THE

NEW ORLEANS

MEDICAL AND SURGICAL

JOURNAL.

EDITED BY

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VOL. XII.

NEW ORLEANS:
PRINTED AT THE OFFICE OF THE DAILY DELTA, 76 CAMP-STREET.

1856.

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TO VOL. XII OF THE

NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.

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FOR JULY, 1855.

ORIGINAL COMMUNICATIONS.

ART. I.—*Cases Illustrative of the Treatment of Asthenic Dropsy: by* M. Morton Dowler, M.D.

Case 1.—The following case is one of considerable interest, as exhibiting recovery under morbid conditions which rarely admit of favorable issue. Abdominal Dropsy, accompanied with organic disease, extreme emaciation, anæmia and debility, in a patient past middle age, presents a case which is generally so little amenable to medicine, as to render either improvement or recovery rather worthy of note than otherwise.

Michael H., a German, *æt.* 45, residing on Seventh-street, Fourth District, New Orleans, ten years resident, summoned me to visit him on the 29th day of December, 1852. He is a man about five feet six inches high; bilious temperament; dark complexion and eyes; has used ardent spirits liberally; health good till within the last two years and a half of the date of visit, during which period he has had several attacks of bilious remittent fever. About nine months previous to my visit, he was attacked with bilious colic, which terminated in acute hepatitis and in a deeply jaundiced condition. Mercury had been freely administered and he had been severely salivated; and after a lingering confinement

in bed, he became able to move about town, though in an excessively enfeebled state. During the four months preceding my visit, he had been constantly declining and wasting away, and for the month next preceding he had been confined to his bed, his legs being able only for a moment to support his body.

The general conditions of the patient, at the time of first visit, were as follows: Emaciation to a degree that could scarcely be exceeded; the great muscles of the body reduced to mere strings; bellies of the gastrocnemii almost obliterated, showing the prismatic outline of the tibiæ; thigh could be easily spanned by the hand; glutei muscles quite shrunken; arms well nigh reduced to skeleton dimensions; skin elevated on the spinous processes of the vertebræ, from which the muscles had greatly wasted away; skin depressed into the intercostal spaces, and the face wasted in the extreme. The thoracic viscera exhibited no marked symptoms of disease. There was a nearly natural respiratory murmur; the respirations were about eighteen in a minute, and the chest exhibited the natural resonance on percussion. The pulse was 80, very feeble, and there was a slight endo-cardial murmur or bellows-sound given out by the heart. Respiration was in some degree impeded by the upward pressure against the diaphragm from existing ascitis. The peritoneal cavity was the seat of dropsical accumulation, which strongly distended the belly. The abdominal rotundity contrasted strongly with the shrunken angularity of the other portions of the body. Through the distended abdominal parietes on examination, the right lobe of the liver rolled under the points of the fingers, revealing a nodulated surface and an almost stony hardness. The patient retained his appetite to a considerable degree, and though his stools were rather light and clay-colored in appearance they differed not greatly from the healthy manifestations, showing that the digestive organs were successfully acting in the midst of all the difficulties with which they were beset. The kidneys were in the most unsatisfactory state, not eliminating more than a wine-glassful of urine in twenty-four hours, though there was considerable thirst, and drinks to a considerable amount were swallowed by the patient. The scanty emission of urine was of a dark red color, throwing down a lateritious sediment, and showing an acid re-action. The application of heat and nitric and acetic acids showed the presence of albumen. The patient complained occasionally of an aching in his right side and in the region of the kidneys. His sleep was broken, and there was a yellow pultaceous coating on his tongue.

There appeared here four indications desirable to be fulfilled, with but little prospect of effecting the fulfilment of any of them, namely: 1st. In relation to the diseased condition of the liver. 2ndly. The suspended function of the kidneys. 3rdly. The intra-peritoneal Dropsy; and 4thly. The existing general atrophy and anæmatosis. I was apprehensive that even the evacuation of the fluid from the peritoneal cavity, which had become somewhat oppressive, would, in the resulting abdominal collapse, only hasten the fatal result.

Believing that mercurial medicine had in time past done disservice to the patient, I ordered him an iodiuretted solution of the iodide of potassium, with a view to its deobstruent and resolvent action on the liver, and also the iodide of iron with a view to an effect on the blood. I prescribed a variety of diuretic remedies without any apparent effect on the urinary secretion. I gave the patient several doses of hydrogogue cathartic medicine, which acted fully, but without any favorable effect. Continued this course for ten days without any improvement in the state of the patient; and the destension of the belly being no longer endurable, I found it necessary to resort to paracentesis. With my friend, Dr. W. P. Sunderland, present and assisting, I passed the trochar and canula through the parietes of the abdomen in the linea alba, and on withdrawing the trochar, there issued twenty-three pints of a greenish yellow, inodorous, limpid fluid, perfectly transparent at first, and becoming flocculent on cooling, and yielding on chemical examination a notable quantity of albumen and phosphoric acid. A sense of faintness and depression, with increased frequency of the pulse, were evinced as the last ounce of water was squeezed out of the shrunken belly, and the patient was laid on his back and bandaged with a towel. The puncture was covered with a piece of lint, secured with adhesive plaster, there being scarcely a drop of blood from the orifice. The internal atrophy and emaciation now showed themselves as complete as the external, the omental and mesenteric fat being absorbed; the aorta and spine lay prominent beneath the attenuated abdominal muscles, and the enlarged right lobe of the liver was seen prominent beneath the ribs. I ordered the patient a little brandy, and engaged to call next day.

In reflecting on what was proper to be done, or whether it was worth while to attempt anything further, I came to the following conclusions: 1st, to continue to evacuate the cavity of the peritonæum as often as occurred any inconvenience from destension; 2nd, that I would attempt to arouse the dormant renal emunctory, by exciting the heart and arteries by means

of direct stimulation, and perhaps thereby to induce a more favorable condition of the liver; and 3rdly, to attempt the induction of hæmatosis and nutrition in this bloodless and emaciated subject. With a view to the second indication, I gave the patient, three or four times a day, a small wine-glassful of the best Holland gin; and with a view to the third I ordered him, three times a day, ten grains of the impalpable powder of metallic iron, in combination with ten grains of the pulvis aromaticus, and ordered for his principal diet frequent and small portions of best beef steak broiled, or broiled chicken, or other animal food; to use either simple water or infusion of juniper berries with gum arabic for common drink. I may say, once for all, that this treatment was continued for nearly three months. At the end of ten days the ascitis had re-appeared almost to the original extent. Drs. Sunderland and Zehender being present, I passed in the trochar a second time and drew off seventeen pints of fluid similar to that drawn off at the first tapping. I may here remark that, since the first tapping, the urine was considerably increased in quantity, the pulse had become firmer; there had been some degree of febrile action, though there was little or no apparent increase of flesh; color of the face slightly better. The patient suffered no inconvenience from re-opening the peritonæal cavity. The treatment to be continued. He takes, every second or third night, two or three of the pill. rhei. compos. as an aperient. His stools were and continued to be deeply blackened by the iron powder. Twelve days afterward, assisted by Mr. Kalteyer, apothecary, I tapped him the third time, the water having accumulated, two gallons escaped. Same diet and treatment; passes now three pints of urine daily, which is becoming clear and natural in appearance. Patient's color greatly improved, and he is gaining flesh. Sixteen days later, assisted by Mr. Kalteyer, I tapped the fourth time; thirteen pints escaped; patient improves in flesh and general appearance; urine abundant. Twenty-one days later I tapped the patient for the fifth and last time; ten pints drawn off.—From this time forward no dropsical effusion into the peritonæal cavity, and the patient rapidly gained flesh, strength and color. At the end of three months from the time of the first tapping his strength had in a great measure returned; his muscular system had become rounded out and firm; and though two full years has now elapsed, there has not been the least return of any dropsical effusion. He has been keeping a coffee-house and attending to other business.

This result is the more remarkable, as during the treatment, and

ever subsequently, there was and has been no appreciable improvement whatever in the condition of the liver, that organ remaining precisely, to all appearance, in the same diseased indurated state. The patient is far from enjoying perfect health and strength, but his recovery from the dropsical and emaciated condition under which he was laboring, and the measure of health he now enjoys, afford a result scarcely to be anticipated in a case of so extremely grave and unpromising a character.

Reasoning *à priori*, the conclusion would naturally be drawn that the hypertrophy * and induration of the liver, and the supervening ascitis and emaciation occupied the relation of cause and effect. But the effects of remedies, and the result of treatment are frequently our only means of determining what is or is not the cause of a given morbid condition. It is well known that the hydropic diathesis is an extremely frequent effect of any disease of the viscera, tending to impede the circulation of the blood, and particularly the effect of hypertrophy. The result of treatment in this case, however, shows either that the Dropsy, anæmia and general atrophy were not a necessary result of the hepatic hypertrophy and induration, or that being such result, such unknown and inappreciable effect was produced on that organ by the treatment, as to do away with or suspend that causation.

Case 2.—The highly favorable effect of saturating the system with the impalpable powder of metallic iron in connection with stimulant and nutrient treatment in Asthenic Dropsy, is further exemplified in a case which I have just discharged from treatment. Wilhelm B., *æt.* 43, native of Germany, eleven years resident, light complexion, blue eyes, phlegmatic temperament, five feet eleven inches high, rather stoutly-built, has used ardent spirits pretty freely during residence, came to my office six weeks ago with abdomen distended with ascitis, and was at the same time affected anasarcous infiltration all over the body. The scrotal cellular membrane was so distended as to put the integument on the stretch. The face was flabby, œdematous and clay-colored; urine scanty, of a dusky red and flocculent. The history he gives of his case is: That a little over two years ago he was engaged as a laborer in clearing the way for the N.O., Opelousas & G. W. Railroad,

* The indurated hob-nail liver, accompanied with Dropsy, I have found, upon post-mortem examination, to be generally either not enlarged or diminished in size This hard nodulated liver —nearly approaching scirrhus in texture—occurs most frequently among persons who have been habituated to the intemperate use of alcoholic liquors.—Ed. N. O. Med. Jour.

and that he was attacked with the "swamp fever," from the symptoms of which he lingered a long time, and from the effects of which he thinks he has never recovered. His dropsical symptoms had appeared three or four weeks ago. I was not able to detect any organic disease, either from personal examination or from testing the urine. His urine exhibits the presence of albumen. I could come to no other conclusion than, that the disease was the result of a lesion of the blood, impairing its integrity. I sent him home and visited him the same day at his house; and passing the trochar and canula through the thick anasarcous wall of the abdomen, in the linea alba, and gave exit to nearly four gallons of a dense, slightly yellowish, transparent fluid, which foamed in the bucket. Previous to tapping the belly, I perforated the scrotal integument with a lancet in two places, and squeezed out all of the infiltrated water, leaving the skin laying lax. On lifting the bucket in half an hour after drawing off the water, I found the contents had assumed the form of a coagulum, showing the existence of fibrin to a most extraordinary extent; so that on attempting to pour the contents into another vessel, the serum issued from the sides, and the great fibrinous mass slid out and descended. On agitating the mass, it resumed its fluid form, and did not again coagulate. I ordered the patient fifteen grains of the impalpable powder of metallic iron three times a day, in combination with the pulv. aromat.; to take a wine-glassful of gin three times a day, which he took in the form of the "Aromatic Scheidam Schnapps"; and put him on small portions of nourishing animal diet and drinks, as in the case of H.; an aperient every other day of the pill. rhei. compos., his bowels being rather constipated. Ten days later, finding that the perforation of the belly had produced no inconvenience, and there being ascitic accumulation, in the presence of Dr. Zehender, I introduced the trochar again, and a gallon and a-half of fluid escaped, which did not, however, undergo spontaneous coagulation. The anasarcous condition had almost entirely disappeared; no re-accumulation in the scrotal cellular membrane. Treatment continued for five weeks; the whole Dropsical condition has ceased to exist, and the patient is now engaged in daily labor. His healthy color is almost restored, and I have reason to conclude that he is completely cured.

Though we often attain complete success in acute and Sthenic Dropsy, by means of diuretic and hydrogogue cathartic medicines, it is very rarely in cases such as the above that they are advantageous or even admissible. Diuresis and hydrocatharsis often aggravate the disease.

Case 3.—I attended on a lady in this city ten years ago, *æt.* 46. She had been, up to the period of twelve months next preceding, in good health, being heavily developed and corpulent; no menstrual appearance for fifteen months. During the year aforesaid she gradually became flabby and leucophlegmatic, and for the preceding five or six weeks has been distended with ascitis and anasarca. I could detect no organic disease, and believe the disease to be a lesion of the blood itself. The urine not more than three ounces in twenty-four hours, and coagulating largely by heat and nitric acid. By means of compound powder of jalap she had copious fluid stools. I prescribed for her the following as a diuretic:—℞. Infus. digitalis, f℥ i; tinc. digitalis, min. xv; potas. acetatis, gr.x; syrup. zingiber, ʒ iss; m.ft. haust.—which draught she took every three hours, till the patient passed a gallon and a half of urine in twenty-four hours, and all without the least improvement in the condition of the patient or the least diminution of the dropsical fluid, and her case proved intractable. In such cases we have but little to expect either from diuretics or hydrogogues, as principal means of treatment.

The sequelæ of malarial fevers are very often anæmatosis, and a tendency to or actual dropsy, especially to anasarca and ascitis. The formidable malarial fever of the Isthmus, commonly called "Chagres fever," of which so much has been seen of late years in New Orleans, has this tendency in a special manner. I have met with several cases of dropsical effusions resulting from this fever, which appeared solely owing to a lesion of the blood. The pulvis ferri, administered either alone or in combination with quinine, and direct stimulation as before designated, when there is great torpidity of the kidneys and general debility, have in these cases almost invariably removed the disease.

Perhaps no disease to which humanity is subject is attended with a more numerous train of dangerous and disagreeable sequelæ than Scarlet Fever. Where the immediate and pathognomonic conditions which characterize the disease have disappeared, the patient's life is often either destroyed or imperilled by immediately consecutive morbid conditions; or where these do not take place, the platform of chronic disease is laid in the organism. Amongst the immediately consecutive conditions, dropsical effusions and engorgements, and particularly anasarcous infiltrations, are so common as to be constantly expected. The scarlatinic anasarca presents generally a marked peculiarity in its indurated and unyielding character on pressure. In many cases, even where there is great distension, there is no pitting beneath the finger, and the morbid

deposit cannot be made to traverse in the cellular membrane, the same having become obstructed by the effects of scarlet fever inflammation. The lungs, indeed, often rapidly become the seat of solidification from the same cause, and sudden apnœa is the result. This induration and infiltration in the subcutaneous cellular membrane is often difficult to be got rid of. I have lately treated several cases of children, thus affected, with complete success, by administering for several days a solution of the hydrochlorate of ammonia, an agent which I had never before administered internally. I am persuaded that it is one of the best resolvents and deobstruents we possess in cases such as these. It will occur to the readers of the New Orleans Medical and Surgical Journal, that in the number for November last, I presented a translation from the French of Dr. Smith of Warsaw,(Poland) of an able and learned paper on the therapeutic application of this agent,—a paper well worthy the attention of the profession. I was induced to try this agent from the analogies afforded by Dr. Smith's paper. The effects of the medicine were a moisture of the skin, a notable increase of urine, a soluble state of the bowels, a softening and resolution of the subcutaneous hardness and swelling, a subsiding of the dyspnœa and the disturbance of the heart, and tumidity of the belly, which attend generally such cases. In all these cases, the impalpable powder of metallic iron was alternated with the sal ammoniac.

But we here close our remarks, by quoting the following sententious generalization of a great observer of antiquity, which is well worthy of being remembered:—"*Gravis per se est omnis hydrops, curatuque admodum difficilis; gravissimus qui morbo alteri, potissimum quartanæ longinquæ, supervenit, atque qui ex acuto morbo cæpit; inveteratus plerumque incurabilis. Hydrops curatus non observata diæta, modo redit. Hydrops licet morbus, sit gravissimus, ægrotantibus tamen tolerantiam et patientiam affert.* * * * * * *Lencophlegmatia mitior est, difficilior anasarca ascitis certe periculosissima. Ascitis tympanitidi juncta mali est ominis.*" —*Aretæus.*

NEW ORLEANS, *May*, 1855.

ART. II.—*Case of Vesico-Vaginal Fistula successfully treated: by* WM. C. ASHE, M.D., of Demopolis, Alabama.

IN the month of March last, Mr. E. W., of Greene County, Ala., requested me to take under my care a negro woman, *æt.* 23, suffering

from Vesico-Vaginal Fistula of some nine years standing, the result of a protracted and mismanaged labor. The girl was dieted for a few days, and a laxative administered on the evening preceding the operation. It is needless to detail each step of the operation, as it was performed after the plan of Dr. J. Marion Sims, of New-York—a full account of which can be seen by reference to his published articles upon the subject in the different medical journals. I would mention, however, that after placing the woman in the position recommended, and exposing the parts by means of Dr. S.'s speculum and the hands of two assistants, the margins of the fistula were *very freely pared.* I esteem it the most important part of the operation to bring in contact the raw surfaces of *healthy* tissue, and to effect this, judging from the case under consideration, it must frequently require extensive incisions to remove all the indurated tissue.

The fistula operated on was about half an inch in diameter, and required a much more extensive dissection than I had anticipated. After the margins had been freely pared, as mentioned above, the silver wires were drawn through by means of the silk ligatures, and the clamps adjusted. The self-retaining catheter was then introduced, and the patient put to bed. About fifty minutes were consumed by the operation, including the short period of suspension necessary for the arrest of hæmorrhage. Dr. Ruffin had control of the subsequent treatment of the case. He removed the catheter twenty-four hours after the operation, though he says that after a few days it became necessary to remove it twice a day; and during the latter part of her treatment its withdrawal and cleansing every ten or twelve hours became unavoidable, owing to the irritation produced by its presence. He found that granulations would shoot rapidly into the foramina of the catheter, so as to render its removal indispensable to the free discharge of urine.

During the whole period of her confinement her diet consisted of dry boiled rice, and she was kept pretty fully under the influence of opium. After a few days she suffered much from the excoriations, caused by the constant stillicidium of urine just within the vulva, as the catheter did not project beyond the labia externa. With the view of avoiding this source of discomfort, a section of a large gum elastic catheter was attached to the end of the self retaining instrument, which answered the purpose for a short while, though it was so speedily acted upon by the urine and so clogged up the fissure in the silver instrument, that but little benefit was derived from its use. I understand

that Dr. S. has improved upon his original instrument, so as entirely to obviate this difficulty.

The annoyance from these excoriations, and the impacted rectum, which had to be overcome by mechanical means after the clamps were removed, (on thirteenth day) were the only unpleasant occurrences during her confinement. Should I be called upon to treat another case, I would so far venture to depart from Dr. S.'s directions as to have the rectum washed out at least every second or third day by mucilaginous enemas. From this impacted condition of rectum the girl suffered for eight or ten hours most violent pain, equalled, according to her description, only by labor pains.

The profession certainly owe a deep debt of gratitude to Dr. Sims for having perfected an operation for the relief of this most loathsome disease, which from time immemorial has been regarded as incurable. Any one having the least taste for, or tact in surgery, by referring to the doctor's lucid description of the operation, and providing himself with a case of his instruments, might safely promise a cure in any uncomplicated case.

ART. III.—*Incised Wounds: by* GEORGE S. D. ANDERSON, M. D., of Alexandria, Louisiana.

THERE is no branch of the healing art that should be more carefully studied, or more thoroughly understood by the general practitioner, than Minor Surgery. Yet, strange to say, there is none that receives so small a proportion of his attention. We see, almost every day, diseases or injuries, apparently of but little importance, that are exceedingly troublesome to patients and annoying to practitioners, from the fact, that their nature, having been but little studied, is but little understood. The treatment of these diseases and injuries must, therefore, be empirical and oftentimes unsuccessful. It is true, that a great many surgical diseases and injuries get well without much treatment; yet it is equally true, that many, apparently as trifling and of as little importance, become chronic and require a great length of time for their permanent cure, whilst others baffle our skill and bid defiance to our art. Sore nipples, for instance, are but little amenable to the ordinary course of treatment. Acute abscess, also, may terminate in suppuration, in spite of all our efforts to prevent it. This may be more particularly the case in mam-

mary abscess, a case of which came under our care in 1850-1, in a lady with her first child. In this case, the entire gland of the right breast sloughed out, and we have a portion of it now in our possession. One lobe of the left gland also sloughed out. This is the most remarkable case of mammany abscess we ever saw. The patient was of the scrofulous diathesis. But to return from this digression: ulcers on the inferior extremeties, especially if they be on the anterior part of the leg—tibia—are a most annoying and troublesome class of diseases. This may result in part from the difficulty generally experienced in getting the patients to submit to a rigid course of diet and regimen; and it may be in part owing to the former dissolute habits of patients, by which the general health is impaired, the vital powers reduced below the natural standard, the blood impoverished, and the general nutritive function deranged. Again, we sometimes see the slightest injuries, as the scratching of a briar, the pricking of a thorn, or the slightest contusion, or abrasion of the skin, become *sores* difficult to heal, either from neglect or imprudence on the part of the individual who is the recipient of them, from some peculiarity of constitution, or some vice deranging the general nutritive function, or from ignorance and mismanagement on the part of the practitioner. From these causes we have seen simple *incised,* contused and lacerated wounds exceedingly difficult to heal, and, in some instances, present threatening and even alarming symptoms. It is, therefore, to the first of this last class of injuries, to wit, *incised wounds,* that we propose to call attention in this article.

An incised wound is one that is made with a sharp-edged, smooth-cutting instrument, as, for instance, a knife or an adz.

The hæmorrhage from an incised wound is greater, as a general thing, than from other kinds of wounds. The pain also is less severe and lasting, and the shock to the nervous system is not near so great. In incised wounds, the blood-vessels are smoothly cut, in consequence of which their orifices are left patulous, with but little disposition to *retract* into their cellular sheaths, or to *contract* so as to diminish their caliber, and dispose the blood in them to coagulate, as is the case in other kinds of wounds. Hence the greater amount of hæmorrhage in incised wounds.

The *treatment* of simple incised wounds is plain, and easily to be understood, even by the merest novice. By "simple incised wound" we mean one in which there are no large blood-vessels divided, no closed cavity entered, no joint penetrated, nor important nerve injured. In common parlance, a *flesh*-wound. Our object is to induce the divided

edges of the wound to unite by adhesion, or the *first* intention. The suture with adhesive strips, with complete rest to the injured parts, are all that the case requires.

The manner of applying the adhesive strips, as well as the suture, is a matter of some importance, as we always wish to avoid a puckered, uncomely cicatrix, especially if the wounds be on the face, neck, or hands of a lady. We wish, therefore, to call attention particularly to them, so that wounds on any exposed portion of the body may, if possible, unite without any observable cicatrices.

There are several kinds of suture mentioned by authors, but ordinarily we prefer the common *interrupted* suture, which is made by taking a thread of silk or flax, of proper size, well twisted and waxed, and threading a *surgeon's* needle with it; the surgeon then places his patient in such a position as to relax completely all the soft parts in the vicinity of the wound; the edges of the wound are then brought in opposition with each other, and the surgeon commences, as a general rule, in the middle, by passing his needle through one lip of the wound, at a sufficient distance from its edge to be sure that it will not tear through, from *without* inwards, he brings it out through the other lip, by passing from *within* outwards. He then takes another stitch, at a distance of from six to eight lines on one side, and then another at an equal distance from the first on the opposite side, and so on alternately on each side, till all are taken. He then commences tying, beginning with the stitch first taken, and observing the order followed in taking the stitches; that is, one alternately on each side of the first, the edges of the wound being held closely together by an assistant. It is a rule always to be observed where there are several stitches to be taken, that they should be equi-distant from each other. After the threads are all tied, the ends of them are cut off as close as may be to the knot.

The manner of applying the adhesive strips is a matter of not less importance than that of applying the suture. The *cutting* of them is a matter that requires some thought. In the first place, they should always be cut in the direction of the *warp*, or chain as it is called in common parlance. If they are cut in this direction they do not stretch, as is the case when they are cut transversely, or in the direction of the *filling* or woof. Our object is to keep the divided edges of the wound in close opposition with each other, which can only be done by having them held together by firm unyielding strips. Reader, bear this in mind,

or you may have the mortification of seeing a puckered cicatrix—the best evidence in the world that you have not discharged your duty to your patient and the honorable profession to which you belong. The next thing is to have your strips of uniform width from one end to the other, and just wide enough to fill up an interval between two of the stitches. They should be long enough to cover all the parts relaxed by the wound. There is little or no necessity for having them any longer. And they should never be so long as to completely to encircle a limb. If they are, they will impede or interrupt the circulation, and thus defeat their own object. They should *always* cross the wound *at right angles*, as this is the only way in which we can keep the edges of the wound held smoothly together, and be sure of a smooth cicatrix. They should be equally divided, so that there will be as much on one side as the other, that is to say, if your strips are four inches long, for example, there should be two inches on each side of the wound. The first one should cover an interval bounded on one side by the first stitch; then the next should cover an interval on the opposite side; and so on, alternately, on each side, till all are applied. We are sorry to say we have seen them so applied as to form acute and obtuse angles with the wound. There is no excuse for such gross ignorance. After the strips have been applied, a little lint dipped in the blood from the wound may be put on the sutures, and then the whole may be covered with lint, held fast by a bandage or strips of plaster long enough for the purpose; all of which should be permitted to remain till the parts are firmly united, if union take place by the adhesive process. But the parts must be kept perfectly at rest, if we expect union by the first intention. The surgical attendant should impress this emphatically upon his patient.

When a wound is not straight but circular, the adhesive strips should not be cut of uniform width from one end to the other, as above directed, but should be cut triangularly. Their bases should, when applied, be on the outside of the wound, and their apices should meet in the center, like the radii of a circle. But the internal ends should never overlap each other. Before applying strips of adhesive plaster, the hair on the part to which they are to be applied should always be shaved off.

If union takes place by the first intention, this dressing should not be removed till it is complete; but if irritation or inflammation ensue, it will be necessary to remove the strips, and let the wound unite by the *granulating* or *scabbing* process. Of the former of these only will we speak.

Whenever there is inflammation sufficient to prevent union by the adhesive process, the adhesive strips are to be removed and the wound bathed in a warm solution of soap, after which a light warm poultice, large enough to cover the inflamed parts, should be applied, and should be repeated in the course of a few hours, if this becomes dry. The poultices should be continued till the inflammation has subsided, and the wound should be washed before applying each fresh one. But there should be no rubbing of the parts with a sponge or cloth, as is sometimes done. The water may be squeezed out of either of these, and let fall gently on the wound, but no rubbing is justifiable. When the inflammation shall have subsided the poultices should be discontinued, and simple cerate or some other mild cerate or unguent applied. This treatment should then be continued till the cure is complete, unless the wound begins to discharge a thin serous fluid instead of laudable pus. Should this be the case, the cerate should be discontinued, and fresh dry lint applied. This can be removed as often as necessary, by soaking it in water at each dressing; but force should not be used to remove it, as this would give pain to the patient and do injury to the wound. If it cannot be removed by bathing the part in warm water, and it is necessary that it should be removed, a poultice should be applied, which will not fail to loosen all adhesions, and then it comes away without pain or injury.

If there are constitutional symptoms, rest, purgatives, (of the saline class) low diet, and the antiphlogistic treatment generally should be resorted to. Should there be much symptomatic fever, blood may be taken from the arm.

We have spoken only of simple incised wounds. At some future time we will resume the subject, and consider the removal of foreign bodies, the ligating of arteries, the stopping of hæmorrhage when it is from several or many small vessels that cannot be tied, &c., as too much importance cannot be attached to this class of injuries.

ART. IV.—*History of a Case of Phlegmasia Dolens: by* JOSEPH B. COTTMAN, M.D.

THERE is, perhaps, no subject on which a greater difference of opinion has existed than on the pathology of Phlegmasia Dolens. Happily,

however, the labors of M. Bouillaud,* Drs. Davis† and Velpeau ‡ have thrown much light on the real nature of the disease, and shown that it consists in an inflammation of the trunks and principal branches of the extremities. Previous to the publication of the memoirs of these gentlemen, various hypotheses had been advanced by writers on the subject; but they were mere speculations, unsupported by facts, and, therefore, inadequate to account for the phenomena observed after death. I hope that the case which I am about to relate will not be entirely devoid of interest; as it affords an opportunity of giving the *post-mortem* appearances, and confirms the opinions of Bouillaud, Davis, Velpeau, Lee and others.

Caroline Seabeth, *æt.* 25, born in Germany; has lived in the Island of Jamaica for six months past; sailed for the United States about a month since, in company with her husband, sister and three other Germans, all in good health; after having been at sea about eight days, during which time the weather was very stormy, and all suffered very much from exposure, she was confined on the open deck of the ship and delivered of a living child; they were all prevented from keeping below in the cabins on account of a very offensive odour given off by some part of the cargo, and were therefore compelled, as the only alternative, to sleep on deck with a simple awning over them for three days and nights after her confinement; herself and child were exposed to the winds and rain, suffered much from want of proper food, ate nothing during a greater part of the time, vomited incessantly, could retain nothing on her stomach but cold water; thirst was very great, drank almost constantly; on leaving Jamaica, they laid in provisions to last them *eighteen days* as the captain informed them they would arrive in Philadelphia at the expiration of that time; owing, however, to adverse winds they were 31 days out, and consequently *thirteen days* on short allowance of provisions, having had a few crackers and stagnant water. Soon after their arrival in Philadelphia they were brought to the Alms House. The women were reduced to such a weak and impoverished state as to be unable to walk; they all presented very much the same appearance—skin yellow, lips livid, very anæmic.

In this state Caroline Seabeth entered the women's medical ward No. 4, of the Philadelphia Hospital, June 16th, 1839.

June 17th, A.M. Present state: decubitus dorsal; expression

* Archives de Médecine, tome ii, p. 192, Jan. 1823.

† Medico-Chirurgical Transactions, vol. xii, May, 1823.

‡ Archives de Médecine, tome vi, p. 221.

anxious; very anæmic; pupils very much dilated; lips livid; gums white; tongue coated with a white fur; respiration labored; pulse 120, quick; skin very yellow over the whole body, more particularly of the face; effusion into the cellular tissue of left arm, very much distended, well marked and confined entirely to left side, commencing at mediastinum and extending throughout face, neck and chest on that side,—none in lower extremities; complains of pains on left side of her neck, and a fixed pain in right temple; action of heart very tumultuous; no pain on pressure over abdomen: patient very melancholy and dejected, afraid of dying, begs to be relieved. Treatment:—Half an ounce of the *oleum ricini* was given last night to clear away any irritating matter or morbid secretions in the intestinal canal, operated twice; wine whey and arrow-root, in small quantities at a time, every three or four hours; quarter of a grain of quinine every hour; an opium plaster to right temple.

18th, A.M. Slept well, appears to be much refreshed and improved in appearance; a single cut cup was applied yesterday to right temple, not so much to relieve the pain as to see the appearance of the blood; about an ounce of whitish serum was taken; contained no red particles; very thin and watery; no traces of red blood in any part of body, except that contained in a few veins coursing over left breast; bowels open once this morning; no pain in temple or neck. Continue treatment.

19th, A.M. About four o'clock yesterday afternoon, patient became very delirious; intense pain in head; pain in region of stomach; incessant vomiting, constant nausea; action of heart very much excited; pulse 140, irritable; skin hot, tongue dry, respiration hurried; ice was allowed freely internally, ice to head, a mustard cataplasm applied over region of stomach; in the course of four or five hours the vomiting ceased; she became quiet, fell asleep, and slept well until this morning, when she appears much improved; no delirium, pulse 112, skin of natural temperature, respiration easy, eyes dull, tongue still coated, great irritability of stomach, frequent disposition to vomit; bowels have not been open to-day. Treatment:—A wine-glassful of *aquæ calcis*, with an equal quantity of new milk, to relieve nausea; continue dietetic treatment; discontinue the quinine.

20th, A. M. Slept well last night; a disposition to sleep during the day; somewhat improved; no pain; expression better; slight vomiting during the night; bowels open once to-day; to be rubbed with the following liniment: ℞. Tr: Camphoræ. Vin. Sem. Colch. ā ā ʒj. Continue other treatment.

21st, A. M. Much the same as yesterday; drowsy; frequent disposition to vomit; eats very little: treatment the same.

22nd, A. M. Swelling of arm has diminished; unable to use it; no appetite: continue treatment.

23rd, A. M. Expression somewhat improved; rested well last night; vomited some yesterday: treatment as before.

24th, A. M. Appetite better; craves food; tongue clean, very white; no vomiting; skin natural temperature; pulse 112; pain in head; glands on left side of the neck much enlarged, painful; œdema of left side still continues, but is much less; motion of arm freer; no pain in arm; no pain on pressure over abdomen; bowels constipated. Treatment: Two drachms of the *oleum ricini;* neck to be rubbed with the *linimentum saponis;* continue other treatment.

25th, A.M. Slept well; is rather better; no pain; medicine operated freely; bowels open five or six times. Continue treatment.

26th, A.M. Last evening complained of pain in right temple; a mustard plaster applied to the part very soon gave relief; expression rather better; tongue very white; very anæmic; skin still retains that yellow tint so marked when she came in; pulse 100. Treatment as before.

27th, A. M. Last evening, about six o'clock, an exacerbation of all symptoms took place; intense pain in head, confined more particularly to forehead; skin hot and dry; pulse 140; irritable; constant vomiting of a greenish colored fluid, a quart in quantity; pupils very much dilated; face blanched, lies with her eyelids closed; light painful to eyes; bowels constipated. Treatment: small pieces of ice to allay the irritability of stomach with the *mistura effervescens* occasionally, as her thirst was very great; cold applications to head; a common enema.

11 o'clock, P. M. Saw her again; found her still vomiting; had slept about an hour; felt somewhat better; still very sick; pain in head continues; the injection had been neglected; it was therefore given immediately; continue the ice.

28th, A. M. Slept five or six hours; feels much better; no pain in head; no vomiting, nausea, or retching; skin natural in temperature; action of heart very tumultuous; pulse 108; œdema of arm not diminished; pain in left hypochondriac region; bowels opened three times by injection. Treatment: apply a mustard cataplasm over painful side; continue ice; commence with the following: ℞. Liq. Ferri Hydriodatis gtt. x: ter in die. ℞. Acid. Hydrocyanic: gtt. iij. Muc. Acac. ʒiij; ʒj ter in die.

29th, A.M. Slept a greater part of the day yesterday; rested well last night; appetite improving, craves meat; skin over whole body still retains a yellowish colour; tongue clean and moist; very white; swelling of arm much diminished; can use it better; bowels open twice since yesterday morning. R. sulph. quiniæ, gr. j; div. et ft. pil. no. ij; una nocte et mane. Continue other treatment.

July 1st, A.M. Rest undisturbed; disposition to sleep during the day, appetite better, expression improved; more cheerful; pulse 72, better volume; bowels open three times yesterday. Continue treatment. Child affected very similar to the mother, very anæmic; effusion into lower extremities; passes no water; dull and drowsy. Ordered cream of tartar drink.

2nd, A.M. Mother the same as before. Child very drowsy; eyes dull; effusion has left lower extremities; refuses to eat anything; has eat well heretofore. This child looked healthy when it came in the house. The mother was then strictly forbidden to suckle it; although she had done so before her entrance. Through neglect, however, the nurse permitted it to take the breast about a week ago; this brought on diarrhœa. My attention was not directed to it. The child, therefore, received no timely treatment until the 1st of July, when I found it in the state described.

3d, A.M. Mother in much the same state as yesterday. The effusion in the child has disappeared entirely from lower extremities; passes very little urine; has emaciated very much within the last three days; very pale, dull and stupid; cannot be aroused. Died at three o'clock in the afternoon. This child, when it came in, weighed three pounds seven ounces; was very lively, and appeared to be doing well until it sucked its mother.

4th, A.M. Quite convalescent; expression better; appetite improved; effusion less; lips light rose color; gums still very white; tongue clean; pulse 100, better volume. Continue treatment.

5th, A.M. Very much improved; expression lively; cheerful; sleeps much both day and night; pulse 112; swelling of arm has diminished; bowels regular. Continue treatment.

8th, A.M. Patient continued to improve until the 7th, when she felt so much better that she was allowed to get up and walk about the ward; at night she was taken with vomiting, pain in region of stomach, diarrhœa, ten stools during the night; fever, skin hot and dry; pulse 130, quick; allowed small pieces of ice and the effervescing mixture to allay

the irritability of stomach; slept none: fever continued during the night. State: 1 o'clock, P.M.—restless; lies with eyes half closed and dim; countenance blanched, expressive of pain; much disturbed; refers all her pain to region of stomach; skin very hot and dry; constant thirst; strong venous pulse in jugular vein on right side; pulse 140 when first examined, respiration 50,—the former sunk to 130 in the course of fifteen minutes, and the respiration to 40,—labored, costal; temperature as indicated by a thermometer placed under the tongue, 118°—placed in the axilla, 109°; tongue clean and dry. Treatment:—Ice internally and to the head; mustard cataplasms to epigastrium; injections of starch containing each ten drops of laudanum, every three or four hours.

9th, A.M. Fever passed off about ten o'clock last night; skin at that time dry and moderately warm; pulse 120, quick; slight cephalalgia; slept well. Treatment:—Commenced last night with the following powders: ℞—pulv. ipecac. gr. vj; pulv. opii. gr. j: div. in chart. no. vj, q. h. q. Took one last night, two this morning.

10th, A.M. Slight febrile exacerbation yesterday afternoon; skin warm and dry; pulse a little excited; tongue dry; thirst; sickness of stomach; no diarrhœa, no pain or pressure. ℞—Sod. bicarb. ʒ ij; tr. sem. card. comp. ʒ vj; aq. cinnam. q. s. ft. ℥ vj, ℥ss. q. h. tertia. Ice internally; discontinue powders.

11th, A.M. Return of diarrhœa; three stools during the night, six this morning; slept very little; pulse 120, quick; feels a sinking sensation in region of stomach when she gets up; no pain elsewhere. Treatment:—Injections of acetate of lead and laudanum every four hours, each containing the following: ℞—acet. plumb. gr. v; tr. opii. gtt. xx. Continue mixture prescribed yesterday.

12th, A.M. Diarrhœa still continues; three stools last night, five to-day; skin natural temperature; no fever, no pain or pressure over abdomen. Treatment:—Discontinue mixture; commence with the following: ℞—cret. prep. ʒvij; tr. catechu. ʒ vj; aq. cinnam. q. s. ft. ℥vj; sig. ℥ ss. q. h. secund. Continue injections.

13th, A.M. Bowels open five or six times since yesterday morning. Continue treatment.

14th, A.M. Slight fever last evening; five stools in the last twenty-four hours, scanty. Continue mixture and injections.

15th, A.M. Diarrhœa has ceased again; bowels open twice since last note; last night about 8 o'clock very high fever came on; passed off in the course of five or six hours; early this morning quite delirious;

talked incoherently; slept some last night; rest disturbed by dreams; wakeful and restless; disposed to sleep at present; tongue coated with a pink fur; no pain; expression the same as before; slight color in lips and gums; pulse 112, irritable; effusion has entirely disappeared in arm. Treatment:—Continue astringent mixture; commence with hydrocyanic acid and quinine as before.

16th, A.M. Had considerable fever yesterday afternoon and evening; passed off about seven o'clock; left her in a very weak and languid state; listless and drowsy; observes nothing; expression very melancholy; pulse weak and feeble; bowels open less frequently, twice last night; slept five hours. Treatment:—astringent mixture less frequently; continue quinine; discontinue hydrocyanic acid.

17th, A.M. Bowels open once yesterday; evacuations better in consistence; no pain on going to stool; slept well; this morning much improved; expression lively, very cheerful; feels better; pulse better, 100 regular; respiration easy. Treatment:—Discontinue astringent mixture; continue other treatment, with the addition of four ounces of wine in the twenty-four hours.

18th, A.M. Slept well; bowels open three times this morning; commence with the following mixture: R. Ol. Ricini, ℥ss, Tr. Opii, ℥j, tr. sen. card. comp. ℥vj, aq. cinnam., q. s. ft. ℥vj. Sig. ℥ss. q. h. sec.

P.M. The oleaginous mixture arrested diarrhœa, had no stool after commenced taking it; quiet; feels better; continue remedies.

19th, A.M. Rested well, but is much worse this morning; expression anxious, face blanched; return of diarrhœa, four stools this morning; effusion has taken place since last night in right leg, extending up the thigh, affecting right *labium pudendi;* whole extremity much distended, twice as large as the other, very white and hot, particularly on internal side of thigh; pain on pressure, but no pitting; no effusion in other extremity, nor in either of upper extremities; very drowsy; lies with eyes closed; emaciated very fast within the last three days; pulse 112, irritable. Commence with the following mixture: R—Cret. prep. ℥ viij; tr. sem. card. comp. ℥ vj; tr. catechu. āā ℥ vj; aq. cinnam. q. s. ft. ℥ vj; sig. ℥ ss, q. h. s. R—tr. opii. ℥ ss; liu. saponis ℥ vss. Lotion for leg; wet cloths, and envelop the whole extremity; continue wine; discontinue oleaginous mixture.

21st, A.M. In much the same state as at last note; diarrhœa has been checked partially; limb equally as much swollen; lymphatic glands very much enlarged; can feel the femoral vein very distinctly just where

it passes under Poupart's ligament; skin of limb very white, glossy; heat very great; pain on pressure. Treatment:—Astringent mixture less frequently; continue the application of lotion, and wine.

28th, A.M. Has been improving since last note; skin of limb presents the same appearance, not quite so much distended; complains of very little pain; return of diarrhœa; bowels open thirteen times since yesterday morning; pulse 120, regular; listless and disposed to sleep. On the 23d and 24th had ice cream and milk punch, which agreed with her very well, and appeared to improve her for the time. Treatment:—Continue all the remedies; good diet.

August 1st. Has continued in much the same state since last note; emaciation advanced; œdema of lower extremity the same as before; last night diarrhœa increased, notwithstanding she had been taking the astringent mixture prescribed on the 19th. She was now put upon the use of the following prescription: R. pulv. opii. gr.j; pulv. camph. gr. viij; acet. plumb. gr. vj; div. in pulv. no iv; sig. q. h. quatuor.

4th. Has been gradually growing worse; diarrhœa increased, and all symptoms have become aggravated. Death took place at eight o'clock, A.M.

Autopsy thirteen hours after death: *Exterior*—very much emaciated; left arm very much infiltrated; right leg infiltrated, extending up to hip and right *labium pudendi;* infiltration greater below the knee than above. *Thorax*—no effusion into cavity; lungs and heart natural; substance of heart very light colour; valves flexible, normal size; upper lobes of lungs very pale, lower lobes contain a very small quantity of blood. *Abdomen*—liver diminished in size, of a very pale color; gall-bladder contains about an ounce of pale colored bile; stomach, in the greater curvature near the cardiac orifice of a rose colored tint, slightly injected, contains aliment; throughout the remainder very pale, internal coat corrugated near the pyloric orifice; from the caput cæci down to sigmoid flexure of the colon; mucous membrane is very much softened and covered with numerous ulcerations; no perforations; in the small intestines and lower portion of ileum, mucous membrane softened, no traces of disease in remainder of small intestines, very white throughout, contain a fluid of same color and consistence as the stomach; glands of Peyer and Brunner elevated above mucous coat; iliac vein on left side contains a small quantity of pale blood, uterus none; tissue very white; iliac vein on right side for a space of three inches is filled with a whitish

substance of a cheesy consistence;* arteries contain no blood; aorta none; axillary and subclavian veins on left side contain the same substance as iliac vein on right; bladder distended with urine; kidneys very pale, healthy; spleen enlarged, of a dark brown color; the only traces of blood observed were a coagulum in right auricle of heart, and a small quantity in veins; it was very pale and watery.

ART. V.—*Phlegmasia Dolens in the Non-Puerperal state: by* B. DOWLER, M.D.

DR. COTTMAN'S interesting case of Phlegmasia Dolens, in the preceding article, is of the highest pathological import, because its diagnosis is tested by that grand and decisive scrutiny, *post mortem examination*, and because death from this malady is infrequent, and permission to examine the dead body is still more rare.

That Phlegmasia Dolens originates in all cases from inflammation of the uterine, iliac, and femoral veins; and that this disease is peculiar to the puerperal state alone, are postulates not warranted by experience.

Without enumerating authorities and giving the details of cases, the outlines of a single example, showing that the latter postulate, at least, cannot be sustained, will be subjoined.

Miss J. M., *æt.* 18, of good constitution, recently recovered from autumnal or remittent fever, which lasted three weeks, (Sept., 1833) had left her room three or four days since; had retired to rest for the night; dreamed that she was attacked by a dog; kicked at him; awoke with great pain in her left hip and left leg. She maintained, *ab initio*, that she "was hurt in her sleep," yet I could find no external injuries. Dogbite there was none; no bruise, no waking consciousness of having actually kicked at the imaginary canine; no appreciable means by which the limb might have been sprained or injured; yet the dream had for her all the effect of reality—the spiritualistic phenomenon "dreamed of in *her* philosophy," had a materialistic existence,—the subjective element had become objective, sensuous—a material entity—a painful leg. Whether the spectral dog-attack was the cause or the effect of the

* This cheesy matter was doubtlessly fibrinous deposit or coagulable lymph, the result of phlebitis, and served to aggravate the latter, as well as to obstruct the sanguineous and lymphatic circulations. *Ed. N. O. Med. Jour.*

disease of the limb, will not be inquired into. The patient, however, could not divest her mind of the belief that she "was hurt in her sleep."

In twenty-four hours the entire limb from the hip to the toes was enormously swollen; skin white, smooth, tense and shining; pain diffused, augmenting with slightest pressure; motion excessively painful. In a few days after, the pain was concentrated in the ankle and foot. It was a week before she could lie on he right side (the left was affected.)

In ten days the tumefaction, tension and induration of the limb diminished; the ankle and foot now pitted on making pressure. In three weeks the swelling had nearly disappeared, and she left her bed.

February 1, 1834. For the last four months there has been more or less swelling in the limb; an ulcer has formed over the tibia, which had not healed completely when she removed from Virginia during the following April.

It would be of little interest to relate the various prescriptions, alterations, external applications, washes and bandagings, tried with little apparent effect in this case. Bloodletting was not indicated by the pulse. Cathartics appeared to be the most beneficial remedy. Constipation was very obstinate during the whole course of her illness. Her general health was now re-established.

In this case no greater tumefaction and induration were noted in the course of the venous trunks, than in the residue of the limb.

The consecutive anasarcous œdema and ulceration in this case, though rarer terminations than resolution, have been repeatedly noticed by competent observers as being among its sequelæ.

In this, as in the majority of cases, the predilection which Phlegmasia Dolens shows for the *left* rather than the right side, is a fact better established than explained.

The dream, not the Phlegmasia, above mentioned, suggests a remark on the former subject, which may be allowed in this place by way of digression.

Dreams in which intensified emotions of a painful character, though usually the effect of disease, may act either as a cause or aggravation of it. They often produce vivid subjective impressions, rivalling, for a time, those derived from the objective or external world. The utmost force of reason during the day can, in some instances, scarcely break the chain of associated horrors forged in the night. The spectral illusions which haunt the drunkard in delirium tremens and other persons in

certain forms of insanity, are, virtually, to such patients, positive existences—ontological entities.

The prevalence of Modern Spiritualism—day-dreaming, table-turning, floor-knocking, ghostly writings, *clairvoyance* and other spectral illusions and delusions, threaten to overturn sound psychology, to increase both mental and bodily disorders, under pretence of enlightening the mind and curing the sick. Filth, malaria, atmospheric phenomena and contagion will not be sufficiently expansive for the causation of diseases, nor will quarantine, boards of health, fumigation, underground drainage and potent paper proclamations be sufficient to prevent, much less cure diseases, unless Spiritualism, in all its vast psychological, physiological, ætiological and pathological expansions, be included. The editor of this journal has been addressed on the subject of the prevailing Spiritualism, under the hope (how vain!) that he had witnessed, or that he understood the pretended revelations in the social, medical and unseen worlds, the Spirits and their Mediums never having favored him with any evidence of the validity of their mission.

ART. VI.—*Letter on Cholera.*

LIVONIA, LA., *May 14th*, 1855.

To Editor of N. O. Med. and Surg. Journal.

Dear Sir:—Herewith I send a short communication on the subject of Cholera. Do with it as you please. If you find anything in it worth publishing, you will do so. As I have hastily written this to-day, I prefer you should take the facts, and put them in such shape as you may think best.*

I am particularly anxious that attention should be directed to the spine, in this disease, and there is no better field for observation than in your Charity Hospital.

We know that the same disease appearing in different countries and in different sections of the same country, will manifest some difference;

* This letter and the accompanying communication of Dr. Lyne, are published *verbatim*, which will, for that reason, be not the less acceptable to the reader. It is Hippocrates who hath said, "the physician should consider what he may find it necessary to do, for it is assistance that is needed and not speculation;" "we succeed or fail exactly in the proportion of our acting properly or the reverse."

and I am desirous of learning whether or not this is the case with Cholera.

If the same Cholera prevails elsewhere, I see no good reason why any one should die of it. I have, for some years, prescribed cupping, with as much confidence of success as a dentist would prescribe extraction for the tooth ache. I use the mercurial alterative merely to restore the secretions. The opium and astringent I use from habit. I commenced with them and have kept them up. I never use any medicine until the symptoms are relieved by counter-irritation. I think it probable that in Cholera, as in typhoid fever, as many die from excessive medication as die from disease. If you should want *cases* of Cholera in detail, I can give you a number of interesting ones in confirmation of the opinion that it is a disease, if not *spinal*, yet the spine is, at least, deeply involved. Respectfully yours,

W. H. LYNE, M.D.

P.S.—It is not to be presumed that any plan of treatment yet known could restore a patient after so much of the fluid part of the blood had been carried off, that the blood could no longer pass the capillaries.

Livonia, La., *May 14th*, 1855.

Dear Sir:—I have, two or three times, within as many years, commenced a communication to you on the subject of Cholera. After writing a few pages my attention would be drawn from the subject,—not soon to be resumed again. I have occasionally met cases since its last disappearance as an epidemic. Within a year past cases have occurred more frequently; and this year more frequently than last. It is now but three days since I was prostrated by it myself, and am but just recovering from its effects. The disease has prevailed this Spring on the plantation of David Barrow, in this neighborhood, with, I understand, about twenty fatal cases. I did not attend them, consequently can say nothing about those cases.

When the Cholera made its appearance in Louisiana, in 1832-3, I was residing at Clinton, in this State. The disease not having appeared in that part of the state, I had never seen a case until I witnessed it on Bayou Grosse Tête, in May, 1849.

The first four cases I saw were on the plantation of Col. H. A. L. They occurred on the 1st, 5th and 7th of May; all of them with the characteristic symptoms. The history and appearances of these cases

differed as little as did the result. They all died in from three to five hours from the time I saw them. In treating these cases I found no difficulty in arresting the purging, vomiting, cramps and profuse sweating, and could restore natural warmth to the body and extremities with a natural soft feeling of the skin in an hour. In short I could do everything I desired, except make my patient live. I could not restore the pulse, nor disembarrass the breathing. Having lost my first four cases under (what I supposed) a well digested plan of treatment. I became satisfied I was merely treating the symptoms—not striking at the seat of the disease. The question to be solved was, Where is the seat of this disease? Two days after the death of my fourth patient I was called to a young negro fellow in the same condition I had found the others. I determined to abandon my former practice, let the consequences be what they might; but had not fixed on any other. I examined minutely all his symptoms; listened patiently to his own account of his sensations; pressed all over the chest, abdomen, and in the pelvic regions. He complained only of the abdomen. When I attempted to examine the *spine* he assured me there was nothing the matter there; his disease and suffering were all in the abdomen. In my examinations of the spine, he began to complain soon after I reached the dorsal; he complained that I was pressing much harder than I had done before. There was a point at which he complained mostly, and as I receded from that point up or down he complained less; the tenderness on pressure was confined to four or five of the processes of the spine. I asked him where I hurt him by the pressure; he answered that the pressing hurt him at the point of pressure, but my pressure caused a greater increase of the pain in the abdomen than it did in the spine. Also, that the hurting in the spine and the increased hurting in the abdomen ceased as soon as I stopped pressing. I immediately acted upon this hint; scarrified and applied my cups on nearly the entire course of the spine, with two or three additional cups on each side of the tender point. After drawing some ten or twelve ounces of blood, or rather when I found no more could be drawn, I removed the cups and applied a mustard plaster on the whole course of the spine. He had been purging every fifteen or twenty minutes and vomiting occasionally before the cupping. After the cupping there was neither purging nor puking. I had ears of boiled corn placed around him under his blankets, and constantly replaced as they became cool. In half an hour the extremities became warm. From the steaming of the corn and the previous perspiration,

the surface was as wet as though he had come out of a bath. I then had him rubbed with dry mustard, and gave him two pills of cal. 2grs., sac. sat. 2grs., opium 1gr., to be repeated if necessary. *It was not necessary.* There was no return of any of the symptoms. The next morning I met another case, in which, although the feet and legs to the knees, the hands and arms to the elbows, were cold, still the cold sweating and shrivelling of the skin had not yet commenced. This case was cupped freely on the spine. Having no pills and being in a hurry, I gave about six grs. calomel and one of opium; directed the feet to the fire, with more blankets. In the evening, seven or eight hours after, I again saw this case; no symptoms of Cholera, but complained of being badly salivated, which continued for the next week or ten days.

Since that time I have had about one hundred cases of cholera. I have never seen but one (a little girl, seven or eight years old,) in whom I did not find the tenderness to exist. I not only have not lost a single patient with cholera since I adopted this mode of treatment, but I have *never failed to give entire relief from all symptoms* of the disease in the space of an HOUR.

Were it deemed necessary, I could detail many cases, but will only occupy a moment longer by giving my own case, which occurred on Saturday last. Up to dinner I felt as well as ever. I made my dinner on boiled cabbage, a radish, corn bread, blackberry pie, and glass of milk. In an hour and a half, or two hours, I felt an uncomfortable sickening sensation in the stomach and umbilical region—soon after vomited—in fifteen or twenty minutes purged—natural—soon after vomited again—followed by another discharge from the bowels of moderate consistence—for another hour purging nearly all the time—light watery, or rather the appearance of dirty soap suds. The pain in the bowels at first slight, soon became very severe—constant desire for water—suppression of urine. I had not suspected myself the subject of cholera until I felt cramp in the feet with coldness. Even then I could not detect with my own efforts the characteristic symptom, *tenderness* of the spine. I called a servant and caused each spinous process to be pressed upon. I found the servant could create the same hurting in the spine, extending to, and aggravating the pain in the abdomen, which had been described by others, when the dorsal vertebræ were pressed. I immediately had my spine, and I believe my entire back, covered with cups. If the servant's awkwardness and roughness could increase the counter-irritating effect of that operation, I had the full benefit of it. Under the influence of

this disagreeable and painful operation, I not only felt relief but comfort, when compared with my former sensations. The cupping over, I took five or six grs. hyd. cum. cret., and one gr. opium, and two grs. tannin. I was relieved of all the symptoms by the time the cups were removed. No discharge from the bowels until last evening, very little—natural in color and consisteney. To-day, small one, showing the effect of the mercurial alterative on the liver; yesterday, the kidneys were more active than usual. Since Saturday night, I feel no other inconvenience than debility and hunger.

I know as little of the causes of cholera as any one. Nor do I know how those causes (if external) enter the system. Nor do I know how they impress the system so as to cause the disease called Cholera. But I feel sure that about the first effect of *the* cause manifests itself in or about the spinal cord and spinal nerves.

As to the contagion or non-contagion of cholera, I can only say, as the result of my observation, that the disease often occurs under favorable circumstances in persons who never saw the disease. But I think those who are exposed to the disease are more apt to take it than those who keep themselves at a distance.

ART. VII.—*Case of Prolapsus Uteri: by* DR. J. N. SLEMONS, of Monticello, Ark.

THE wife of S. G. was confined in labor on the 24th of Feb., 1855, P. M., and on the 26th, A. M., she was delivered of a fine healthy child. She was attended by an old negress belonging to the family, who had gained some reputation in the community by attending women in parturition; being in such emergencies considered well skilled.

After the lady was delivered of the child, the old negress set in to get away the placenta. She commenced by pulling at the umbilical cord, (the lady was subject to falling of the womb,) which, after some time, with considerable efforts, she brought down, and the womb with it. She drew the whole mass of the placenta externally, except some of the long fibres which lay in the mouth of the womb, which was pulled down about two inches externally. After making some efforts to extricate the after-birth, as she thought, she concluded that it could not be got away, and that a physician had better be called in. I was sent for, and about six hours after the birth of the child arrived at the lady's cham-

ber, where I met the old negress, who told me that her mistress was in a dangerous condition, and that she was not certain that I could give her any relief, "For," said she, "I have pulled as hard as I can, and I can't get it to come away." After I had listened to the story of the negress, I made an examination, and I found to my great astonishment the placenta already discharged. I lifted that out of the way, and on further examination, found that the mass which the negress had been trying to extricate was the womb itself.

It was now some four or five hours since the neck of the womb had been forced externally; and by the irritation which had been produced, the neck of the womb had become considerably swollen and rolled back on itself, resembling the convolution of a cap-brim. The lady, from the time she was delivered of the child, had suffered the most excruciating pain, which she supposed was efforts of the womb to discharge the placenta. I immediately began to adjust the prolapsed womb: I placed three fingers of the right hand about the os uteri, and by gentle pressure succeeded in replacing it in the pelvis.

I would not offer this case to the public were it not that the world is suffering under a load of pretended or false modesty, of which the above patient came near being a melancholy victim. She assured me that she knew that she ought to have had a physician, but she could not bear the idea. By hearkening to the voice of mistaken delicacy, thousands of women have been deprived of health through life, and hundreds, in a moment little expected, have been hurried to their last account. Nine-tenths of the cases of prolapsed uteri are the result of the attendants' want of skill and ignorance of the anatomy of the organs concerned in parturition. The midwife, like a maniac contending with the surrounding elements, strikes and cuts without end or aim, and with a great deal of anxiety she is constantly trying to end the case, by urging the patient to make good use of her pains; often forcing the child away, as she would tell you, to relieve the poor mother. This is the only reason given. We hope the time is not far distant, when false modesty on the one hand and butchery on the other will be discarded and arrested.

Believing this case to be of no small import to the community at large, I offer it for publication.

ART. VIII.—*Cases of Yellow Fever; from the Case Book of the late* A. HESTER, M.D., *late Editor of the N. O. Med. and Surg. Jour.*

——"To know that which lies before us
In daily life, is the prime wisdom."

"A wise physician, skilled our wounds to heal,
Is more than armies to the public weal."
—*Mottoes from the title page of Dr. Hester's MS. Case Book.*

FEW medical men of his age and of his era have treated so many cases of Yellow Fever as the late Dr. Hester. Of the results of his opulent and exuberant experiences, he has hardly left a trace except the six following cases, which were for the first time read by the Editor of this Journal, near the close of May, 1855. Familiar with the whole course of Dr. Hester's practice in the Charity Hospital of New Orleans, the present Editor feels a melancholy pleasure in submitting to the readers of this Journal these instructive pathological *souvenirs* of one much lamented—now beyond the reach of praise or censure, who

"Sleeps well after life's fitful fever."

The case book from which these histories are taken, is unfortunately blank, excepting eighty or ninety pages, including "Notes and Observations in Mexico" during Dr. Hester's services as a medical officer in the army of the late General Taylor. It is intended to publish, in future numbers of this Journal, the remaining papers—valuable to the living, mementos of the dead.

The bent of Dr. Hester's mind was practical in an eminent degree. Desirous of curing his patients, yet, like others, sometimes failing, he lent a willing ear to the suggestions, and even tried the modes of treatment which his professional friends found, or thought they found, the best adapted to ensure a favorable result, particularly in Yellow Fever. In therapeutics he was not a rontinist. Energetic as a therapeutist, yet open to conviction, he sought for truth from what source soever it emanated. His mode of treatment was marked by decision and perseverance. When he gave the antiphlogistic, the stimulant, the expectant or any other method which he adopted for the time and case, a trial, it was a thorough one.

The stream of pathological description running through these histories is lucid—

"Though deep, yet clear; though gentle, yet not dull;
Strong without rage; without o'erflowing, full.

The entire series of Yellow Fever histories, amounting to six, will be offered to the reader. Hence, so far as the Editor is concerned, they cannot be called picked cases, though they are of great interest, inasmuch as they happen to be, to a great extent, typical cases illustrating the most prominent features of several modes of treatment followed in New Orleans twelve years ago. The year in which these histories were written is omitted in the case book; but I find on referring to my MS. vol. xii, for 1843, that several of these cases are recorded, as that of W.W., p. 176, MS.; that of H. F., which is CXXII in my series of Yellow Fever dissections, &c.—Ed. N. O. Med. Jour.

Case 1. *Yellow Fever.*—A. G., *æt.* 26, just from the Red River, of this State; follows steamboating; stout, muscular; of a highly sanguine temperament; hair light, sandy and curly; face, breast and eyes intensely red; was attacked about eight o'clock, 8th of August, with a chill, attended with its usual *prodromes*, succeeded by the usual febrile phenomena, such as pains in limbs, back and head, thirst, nausea, &c. In the evening of the same day he entered ward No. 24, bed 319. H. S. presd.: v. s. q. s.; submurias hydrargyri grs. xv *statim;* to be followed next morning by ol. ricini ℥ ij; cold applications to the head, hot mustard foot bath. I saw him on the morning of the 9th of August for the first time. He lost 30oz. of blood by the venesection of the previous evening, which relieved pains in back, the cephalalgia, and produced abundant bilious vomitings, and reduced heat of skin. The proto-chloride hydrargyri et ol. ricini determined three or four operations. The amount of blood drawn was 30oz.

Present condition: spent a restless, a bad night; little or no sound sleep; cephalalgia; some lombalgia; restless; eyes highly injected; keeps them partially closed. Skin about breast, neck and face intensely red; cheeks flushed; tongue broad and loaded with a mixture of a white yellowish coat; unquenchable thirst; skin hot, but slight tendency to softness about forehead. Distinct *epigastric pulsations*, not, however, as violent as I have observed; pulse full, rather soft, quick, from 100 to 106 pulsations per minute; respiration 40 do.; urine continues to flow in small quantities. Ordered, from 15 to 20 oz, of blood by cups from epigastrium, followed with cataplasm; from 10 to 12 oz. of blood from mastoid; ice-water to head; have mustard foot bath repeated every two hours; emoll. enema (cold) every three hours.

August 9th, Evening, seven o'clock. Cups to epigastrium, removed

the sense of weight at the stomach, and dissipated the cephalalgia; more tranquil; skin hot; pulse quick, slightly resisting, irritable, a little irregular. I have often remarked that the slightest effort, or movement of the patient accelerated the pulse and increased its force, far more than in any other fever; hence the great importance of perfect quietude and absolute repose of both body and mind. Pulse from 90 to 95 per minute; respiration more regular and less frequent, about 32 per m.; much disposed to dose; urine scanty; great thirst; in other respects the same as yesterday, except, perhaps, the tongue is more loaded; no epigastric pulsations. At the earnest request of Dr. * * *, of this city, who happened to be present at the time of my visit, I consented to have this man again bled *ad nauseam;* surface of body to be sponged with acetic acid and water; lumps of ice to quench thirst; hot mustard pediluvium; iced applications to head.

August 10th, eight o'clock, A. M. The patient was bled to 65oz. last evening before nausea was produced, although the blood was drawn while sitting up in bed; from this fact, some idea of the malignant intensity of the fever may be formed. This loss of blood determined nausea, slight syncope, moist skin, moderate flow of urine. No sleep last night; complains of great prostration; surface of body is assuming a yellowish hue, which I regard as quite unfavorable to the issue of the case, so early in the disease. Tongue coated: restless; says his head feels "light;" thirst; stomach irritable; gaseous eructation; skin cool; pulse regular, soft, 80; respiration 25; eyes remain closed; no epigastric pulsations; nausea. Prescribed sulphatis quiniæ ʒj, sulph. morph. gr. j., muc. g. arabic fʒ viij. mix.; one-half per anum; the remainder in four hours; also the following, to correct the acidity of stomach and allay the nausea: aquæ calcis fʒ x; tablespoonful, frequently repeated; lumps of ice, cataplasm to epigastrium; hot mustard foot bath. Evening of the same day: has been restless all day; anxious expression of countenance; nausea and vomiting; eructation; sighs frequently; did not retain the enema of quinine more than half an hour; great thirst. Ordered a large blister to epigastrium; followed by emoll. cataplasm; sponge surface with lime juice, and repeat hot mustard pediluv., and the following anti-acid and anti-emetic mixture: R. sub. carb. sodæ. ʒj., mur. sodæ. gr. xv., morphine gr. j., aquæ. font. fʒ vij. mix; one-fourth every half an hour, or according to the indications. Whilst writing down the above prescription, he grew very restless, complained of nausea, raised his head from the pillow and called for a vessel, into which he ejected

half a pint of a thin, dark colored fluid, resembling a weak decoction of coffee, differing, however, from genuine black vomit in many particulars. After giving the requisite instructions to the nurses, I left the patient to his fate, hoping that the means which had been employed might prove successful. He afterwards ejected a somewhat similar colored fluid; during the night he became more calm, ceased to vomit, in a great measure, and expressed himself as being better. I still had some hope, as the matter he had thrown up was far from being the genuine *vomito prieto.*

Unfortunately, during the absence of the nurse, and when the night watch was on duty, whose business it is to act for the nurse, between the hours of two and three o'clock, A. M., the blood began to stream from one of the punctures made in the vein, and this continued without the knowledge of any one, until one or two pints, as was supposed, but perhaps much more, had been lost, and in thirty minutes afterwards he rapidly sank and expired.

Autopsy five hours after death:—Exterior habitude; body pale yellow; muscles rigid; stomach contained six ounces of pale yellowish mucous; mucous membrane covered with an extraordinary quantity of mucous; it was thrown into folds or duplicatures,—*mammellonated,* thickened, and in some parts slightly injected, but did not seem to have suffered any very serious lesion. Duodenum rather darker than natural; other portions of intestines healthy, with occasional patches in the small intestines of increased redness as in the stomach. The *plaques* of Peyer quite vascular; nothing bearing the least resemblance to black vomit in *primæ viæ;* liver of florid yellow colour, and vessels loaded with a dark blood; no appearance of bile in *pori biliarii,* but instead a pale *gelatinous fluid,* analogous to the contents of the gall bladder in those cases, which are said to bear some resemblance to a *dropsical oyster;* vena cava et vena porta contained good coagula; gall bladder, enormously distended with a pale-colored fluid; was seven inches in length; kidneys contained a little muco-purulent fluid; urinary bladder nearly empty, contracted, containing one or two oz. of a brown yellowish fluid, loaded with mucus; its mucous membrane vascular. Lungs perfectly collapsed and healthy. Heart enlarged, slightly, and its walls paler than usual; contained dark coagula, having an albuminous flake for its *nucleus.* Brain and membranes normal.

Case 2. J. J., German, *æt.* 26, single; has resided in New Orleans *only three months;* was attacked *forty-eight hours before he reached the hospital.* He states that he came to the clerk's office, situated at the entrance to the enclosure which surrounds the buildings, in a carriage, on the evening of the 12th of August, and entered Ward No. 24, bed 313. As he was received after the evening visit, nothing was done for this man till the morning of the 13th, when I saw him about eight o'clock. About forty-eight hours previous, he states that he felt indisposed—was seized with *malaise,* debility, pain in his limbs, across the lower part of chest, and violent cephalalgia, followed by high fever.

As he now lies before me, he is stout, tolerably muscular, especially about his chest and upper extremeties, perhaps because of the constant exercise of these muscles in rowing passengers across the Mississippi; has light hair, a fair complexion, and light blue eyes, and is of a sanguineous, engrafted upon a lymphatic temperament; face red; cheeks flushed, much burnt from exposure to the sun; ascribes his attack to the combined influences of the sun by day, and the damp humid air by night; pulse rather full, developed, not very hard, between 90 and 95 per minute; tongue hot to the touch, and intensely red at the apex and around its borders; loaded with a very white long fur on the dorsum; great thirst; seems drowsy, as if under the influence of a *narcotic poison;* conjunctivæ highly injected; respiration unembarrassed, regular, about 28 per min.; bowels regular; skin hot and inclined to be soft; great cephalalgia. *Prescription:* 12 vel 15 oz. blood from *mastoid;* seidlitz powders, repeated until they operate freely; warm saline foot bath; tepid infusion of orange leaf; enema of muriate of soda.

Evening of the same day, (13th) at six o'clock, cups relieved the cephalalgia; skin less moist; hotter than in the morning; the seidlitz powders moved the bowels three or four times; pulse quick, compressible, 100 per minute; respiration 26 do.; tongue coated in the middle, with long fur as white as cotton; blood-red on its edges; urinates quite freely; eyes very much injected. Ordered: hot mustard footbath every *two hours;* the surface sponged with acetic acid and ice-water until the heat of the skin should subside; *lumps of ice* the only drink allowed; enema of muriate of soda; cold applications to the head.

August 14th, Mane. Spent a quiet but sleepless night; tongue as yesterday; no cephalalgia; thirst; face, neck, breast and eyes very red; skin hot, but soft; pulse quick, compressible, 100; urinates well; neither nausea nor vomiting; several thin watery operations last night.

Ordered: Hot mustard foot bath; sponge body with solut. muriate of ammonia; lumps of ice.

August 14th, Evening. Face still continues red and covered with small white vesicles or phlyctænæ; tunica conjunctiva injected; tongue without change, perhaps not so much coated; gums intensely red; hæmorrhagic, but no discharge of blood as yet; bowels moved three times to-day; the solution of muriate of ammonia promptly reduced the heat of skin and quenched the thirst; pulse full, regular, quick and soft, 80 per minute; respiration regular, 20; full flow of urine; skin cool; disposed to slumber: the same treatment continued.

August 15th, Mane. Spent a bad, restless night; was partially delirious; no sound sleep; in other respects the same as the evening previous; bowels acted on three or four times; little thirst; found him with pulse at 80, soft, regular; skin cool and moist; no mental disturbance; some thirst; eyes still injected; urinates freely. Ordered an enema of quinine, x grs. every two hours. Evening. He kept the quinine, and declares that he feels "first-rate;" some thirst; no buzzing in the ears from the quinine; complains of fatigue in the loins; some sleep during the day; is quiet and cheerful; skin cool and soft.

August 16th, Mane. The enema of morphine which I ordered last evening determined some refreshing sleep; no delirium during the night; skin cool and moist; urinates freely; adnatæ yellow, in fact, the whole surface slightly jaundiced; tongue broad and cleaning; ordered enema of 10 grs. of quinine every two hours. Evening. Skin moist and cool; quiet; little thirst.

August 17th, Mane. Spent a good night; quiet this morning; skin almost normal; tongue rapidly cleaning; some thirst, but not urgent; eyes yellow; the vesicles on face are drying up; he is cheerful; desires to eat; all the secretions returning to their healthy point. Ordered a weak solution of quinine through the day; spoonful occasionally of beef tea; still improving.

August 18th, Mane. Slept well; tongue clean; no thirst; pulse and skin normal; cheerful; good appetite. Ordered light soups. The patient is rapidly entering the convalescent state.

August 21st. Discharged cured.

August 22nd, Mane. Patient vomited four or five oz. of thin greenish fluid; limewater was given, and he ceased to vomit; pulse 75 to 80, full, round and soft, in fact, quite natural; tongue slightly inclined to some dryness along centre, but moist and red on border; no appetite;

no nausea; thirst; prostrated; skin pretty good; lies with his eyes closed; is evidently better than on last visit; kidneys still continue to act well; slept quite well last night; took a little of the wine-whey, but preferred the porter. Ordered porter continued; lavement of chicken broth every three hours.

Evening, six o'clock. Pulse good, countenance more cheerful; tongue moist, apex and borders *red;* vomited but once through the day; asks for food; complains of dysury, doubtless caused by some slight irritation at neck of bladder. Ordered *fomentations to hypogastrium*; *porter continued; ice.*

August 23, 24, and 25. Continues to improve slowly; now very much emaciated, features elongated, and cheeks hollow; muscles wasted and flaccid; tongue, although quite clean in the middle, still it continues red on edges and at apex; bowels and kidneys continue to act well, save, however, on the evening of the 24th, when he complained of some difficulty in passing his water. Begs for some med. to make him micturate without pain. Ordered infus. sem. lini et sodæ; continue porter and chicken broth. On the evening of the 25th, urine flows freely; complains that I failed to allow him meat this morning, as I had incautiously promised him. The patient is convalescing apace.

W. W. continued to improve rapidly up to the 29th of August, when he arose, left his bed and walked the ward, barefoot, soon after the floor had been washed, and on the following day found him with cephalalgia; some febrile excitement; thirst; pain in abdomen; tongue moist; no appetite. Ordered ol. ricini; cold applications to head; hot mustard foot bath.

August 31st. Less cephalalgia, fever abated, some thirst, scanty urine. Proscribed all food, and ordered cold drink. The febrile excitement and cephalalgia gradually subsided; his pulse fell to the natural standard, 75; skin cool and moist; little thirst; the urine, which was scanty for a few days, is now more abundant. The pain in the abdomen, which was attended with dysenteric symptoms, is relieved by warm cataplasms, fomentations, anodyne enemas, &c.

Sept. 4th. He has been taking porter for a few days, and beef tea, cool drinks, &c. He sleeps well, some appetite, and is gradually convalescing.

In a few days, W. was discharged, perfectly cured.*

* My notes of this case extend beyond the period indicated by Dr. Hester: Sept 4th. W. W. is much prostrated and emaciated. Sept. 6. Convalescent. Oct. 4th. Is going about for the first time.—ED. N. O. MED. JOUR.

Case 3. W. B., an Irishman, *æt.* 29, resident of New Orleans fifteen months, entered ward No. 5 the 24th of July; sick three or four days before his admission. He was attacked with a chill, followed by the usual febrile phenomena and pain in back and head. In the evening of the 24th Dr. —— prescribed cups freely to epigastrium, followed by a warm cataplasm; hot pediluv.; gum water iced. I did not learn from Dr. —— what treatment the patient had tried before his admission. It may be presumed that little or nothing was done. I saw this man on the morning of the 25th, at eight o'clock, my usual hour of visit. His face was flushed; skin hot and slightly inclined to be soft; no decided perspiration; restless, and spent a disturbed night; complained of pain in the head; thirst constant, eyes partially closed; excessively tender over the epigast.; the cups ordered by the H. S. had procured little or no relief, no doubt in consequence of their careless and unskilful application. He was unable to bear the least pressure over the epigastrium; odor of the breath fœted, *sui generis;* tongue coated in middle, but red at tip or edges, dry; little or no urinary secretion; intellect tolerably clear; pulse 105, quick and rather strong; calls for cold drinks. Prescrip.: cups freely to epigast.; cataplasm emoll. enema; cups to back and head; cold applications to forehead; gum water iced; sinapised pediluv.

In the evening he had nausea and vomiting; extremely restless. H. S. pres. ℞—sod. bi-carb. ʒjss; morph. sulph. gr. jss; aquæ distill. ʒjv; m.; dose—spoonful; gum water; lumps of ice.

During the night he purged a very dark matter, and threw up half a bowlful of genuine black vomit three or four times; no sleep; some delirium.

On the morning of the 26th found him lying with his eyes closed, and occasionally uttering a plaintive and melancholy cry. Now the icteric tinge began distinctly to show itself over the chest, face and arms; comatose, but when aroused would speak incoherently; hæmorrhage from mouth and gums; called for nothing; indifferent to surrounding objects; pressure over the epigast. extorted cries from the patient. On examination I found he had not been freely cupped, as ordered the previous morning; hiccough at intervals; pulse about 60, full, regular and soft—in fact, just such a pulse as one might expect to find in a man plunged into a deep sleep—*balmy* sleep, "sweet restorer"; skin cool and moist; respiration between fifteen and twenty per minute, regular and profound. Ordered the nurse to apply sinapisms to his extremities; to allow him ice, if he should manifest any signs of thirst.

I returned in the evening of the same day between five and six o'clock, and found he had expired amid terrible agonies, black vomit and profuse nasal hæmorrhage.

Between six and seven o'clock, or two hours after death, he was placed on the table, and, assisted by Dr. E. D. Fenner, of this city, I proceeded to make the autopsy. The following notes of the case were drawn up on the spot. *Exterior habitude:* the surface of the body of a fine golden or icteric hue, which was universal; no other external discoloration; no ecchymosed spots discovered; little emaciation; rigidity; features contracted, but not distorted. *Brain:* membranes natural; ventricles filled with a perfectly colorless serosity; some plethora of the bloodvessels; in other respects healthy. *Chest:* both lungs collapsed; the right more completely than the left; of a very dark pink color; no effusion, no adhesions. *Heart and Pericardium:* no coagula in the cavities of the heart; no effusion in pericardium. *Abdomen:* omentum attenuated, dark and bloodvessels full. *Stomach* contained a pint and a half of a thin, dark fluid blood, without *flocculi* or any other resemblance to black vomit; in fact, defibrinised blood. On tasting it, I found it precisely like common blood, destitute of that peculiar alcaline bitter taste detected in well characterised black vomit. Mucous membrane thickened and entirely red, vascular, and marked with broad striæ of a darker hue. On cutting through the mucous membrane and introducing the handle of the scalpel beneath, we could easily detach it in perfect layers from the white subjacent muscular coat. The vascular structure of the mucous membrane formed a beautiful net work. The small intestines filled with a very dark thick matter; the *plaques* of Peyer and the glands of Brunner were very red and highly inflamed and prominent. The rest of intestinal mucous membrane of a dark mahogany color; transverse colon not one-fourth its usual size, contained small semi-hardened black balls in its cells. Liver, engorged with a dark half-coagulated blood; the convex surface of the liver rough and granular; its color corresponded with the icteric hue of the skin. We could not detect any bile in the *pori biliarii;* the gall bladder perfectly empty, flaccid, resembling a small dropsical oyster; urinary bladder empty, and of its natural pale appearance.

Case 4.—*Recovery from Black-vomit.*—W. W., *æt.* 28, native of England, has resided in New Orleans five months; of medium height, rather slender form; florid complexion; dark hair and eyes; of a nervo-sanguineous temperament; entered ward No. 5, bed 61, on the after-

noon of the 14th of August, sick three days. He states that he was attacked with a chill, malaise, pains, &c., followed in a few hours by intense reaction, great heat, pains in limbs, cephalalgia, lombalgia, thirst and the like. The only medicine which he has taken was a dose of ol. ricini. Present condition: face and general color of a dark florid appearance, more particularly the cheeks; pulse full, round and soft; the volume of the artery seems larger than natural; number of pulsations, 100 per minute; respiration over 20 do., regular; skin hot, but decidedly moist; the tunica conjunctivæ injected; intolerance of light; dull of hearing; tongue nearly clean, moist, and cupped in the middle, discolored on the borders. Intense dull heavy pain in frontal region, and acute pain in the lumbar spine; pains in limbs still persist; cheeks flushed. He groans constantly and sighs profoundly; intense heat in *epigastric center;* thirst; bowels free; tongue is cool to the touch; disposed to slumber. Ordered repeated hot mustard pediluv.; iced mucilaginous drinks; mass. hydrargyri gr. xv, *statim;* emoll. enema; cups *freely* to each mastoid; ice to head.

August 15th, Mane. No sleep last night; the cups produced only partial relief; vomited twice last night; pulse full and developed, 95 to 100; cephalalgia; skin hot and dry; face flushed; unquenchable thirst; jactitation; respiration 25; sighs and groans; is discouraged; tongue as before, more red along its borders and at apex; keeps his eyes closed. The mass. hydrargyri produced four or five good operations through the night; lips intensely red, of a vermillion hue; some nausea. Ordered cups again to each mastoid, and as he now for the first time manifests great uneasiness from slight pressure over the epigastrium, cups were also ordered to this part; to be followed with emoll. cataplasm; hot mustard pediluv. repeated; sponge surface with iced water until heat of skin abates; ice to head, lumps of ice to quench thirst.

August 15th, six P. M. Cups were *freely* applied as directed, (I have no means of measuring the amount of blood drawn, but my instructions are usually to deplete to relief); the application of the cups removed all pain from the epigast., still he has slight cephalalgia; more quiet than this morning; slept a short time during the day; vomited three or four times a small quantity of greenish bile; thirst; pulse full, quick, soft, 95 to 100; skin rather hot, less so than in the morning; urinates freely; one operation from bowels; tongue moist and a little furred; eyes very sensible to the light; face not as much flushed.

August 16th, Mane. No sleep last night; great thirst since yes-

day; vomited a small bowl nearly full of a very dark and rather bloody looking *fluid*, in fact, such as is found in the stomachs of some subjects that have thrown up black-vomit during life; hiccough from time to time; pain in head and back; skin hot and rather moist; tongue *clean*, moist, red on edges; eructations of gas; litmus paper laid on the tongue assumed a pale blue appearance; pulse full and soft, 90; respiration good; urinates quite freely; had *hæmorrhagia nasi* this morning; complains of nausea. Litmus paper, when plunged into the black-vomit ejected from the stomach, was scarcely affected.

August 16th, six P. M. He has not ejected any black-vomit since this morning, but instead, a dark greenish bile, three or four times; skin cool and moist; tongue *clean* and *moist*; pulse soft, quick, irritable, 85 vel 90; has not vomited anything for the last few hours; no nausea; bowels freely opened by a saline enema; thirst; urine continues to flow; better and more quiet than this morning; slight cephalalgia. Ordered sinapised cataplasm to lower extremeties; enema of sulphate of quinine and tinc. opii., ten grains of the former and thirty drops of the latter in a solution of starch; repeated every two or three hours, according to circumstances.

August 17th, Mane. He vomited some yellowish bilious matter, mixed with a great deal of mucus; retained the enemas; skin cool and moist; pulse soft, 85; no pain in any part of body; evident prostration; tongue perfectly *clean*, moist, red on edges, spread out; great thirst; eyes of a yellowish muddy hue; features relaxed and elongated. Ordered repeated enemas of solution of nitrate of potass. et morph.; London porter, in small quantities; body sponged with a saturated solution of muriate of soda, (warm); sinapisms to lower extremities; blister to epigastrium; ice in small lumps to quench thirst. Six, P. M. The porter and ice sit pretty well on his stomach; still vomits occasionally, when he swallows any fluid; he retained several of the nitrised enemas; slept a little; the blister draws well, and seems to allay the irritability of the stomach in a great measure.

August 18th, Mane. Slept some last night; vomited from time to time; eructations of gas; pulse 85, full and soft; skin moderately warm and moist; free flow of urine; bowels regular; same treatment continued.

Six, P. M. Groans frequently; complains of blister; takes the porter with evident *gusto;* pulse as this morning; skin warm and moist. Ordered quin. and morph. per anum.

August 19th, Mane. He retained the enemas of quinine and mor-

phine; took the porter, in small quantities, through the night, and slept well. Tongue continues clean and moist; some thirst; skin warm and moist; pulse good, 85; eructations of gas; is growing peevish. Omit the morph., and ordered ten grains of quinine every two or three hours, dissolved in beef tea; sinapisms to extremities; porter. Six, P. M. Some sleep through the day; retained two or three of the enemas; has thirst; calls for wine; disposed to slumber; slight nasal hæmorrhage to-day; urine flows freely; no vomiting since this morning. Porter only continued; ordered blistered surface sprinkled with one grain of morph.

August 20th, Mane. Says he slept none last night, but nurse asserts that he did sleep; the same as yesterday evening in other respects; tongue a little redder than heretofore, and inclined to become dry; pulse full and soft, 80 to 82; respiration normal; ejected a draught of water which he swallowed this morning; *singultus;* blistered surface red and discharging. The only dressing used has been emoll. cataplasms, continue porter and ice; repeat enema of weak beef tea; one grain of sulph. morph. sprinkled on blistered surface. Six, P. M. Continued to vomit when he took fluid into his stomach; occasional hiccough; great thirst; slept some during the day; urinates; tongue more red, but not so dry as this morning; pulse as yesterday; clamors for Madeira wine. Ordered porter in small quantities; aqua calcis, tablespoonful as often as nausea and eructations recur; saline pediluv.; morph. to dust blistered surface.

August 21st, Mane. Slept pretty well last night; took his porter; slight vomiting occasionally; the limewater, however, checked it almost immediately; none since. Patient confesses he feels better; looks more cheerful; pulse full, soft, 80; skin corresponds with pulse; all the secretions seem to flow pretty well; he, however, states that he has some difficulty in passing his water. Ordered anodyne enema; continue porter; spoonful of chicken water occasionally.

Six, P. M. Patient vomited about eight or nine ounces of a very dark, greenish bile, and passed from his bowels a large quantity of black matter, which the nurse said resembled *tar*, was thick and very fœtid. His pulse is about 75, soft and regular; skin moist, wrists and ankles covered with a profuse cold sweat; the rest of his body moderately warm; seems discouraged; imagines that he has black-vomit; says he feels badly; is taciturn, not inclined to talk; tongue more highly colored, but still quite moist; when asked if he desires any food, called for milk; seems indifferent; careless of exposure. I regard this case as very re-

markable in some respects, which I shall endeavor to develop after the issue is determined. Seeing the prostrated state of my patient, and fearing an approaching exhaustion, I ordered a little wine-whey, and should this not act well on the stomach, the porter may be substituted; sinapisms to upper and lower extremities, a grain of morph. to be spread over blistered surface, and left him to nature.

Case 5. H. F., a German, *æt.* 28, light complexion, blue eyes, nervo-sanguinous temperament; large muscles; in fact, a man of herculean structure; entered ward No. 15, July 26th, in the service of Dr. ——. This man had been sick four days before he came to the hospital. He was by occupation a boatman, in and out of the city for the last six years, but unacclimated.

At the time of his admission he was laboring under little febrile excitement, and scarcely any pain. During the four days of his indisposition prior to his reception at the hospital, he had the ordinary *prodromes* of Yellow Fever, such as chills, malaise pains, febrile action, thirst, injected eyes; furred tongue, constipation, dry skin, cephalalgia, &c; still he was enabled to walk his room, which he continued to do in spite of the advice of his friends to the contrary.

On the day he reached the hospital he had little or no fever, and was almost entirely free from pain. From the period of his admission up to the morning of his death, his skin was cool, moist; pulse soft, regular; tongue moist and slightly coated with a white fur, but none at the tip and edges; tongue thickened and tumid; thirst; in fact, he seemed and thought himself convalescent. But on the evening of the 28th, that most fatal and terrible symptom, the black vomit, made its appearance. He continued to eject large quantities of it from time to time; stomach irritable; thirst. On the evening of the 29th* he ceased to throw up the black vomit, and instead, a thin white or rather almost colorless flocculent fluid, containing a great deal of mucus; this fluid he continued to eject from the stomach at longer or shorter intervals up to the moment of his death, which occurred about seven o'clock on the morning of the 30th of July, having been delirious† before death.

Autopsy three hours after death: No emaciation; muscles extremely

* I will not add my notes of this case only in so far as it regards one or two particulars: on the day before this patient died, my notes then made read thus—intelligence and sensibilities natural; countenance animated; when he vomits, he holds his bowl; saw him vomit a thick mucosity twice; when annoyed by mosquitoes, he brushed them away; speaks with ease, &c.—B. DOWLER.

† I learned that during the night he fell out of bed.—B. D.

rigid; arms demi-flexed, and I found it utterly impossible to extend them. *Exterior habitude:* surface of body pale and slightly jaundiced; small petechiæ about the arms and chest; no other discoloration of the surface of the body. *Head:* brain, great vascular injection; no softening, no disease of the membranes; cutting into the substance of the brain, we found numerous bloody spots dotting the cut surface; in fact, as large as a pea, and altogether the most striking case of the kind ever witnessed by any of the medical gentlemen present; small quantity of *serum* in the two lateral ventricles. *Thorax:* both lungs collapsed and sound, of a grayish appearance in spots. *Pericardium and heart:* fluid in the pericardium, normal in quantity; numerous small *petechiæ* clustered together in the right auricle, similar to those observed on the arms and chest; no coagula in the cavities of the heart. *Abdomen:* omentum beautifully injected and of a dark color; stomach intensely inflamed, injected, very vascular; mucous membrane of a dark brownish red hue, *mammillated*, thickened, and so tenacious as to be easily raised by the finger without tearing. From four to eight ounces of a thin colorless fluid, such as he vomited, found in the stomach, loaded with flakes of thick mucus or flocculi. *Intestines:* small, injected, and mucous membrane reddened; solitary glands and *plaques* of Peyer prominent, red, phlogosed, turgid with blood; no black vomit in any part of the alimentary canal; kidneys healthy; liver marked with yellowish striæ externally, of deeper and more uniform yellow color internally; blood vessels of liver contained a little dark blood; gall bladder contained half an ounce of a dark thick tenacious bile. The blood which escaped from the large vessels, in extirpating the heart, was very dark and fluid at the time it escaped, but soon after formed a tolerably consistent clot. Bladder perfectly empty and contracted, vascular. After the examination, as detailed above, I proceeded to dissect certain muscular parts of the subject, with a view partly to see if any intermuscular hæmorrhage had taken place, such as described by Surgeon Maher in his work on Yellow Fever, but nothing of the kind was discovered in this case.

Case 6. Mme. ——, *æt.* 25, of fair complexion, well formed, habitually healthy, medium size, was attacked with a slight chilliness on the morning of the 4th of September, at the corner of —— streets; has resided in this city about thirteen months, and never had any of the fevers of the country. She stated to me, on the fourth, between the hours of six and seven, P. M., the time I was first called to her assist-

ance, that her feet and hands continued cold for some time; afterwards, she was seized with violent frontal cephalalgia, lombalgia, fever, thirst, hot and dry skin, soreness of the globes of the eyes, constipation, &c.

A few days prior to the attack, her menstrual discharge came on, but for thirty-six or forty-eight hours before the seizure, it ceased suddenly, to return again on the evening of the fourth, more profusely than before, at which time I was summoned to her assistance.

Mme.'s state at my first visit, at seven, P. M., Sept. 4th: she occupied a small room, ten by fourteen feet, on the third floor, without any window fronting the street, and with a large folding-door opening on a gallery: several carpenters were engaged below, in removing an old floor, and in laying a new, which kept up a constant noise, that gave great uneasiness to my patient, and evidently increased the headache. I found her with a hot, but slightly moist skin; face flushed, red, swollen; eyes sensitive to the least light; intense cephalalgia, pain in small of back; thirst; tongue cuneiform, pointed, red, with a thin, rough, whitish coat towards the base; pulse quick, strong, 115 to 120; slight dyspnœa; the neck and breast very florid; constipation; an abundant menstrual discharge.

The strength, frequency and tension of the pulse, the vigor of her constitution, the period of the disease, joined to the cephalalgia, the lombalgia, hot skin, &c., induced me at once to order a free bleeding from the arm: cups she refused to have applied, on the ground that they would leave so many more marks on a skin naturally delicate and of a beautiful complexion. Ol. ricini. was ordered, to be repeated in large doses until the bowels were freely purged; hot lemonade, to encourage a sweat, and hot mustard foot bath, to divert the circulation and determine to the surface.

Sept. 5th, Six, A. M. She was bled in half an hour after I left her last evening, to about 25 or 30 oz. of blood, which produced slight syncope, nausea, some vomiting, sweats, &c. The bleeding relieved the head and back, the oil operated four or five times during the night, the warm lemonade, aided by the hot foot baths, kept up a fine perspiration. I find her this morning somewhat refreshed, with slight cephalalgia, skin moist, but hot; but little thirst; tongue pointed and more coated, moist; the menstrual discharge nearly arrested; pulse, quick, soft, 98; respiration easy; flow of urine. Ordered enema of muriate of soda, sulph. quiniæ. ℥ss., muc. gm. arab. f℥ viij. mix. Spoonful every two hours; warm lemonade. Repeat h. m. foot baths; ice to head.

12 M. on the 5th. In consequence of constant noise below, made by carpenters, she complains of cephalalgia just on the top of the head; bathed in a profuse perspiration; skin rather hot, when the hand is suffered to remain on the surface of the body for any length of time; but very little thirst; took four or five potions of the solut. quinine; pulse quick, soft, about 90; tongue coated, with a white fur about base and middle, pointed and red at apex; bowels moved once by the enema; complained of some slight dyspnœa; face slightly swollen and flushed. Suspend the quinine. Ordered enema of cool flaxseed tea; hot m. foot baths; cold applications to head.

Seven, P. M., same day. The noise having ceased below, the cephalalgia also disappeared: skin moist and less hot: some thirst: tongue soft and pointed: free from pain: complains of fulness of abdomen, caused, no doubt, by the awkward use of the syringe, by which air rather than fluid was thrown into the bowels: pulse soft, quick, 90. Continue same treatment.

Sept. 6th, Mane. Slept some last night: tongue as heretofore; skin rather hot, but soft: no flow of urine this morning: slight pain in back: thirst: feeble: pulse 88. Ordered emoll. enema; cold applications to head and breast: hot m. foot bath: iced gum water.

Noon. Cephalalgia, caused by the constant clamor of the carpenters below: skin moist and warm: tongue as heretofore: pulse quick, full, soft, about 82. Same treatment.

Nine o'clock at night. No cephalalgia: little thirst: tongue broader and moist: skin cooler and soft: begs for something to eat: pulse soft and regular, about 85. Continue iced gum water and rice water.

Sept. 7th, 10 A. M. Free from pain: slept well last night: no discharge of urine since last night: pulse regular, soft, 80: skin perfectly cool and moist: some appetite: tongue broader, red around edges and at apex: thin white coat along dorsum and at its base: but little thirst: intolerance of light: face still seems swollen. Continue rice water. Ordered the following: ℞. sulph. quiniæ. ʒj: muc. gm. arab. q. s. M. Make pills no. x: one every hour, up to two, P. M.: hot m. foot bath, should she feel the least chilliness.

The pills were taken: the skin and pulse were in excellent condition all day: little or no thirst: tongue cleaning: some appetite: free flow of urine: she lost during the day two or three oz. of blood from an unclosed alveolar abscess, which, strange as it may appear, prostrated her strength. An astringent gargle arrested this singular flow of blood.

From this day she rapidly convalesced. Next day, took soup, remained quiet: and on the ninth day left her sitting up, complaining only of debility.

ART. IX.—*Infantile Coma treated with Quinine and Chloroform:* by WM. D. ANDERSON, M. D., of Waterproof, Tensas Parish, La.

THE following case without note and nearly without comment, is summarily reported, with the supposition that in the vast number of similar cases occurring, and so generally followed with a fatal result, some of the profession may find it subserve a good purpose.

Mary A., aged 7½ months, on the 1st of April last, after an hour or so of fretfulness, about 2 o'clock P. M., became comatose; pupils contracted to their narrowest diameter; stridulous breathing, &c., having had no convulsions.

For two or three days previously she had taken without professional advice, on account of a perceptibly relaxed condition, with slight coolness and moisture of the skin and fretfulness, about one grain of quinine once in the day, which, as the child was supposed to be well, was omitted on the day of her attack.

The parents had lost at the same age, and precisely in the same manner attacked, after a few hours illness, two children next older, giving rise not only to anxiety, but to decided distrust of the ordinary treatment in such cases.

Unable to administer remedies by the mouth, 3 grs. of quinine were given by injection, there having been no derangement of the bowels.

Although there was no apparent irritation of stomach or bowels, a large blister was at once applied to the epigastrium, which drew in some three hours; scarified the mastoid processes, and applied cups; coma steadily increased; laryngismus extremely urgent; hæmatosis so faulty that I apprehended immediate death by asphyxia. Repeated the quinine, and administered chloroform, f 3j, upon a handkerchief held about two inches from the child's nose; a few inspirations made such impression upon the pulse that I felt doubtful whether I had not administered too much; but an immediate improvement in the breathing, removed the apprehension. Care was especially taken to supply abundantly fresh air, as the influence of the chloroform passed off, the symptoms increased, so that I sat by the child and controlled the breathing when obliged to

do so, by repeated, but cautious repetitions of its use. I had the satisfaction to see steady improvement. Some twelve hours elapsed from the beginning of the coma, to restoration to consciousness. On the next day I gave 1 gr. of quinine by mouth three times in the day. No return of paroxysm.

Third day.—Gave 1 gr. of quinine and 1 of calomel. Stomach irritable: soon followed by another paroxysm. Coma profound: all the symptoms of the first attack aggravated. Treatment by quinine by injection and chloroform by inhalation repeated, and prolonged at intervals, *pro re nata*, so as to avert asphyxia. Blisters were applied to the extremities: consciousness after some hours, again restored and was maintained from about 3 o'clock, A. M., to 4 P. M., at which time recurred paroxysm, the third. Same treatment: chloroform more liberally used, the child was again brought back to consciousness, which, as the secretions were now in good condition, was steadily maintained by an anodyne and supporting treatment. Recovery was complete.

It may be objected, that treatment by revulsion, though merely adjuvant, was without indication.

That the condition of the patient was asthenic, one of irritability is evident. Aggravated irritation could only be mischievous: directed and concentrated superficially it became therapeutic.

Refraining from further comment, I would acknowledge my indebtedness to Drs. Stone and Cartwright, of New Orleans, for practical observations illustrative of, and bearing upon the pathology of the case.

Louisiana Swamp, *May 18th*, 1855.

Art. X. *Turning by Taxis:* by J. C. Smith, M. D., of Fannin Co., Texas.

To the Editor of the N. O. M. & S. Journal.

Dear Sir:—I hope you will excuse me for troubling you with the history of a case of labor that I was called to attend; which I think may be of some interest to the profession.

On the night of the 4th of April last, about ten o'clock, I was called to see Mrs. W., in labor with her seventh or eighth child. She was a stout robust looking lady, with quite a prominent abdomen. She seemed

to be very low spirited, and was fully persuaded in her own mind that she would not survive her confinement. I gave her all the encouragement I could.

She said she had been complaining a day or two, but had been getting worse since late in the afternoon.

When I arrived she was comparatively easy, and bid fair to rest well the residue of the night. But that was a mistake; for her pains soon began to grow stronger. Upon instituting an examination *per vaginam*, I could detect nothing but a soft yielding mass, from which I could not clearly establish any particular presentation, as labor had made but little advancement. I then passed my hand over the abdomen, and a little to the right, at the fundus uteri, I found a round, hard substance, resembling the head of a child, as well as I could judge; and if so, it must prove to be a foot or breech presentation! What could be done to change the position of the child? Upon pressing on the head I found it would yield readily; I, therefore, resolved on my plan. On the application of taxis it seemed to move most readily to the left side of the mother. I accordingly continued my efforts in that direction, and by using moderate taxis on the head between pains it seemed to move gradually and without any difficulty to the left side. I then discontinued my taxis. The pains had become very severe; the membranes were presenting externally, and were so very tenacious, that it required several efforts before I could rupture them, when a great quantity of liquor amnii passed off. After rupturing the membranes, to my utmost satisfaction, I found the head occupying its proper position. After three or four strong and lasting pains, she was delivered of a fine daughter, weighing ten pounds. The case terminated quite favorably.

NOTE BY THE EDITOR.

The presentation in this case, when the examination *per vaginam* took place was not discovered, because, as yet none existed. Inasmuch as the fœtus had not yet been forced or impacted into the superior strait of the maternal pelvis, its head whensoever it might happen to be felt, for a time, was free, as well as its body, and might have changed its position without any external force. Such changes—they might almost be called fœtal gambols or recreations—often occurring towards the close of gestation, prove very embarrassing, if not alarming to inexperienced and timid mothers.

Nature is great in child-birth. An actual presentation of an unfa-

vorable character, as that of the arm or shoulder, has, after a long continuance—after the evacuation of the waters—after the contraction of the womb upon the body of the child, been overcome by a spontaneous evolution, as many can testify.

The turning, flexion, or rotation here attributed to *taxis*, may have been due solely to the natural mechanism of labor. It is probable that the obstetrician could not have prevented this natural movement. It is not easy to understand how lateral pressure on the abdomen could effectuate the turning in an intelligible manner. It is worthy of consideration, whether pressure upon the abdominal parietes might not be sometimes used as an auxiliary force in directing the head, &c. At the same time, it must be evident that if the fœtus, while swimming in the liquor amnii, no part being engaged in the pelvis, could be placed, it could not be retained in any particular position.

The special or efficient cause which generally directs the head in preference to other parts of the body, to descend and engage in the pelvis, is not satisfactorily explained; yet such is the natural history of parturition.

ART. XI.—*Remarks on Therapeutics*: by M. MORTON DOWLER, M. D., of New Orleans.

IT augurs no inconsiderable amount of good in relation to the usefulness and reputation of legitimate practical medicine, that a very notable change has of late years begun to manifest itself in the medical profession, touching certain therapeutic measures which have too long, and to too great an extent shaped the course of the practitioner, and governed his action in the treatment of acute and febrile diseases. I allude to blood-letting, purgation, mercurialization, starvation, and other depressing, debilitating, and depletory measures, usually denominated antiphlogistic. These have been called, *par excellence*, *curative measures*. Everything falling short of this therapeutic discipline in sthenic diseases, has been too generally set down as merely palliative, or as indifferent, or pernicious. Therapeutic adynamia being regarded as exclusively curative, under such circumstances, it has been brought about with a bold and unfaltering hand, and with breathless and excited haste. It is no intention of mine, in adverting to this subject, to deny that this adyna-

mic condition, thus superinduced by treatment, with all its palpable disadvantages, presents many points favorable to the recovery of the patient. It concerns us not so much, on the present occasion, as to how a cure may be effected, as to how it may be *best* effected. The question we now raise, relates not to the abandonment of this draining and exhausting treatment, or to its capability in the cure of disease; but to how far we may be able to lay it aside, or mitigate its evils; how far it is essential, and how far non-essential. The Materia Medica may be justly said to be without known limit. So wide in its extent, that it may be laid down as a very general principle that every known physical agent, to what kingdom or category soever it may belong, which is capable of strongly affecting the animal organism, is capable of becoming a curative agent if appropriately administered. And in direct proportion as this principle may be be found to be true, will the domain of the Materia Medica be found to extend itself, exhibiting the limited known, and the boundless unknown; administering a stern rebuke to the mere routinist as he is seen figuring on his narrow and tottering platform. With such a field in view, who should remain satisfied with the utmost he may ever be able to discover? How excellent soever may be the therapeutic means we may have already attained, the time will never arrive when we shall not have most abundant reason to seek those which are still more excellent. In the mean time, there is one important maxim which should be ever present with the physician, and that is to remove the disease with the least practicable amount of the morbid effects of remedies; and if, indeed, such effects must needs be produced, to select such capable curative agents as make the least *permanent* morbid impression. The morbid effects of remedies are a subject for serious consideration. An able work is much wanting on this subject, treating of diseases which are the direct result of medical treatment, and particularly of the treatment of which we have been speaking. These new elementary modes of morbid action, very properly invoke the aid of medicine to remove the untoward results of medication.

Amongst the reproaches that have been regularly uttered against the science of therapeutics,—the oldest, most popular, and useful branch of medical science—it has been urged that diametrically opposite modes of treatment are constantly pursued, and come forth claiming equal merit and efficacy at the hands of their advocates. Such objection can have no force in the estimation of any mind capable of reasoning and discovering truth; and the physician who admits the validity of such

objection, is wanting in capacity to defend, as well as practice his profession. This therapeutic antagonism, as thus assumed to exist, is without the least satisfactory proof, for the following reasons: 1st, the properties of therapeutic agents are almost always *not opposite to*, but merely *different from* each other. 2ndly, Admitting that two therapeutic agencies, as opposite to each other as possible in properties, may be proposed for the cure of a given case, it may so result that there may be in the same case a sufficient number of morbid conditions amenable in common to both agencies, that the one or the other remedy may cure the patient. 3rdly. There is no such thing as one disease being the reverse of, or the antipath of another; disease being characterized, not by antagonism, but by *differences*, so far as resemblances are *wanting*. The negro might as well be said to be the reverse of the Caucasian. Difference and resemblance are all that can be made out. In therapeutics, different or even opposite agents—if the latter can be said, in strict terms, to exist —by no means necessarily, or indeed generally, fail to produce common or similar results. We even see that the morbid and physiological effects of heat and cold are correlatively not in opposition, but similar to each other. Frost-bite and burn resemble each other, and cold and heat applied to the same surface will each in turn, relieve pain, and subdue inflammation. Every one knows that heat and cold, physically and as they manifest themselves to our senses, are but the mere differences in *plus and minus*. The doctrine of antagonism and opposition of one disease to another and of one remedy to another, was the capital error of the illustrious Brown, who saw nothing in either pathology or therapeutics but that which related to the two great antagonistic destroyers, *sthenia* and *asthenia*. In the same disease the leading symptoms of *invasion* on the one hand, and of *disappearance* on the other are often alike, as in palsy, in relation to which a learned author most happily says, "*tremor in corpore sano est prodromus paralyseos, in paralytico sanitatis*"* Hence when we hear of *opposite* diseases and *opposite* remedies, we hear little else than a misapplication of words, and a display of fallacious reasoning. The objection in question, therefore, so far from affording an argument against the science of therapeutics, is calculated to elicit the irresistable strength of the principles on which legitimate medicine is founded. Thus, in the same category of diseases, the most dissimilar agents may possess a sufficient number of curative points, and

* Wedelior Scripta.

co-incident actions—properties in common with each other, however different in degree—to cure or relieve the patients. We will suppose by way of illustration, that in a given case there may be five indications, on the fulfilment of three of which the life of the patient depends; and that on the fulfilment of the remaining two, depend the restoration of the patient to *perfect* health. Three very different modes of treatment might in such case be pursued, and there is nothing unreasonable in its so resulting, that, if, say, the first course of treatment were adopted, the first class of indications might be barely fulfilled; if the second course were resorted to, the whole first class and one of the second; and if the third course were adopted, both the entire classes of indications might be completely fulfilled, exhibiting, not the only curative, but the most highly curative, mode of treatment. It follows, then, that while excellence in therapeutics can only be attained by a profound study of medicinal agents, and morbid conditions; and that while legitimate medicine tolerates nothing short of all this; blind empirical systems often lead, not only to the cure of disease, but even to important discoveries. We may however advert to one empirical system which constitutes a remarkable exception, in never having, either directly or indirectly enlarged the domain of true therapeutic science; which is wholly incapable of doing so; and which is simply devoid of curative capacity; and that is homœopathy. In relation to its philosophical claims, it is wholly unworthy of serious attention or examination. It calls on its votaries to deny the more ordinary, obvious, self-evident requisites necessary as *intermedia* between cause and effect. Till infinitissimals can be admitted in diet, drink, food, air, and other agents taken into the human body, infinitissimals can never be admitted in rational therapeutics; and it is quite as philosophical to propose as diet the decillionth part of a roasted potato, or of a corn dodger, as the appropriate remedy to rescue an individual from death by starvation, as to propose the decillionth part of a grain of any medicine for the cure of any disease. Practical homœopathy can only maintain its existence by delusion, or fraud, or both. Its unprincipled adherents often administer, under the mask of their creed, the largest and most dangerous doses of active drugs; or with a pliancy of conscience never before known to charlatanism itself, they give notice that they are prepared to treat patients, at their option, homœopathically, or "allopathically!" It has been claimed for homœopathy, by some, that though it is inherently void of any curative power, whatever, it has rendered some service to the science of therapeutics in

the following respects; 1st, that being in itself a mere therapeutic nullity, it shows, in its fortunate cases, how frequently patients may recover without the aid of medicine; 2ndly, that in fatal cases, it exemplifies the natural course of disease uncontrolled and unmodified by medical treatment; 3rdly, that it exemplifies the therapeutical effect of deluding the patient into the belief that he is undergoing active medication, when in fact he is swallowing a nullity. These effects could only, however, be realized when the dispenser of globules sincerely and "in honest sadness" adheres to his creed in the treatment of the patient; which, with the homœopathic quantum of good faith that generally exists, can rarely be depended upon; and in any view of the subject, nothing true has grown out of this empirical system which, is not as old as the time Hippocrates himself. Even the negative merits, which the opponents of homœopathy have conceded to it, it does not possess. Psychologically speaking, however, this system has unintentionally made some amends for its totally unedifying therapeutics and pathology, which consists in its having demonstrated a lower level in human credulity, than any acknowledged to exist previously to the advent of the "Spiritual rappers." The result however is more curious than useful.

Now it is an essential characteristic of charlatanism that it should be designated as some kind of *pathy.* Hahnemann endowed his system with a name, based on one of the most absurd maxims ever uttered by man. Had he confined his baptismal office to the naming of his own system, it would have been less matter. But he proceeded to give a name to the system which descended from the Father of medicine, which he designates by the name of *Allopathy.*

It is deeply to be deprecated, that this appellation, which if etymologically interpreted, could only be applicable to an impirical system, instead of being spurned by the profession, should have been so far tolerated as to have become not only the popular but professional cognomen for the true practical science of medicine. Hahnemann gives this name to our science and announces its doctrine which he declares to be expressed by "*contraria contrariis curantur.*" The most popular dictionary of medicine in our country, that of Dunglison, defines allopathy to be "*curatio contrariorum per contraria.* Relating to the ordinary method of medical practice, in contradistinction to the homœopathic." [!?] So it appears that true medical science has been reduced to a mere *pathy,* as contradistinguished from and antagonistic to the *pathy* of Hahnemann; that it has become so far as words are concerned, associated

with, and has become the mere correlative of homœopathy! The definition of allopathy laid down by Noah Webster, shows how permanently this empirical appellation has been fastened on the legitimate practice of medicine. Webster characterises allopathy "as being the ordinary mode of medical practice, in opposition to *homœopathy*." Thus the medical student instead of being led to ignore altogether the follies and impostures of homœopathy learns at the onset that he is choosing between two rival systems in entering on the study of true medicine. One-ideaism is the bane of medical science and thus has the term allopathy been surreptitiously applied to legitimate medical science and thus the preposterous platform of "*contraria contrariis curantur*. This idea has too far influenced the medical mind. The idea of inducing opposition and antagonism of conditions in the cure of disease is, as we have already suggested, in all probability quite erroneous; and it has led to the adynamic routine of treatment in acute disease at which we glanced at the beginning of this communication.

ART. XII.—*Experimental Researches into Animal Heat in the Living and in the Dead Body:* by BENNET DOWLER, M. D.

Part 1.—*Preliminary Views of Existing Doctrines.*

MODERN physiologists have assumed rather than proved the chemical theory of animal heat. The validity of this purely physical theory is, at least, questionable, notwithstanding the precise formulæ which have been enunciated, whereby the respiratory process is identified with ordinary combustion, the lungs being regarded literally as a furnace, and oxygen as the fuel of the animal economy. Thus, for example, like others, M. Virey affirms that the lungs constitute the sole fountain of animal heat—"le foyer unique de la chaleur animale"—that their repose, as in sleep, causes refrigeration, and that their power of calorification is in the direct ratio to their activity and development. (Dict. de la Conver. t. ii, 308–9.) Dr. Billings in his Principles of Medicine repeatedly calls the lungs the furnace in which charcoal fires constantly burn for the generation of animal heat. Furnace! fuel! fire! How simple, clear, practical, and withal captivating! Such is language of physiologists in general!

In giving an outline of the existing doctrine of animal heat, Dr. Carpenter's physiological works will be quoted chiefly, because of the

great esteem in which they are held, and because he is not only the most voluminous but the most recent systematic writer on Physiology in the English language, his works being more generally read in America than those of any other European author. He is, moreover, less dogmatical on the subject under consideration than most writers.

Dr. Carpenter says* that the "respiratory process gives off as much heat as if the same materials were burned in a furnace. Heat seems peculiarly to depend upon those changes in which the function of Respiration is concerned—viz., the union of oxygen derived from the atmosphere, with compounds of hydrogen and carbon existing in the living system. Wherever the aëration of the blood is extensively and actively carried on, there is a proportionate elevation of temperature. And, on the other hand, wherever the respiration is naturally feeble, or the aëration of the blood is checked by disease or accidental obstruction, the temperature of the body falls. When the amount of heat that should be generated by the production of the quantity of carbonic acid found in the air expired during a given time, is carefully estimated, and the oxygen which has disappeared is considered as having been similarly employed in other combustive processes, especially in the formation of water—it is found that the total so closely corresponds with the amount of heat *actually* generated by the animal during the same time, that it can scarcely be doubted that this process is the main source of calorification." (Prin. Com. Phys., § 452.)

This respiratory theory of animal heat can be easily tested by frequent, full, and forcible inspirations, which, however, will not increase the temperature in the least.

Dr. Carpenter says, "if the supply of oxygen be deficient, as it is when the respiration is impeded by diseased conditions of various kinds, there is a depression of temperature." (Human Phys., § 115.) A practical physician who relies on his thermometer and not on his theory, will reverse this erroneous conclusion.

In diseases which reduce the respiratory process to the minimum, as in consumption, the heat is often great. The patient with but a handful of the lung permeable to the air suffers from pungent hectic fevers. In catarrh, bronchitis, croup, pleurisy, pneumonia, and the like, the diminished respiration is attended with increased heat during the acute stage at least.

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* Principles of Comparative Physiology. *Passim*, 4th Ed., 1854.

Throughout this investigation, let the reader bear in mind the question of the illustrious Haller, who asks, "Is the blood *cooled in the lungs*? When the lungs are obstructed, ulcerated, and almost destroyed morbid heat is increased in the human body." (Cclxxxii—Cclxxviii. Phys.)

Dr. Carpenter has shown a praiseworthy willingness on several occasions to renounce opinions which he had previously advocated, but which the progress of science had invalidated—a great merit is this in a writer whose influence for good or evil, is immense in both Europe and America. Scientific truths and discoveries, if ignored or rejected by such an author, will seldom be received with alacrity—will often be distrusted—will, perhaps, be denied, especially by such as are incapable or unwilling to examine for themselves. It is easier to adopt than to elaborate opinions by means of experimental, rationative, and inductive methods of research. Incompetence and indolence in taking shelter under the authority of celebrated names, seek to avoid these laborious methods of knowledge, content to let others think, reason, and decide both in doctrinal and practical principles.

Ex parte evidence, as formulæ for the generation of heat by the combinations of oxygen with carbon and hydrogen to the neglect of refrigeratory formulæ such as transpirations and transudations by the skin and lungs, must be regarded as an inconclusive mode of establishing fundamental principles in the physiology of animal heat. The disintegration, waste, and decomposition of tissues—the elimination of fluids, gases, secretions, and excretions, would, with equal industry afford arithmetical tables and calculations quite sufficient to neutralize the heat consequent upon the combination of atmospheric oxygen with the hydrogen, and carbon in the animal tissues. Mere chemistry accounts more satisfactorily for refrigeration than for calorification. Even were it thoroughly proved that a correspondence existed between the quantity of oxygen received in respiration and the degree of caloric evolved in the system, it would not necessarily follow that the former caused the latter. On the supposition that the ratio of oxydation be uniform, the ratio of refrigeration by means of waste, cutaneous transpiration, evaporation, and so forth, might, from various causes be diminished. In many cases of disease impeding the action of the respiratory organs, the temperature of the body is excessively high. In apoplexy, and still more in sunstroke, there is an exeessive elevation of temperature sometimes reaching 112°. The heat is often exeessive in the comatose stage of acute fevers, in which the breathing is infrequent, irregular, and imperfect.

In not a few mortal cases of yellow fever, the last stage is characterized by coma, stertor, and an excessively slow breathing, and yet this, above all other forms of death, is attended by a rise, and a persistence of temperature, as will appear in the experimental part of this monograph.

The dog, not to name some other animals, pants and accelerates his respiration in a ratio corresponding to the heat of the weather, being greatest when the air is hottest. If diminished respiration produced diminished temperature, the dog would act just the contrary, influenced as he is by instinct, or fixed reason as a French philosopher would name it; while man whose reason is in this sense, less fixed and more dynamical, might avail himself of increased and forced respirations to warm himself when too cold, and, on the other hand he could restrain the number and fullness of the same acts in order to cool himself when too hot. In fact, he imitates the dog to some extent—by panting and breathing oftener in hot than in cold weather.

Plausible, if not universally satisfactory reasons might be offered showing that in the healthy state animal heat is evolved not from respiration, but from the dynamics of the nutritive, assimilative, and capillary systems. In certain diseases of an inflammatory character, a morbid nutritive action, with swelling and induration, an increase of heat might be expected from pressure, tension, congestion, obstruction, and consolidation, on the analogical principles of physics. This increase of heat, actually occurs, and whatever be the cause of this morbid manifestation, there can scarcely be a more improbable one named than that of increased activity of the lungs, and the consequent increased absorption of oxygen. The burning blushes of shame, and, the hot flushings of the early stage of yellow fever, the prolonged and pungent heat of typhus, erysipelas, scarlatina, and consumption, do not appear to be due to an increased combustion of oxygen in what the chemical physiologists fancifully call the furnace of the whole system, that is, the lungs.

The quantity of air inspired will not by any known process, account for febrile and inflammatory diseases, nor for a single malady in the whole nosology, the formulæ, tables, and calculations of chemists to the contrary notwitstanding. The adherents of this theory often show wavering, misgivings and scepticism in the respiratory theory of animal heat. The strongest proof of this is evinced at the bedside where the theory has no practical existence and where it should be tested. An impeded, imperfect respiration would enable the physican to diagnose the

case as belonging to algid diseases, while a free, full, and exaggerated respiration would enable him to pronounce in favor of fever and inflammation with a corresponding elevation of temperature.

Let the physiological chemist who has long labored to prove that the lungs constitute the great heating furnace of the whole body, labor equally hard and long to prove that the lungs constitute the refrigeratory apparatus of the system—let him show that solidification is compensated by liquefaction, the absorption of oxygen by gasification—nutrition by waste, composition by decomposition, oxydation by deöxydation, calorification by refrigeration—in word let him hear both sides of this question, and although he may steadfastly believe that the evolution of animal heat has a chemical origin, yet he will distrust the opinion that the lungs constitute the fire-place for heating the whole body. He will also find evidences more or less clear, showing that Vitalism towers above physics, self-revealed, reflecting its own peculiar light, transcending, not contradicting chemistry, possessing laws differing from the latter in origin, progress, distribution, and purpose, as much as thinking, feeling, willing and voluntary motion differ from quantitative and qualitative analyses and from the properties of the material universe.

That the chemists distrust their respiratory theory as insufficient, is inferable from the fact that, not a few of them appeal to other sources for aid, as the nerves, nutrition and so on. Dr. Carpenter, while he adopts the respiratory theory, endeavors to fortify himself upon some non-respiratory platforms. He says in regard to "the evolution of heat in animals that among the lower tribes, in which the power of locomotion is but feeble, and the supply of the wants of the system not immediately dependent upon it, very little more heat is generated than in plants. But wherever a high degree of muscular energy is required, in connection with a general activity of the functions of the nervous system, the evolution of caloric to a remarable extent is provided for in the nutritive processes. We may regard it, therefore, as in *its degree* essentially connected with the development of the Animal powers relatively to the system of Organic life; although really *dependent*, as it would appear, upon the changes occurring in the latter." (§ 441.)

This explanation which is entirely superfluous upon the respiratory theory of the origin of heat, is at the same time erroneous. Many animals whose nutritive and muscular actions are great, so far from having a temperature correspondingly high, have little if any independent

power of generating heat, but follow that of the medium in which they live, as fishes, the alligator, &c.

The fishes of the Mississippi and Lake Pontchartrain, represent the temperature of the water from which they are taken. Experiments made at all seasons, and repeated for years show that, when the alligator is in the shade its temperature is like that of the air in the same situation, from 33° of Fah. up to the maximum of the weather. Its nutritive, muscular, and calorific actions do not correspond in activity, nor do they appear to be connected as cause and effect.

The validity of explanations become suspicious, when a multiplicity of causes which are in no perceptible manner conjoined, are, nevertheless, called in to complete the causation of a particular result. Dr. Carpenter having explained the generation of animal heat by the pulmonary furnace with its fuel and combustion conformably to the prevailing theory, shows a predilection for other methods of explanation, as that of "the direct conversion of Nervous Power into Heat," which he says, "seems not unreasonable." This proposition were it conceivable, would be, at least, improbable. Matter in motion, the dynamical condition, like the statical, might or might not produce heat. But power or force apart from matter is of all the fundamental abstractions the most difficult to conceive. A faint glimmering of this idea is found in the personal consciousness or in the subjective. This is its sole type, and expositor, but does not include the idea of heat. Nor can he be conscious that there is a "Nervous power" much less that this "power is directly converted into heat," in the same way that he is conscious of voluntary motion.

M. Le Gallois, adopting the Lavoisierian doctrine, like the majority of later writers maintains that calorification is developed in the human economy in exact proportion to the activity of the respiratory function, and the consequent consumption of oxygen. M. Magendie who attributes animal heat to the same source, says, nevertheless, "that the blood in the living vessels is, in truth, almost as directly influenced by the temperature of the atmosphere as the mercury in the barometer!" (Lect. on the Blood, 46.)

M. Magendie asks—"What sense is there in applying the word inflammation to our organs? Do our tissues really take fire? When the blood rushes to a part in abundance, a certain rise of temperature, no doubt, occasionally follows; but it only reaches but a few degrees above the normal standard of the organ and never exceeds that of the blood

in the left ventricle." (Ib. 32.) It will be seen hereafter, in the experimental part of this monograph, whether these views can be maintained.

Sir Benjamin Brodie says animal heat originates in and emanates from the brain—a theory which M. Chossat adopted, though he enlarged it so as to include the spinal marrow, so that, according to him, the heat evolved is in exact proportion to the activity of the nervous system, and diminishes in a ratio with the severity of the lesions in that system.

Baron Liebig, one of the greatest of living chemists, whose praiseworthy efforts to subdue physiology and bring it under the reign of chemistry, have proved not altogether successful, offers formulæ and still oftener positive assertions and fine words, from which it would seem that animal heat is a very simple chemical affair, and withal easily understood. In the London *Lancet* for Feb. 1845, he says—"Animal heat which cannot be accounted for by any known physical law, is opposed to the most positive and well established facts as I shall show. The amount of heat evolved by an animal in a given time, corresponds exactly with that which the oxygen consumed in the respiratory process during that time, would produce if it had combined directly with carbon and hydrogen, as in ordinary combustion!" "An animal, placed in an appropriate apparatus, evolves, in a definite space of time, exactly as much heat as the same apparatus would have received had the oxygen inspired during the same space of time been combined directly in the apparatus with a certain definite proportion of carbon sufficient to form an amount of carbonic acid, exactly corresponding to that exhaled in the same space of time, and with a certain definite proportion of hydrogen sufficient to form an amount of water exactly corresponding to that which we assume to be formed in the organism by that portion of the inspired oxygen which does not form carbonic acid. And thus the question whence the heat of the animal body proceeds is fully answered!"

Some who adopt the respiratory platform of animal heat, believe that the lungs have a higher temperature than any other part of the body. This ought to happen according to their theory, but facts will show that in the human body this theory fails.

If the respiratory theory "accounts for the amount of heat *actually* generated," why seek for and adopt other explanations of the same thing?

The theory which makes the great nervous centre, that is the brain, the generator of animal heat, is disproved as to the human subject, by a greater number of experiments, as the sequel will show, than, perhaps,

any individual ever performed before—performed both before and after death—from which it will appear that the brain, which one school of physiologists regard as the focus from which heat originates, has at, or soon after death, a lower temperature than the centre of the thigh, the rectum, the abdomen, epigastrium, heart, axilla, &c. The experimental part of this monograph will show that the lungs, the reputed heating furnace for the system, has not the highest and most enduring temperature as compared with the stomach, liver, rectum, &c.; even the axilla very often greatly surpasses the interior of the chest in heat.

In cholera, which presents the maximum of morbid algidity, the rapid waste, liquefaction, cutaneous transpiration, in connection with the suspension of absorption and the arrest of the nutritive action, will much better account for the diminished temperature of the body than any supposed epidemic impediment in respiration.

If obstructed respiration be the cause or even the invariable precursor of algid epidemics, such as cholera, cold plague, congestive fever, pernicious intermittents, and the like, it is very surprising that no one has recorded this remarkable fact, which must be, if true, very obvious to all, namely, an "impeded respiration," which is the supposed thermometrical standard of animal temperature. The same ætiological negation exists in the history of epidemics of a different type, in which an excessive evolution of heat is the most characteristic feature, as yellow fever, typhus, bilious fever, erysipelas, scarlatina, pneumonia, and an host of inflammatory affections, not one of which has been noticed as having been caused by fuller, larger, and more frequent respirations. In neither physiological nor pathological calorification does the respiratory theory of the origin of animal heat afford a satisfactory explanation.

It is utterly impossible to see any direct connection as cause and effect, between the respiratory action and an opthalmia, a whitlow, boil, erysipelas, or scarlet fever.

Light and shade, good and evil, truth and error, often seem compensative. The physicist who labors to reduce the laws of the human economy to those which govern inert matter, labors under a delusion, which, however, is one of great utility, because in aiming at a real impossibility, he will sometimes conquer an apparent one. The moralist who aims at absolute perfection will probably attain a higher degree of moral excellence, than one whose standard is compounded from the actualities of life among even the most virtuous. The physicist will probably subdue a great portion of physiology without the solutions

vaguely adumbrated by the ænigmas of vital principles, vital forces, vital essences or entities, which words, or some others must still be used to indicate all that physics cannot as yet lawfully claim, and that all is the sublimest portion of physiology, as sensation, perception, volition, reason, voluntary and involuntary dynamics, &c. Vitalism, even though viewed as an abstraction, or a provisional admission of ignorance, is an essential word, and imports a grand generalization which rises higher than chemical philosophy.

Animal heat, whatever be its cause, appears to originate in all parts of the body—not from the lungs alone—not from a single focus; nor is it propagated from a single centre by radiation and conduction. On the supposition that it has a chemical origin, and is not an effect, property, endowment, or essential element of life itself, then the assimilative or nutritionary process, and that also of metamorphosis and decomposition, all ever present, ever progressive, in every part of the human economy, will afford a more satisfactory explanation of this heat, than the lung theory. Decomposition when its ratio is retarded as compared with assimilation—or when its action is greatly accelerated as in certain stages of putrefaction, may virtually or directly give rise to heat.

This nutritive platform is sufficiently broad to include all the oxygen actions, reactions and combinations with carbon, hydrogen, and the animal tissues. Indeed the elimination of heat can be better accounted for by the known capillary action than by the respiratory.

The capillary system *i. e.* its vessels and their contents—the motion of the blood, its friction,—the changes or metamorphoses of the blood-corpuscles, may all with good reason be regarded as sources of animal heat. That heat may be secreted by the capillaries, as bile is by the liver, is not improbable.

All who admit that there is in the economy a residual class of phenomena, properties, and functions not referable solely to chemistry—in a word all vitalists can find little difficulty in attributing animal heat to life, whatever that be.

In his Treatise on the Forces which produce the Organization of Plants, Prof. Draper says, that "life is compressed within a range of 180°—between 32° and 212°." To this generalization there are exceptions. Insects and fish have been frozen without dying. According to some accounts, apparently authentic, it appears that fishes may live in the boiling waters of springs, &c.

Caloric, it has been supposed by some writers, is the cause of all

vital phenomena, nutrition, secretion, excitation, motion, energy, organization, being in fact, the vital principle, life itself.

In a Review of Dr. Metcalfe's elaborate work on Caloric, which appeared in the American Journal of the Medical Sciences for Jan. 1846, the reviewer says: "It has been shown by the experiments of Dr. Davy, that the lungs have a higher temperature than other parts of the body. As this fact has been called in question by other physiologists, Dr. Metcalfe repeated the experiments on sheep and oxen, and found in every trial, that the temperature of the lungs and left side of the heart were from 2° to 3° higher than that of the stomach, liver, &c. The mean healthy temperature of all animals is directly in proportion to the amount of their respiration." Dr. Metcalfe says, "vital energy, the temperature of the body, and intelligence are always in direct proportion to the respiratory function. Caloric is not only the cause of all excitement, but directly or indirectly of excitability also. Animal heat is the cause, not the effect of secretion. Caloric is the principle of vitality and the sole cause of organization." Dr. Metcalfe's "great remedy for inflammation is the application of heat to the part."

Having given a synopsis of the fundamental principles of Animal Heat as now received and taught, it is intended to bring before the reader, in future numbers of this Journal, numerous physiological, pathological, therapeutical, and post-mortem experiments which will confirm or overthrow these principles; or, perhaps these experiments may indicate new questions of high import, notwithstanding the difficulty of their solution.

(To be continued.)

Art. XIII.—*Researches into the Natural History of the Mosquito:* by Bennet Dowler, M. D.

Ubi tot sensus collocavit ut in Culice.—*Plin. Hist. Nat.*

An opinion, as common as it is pernicious and vulgar, has prevailed against the propriety of undertaking researches, the utility of which cannot be immediately and directly appreciated. *Cui bono?* This question is, in the first stage of investigation and discovery, both improper and prejudicial, being apt to bias the inquirer and impede, if not prevent his progress. "To discover, not to apply," is the first step—its applications the last, easiest, and least meritorious. Franklin's sublime

discovery of the identity of lightning and electricity, by means of a kite, made the application of the conducting rod an easy affair, whereby life and property might be protected.

Discovery has, in perhaps every instance, been preluded by innumerable antecedents calculated to develope the truth, or at least to prepare the mind for its final reception and appreciation.

"I could never have fully comprehended," says Goethe, "how paltry men are, and how little they care for high aims, if I had not had such opportunity to test them in the course of my scientific researches. Now I saw that most men only care for science in so far as they get a living by it, and that they are ready to worship any error which they find profitable."

Byron, it may be hoped, spoke in an ironical vein when he said that "cash is virtue." But the great reformer, Bentham, maintains with all possible gravity, throughout many ponderous octavos, that utility and virtue are identical.

The mosquito is not a mere thing of *virtu*. It is an encyclopædia of anatomy, microscopy, physiology, and natural history, presenting a series of problems, the solution of which would place the science of organism, function, and vitalism upon a lofty eminence which they have never yet reached, and perhaps, never may. Were the physiology of the mosquito, its alimentation, assimilation, circulation, respiration, secretion, excretion, muscular motion, sensation, generation, development, life, and death, all known and determined, the existing ænigmas of human physiology would be almost entirely solved. A thorough knowledge of a single species will serve as a key to the whole animal kingdom.

In some of the States of the Union, by a wise legislation, the Natural History of Insects has been prosecuted by authority and paid for by the Treasury—particularly in reference to the Natural History of Insects injurious to the public, and the vegetable kingdom: such as Dr. Harris' Treatise (8vo. pp. 459, Boston, 1841,) on some of the insects of New England. Entomological Societies in several States have been formed; and courses of lectures are annually delivered in some of the colleges upon the natural history of insects. But in Louisiana where insects abound, where some thousands of new ones may doubtlessly be discovered, and where the crops suffer most from them, entomology has scarcely been dreamt of in her philosophy either as a question of economy, or natural history. An accurate knowledge of the cotton-destroying-insect is the most likely means of discovering the method of preventing

or restricting its destructive march. He who shall write a good history of a Louisiana Bug, may expect an immortality that will not be conceded, perhaps, to a single politician of this day.

All I propose on this occasion is to offer a few desultory remarks on the Mosquito, not a scientific treatise;—and, as it is not deemed polite to look a gift-horse in the mouth in order to know his age or value, so I trust that this *con amore* attempt in the right direction, will somewhat disarm criticism, and, perhaps, induce others, better qualified than the writer, to give the public their scientific observations upon the natural history of this insect, and upon the material conditions which tend to circumscribe its extension, as the clearing, drainage, and cultivation of the land—the plants, waters, and localities in which it multiplies, and seeks nutrition by its suctorial operations.

The Mosquito is, in fact, a historical animal and not without reputation. Linnæus, flattering philospher! puts man at the head of the creation baptizing him with the specific name, SAPIENS! Were a mosquito to write a history of its race and the rôle it has peformed in the distinguished transactions in the drama of humanity, it might relate how its powerful tribe compelled Sapor, King of Persia to raise the seige of Nesibis by attacking his mighty elephants, his beasts of burden, and his serried columns of soldiers—how it dispersed the mighty army of the Emperor Julian—; it might quote from Mouffet, author of *Theatrum Insectorum*, showing that the mosquito race had attacked and depopulated several ancient cities. It might dwell with pride on its civil and geographical honors—honors greater than Columbus himself has obtained. Witness mosquito bayous, and bays; and mosquito kingdom, large, fertile and salubrious. "Honors greater than Ilion to her hero paid." A foreign writer says that the American mosquitoes attacked General Washington, piercing his leathern boots, and that they are equally potent on the river Po, in Italy. Mr. Bryant has poetized the mosquitoes of New-York, as all know.

Mosquito Bar.—The Greek word conopeion—whence the Latin conopeum, is thus defined by Sehrevelius: "*velamen ad culeces arcendos*" —a veil to exclude gnats or mosquitoes. Indeed, the best lexicographers translate the Greek word conopeion by the term mosquito-net—consinière (Fr.), mosquitero (Sp.), námooseëh (Arab.). The Greek word canops, culex (Lat.), gnat or mosquito, is doubtlessly the radical word whence the Greek conopeion, the Latin conopeum, or as Horace has it, conopium. Hence the English word canopy.

Herodotus (born 484 B. C.) whom Cicero calls the Father of History—"*historiæ patrem,*" gives an account of the mosquitoes and mosquito-nets of ancient Egypt, full of instruction, though in some particulars erroneous. "The Egyptians," says he, "are provided with a remedy against gnats or mosquitoes—each has a net with which he fishes by day, and which he renders useful by night. The Egyptians cover their beds with their nets and sleep securely beneath them. If they were to sleep in their common under garments, the gnats would not fail to torment them." (ii, 95.) Although this passage may be open to criticism, it indicates the Egyptian origin of the mosquito-net. A net so open in texture (and consequently open to criticism) as to permit the turbid waters of the Nile to traverse its meshes freely, would scarcely be an effectual mosquito bar, unless we suppose that the Pharaonic mosquitoes were of colossal size. Such a supposition is untenable, inasmuch as the mummies of many sacred animals, including some insects, fully attest that no individual variations in the animal kingdom have taken place for thousands of years.

Mr. Lane, in his work on Modern Egypt, says, that "the mosquitoes are troublesome at night unless a curtain be made to keep them away. A mosquito curtain—námooseeyeh, (from namóos a mosquito,) is composed of muslin or linen of an open texture, and is suspended by means of four strings which are attached to nails in the wall." (i. 4,228.)

Having noticed what Herodotus has said in relation to the mosquito-bar, which, he represents as having been used only in the marshy regions of the Nilotic valley, it may be proper to add his account of the mosquitoes themselves. He says, that, "Egypt contains a surprising number of these insects. As the wind will not suffer them to rise far from the ground, the inhabitants of the higher part of the country usually sleep in turrets." In the days of the Pharaos, mosquitoes were least troublesome in elevated situations. It is so still. Egypt is probably more infested now by these insects, than in ancient times, when the population was vastly greater, and the soil better cultivated. At present, as night approaches, these insects swarm forth from depressed grounds, rice-fields, marshy places—in the shades and ruins of the colossal Memnon, the dilapidated Sphinx, the mouldering Luqsor, Karnac, Denedra—the time-defying Pyramids, and the desecrated tombs of the Pharaos.

Although among the ancient Romans the term culex may have been often applied, as the word gnat is among the moderns, to designate the whole family of gnats, yet there can be little doubt that from

the earliest times this word was specially intended to indicate the mosquito, which then infested, as it still does, the marshy districts of Italy. Horace, nearly two thousand years ago, having experienced the pain-giving, blood-sucking, and sleep-averting operations of this insect, pronounced against it his malediction :

Mali Culices * * *
Avertunt Somnos.

At the commencement of last century naturalists did not appear to have been acquainted with 10,000 species of animals ; now they know nearly ten times this number of insects alone : the beetles or coleopterans amount to 2,000 or 3,000, while the known animals amount to a quarter, and counting the fossil, to half a million of species and varieties.

If we except the great Aristotle, the ancients made but little progress in Natural History. With the revival of letters and the discovery of the art of printing, comparative anatomy and physiology, began steadily to advance. The fundamental principles of philosophical zoology eliminated from organization, from typical forms, from function, from affinity or homology, and from analogy, prepared the way for a natural classification of animals, living and extinct—a classification not based on words alone, but on things. In pursuance of this method, the late St. Hilaire deduced from even monstrosity itself, laws classific—regularity from irregularity—unity from a seeming confusion.

Culicidæ. Nomenclature.—The Hexapod insects (that is, not having more than six legs) Linnæus divided into seven orders—the 6th being called the Diptera or two winged, as the housefly, and mosquito.

Entomologists of the present day usually apply the word *culex* to designate a genus of the family *culicidæ*—a family belonging to a great primary division of the Animal Kingdom, namely, the *Articulata* which is characterized by a cutaneous skeleton, sometimes calcarious ; sometimes horny ; sometimes membraneous; consisting of a series of segments and rings, (in insects never exceeding twelve) joined together in multitudinous forms without essentially deviating from a common type. This compensating external skeleton, like the ordinary internal one of the vertebrated animals, serves as the frame-work for the muscular, apparatus, while it encloses and protects many vital organs.

This firm integumentary envelope, once regarded as identical with horn, is due to a peculiar substance which organic chemists have named *Chitine.*

Of all the *Diptera* or two-winged insects, the gnat family seems to have been the least accurately studied or classified, as may be judged from the fact that its species have been so variously reckoned, as two—three—five—six—fourteen—twenty-eight; a strong contrast to the classificatory precision, real or apparent, in systems of entomology. For example, the *coleopterous* or four-winged, hard-shelled insects, although exceeding twenty thousand, perhaps reaching twenty-five thousand known species, appear to be better understood than the small tribe of the *culicidæ*.

Of the genus to which the mosquito belongs, the latter is doubtlessly the best type with regard to anatomical and physiological characteristics and developmental transformations, from ova to larvæ—from larvæ to nymphæ—from nymphæ to perfect insects—all of these interesting topics, as well as inquiry into many other observed episodes illustrative of mosquito life, must be omitted at present.

Geographical distribution and climatical range of Mosquitoes.—"All the insects, says Latreille, brought from the eastern parts of Asia, and China, whatever be their latitude and temperature, are distinct from those of Europe and Africa." Mr. Lyell says the insects of the United States, although often approaching very close to our own, are, with very few exceptions, specifically distinguishable by some characters. In South America the equinoctial lands of New Granada and Peru on one side, and of Guiana on the other, contain for the most part distinct groups; the Andes forming the division, and interposing a narrow line of severe cold between climates otherwise very similar. (Géographie Générale des Insectes et des Arachnides. Mém. du Mus. d' His. Nat. t. iii.)

The mosquito of all climates appears to possess the same essential characteristics. The same is true to a great extent of the honeybee (apis mellifica); though it flourishes almost exclusively in proximity with civilized man, having been imported into America, it is the harbinger of the advance of civilization, occupying a zone near the settlements. The mosquito on the contrary is a native of and flourishes best in a wilderness where moisture abounds.

There is probably no insect or animal so diffused, and unrestricted as to latitude, as the mosquito. Many writers have grossly erred in assigning its special *habitat* to southern lands; Crabbe says "the mosquito is a kind of gnat in *warm climates*." Baron Humboldt says that mosquitoes are not so general in the Torrid Zone as many believe. On the

table lands remote from the beds of great rivers there are not more gnats than in the most populous parts of Europe. Capt. Cook says that he found none of these insects at Terra de Fuego, which, he adds, "is perhaps more than can be said of any other unclcared country," while "in New South Wales clouds of mosquitoes sting incessantly."

Louisiana is less infested with mosquitoes than many districts of the torrid and fridged zones. In his travels in the Equinoctial Regions of America, Baron Humboldt gives some statements, which, coming from almost any other traveller, would scarcely be credited. * * * He mentions certain localities, where, in order to avoid the mosquitoes "the inhabitants have to bury themselves from 3 to 4 inches deep in the sand, their heads only being out which they cover with a handkerchief:" "In the missions of the Orinoco there is a large species of gnat, the *zancudo* which is very troublesome by night, while the mosquito is only bad in the day: When two persons meet in the morning, the first questions they address to each other are—"How did you find the *zancudoes* during the night? How are we to day for mosquitoes?"

Mosquitoes of the Arctic or Frozen Zone.—Humanity may hope for comparative, not absolute happiness. If, as a French philosopher contends there is always something in the misfortunes of others not displeasing to ourselves—if contentment can be derived from the assurance that others are far more miserable than we are—if it can be shown that the paradise of the mosquito is not in the region of eternal summer, but in the glacial zone, whose icy peaks shimmer in no light but that of the stars, and the auroral corruscations during several months of the year, then surely the children of the sun should be reconciled to their lot —to their cotton, coffee, sugar, figs, oranges, palms, bananas and a moderate proportion of mosquitoes which buzz in their Eden, where, in many places, two or three crops of cereal grains may be gathered every year from an exuberant soil.

A few reliable authorities will sufficiently show the prevalence of mosquitoes in the Arctic Regions; among them is Captain Franklin—the late Sir John Franklin—the long lost voyager, who in his voyages in the Polar Seas, in 1825-6, gives the most deplorable accounts of the annoyances which the expedition suffered from mosquitoes; they abounded says he, at the mouth of the McKenzie river under 69° N. Lat., at the low temperature of 45° Fah.," (only 13° above freezing.) "On the 24th of May they appeared at Fort Franklin 65°

11′ 56″ N. Lat. At first they were somewhat feeble, but a few days after they became vigorous and tormenting."

"July 22d, in 69° 36′ N. Lat., tormented with mosquitoes:" On reaching a still more northern latitude he says, "the mosquitoes were so numerous as to prevent any enjoyment in the open air and to keep us confined to a tent filled with smoke—the only remedy, they assailed us as soon as the temperature reached 45° Fah. Myriads which reposed among the grass, rose in clouds when disturbed and gave us much annoyance."

Capt. Back, R. N. in 1833, when at Fort Reliance, Slave Lake, complained bitterly of the mosquitoes. Let us glance first at the climate of this same Fort. Capt. Back says that in Dec. and Jan., 1833–4, the mercury fell 102° below the freezing point—sextant cases, boxes of seasoned wood and so forth all split—the skin of the hands became dry, cracked and opened into unsightly and smarting gashes. Nitric ether became viscid, rum thick, mercury solid. He had of course to use the spirit thermometer. It is evident, that no degree of cold yet ascertained can kill mosquitoes.

The dismal picture drawn in this high latitude of the glacial zone, of the sufferings of Capt. Back and party from the mosquitoes and sand flies, has no parallel in the torrid zone. "How," says he "can I give an idea of the torments we endured from these insects? They rose in clouds actually darkening the air; to see or speak was equally difficult, for they rushed at every undefended part—our faces streamed with blood—inflammation and giddiness almost drove us mad—even the Indians threw themselves on their faces and moaned with pain and agony. The men were unable to work without the protection of clouds of smoke." After travelling north from Fort Reliance in the month of June, at 40°, "the musquitoes were quite lively."

Capt. Ross, R. N., in his second voyage, complains in the most piteous manner;—"the mosquitoes were more virulent than in the West Indies, rendering every moment a torment so as to occupy the entire attention, making it almost impossible to act or enjoy." While his ship, the Victory, was enclosed by innumerable icebergs from which she never was extricated, "the mercury descending to 40°—the mosquitoes swarmed in the vessel, and were as troublesome as in the West Indies."

In the British and Foreign Medico-Chirurgical *Review* for October, 1852, is the following statement founded on Dr. Magnus Huss' able

work on the Endemic Diseases of Sweden, published in 1852, at Stockholm.

"In the northern parts of Sweden and Norway, among the Lapp population of these wild regions, conjunctivitis and snow blindness prevail—hardly one of the Lapps escapes from the consequences of living throughout the winter in close huts, surrounded with a dense atmosphere of smoke, and of exposure to the glare of the sun on the trackless snow-fields in spring. During the winter, the only artifical light used by the Lapp is obtained from resinous pine-branches, which of course, add much to the density of the acrid smoke with which their huts are constantly filled. In summer, the smoke is imperatively called for to drive off the swarms of mosquitoes and gnats, which are then scarcely less troublesome than in the tropical regions."

Malte-Brun, the celebrated geographer, asserts that "the mosquito which torments the traveller upon the banks of the Orinoco, resembles that which buzzes in Lapland," and he might have added Iceland, Lower Hungary and innumerable other places. At the bases of Greenland's "icy mountains," "mosquitoes appear in the month of June, July, and August in myriads" to trouble a wretched and sparse population—(Edin. Encyc.)—the very months in which they torment Louisianians the most. The latter are annoyed a month sooner, and often six weeks later.

Mosquitoes in times past and in different places.—The Jesuit Father Du Poisson, in his voyage from New Orleans to the Arkansas river, commencing on the 25th of May, 1727, in company with Fathers Souel and Dumas, "under the direction of the good man Simon," gives during the first days of his voyage the following account* of the mosquitoes a century and a quarter ago. "This little insect" (the mosquito) "has caused more swearing since the French have been in the Mississippi, than had previously taken place in all the rest of the world. Whatever else may happen, a swarm of these mosquitoes embark in the morning with the voyager. When we pass among the willows or near the canes, as very often takes place, a new swarm fastens with fury on the boat, and never quits it. It is necessary to keep the handkerchief in constant exercise, and this scarcely frightens them. They make a short circuit and return immediately to the attack. When we land to take dinner, there is an entire army to be combatted. We make a

* Drake. Valley Miss., i. 111 et seq.

great fire, which we stifle afterwards with green branches. But it is necessary for us to place ourselves in the very thickest of the smoke, if we wish to escape the persecution, and I do not know which is worse, the remedy or the evil."

"One is eaten and devoured. They get into the mouth, the nostrils and the ears; the face, the hands, and the body are all covered; their sting penetrates the dress, and leaves a red mark on the flesh, which swells on those not yet inured to their bite." "After having supped with haste, we are impatient to bury ourselves in the *baire*,* although we know we go there to be stifled with heat. With what address, with what skill does each one glide under his *baire!* But they always find that some (mosquitoes) have entered with them."—"May 31st, devoured by the mosquitoes at night. June 3d, arrived at a spot above the Manchat, [Manchac] Bayou Ibberville, a branch of the Mississippi which empties into the Lake Maurepas—millions of mosquitoes."

In Richard Hackluyt's translation from the Portuguese, of De Soto's Expeditions from 1539 to 1543, (published in London, 1609), it is related, that while the voyagers coasted along the Gulf of Mexico, probably near the mouths of the Mississippi, "the mosquitoes fell upon the men in infinite swarms, producing intolerable torment—stung them—infected their flesh as if they had been venomous. The sails were black with them."

Thus it was at the mouth of the Mississippi more than three centuries ago, and so it is now upon its head waters. Dr. Owen, U. S. Geologist, in his magnificent work—the Geological Survey of Wisconsin, Iowa, and Minesota, published by the authority of Congress, in 1852, says that "a cause apparently trivial will long delay the settlement of certain regions which he mentions; he says that this cause is the prevalence, especially on the upper Wisconsin, St. Croix, and Black river countries, and thence north to the British line, of venomous insects the *brulôt* or buffalo gnat, sand-flies, and mosquitoes. At some of the worst spots we could scarcely have discharged our professional duties at all, without a constant protection of mosquito netting."

The luxuriant valleys and humid regions of Tropical America where but little improvement has been made by human hands, the mosquitoes are probably as numerous as they were in the days of Columbus. The late Mr. Stephens, in his travels in Central America in 1841, says: "I

* *Baire*—an old, obsolete French word for *barre*, not found in the Dictionary of the Academy.

verily believe that a man could not, on the banks of the Rio Palisada, have passed an entire night and have lived." Alcedo, one of the early writers on America, gives a similar account of portions of the territory which now forms the state of Tobasco, in Mexico, where, as he affirms "the mosquitoes scarcely suffered men to exist." Dr. Mosely, in his elaborate work on tropical climates says "that these insects are vexatious in all the West India Islands, but are yet worse on the continent. In Mexico and some other places, it was said that they sometimes killed people." Peter Martin, and other historians, in their accounts of the Spanish discoveries in South America, nearly three and a half centuries since, alluded to mosquitoes as being very formidable in marshy regions, where they "filled and darkened the air like clouds."

Re-productive Power.—Entomologists affirm that the flesh-fly (*Musca Carnaria*) family muscida, gives birth to 20,000 larvæ—these larvæ devour so much food that in 24 hours their weight is increased 200 times, and they attain their full size in five days: "there is ground, says Kirby for the assertion of Linnæus that three of these meat flies could devour a dead horse as quickly as a lion." Such are the ravages of a dipteran like the common house fly. (*Musca Domestica.*)

The mosquito is supposed to lay 300 or 400 eggs five or six times in a season where the summer is long—say 2000, which in two days become larvæ—in 15 pupæ or nymphæ—in 21 winged insects—a small number compared with the aphis, the plant insect, of which there are many varieties—one of these according to Reaumur, produces 5,904,900,000.

Water. Food.—Water is necessary to the reproduction and sustenance of mosquitoes. They walk and deposit their ova upon it, but cannot re-enter it without drowning, after having cast off their nympha-robes.—The temperature of nine out of the twelve months of the year, is, in the climate of Louisiana favorable, with few exceptions to the development of mosquito ova and larvæ while all the other agencies favorable to their generation and sustenance abound in many places almost perennially, particularly in New Orleans, as stagnant, filthy waters exuberant in animal and vegetable organizations, produced by a luxuriant soil and the refuse of the city, stimulated into rapid putrefaction by a hot sun—conditions but too well adapted to produce a vast mosquito crop, while the environs of the town afford these insects complete protection from the intensity of the sun, and the turbulence of the winds by means of the grasses, shrubs, palmettoes, and cypress forests, the whole constituting a mosquito elysium for these pestilent dipterans, both rural and urban,

permitting them to chose the poluted water with its microscopic plants and infusorial animals, or the Caucasian, Indian, and African blood.

The turbid waters of the Lower Mississippi, whether flowing in its natural channel or in pipes and hydrants, does not appear to be congenial to several animals and insects found in its tributaries as water-bugs, tadpoles, etc ; nor does it seem adapted to mosquitoes as a medium of ovulation, larval development and nutrition; this is owing (it may reasonably be supposed) to the extraordinary purity of the water itself, not to its temperature, nor, perhaps to its current—I say purity, notwithstanding the vast amount of detrital matter suspended in its current, and comminuted to extreme fineness. Perhaps there is no river freer of animalcular, infusorial and microscopic organisms and microscopic plants. Of Muller's seven or eight hundred infusorial species none appear to abound in the Lower Mississippi. The river water which reaches New Orleans, has its sources for the most part, thousands of miles distant. The rains which fall in the Delta run not *into* but *from* the river. Hence whatever purifaction a running water can derive from a prolonged flow without receiving tributaries towards its debouchure, this river has, seeing that it traverses eighteen parallels of latitude not to mention longitude, giving an austro-boreal axis of nearly one third of the distance from the tropic of Cancer to the North Pole.

The extraordinary salubrity of the water of the Lower Mississippi had always been noticed and believed from the earliest times, though of late, since the prevalence of yellow fever epidemics, a few individuals have erroneously drawn different conclusions.

The late Dr. Drake maintained that its "water is medicinal, and especially adapted to the cure of chronic functional disorders of the stomach, bowels and liver," while the Upper Mississippi contains, according to Professor Baily, quoted by Dr. Drake, abundance of microspopic infusoria,—"a specimen of water taken opposite the city of St. Louis, had no less than twenty species, all living and active, a part of them soft, and a part with hard silicious shells. Most of the species were in great numbers." (Valley Miss., i. 72.) These are, it may be reasonably be supposed, adapted to nourish the mosquito, other conditions being favorable.

From the circumstances above noted and from the fact that the Lower Mississippi receives no filth from tributaries, excepting what is actually thrown into its enormous volume, its purity is easily explained

It is very far different with short, small rivers, passing through

densely populated districts, receiving the refuse of the soil and of the population. Such is the river Thames, which affords the drinking water of Londoners, and which, judging from a series of microscopic observations and engravings published a few months since in the London *Lancet*, illustrating the impurity of that stream, is a liquid having for its *substratum* an infinity of living forms and plants of the most *bizarre* configurations—the water being the menstruum of an exuberant filth and infusorial organisms. The Big Drink, as the Mississippi is unclassically called, has but little foreign matter in it beyond its suspended and undissolved silicious, aluminous and some similar substances, while the wells along its shores abound with saline matters, together with other impurities.

So far as I have been able to observe the Mississippi water, is avoided by the mosquito as a medium for hatching, and food.

The food of the mosquito is derived from the flora, and infusorial organisms in the waters of a country, rather than from its red-blooded animals. A naturalist defines the mosquito thus: "a little active insect which *lives by sucking the blood of other animals!*" Naturalists generally assert that the female mosquito alone has an appetite for blood. Whether this be true I do not pretend to say, although it cannot be a difficult question, as the male may be recognized by its feathery antennæ or plumes.

The South American Indians, as travellers assert, often ask the question—how did the mosquitoes live before the people came among them. The following experiment will, in part, explain this mystery.

Some years ago, a lady sent me a glass half filled with cistern water containing animalcules for microscopic examination. The glass was carefully covered on the top with paper, the latter having numerous holes made with a pin to admit the air. These animalcules proved to be the *larvæ* of mosquitoes. These larvæ having passed through all the stages of transformation peculiar to their class, and having freed themselves from their entangling envelopes, took wing and flew from side to side within the glass, occasionally alighting on the water, whence, Venus-like, they had emerged altogether perfect at first.

For many days they were thus kept in prison, and grew larger and more active without having had any other food than that derived from this impure water. And here I may remark, that after the straining of impure cistern water through a linen cloth, myriads of living animalculæ may often be seen in motion, by those persons who possess very strong vision for

short distances—at least I possess this power. Such water is doubtlessly not only favorable to the ovulation and larval development of mosquito-life, but rich enough in animal and vegetable substances (visible with the naked eye, and still more by the microscope,) to afford nutriment to the perfect insect. Substances are raised by winds to the roofs and gutters of houses to be washed down by rains into cisterns where they accumulate, ferment, and turn putrid. On the supposition that the mosquito is not a vegetarain but an animal-feeder, truly carnivorous, the necessity for cleanliness, and drainage, is not for that reason the less obvious, because moisture, filth, and putrefaction, generate microscopic animals, (the Infusoria) to the greatest possible extent, and, consequently afford the greatest amount of food, and the greatest number of mosquitoes. It so happens, however, that these agents produce equally microscopic plants, infusional animals, so that the essential conditions of mosquito well-being will remain after the abstraction or change of all other agents as red-blood animals.

Influence of temperature upon the Mosquito.—While most animals and plants are restricted to certain cilmatic or geographical regions, having but a limited range of temperature, where, alone, they can permanently exist, the cold-blooded mosquito flourishes alike in the eternal verdure of the tropics, and in the glacial zone, in depressed marshy valleys between mountains capped with everlasting snows and glaciers, remaining torpid during the long night of five or six months, but swarming forth during the prolonged day of summer, always however greatly influenced by temperature in every climate.

There can he little doubt that in very cold countries this insect undergoes congelation every winter without losing its vitality, as is known to be the case with some other insects. Dr. Carpenter says that "in one of Captain Ross' Aretic voyages, several catterpillars of the *Laria Rossii* having been exposed to a temperature 40° *below zero*," [72° below the freezing point] "froze so completely, that, when thrown into a tumbler, they chinked like lumps of ice. When thawed, they resumed their movements, took food, and underwent their transformation into the chrysalis state. One of them which had been frozen and thawed four times, subsequently became a moth. The eggs of the slug have been exposed to a similar degree of cold, without the loss of their fertility." Still, however, the influence of temperature upon the mosquito, is, in all climates very striking: for example—all sudden changes from

hot to cold, temporarily benumbs it; but after the first shock, if the temperature be not very low, it gradually recovers its activity, with, or without the occurrence of an increase of atmospheric heat during the interval within certain limits. A temperature that proves torpifying to it in Louisiana, proves pleasant, or perhaps oppressive in very high latitudes. This monograph shows that in the Artic regions, at a temperature only a few degrees above the freezing point, mosqitoes become active. I might show from a record of the temperature, the weather, and the mosquitoes of New Orleans kept daily for many years, that the Louisiana mosquito, is sometimes rendered torpid in the hot season, even when the thermometer ranges above 80°, provided it had ranged much higher within a day (more or less) previously: thus--1839; August 14th; 8 A. M., air 78°, showing a decline of 15° in as many preceding hours; mosquitoes feeble, August 15th; 8 A. M., 76°—at 10 A. M., 78°—at 10 P. M., 80°; mosquitoes almost torpid. On the three following days the mercury reached, sometimes transcending, 80°; easterly winds prevailing, yet the mosquitoes, chilled by the cold, remained inactive at a temperature 30° or 40° above that required to benumb an Arctic mosquito.

In uniform weather, the Louisiana mosquito may be, and often is very active, particularly in the vernal and autumnal seasons, while the temperature is much lower than that indicated above. Although a sudden change from 90° to 75° may torpify the mosquito, it does not follow that the former is, upon the whole, more congenial to its active habits than the latter. Far from it. The weather may be too hot for mosquitoes as well as for man.

The same degree of temperature may produce torpidity, or activity indifferently within a certain limit, owing to late, sudden, or gradual calorific oscillations of the atmosphere:

1846.	Oct.	12,	air at sun-rise	71°;	mosquitoes	active.
"	"	13,	" "	61°;	"	feeble.
"	"	14,	" "	58°;	"	feeble.
"	"	15,	" "	55½°;	"	torpid.
"	"	16,	" "	63°;	"	active.

Here, a sudden fall of 10° produced feebleness—a further decline of 5½° torpidity; a rise of 7½° restored activity, though this rise was only 2° beyond that at which feebleness took place in the first instance, when the fall within the 24 hours preceding had been 10°.

(To be continued.)

PROGRESS OF MEDICINE.

Art. I.—*Ozone in Epidemics.*

[Translated from *Revue de Thérapeutique Medico-Chirurgicale* of May, 1855, for the *New Orleans Med. and Sur. Journal*, by Mrs. M. E. V.]

M. Wolf, director of the Observatory at Berne, announces in a letter addressed to the Academy of Sciences that, according to his personal observation, a rapid diminution of Ozone in the air is (if not always, at least usually) followed by a considerable augmentation of mortality.

What is Ozone? This is the question.

We answer with pleasure, for a new subject is in question, which is worthy attention under several aspects, and which recommends itself equally to the chemist, metcorologist, and physician. Henceforth the study of thevariations of this new principle enters into daily meteorological observations under the same claim as that of temperature, atmospheric pressure, &c.

Ozone is nothing else than oxygen itself; this gas which enters for twenty-one centièmes (·21) in the composition of the air we breathe. But is oxygen so different from that to which chemists are accustomed to give that name, that they have a great deal of trouble to recognise it under its disguise.

For instance, oxygen is without scent, as every one knows; ozone on the contrary has a strong odor. It is by its scent, indeed, that its presence became known to observers; its name being taken from the Greek, reminds you of this property. Its odor oftentimes partakes of those of chlorine, of phosphorus, and of burning sulphur mixed with air. It manifests itself in the discharges attendant on the turning the plate of an electrical machine, or when there is a peal of thunder.

But the new and permanent qualities which oxygen acquires in becoming ozone are not confined to this; we know, for instance, that ordinary oxygen only combines slowly with mercury at the usual temperature; ozone, on the contrary, combines rapidly with this metal. In a word, *the oxydizing qualities of Ozone are much more energetic than those of ordinary oxygen.*

Van Marum was the first who found this remarkable substance. It was in 1785; having at his disposal the great apparatus belonging to the Museum of Teyler, he excited sparks in a tube full of oxygen. A quarter of an hour afterwards, after 5,000 sparks, the oxygen had acquired a strong scent, which he regarded as being very clearly that of electricity.

From 1785 to 1840, these remarkable experiments were completely lost sight of. In the course of the last year, M. de Schoenbein, Professor of Chemistry at Bale and inventor of the gun-cotton, decomposing water by means of an electrical battery, remarked that the production of hydrogen gas was accompanied by a very peculiar odor. He published a memoir on the subject. What was this new substance? Was it a simple element—was it an oxygenated product of azote or of hydrogen? The ingenious chemist left the question undecided, but he gave this odorous substance the name of *Ozone.*

In 1851, two *savants* of Geneva, MM. Marignac and De la Rive, concluded after a series of experiments that Ozone is nothing but oxygen in the peculiar state of chemical activity given to it by electricity. Berzelius and M. Faraday believe equally that there is here, an isomeric or allotropic state, that is to say, a simple modification of the oxygen. Finally in the same year, 1851, M. Schoenbein, who, on discussing this interesting question for the third time, agreed with MM. Marignac and La Rive.

Nevertheless, the majority of chemists admitted it hesitatingly. New experiments were necessary. Those made by MM. E. Frémy and Edmond Becquerel, in 1852, seemed to remove all doubts. They have shown, in confirmation of the experiments before mentioned, that electricity, acting on oxygen, develops new qualities in it; and these gentlemen have proposed changing the name of ozone into that of electrified oxygen (*Oxygène électrisé*).

Ozone then is nothing but a peculiar form of oxygen. Thus we are shown the changes that simple and compound substances experience in their most essential qualities from the force of exterior circumstances. The changes in oxygen that electricity causes in this case are comparable, in fact, to those produced by the solar rays on chlorine whose, affinities become much more energetic, and to those which heat develops in sulphur, phosphorus and carbon, whose colors, consistence, solubility and affinities they modify, and in many compound metallic oxides, for instance, experience under its influence isomeric transformations. Thus, this col-

lection of mysterious facts is of powerful interest and fully studied, will doubtlessly modify the classic ideas already much shaken as to the pretended number of simple substances which are thus found numerous by combination.

Once admit that by the agency of electric sparks, oxygen can enter into a state of chemical activity, then we must ask, if this change which we produce in our laboratories, is not produced spontaneously in the air; the more so as we cannot doubt that the atmosphere incessantly agitated by storms, experiences these chemical changes we speak of. This is a matter, however, of which one does not soon acquire a certainty.

Since 1850, M. Schoenbein has proved that Ozone decomposes the iodide of potassium, and he proved that a band of starched paper containing a small quantity of this salt, constitutes the most powerful, delicate reagent for discovering the presence of this new substance. A strip of paper prepared in this manner and exposed to the air, soon revealed, in changing from white, which was its original color before the experiment, to a blue of more or less intensity, the presence of ozone. That ozone then exists naturally in the air, is a point demonstrated; but does it always exist in the same proportions? The contrary is evident. Of what importance it is then, to study its variations! To do this it was necessary to bring back the observations to a common mode of comparison; nothing proved more easy.

Observers first arranged an ozonometric scale by dividing into a certain number of parts or degrees, the chromatic space comprised between the white which answers to the absence of ozone and the most intense blue that ozone can produce, at its maximum on ozonoscopic paper, putting on simple iodine. Ten was the number of divisions adopted, and, this done, they possessed an *ozonoscope* by means of which they could measure the daily variations of the atmospheric ozone, as they could by means of the thermometer and barometer measure the daily changes of the temperature, and atmospheric pressure.

Several philosophers, knowing the importance of this new branch of meteorological observation, have pursued it. MM. Bœckel at Strasburg, Simonin, sen., at Nancy; Wolf, at Berne; Billiard, at Corbigny; Schapter, and Beseluber, in Germany; Gailliard, in America, etc., are among these observers.

So that here is a substance, whose existence was not suspected a few years ago, and one which acts on us and on all animated nature. How is it possible to doubt as to the intensity of its action? How can one

doubt but that considerable variations in the oxydizing power of respirable gas have a powerful influence on respiration, and, in consequence, on all the vital functions?

An American physician, M. E. S. Gaillard, finds a connection between Ozone in atmospheric air and the appearance of intermittent fevers.

According to Dr. Bœckel, malaria always shows itself with the zero of the Ozonoscope, and the same thing takes place when paludal fevers prevail.

According to M. Schoenbein, a considerable quantity of Ozone was observed in the air of Berlin during the epidemic *Grippe* and during a medical constitution of the air predisposing to affections of the chest; and the reverse took place under the prevalence of the gastric constitution.

According to the same observer, Ozone was completely wanting in the atmosphere of the same city during a cholera epidemic.

According to M. Bœckel, the same thing occurred at Strasburg. The appearance of the cholera coincided with the absence of ozone, and the ozone reappeared as the cholera decreased.

M. Billiard regards the diminution of Ozone as the first cause of this terrible malady.

Finally, without going so far, M. Wolf, in the letter which occasioned this article, confirms, as to the city of Berne in which he resides, the observations made at Strasbourg by Dr. Bœckel.

It appears likely to us that Ozone has not only a great physiological part to perform, but it is necessary to employ it in explaining several physical and chemical phenomena, such for instance, as the production of nitric acid in the atmosphere, and the disengagement of the odor which so often accompanies thunder.

(*L'Ami des Sciences.*) VICTOR MEUNIER.

[Addendum, from the *Gaz. Hebdom. de Méd.* of May 11, 1855.]

Ozone and Cholera.—Having procured the daily list of deaths from Cholera at Aarau, in Switzerland, from the 15th of August to the 14th of October, 1854, M. Wolf, director of the observatory at Berne, has classed the days in which no deaths occurred—those in which there were one or two, and finally those in which there were three or more: "I

have found," says he, "that the corresponding mean of the reactions of Ozone at Berne is—

For the days of the first class - - - 6. 48;
" second class - - - 5. 48;
" third class - - - 4. 58.

"I conclude from this," says M. Wolf, "that the Cholera, to say the least, is very much favored by the diminution of Ozone."

(*L'Ami des Sciences.*)

ART. II.—*Note on the Induction of Sleep and Anæsthesia by Compression of the Carotids:* by ALEXANDER FLEMING, M. D., Professor of Materia Medica, Queen's College, Cork.

WHILE preparing a lecture on the mode of operation of narcotic medicines, I thought of trying the effect of compressing the carotid arteries on the functions of the brain. I requested a friend to make the first experiment on my own person. He compressed the vessels at the upper part of the neck, with the effect of causing immediately deep sleep. This experiment has been frequently repeated on myself with success, and I have made several cautious but successful trials on others. It is sometimes difficult to catch the vessels accurately, but once fairly under the finger, the effect is immediate and decided.

There is felt a soft humming in the ears, a sense of tingling steals over the body, and, in a few seconds, complete unconsciousness and insensibility supervene, and continue so long as the pressure is maintained. On its removal, there is confusion of thought, with return of the tingling sensation, and in a few seconds consciousness is restored. The operation pales the face slightly, but the pulse is little, if at all, affected. In profound sleep the breathing is stertorous, but otherwise free. The inspirations are deeper. The mind dreams with much activity, and a few seconds appear as hours, from the number and rapid succession of thoughts passing through the brain. The experiments have never caused nausea, sickness, or other unpleasant symptom, except in two or three instances, languor. The period of profound sleep, in my experiments, has seldom exceeded fifteen seconds, and never half a minute.

The best mode of operating is to place the thumb of each hand under the angle of the lower jaw, and, feeling the artery, to press backwards, and obstruct the circulation through it. The recumbent position is best, and the head of the patient should lie a little forwards, to relax the skin. There should be no pressure on the windpipe.

The internal jugular vein must be more or less compressed at the same time with the carotid artery; and it may be thought that the phenomenon is due, wholly or in part, to the obstructed return of blood from the

head. I am satisfied that the compression of the artery, and not of the vein, is the cause. The effect is most decided and rapid when the arterial pulsation is distinctly controlled by the finger, and the face loses somewhat of its colour; and, on the other hand, is manifestly postponed and rendered imperfect when the compression causes congestion of the countenance.

This mode of inducing anæsthesia is quick and certain. The effects diminish immediately when the arteries are relieved from pressure, and are not liable to increase, as happens sometimes with chloroform and ether, after the patient has ceased to respire, the vapours. So far as my experience goes, it has shown no tendency to cause faintness; and usually, after its employment, no unpleasant feeling whatever remains.

I think it may be found useful as a remedial agent in certain headaches, tetanus, asthma, and other spasmodic diseases, and to prevent pain in such small operations as the extraction of a tooth or the opening of an abscess. Whether the compression can be continued *with safety* sufficiently long to make it available in larger operations, has to be ascertained. But, whatever be the practical value of this observation, it is at least interesting as a physiological fact, and may be the means of throwing light on the causes of ordinary, medicinal, and hypnotic sleep, and of coma. Some facts encourage the supposition that the circulation of the brain is languid in ordinary slumber, and the etymology of the word carotid shows the ancient belief in the dependence of deep sleep on some interference with the passage of the blood through these vessels; and it is not an unreasonable conjecture, that hypnotic sleep may be sometimes caused or promoted by the contracted muscles and constrained position of the neck compressing the carotid arteries, and diminishing the supply of blood to, and pressure on, the brain.—*Brit. and For. Med. Chir. Rev.*, April, 1855.

Art. III.—*Histology.*

The following anatomical and physiological remarks, from Prof. R. D. Lyons' Report on Micrology, are from the last mentioned work without the accompanying references.

Regeneration of Nerves.—The following observations will prove of value for the purpose of comparison with those of Waller and Budge, which we formerly recorded. Schiff considers that the regeneration of nervous tissues takes place by the formation of new fibers in the old sheaths even before the previous ones are completly disorganized. At the seat of action, the parts become red, and somewhat swollen; and between the bundles of fibres, small rounded, or angular nuclei, with nucleoli, show themselves; between them will be seen a quite structureless mass, resembling connective tissue, in which soon appear nuclei in rows, and at

first round, but afterwards oblong, and placed opposite, but in alternate order. On the appearance of these nuclei, the mass becomes seperable into laminæ, in which the continuation of the primitive fibres of both ends of the nerves are visible. While at first the whole mass comports itself to potash and acetid acid, like arcolar tissue, the cylinder fibres now, on the addition of potash, distinguish themselves from other fibrous tissues, assuming a pale yellow color, and clear contour. These stages of the development proceed from both ends to the centre uniformily, but the following changes take place more rapidly in the upper. The substance lying between the rows of nuclei acquires a finely striated appearance, and on the side of every finely striated portion may be seen a dark line, which is the expression of a marked, pale greyish-yellow color, so that the new nerve has now the appearance of the primitive fibres of the olfactory, and, like this, shows here and there indications of a double border, but it is not so dark; the outer line of this double border, is stronger than the longitudinal striation in the substance within. Potash brings out the cylinders very clearly, but does not attack them. Acetic acid shows the nuclei distinctly. Somewhat later, the dark investments of their contents (axis-cylinders) seen in the single nerve fibres are, as it were, removed, and between them lie broad quadrangular, or somewhat rounded laminæ, which are found to be fat; when these laminæ exist, the nuclei of the sheath are no longer visible; their number increases, and they at last become united to the sheath, which is at first very thin, and but slowly increases in thickness, and hence the newly-formed nerves for a long time exhibit a small diameter. This author does not agree with Kolliker in the opinion that the formation of a nervous cicatrix is quite parallel to that of embryonal nerve tissue. As to the period at which a regenerated nerve is capable of reässuming its functions, Schiff, has observed that, in the infra-orbital and lingual nerves, the communication of sensation was re-established before the regeneration of the marrow in the new part was completed, and at a time when only single fat particles showed themselves in parts remote from each other. * * *

These observations are very well borne out by the investigation of Bruck, on the sciatic nerve of a cat, which had been cut across in the middle of the thigh, and examined some months after, when the powers of the extremity had been completely restored. The regeneration appeared to be as complete as possible, union having taken place fibre for fibre, there being no blind or ununited extremities; and in each fibre the cicatrix was still visible where the junction of the divided parts had been effected. Nowhere was it observed that two or more fibres were united together, nowhere was there any intermediate substance, exudation, or callus; each end of a central fibre had again found a peripheral fibre, with which it had united so as to form a continuous and isolated line. Above and below the cicatrix the fibres in all these parts, and in all their relations, were perfectly normal. The seat of the cicatrix was marked by a more or less deep circular constriction of the nerve tubes, which on both sides of it were somewhat swollen out and flask-like. The marrow was in all

the fibres, as well above as below the cicatrix for a short distance, somewhat granular, finely striated, and presented a double contour ; but at the point of section, and in the dilated parts, it was completely clear and transparent. In this clear space, without the application of reägents, and without further preparation, the axis-cylinder could in many instances be seen, its diameter sometimes unchanged, or, as might be, a little enlarged or diminished. In a few instances it stopped short on one side or the other, and was no longer visible. The regeneration was most complete in the outer sheath and the axis-cylinder, while the nerve-marrow was sometimes not complete, or re-placed by another transparent substance.

Nervous Ganglia of Lymphatic Glands.—Shaffner asserts that further researches have confirmed him in his opinion of the existence of microscopic ganglia in the lymphatic glands. He has, by degrees, brought the whole of some of the minute axillary glands of the mouse under the field of the microscope; a section being made longitudinally, and the structures treated with acetic acid, nerve fibres and ganglia were found, but very sparingly.

Périnèvre.—Under this name, M. Robin describes a structure investing the primitive bundles of the nerves, forming an uninterrupted sheath, which extends from the point of exit of the nerves from the dura mater or the ganglia, to the peripheral terminations of the nerve-tubes; it is absent from the branches of the sympathetic which present a grey colour and soft consistence, but exists in those which are white. Each tube is composed of a wall, some thousands of a millimetre thick, homogeneous in substance, and having neither fibres nor fissures; it is, however, slightly granular, and provided with longitudinal nuclei, much further seperated from each other, and much less numerous in proportion as the tube is large. It is rendered hard, and assumes the appearance of parchment on the addition of nitric acid. Each nerve filament, whether visible to the naked eye or not, is enveloped by this périnèvre; it is to be distinguished from the neurilema which forms a sufficiently thick coat on the large nerves, and supports the nutrient vessels, but the périnèvre exhibits no capillaries.

Origin of Epithelial Tissue.—Gunsburg, from the result of investigations on embryos of from five to six weeks to three months, regards this structure as formed by the solidification of the plasma into a textureless basis-membrane, in which subsequently elementary granules appear; around these granules envelopes are formed, and afterwards a nucleus becomes developed in the centre of the cell-vesicle. This view, if confirmed, would obviously assign to the nucleus a position of very little importance, and indeed it would then be almost impossible to conceive what physiological value it possessed.

The author has followed out the development of the cylindrical epithelium in the lungs and intestinal canal in three embryos of six weeks,

eight weeks, and five months respectively, and concludes that it takes place exactly in the same way as in the epidermis.

Connective Tissue.—Bruck, (Prof. C., of Basle) has investigated the connective tissue, at various stages in the progress of its development. He refers its origin to the fibrillation, or splitting into fibres, of a dense structureless blastema, by a process of simple dehiscence, without any intervention of cells, into a fibrous form of intercellular substance; but he does not claim this mode of genesis for all the structures to which the name of connective tissue is applied. In the tissue of the umbilical cord, and that of the Whartonian structure, it can be shown that the gelatinous tissue of Schwann does not disappear, but progressively increases, separates the cell-elements from each other, and finally exhibits a clear striation, splitting, and fibrillation in the longitudinal axis of the cord. There is no evidence of a cell-metamorphosis contributing to this formation of fibres. In other parts of the body, the direct origin of fibre-tissue, by dehiscence of a structureless intercellular substance, is more difficult to be shown, though the author thinks he has often witnessed a secondary increase of the so-called formed intercellular substance. Other tissues, however, are found which are undoubtedly developed, not from intercellular substance, but from the melting together or fusions of cells: thus, the amnion and allantois, according to Bruck, manifestly show originally a cellular formation; but the contours of the polyhedral cells disappear very early, though their nuclei remain longer, often become elongated, and in the further growth of the membrane, becoming separated from each other, appear less numerous than at first.

In this perfectly homogeneous, transparent, and very thin membrane, fine folds appear, in the direction of which it may be torn artificially into striæ and fibres. The same may be observed in the unbilical vesicle in animals in which it continues longer. In all these cases there is to be seen, in a secondary membraneous blastema, a tendency to the formation of folds, splittings and fibrillations. The same takes place equally, more or less, in all investing tissues—as the capsules of the Pacinian bodies, the membrana propria of glands, and the sheaths of the primitive muscular fibres. To reduce all these structures to a common histogenetic origin, the author proposes to designate as extra-cellular substance, all that has hitherto been regarded as blastema, basis, and intercellular substance, or cell product. The renal and seminal canals he finds at first to consist of solid cell-masses, on the outer surface of which the peculiar secondary gland-membrane first appears as a structureless and very thin blastema layer, devoid of nuclei. Bruck also recognizes the existence of a kind of connective tissue in which simple nuclei play the part of cells. Many so-called free nuclei exist, which, on further examination, are proved to be cell-nuclei; that is, surrounded by a distinct cell membrane; but there are also to be found, for a long time, in many connective-tissue structures, not only the entire or rudimentary remains of original cell-

nuclei, but also in pathological as well as in fœtal connective-tissue frequently, a greater or less quantity of round, oval, oblong, and pointed nuclei, in which no cell wall can be demonstrated; and neither by acetic acid, boiling or other means, can any trace of an investing membrane be found. These nuclei generally disappear, especially in pathological structures, after they have become elongated into small rod-like or pointed bodies.

Cell-nuclei are also to be met with, which reach an enormous length, and may properly be called fibres. That these elements are not elongated cell-membranes is evident from their appearance, and also because the fibre-forming nuclei entirely disappear under the action of potash.—Further, in the nuclei of the elastic fibre cells, the pointed ends are characteristic, and they may be thus readily distinguished from the rod-like stunted nuclei of the contractile fibre cells; their sharp dark outlines, and their homogeneity stand in contra-distinction to the pale, often finely-granular, or nucleated nuclei of the muscle cells. In the very open connective tissue, cells will be met with, arrested, as it were, in the process of elongation into fibres; besides the elongated nuclei, cells also are seen, the ends of which are produced into long and fine threads, the nuclei being drawn out very fine, but capable of being brought into view by acetic acid.

Bruck combats the opinion of Virchow, that the nucleus-fibres are hollow and form a very extensive system of tubes ministering to the process of nutrition. He has never seen any such cavities, and thinks their existence improbable, as the elastic elements do not become solidified by degrees, but are so from the commencement. According to this author, the greater part, if not the whole of the actual elementary parts, on which Virchow's theory is based, is to be referred neither to the connective nor the elastic tissues, but to another—namely, that of undeveloped capillary vessels. The author bases this opinion on the results of the investigations of the Whartonian gelatinous tissue; in very small embryos the number of the spindle-shaped cells, which constitute the vascular walls, continually decreases, until finally but one or two remain. The smaller the number of these cells, so much the thinner will be the walls of the vessel when complete, and so much the greater will be the amount of development of the individual cells, which increase much in length, and throw out thread-like processes, by which they become connected to each other. These fine connecting threads not infrequently contain single, and even many, elongated blood-corpuscles, lying in rows and thus showing that here already a circulation has been established. According, however, to Bruck, the stellate formative cells of Schwann have nothing to do with the first development of the vessels, but appear constantly at a later period, when the larger vascular subdivisions are completed, and their peripheral extensions are further accomplished by the continually increasing intercellular substance. In the tail of the larvæ of the frog, at the time when the heart and larger vessels are being formed, and the circulation established, there may be seen at the peripheral extremities of the vessels free-branched cells, which by de-

grees attach themselves to the outer vascular loops, and become connected with their fine, and at first solid, prolongations.

Amongst the parts in which the vascular system never passes beyond the fœtal stage of development, the capsule of the lens, and the capsulo-pupillary membrane in the first half of fœtal life, exhibit beautiful examples of vessels forming broad, wide meshes, and with thin, structureless walls. The vessels of the capsule of the lens lie in the structureless membrane, and course along pretty extensively without forming branches or anastomoses; they often have many nuclei running in the direction of the long axis of the tube; frequently a vessel will be seen to run into a long, thin, solid thread, which exhibits enlargements, in which nuclei are deposited. Around the lens will sometimes be found a thick mesh work which, with many large branches, springs from the arteria centralis, but is not throughout permeable to blood. Often, rows of spindle-shaped cells are to be seen which the author regards as undeveloped vessels of a larger kind; sometimes, a single spindle-shaped cell with extensive prolongations, appears to connect two large vessels. On the capsule of the lens, no considerable intercellular substance is to be found between the vessels; but it will be seen in abundance and in continually increasing quantity, around the arteria centralis bulbi and its various branches.

Structure of the so-called Worm of the Dog's Tongue.—It may be interesting to mention here the results of a microscopic examination of this little body, made by Virchow. He has found it present in all dogs, as well old as young; its physiological use he considers, with Morgagni, to be that of furnishing a support to the very long tongue of these animals. Two structures may be discerned in it by the naked eye: one, red, fleshy, and separated into irregular divisions; the other, white, hard, and apparently cartilaginous. In the former Virchow has found striated primitive muscular fibres, which pass from side to side in rather sharp curves; abundant nerve filaments were seen; there were also some longitudinal muscular fibres. In the dense white part, hitherto generally considered cartilaginous, he found no cartilage elements, but a thick fatty tissue, enclosed in a dense fibrous covering, from which the muscular tissue springs. Virchow, therefore, regards this little body as neither sinew nor cartilage, but as a quite peculiar, half-muscular, half-fatty and fibrous structure.

Donders finds that the bile contains no hepatic cells, but only cylindroid epithelium, with nuclei. The liver cells are, in the higher animals, subject to molecular changes. In the secretions of the pancreas, and in the saliva, some dissolved and half-disintegrated gland cells are constantly found. He considers the mucus of the intestinal wall to be produced by the rupture of distended cells on the free surface; some cells burst and discharge their contents without losing their nuclei.

In the very open tissue of the papilla, the fat, after absorption becomes heaped up into large drops (it is usually infiltrated uniformly between the bloodvessels,) and these form, by flowing together after death, a kind of compound cells.

The papilla possesses very numerous capillary vessels, which lie close under its delicate investing membrane; lympathic vessels are, according to Donders, but rarely seen in the papillæ, and then but as a central vessel near the branch of the bloodvessel: he has not observed, a network commencement of the lympathics in the papilla. The pancreatic juice has not, in his opinion, any particular import in the absorption of the fat. He confirms the presence of fibre cells and a contractile power in the papillæ, but denies the existence of open mouths; though, as in his former experiments with Mensonides, he has often observed the entrance of solid molecules.

Structure of the Lympathic Glands.—Donders confirms, generally, the opinions of Reichert and Kölliker on the structure of the lympathic glands. He finds them to possess a strong, but very thin capsule, in which he has not seen fibre cells, though he in no way throws doubt on the statements of Heyfelder. From the capsule, bands pass into the gland tissue, which divide it into lobules. The external lobules are bordered all around by the capsule, the internal not entirely so. The contents of the lobules consist chiefly, but not entirely, of cells lying in a little fluid; between the cells there is a prolongation of the capsule in the form of a very fine stroma, consisting of a network of fibres, with very large meshes. In the outer lobules, capillary vessels are found. After ligature of the ductus thoracicus, the lympathics of the gland become filled. The lymph and the chyle do not, in the opinion of Donders, entirely pass through the glands, but find a circuitous channel. In coagulated, as well as in injected glands, he has found the contents of the vessels to escape, and to become infiltrated into the parenchyma. The lymph passing out of the glands contains less water, and more fibrin and morphological elements—namely, lymph-corpuscles, which afterwards become blood-corpuscles.

Peyer's Glands.—Donders agrees with Brücke in considering these glands as entirely analogous to the outer lobes of the lympatic glands. They possess a stroma, and capillary vessels, take part in the fatty absorption, and stand in connexion with the lympatic glands.

Corpora Amylacea.—We have hitherto found these bodies noticed as occurring under conditions little, if at all, departing from the normal; Günsburg has, however, found them to constitute a large element in certain tumors in the brain, near the vessels of the neck, and behind the stomach.

Cilia: Nasal Membrane.—Gegenbaur was unable to detect any ciliated epithelium on the upper eyelid, but found, in this situation, the ordinary pavement epithelium, which corresponds with Henle's later observations.

According to the observations of Gegenbaur, Leydig, and Müller, a ciliated epithelium is found over the whole nasal mucous surface,

even in the olfactory region on the cribriform plate, which, according to Todd and Bowman, possesses in lower animals, a peculiar unciliated cell-layer.

It was endeavoured to determine the direction of the ciliary wave by finely pulverized carbon, but no results were obtained to warrant a belief that the stream took place in any determinate direction. The epithelial cells in the olfactory region appeared to be more delicate than in the under parts, and here and there had two, and sometimes three nuclei.

Cilia: Auditory Membrane.—Kolliker, in the same case, (that of the beheaded criminal,) examined into the distribution of ciliary motion in the auditory apparatus, and showed that it was absent from the membrana tympani; neither could it be demonstrated to exist in the ossicula: it was present, however, on the promontory, on the outer wall near the membrana, and also on the floor and roof of the cavity.

Cilia: Brain.—Leydig examined this organ with a view to determine the question, whether cilia exist on the surfaces of the ventricles, and, if so, in what situations. This observer had found that in fishes, amphibia, and birds—and, according to Valentin, in mammalia—the epithelial cells of the choroid plexus were ciliated; but, though the cells of the choroid plexus, in the case under examination, were well seen, and presented a clear border, there were no cilia to be seen in this situation, nor in the cells of the ependyma of the lateral and third ventricles, though fine vertical sections were made, which brought clearly into view the sharp border of the cell-layer. In the fourth ventricle, however, ciliary motion was distinctly observed; the cells were of a round, flat form, the cilia were tolerably long, but very fine, and when moistened with blood-serum, moved with great activity—a fact which was verified by Müller, Kölliker, and Virchow. When the cilia became inactive, their motion could be once again, for a short time, vigorously re-established by the application of a solution of potash. This ciliary motion, it is to be remarked, was chiefly confined to the neighbourhood of the striæ acousticæ (calamus scriptorious.)

Kidneys.—Leydig could find no trace of ciliary motion in these organs.

Cartilage and Bone, structures of.—Bruck describes the elements of bone and cartilage, especially in their relation to each other, and advances some views different in many most important respects from those generally entertained. He considers that all the primordial parts of the vertebral skeleton, as far as their ossification is concerned, again disappear, and become fused into a secondary blastema, out of which the so-called bone and cartilage marrow tissue are produced. All that is comprised under the term bone in the adult, is, with few exceptions, an

entirely independent, generally later formation, which from the commencement is produced as bone, and is either entirely independent of the pre-existing cartilaginous parts, or is developed as an "apposition" to them.

Decrease of Blood-Corpuscles during Hybernation.—In a marmot examined the 28th of November, the mean number of blood corpuscles in the cubic millimetre was found to be 5,828,000; on the 5th of January this number had decreased to 5,106,000; on the 4th of February, to 2,356,000. Hæmorrhage appears to have taken place during the last operation. The animal's weight also was observed to diminish at each period.

Proportions of colored and colorless Corpuscles in the Splenic Vein.—The mean of four enumerations by Vierordt on the body of a criminal, gave 4-9 colorless to one colored.

Lymph, Micrological Characters of.—A rare and very remarkable case of lesion of the lymphatics has given to M. Gubler an opportunity of analyzing this fluid, so seldom in the human subject recorded to have been submitted to chemical or microscopical examination. We therefore produce here the most important results of the observation.

A female in a good state of general health, presented, at the anterior and superior part of the left thigh, about two centimetres below the fold of the groin, several small phlyctenulæ, or translucent vesicles, of the appearance and size of a grain of sago boiled. They were covered only by the epidermis, and appeared manifestly to result from a varicose dilation of the sub-epidermic lymphatics. They were disposed in two divergent lines, enclosing a very acute angle, the apex of which corresponded very nearly with the opening of the internal saphenæ; the sides diverted outwards were lost before they reached the inguinal region; the superior followed exactly the fold of the groin; the inferior ran a little more transversely. There were four very apparent and prominent vesicles a little lower down, and lying on the border of the sartorius. The largest among them, when torn with the point of a needle, gave exit immediately to an opaline fluid, which ran in a little stream down the thigh, falling at the rate of about fifty drops per minute, and this continued until arrested by compression. The smaller vesicles gave exit to but a very small quantity. This liquid, collected in a vessel, coagulated, in from one quarter to half an hour, in the same manner as blood—that is to say, it formed a clot swimming in a fluid; but the serum, so to speak, retained the same color as the clot, was undistinguishable by the sight, and could only be recognized on shaking the mass.

Submitted to chemical and microscopical analysis, this fluid was found to present the characters assigned to lymph. Other abnormal conditions of the lymphatics existed in this limb which it is not necessary to specify here. It may be mentioned, however, that on one occasion lymph escaped from a rupture of one of the vesicles, and continued to flow for forty-

eight hours; and it has been calculated that about 2830 grammes, or nearly six pounds, escaped in twenty-four hours.

Physical properties.—At the moment of exit from the vesicle, the liquid was white, opaque even when seen in drops, having much the appearance of milk deprived of its cream, with a slightly dull yellow tint. It had a strong alkaline reaction, a feeble saline taste, and a scarcely sensible animal odour. As before observed, it separated into a serum and clot, the former still retaining the opaque white color, and scarcely distinguishable from the latter.

Microscopic examination, with powers from 300 to 500 diameters.—A considerable quantity of yellowish corpuscles occupied the field, similar to those of blood recently withdrawn from the circulation, but of very unequal size. Some had the usual dimensions of blood corpuscles, but the greater part were sensibly smaller, reaching a diameter of only 1-150th of a millimetre. Lastly, there existed a certain quantity of colored corpuscles, like the preceding, but much smaller, about half the dimensions in diameter, of the larger ones—that is, about 1-300th of a millimetre. These little globules were seen to be rounded on all sides as they rolled over the field; they were constantly spheroidal, and exhibited no flattening, excavation, or anything which indicated a nucleus; their surface was smooth, their outlines regular, and their yellow color appeared as intense as that of the best formed blood corpuscles, if not even more so.

Besides these coloured corpuscles, which, in the opinion of Gubler and Quévenne, are to be regarded as only modifications of those of the blood, there were others less numerous, and pale or colorless, and of very various dimensions. The smallest, having the same dimensions as those last described, were white or colorless at a certain focal distance; but on approximating the object-glass a little towards them, they appear to present a very light greenish tint. They were spheroidal, covered with small, but very apparent granulations, which, however, did not render their outline irregular. The largest of these white globules exceeded in size the largest blood corpuscles. Their form was regularly spherical, their outlines smooth and uniform, and their walls finely punctured.—There was no visible nucleus, and no appreciable greenish tint. These larger white globules, reaching to 1-100th of a millimetre, were very rare, but the smaller white ones were present in abundance; intermediate ones were constantly seen. Lastly, there were suspended in the liquid, infinite multitudes of molecular granulations, scarcely visible from their extreme tenuity, reaching to only about 1-600th of a millimetre in size.

The above elements may be regarded as those proper to an average specimen of this fluid, but on some occasions others were observed. Thus, in one examination there was found a considerable number of discoid blood-corpuscles, and bodies analogous to the white globules of the blood; in another specimen the small white globules, and the small spheroidal

bodies of a hæmatoid nature above noticed, were less numerous. With these exceptions, the same elements were constantly to be found, and with the same characters, the relative proportions of them alone varying.

Certain changes were produced in these little bodies when allowed to rest, all, however, more or less attributable to histolytic influence, and, as we conceive, in no way characteristic; the discoid bodies became globular, granular, and mulberry-like, and were at the same time diminished in diameter. The small spherical blood-globules manifestly multiplied as the lenticular bodies disappeared; a part of the molecular granules grouped themselves into pellicular masses, more or less extensive, in which were to be seen some very brilliant globules (oil particles.)

Weak acetic acid dissolved almost all the red globules, which first became enlarged; a few of the colorless corpuscles resisted its action for some time, but finally disappeared. The white globules were greatly altered by this reägent, but did not become dissolved; the largest became much swollen, their cellular wall becoming pale and thin, and losing its punctured appearance. The granulations assemble in the cavity of each cell in a single round mass, resembling in form and aspect an ordinary excentric nucleus. In the small white globules the granulations of some became more apparent on the addition of the acid; others exhibited a very pale zone, which seemed to be a rudimentary cell-wall, closely embracing a granular nucleus. By the action of ammonia, also, the red globules instantly disappeared; the white globules dissolved in this reägent, but more slowly. The molecular granules were dissolved by ether, oily drops resulting on its evaporation. Iodine coagulated the albuminoid matter, and colored it yellow, as well as the globules. Water swelled out the discoid bodies, and rendered them vesicular, depriving them at the same time of their coloring matter.

The clot was composed of a mass, which appeared amorphous when thick, but which was manifestly fibrous and striated when examined in thin particles, and showed delicate fibrillæ under the microscope. The following is a *résumé* of the observations on the microscopic elements of this lymph.

It contained, in suspension in a serous liquid:—(1) hæmatoid corpuscles, always of a diameter inferior to those of blood, some lenticular like blood corpuscles, properly so called, others very small, spherodial, and smooth; (2) pale, scarcely-colored globules, being those more usually designated as lymph-corpuscles, some exceeding in size the red corpuscles of blood, others much smaller; (3) granular fatty molecules.

The authors regard the first-named elements merely as modifications of the blood-corpuscles, presenting a similar aspect and similar chemical reäctions the second resemble the white corpuscles of the blood, but differ from them in certain regards; these are the veritable corpuscles of lymph of authors. The difference between the white globules of the blood, and the large white globules of lymph, seems, according to MM. Quévenne and Gubler, to be manifested chiefly in the different comportment of their nuclei to acetic acid; but they do not attach much importance to it.

Anatomical Investigations on the Body of a Criminal.—A series of experiments was lately made on the corpse of Gensler, who was put to death by the sword for having committed murder by poisoning. Professors Virchow, Kolliker, Muller, and Liebig, made microscopical and galvanic observations, the most prominent of which were : the mieroscopical representation of the ciliary movements on the third ventricle of the brain; further contraction of the iris by application of galvanic stimulus, and beautiful representation of muscular longitudinal stripes on a vein of the liver; also on the cremaster, which showed eontractions for a longer time; the museles of the thorax eontracted for an hour after the decapitation. The corpse was snbjected to anotomical investigation twenty eight minutes after death. The temperature of the spot where the head was seperated from the trunk was yet ninety-eight degrees, whereas that of the room was eighty degrees. The head was separated from the trunk precisely at the atlas.—*American Medical Monthly.*

ART. IV.—*Heart Diseases.*

In a recent elaborate paper, rich in cases and numerical analysis, on protracted Valvular Diseases of the Heart, read before the Society of Statistical Medicine, by JOHN W. CORSON, M. D., physician to the New-York Dispensary, the following summary is given by the doctor :—

CONCLUSIONS.

The careful consideration of these forty-one cases of the most favorable and protraeted examples of different forms of valvular disease of the heart, impartially selected, tends more or less to establish the following recognized, or new propositions :

1. That in protracted valvular diseases, aortic lesions are twice as numerous as any other class; aortic obstruction alone and aortic obstruction with regurgitation nearly equally divided, forming about one half ; mitral regurgitation nearly one fourth ; aortic and mitral combined, one sixth ; and simple or complieated affections of the right valves, about one eighth.

2. That owing to the exeess of three males to one female in the large aortic elass, two thirds of the whole were males ; and that the average age of the whole, rejecting fractions, was thirty-nine years ; of the aortic alone, forty years, and of the mitral alone, thirty-two years.

3. That in both ability for exertion and duration, the aortic on the whole excelled; each being greatest with either slight aortic obstruction or limited stationary mitral regurgitation, with the *least hypertrophy ;* enlargement being best endured in the aortic class; and that the average

duration of the forty-one cases reached the extraordinary term of nine years; nine with aortic obstruction averaging ten and a half years; eight with aortic obstruction and regurgitation, eight and a quarter years; seven of aortic and mitral combined being ten years; and three of right and left valves simultaneously, being four years.

4. That of twenty-nine cases in which the causes were mentioned, twenty, or about two-thirds, were from rheumatism, four from pneumonia, or pleurisy, and none from Bright's disease.

5. That the aortic differed from the mitral in having, more often, florid face, bright protuberant eye, jerking, thrilling, or firm pulse, precordial bulging and pain, strong impulse, harsh grating or sawing murmurs always sternal, more frequent and large hypertrophy, and more cerebral complications; while the mitral, on the contrary, were more liable to a livid or puffy face, softer, smaller and more intermittent pulse, feebler impulse, more liquid murmurs always *apexial;* less hypertrophy, and more frequent pulmonary complications and dropsy.

6. That in Prognosis, from their presence or absence in these cases, were variously rated, with some exceptions, the following characteristics: favorable, slight aortic obstruction or limited stationary mitral regurgitation with little or no *hypertrophy*, a natural or florid face, and a healthy easy avocation; less favorable, aortic obstruction and regurgitation, or free mitral regurgitation with large hypertrophy, excessive pulmonary congestion or dropsy, and an unhealthy straining or anxious avocation; unfavorable, mitral obstruction, tricuspid with left valvular lesions, or disease of any two sets of valves sufficient to produce murmurs from both during life; Bright's kidney, a livid or cachectic face, or enlarged liver.

7. That eleven cases at the time reported were still living; and that of the thirty fatal cases only seven—all purely or mainly aortic—were mentioned as dying "suddenly;" while sixteen, principally mitral, "sank gradually;" and that in the thirty post-mortem examinations, beginning with the most frequent, there were found the following cardiac pathological changes: hypertrophy with dilatation, ossific deposits or calcification, adherent pericardium valvular thickening, cartilaginous induration, and vegetations.

8. That in the treatment of protracted valvular disease, we must avoid as far as possible thwarting the restorative operations of nature, by depressing with bleeding or digitalis; these, when required by dangerous complications or secondary inflammations, being used cautiously as in phthisis, and on account of less liability to fatal syncope, being best borne in mitral disease with sufficient impulse; that many cases only require careful regimen for years; that allowing a certain excess above the natural

standard to carry on the embarrassed circulation, the impulse is the true pulse of the heart, indicating, especially when feeble, the need of support; that when any interference is necessary, tonic, and soothing remedies are far the most frequently required; and that the most valuable tonics to sustain a failing heart are first, *strychnia* or *nux-vomica*, in from one fourth to one third the usual minute doses long-continued, and next, preparations of iron with mild sedatives and bitters.

ART. V.—*Wounds of the Heart.*

SAMUEL S. PURPLE, M.D., senior editor of the New-York Journal of Medicine, in the May (1855) No. of that journal, deduces from his "*Statistical Observations on Wounds of the Heart, and on their relation to Forensic Medicine, with a table of forty-two recorded cases,*" *the conclusions which follow:*—

That wounds of the heart are not in general immediately fatal.

That recovery, after severe gun-shot, incised and punctured wounds of the heart is possible, and that, too, amounting almost to a probability, provided a careful and judicious treatment is faithfully carried out.

That the presence of a leaden ball imbedded in the walls of a ventricle of the heart does not preclude the possibility of recovery, and is not incompatible with the continuance of life for a number of years.

That it is possible for an incised wound of the heart to heal by the first intention, and the patient afterward be able to continue a laborious occupation for years after with no severe manifestations of heart disease.

That the presence of a foreign body, other than a leaden ball, of considerable size in the walls or cavities of the heart, does not necessarily preclude the possibility of a continuance of life for a number of years.

That the prognosis of all wounds of the heart is unfavorable, but that in some cases hopes of recovery may be entertained, provided the patient's constitution be good, and efficient treatment be early resorted to.

That the proper treatment of wounds of the heart is that which is adapted to like wounds of the chest in general; and that the inflammatory complications must be met with the same remedies as are adapted to the management of the disease when arising from idiopathic causes.

That all parts of the heart are not equally liable to wounds, the right ventricle being the one most frequently injured.

That the comparative mortality of heart wounds shows that the

average duration of life is greater if the left ventricle be the seat of injury. This proposition is opposed to the received opinion of almost all writers on this subject.

That the medico-legal relations of wounds of the heart are important, and should command the surgeon's careful attention, in order that he may not jeopard the life of his patient by timidity on the one hand or temerity on the other.

Art. VI.—*Inhalation of Iodine in Consumption.*

M. Piorry, in a paper read before the French Academy of Medicine, has given the following summary of his researches upon the inhalation of Iodine Tincture vaporized by heat and to be inspired at short intervals, one or two hundred times daily:—

1. The inhalation of the vapor and tincture of iodine is useful in the cure of phthisis.

2. In many cases such inhalation is followed by a diminution in the extent of the indurated parts surrounding tuberculous deposits, and an amelioration in the general symptoms.

3. It is probable that tubercle itself disappears under the influence of iodine inhalations.

4. That inhalations of the tincture of iodine may promote the cure of tuberculous cavities.

5. That after the softening of tubercles, the resulting cavities may cicatrize spontaneously.

6. That compression of the thorax over the points of disease indicated by percussion and auscultation, may contribute to the cure of the local lesion, and to the prevention of pyæmia.

7. That iodide of potassium administered internally, and frictions with diluted tincture of iodine over adherent portions of the lung, are also of great utility.

8. If, adds M. Piorry, any useful therapeutical facts have been brought out in the preceding essay, I would observe that science and humanity are indebted for them to the progress of accurate diagnosis. —*Rec. Med. Sci.*

ART. VII.—*Uterine Displacements.*

Within the last three years the French medical mind has been chiefly occupied with the Perchloride of Iron, the Microscope in Cancer, and Uterine Displacements. In regard to the latter, the commission of the Academy, recently reported the following conclusions, which, with the exception of the third, were adopted, namely:—

1. The cases reported to the Academy by MM. Broca and Cruveilhier, along with numerous others on record, prove that the use of the intra-uterine pessary may often occasion serious accidents, and sometimes even death.

2. In the rare cases in which this instrument has appeared productive of advantageous results, it is not proved that it had always acted by replacing the uterus.

3. In some exceptional cases where uterine displacements (*déviations*) have occasioned serious functional derangements, and where all known therapeutic measures have been tried in vain, the application of the intra-uterine pessary may be tried as a last resource.

4. The commission has the honor to propose a vote of thanks to M. Broca, for his very interesting communication which has originated the late debates; and also to M. Cruveilhier.

The President put the first conclusion to the vote.

M. Velpeau—This conclusion appears to me to have been adopted; but it is too severe. Instead of saying "the use of the intra-uterine pessary may *often*," I would substitute the words "may *sometimes* occasion," etc.

The President.—It is proposed to suppress the adverbs altogether. It should be read: "the use of the pessary *may* occasion," etc.

The President then put the first conclusion to the vote, with the word "*often*," suppressed. It was adopted in this modified form.

The *second* conclusion was carried unanimously, without any modification.

The *third* conclusion was then read, and M. Gilbert demanded its suppression.

M. Velpeau.—I insist on its being allowed to remain.

M. Cazeaux.—I am convinced that the use of the intra-uterine pessary is always useless and sometimes dangerous. I cannot adopt this conclusion.

The President.—It contains the words: "As a last resource." For this purpose we may try anything. [Laughter.]

Several members proposed the suppression of the conclusion and the president proposed to put it to the vote.

M. Jobert requested the suppression of the words "as a last resource" (*comme dernière ressource.*)

M. Velpeau supported this amendment.

The conclusion thus modified was put to the vote and rejected.—*Ohio Med. & Surg. Jour.—Month. Jour. Med. Sci.*

Art. VIII. *Chloroform in Midwifery.*

Prof. E. W. Murphy, in a recent work reviewed by Dr. Churchill in the April number of the Brit. & For. Med. Chir. Rev., from which the following quotation is taken, advances the subjoined Rules for the administration of Chloroform in child-birth:—

Rule 1. Let the Chloroform be pure. If rubbed on the hands, the smell should be fragrant, not pungent, like sulphuric ether. If inspired from the inhaler, there is a sense of warmth in the mouth, a fruity flavor, no pungency; if the strength of the vapor be sufficient, it will excite a slight cough: but if impure, the cough is irritating. Let the sponge of the inhaler be placed in warm water, and then rung perfectly dry.—About thirty minims may be poured upon it, which is sufficient in the first instance.

2. When labor has commenced, do not interfere so long as the patient bears her pains well; if she be not teased with short, very severe, and inefficient pains, chloroform need not be given. If, on the contrary, the severity of the first stage be such, the anguish of the patient so great that pain is evidently a cause of protraction, chloroform may be given with great benefit.

3. Always commence with a small dose, about thirty minims; if it agree with the patient no inconvenience is caused, but she will generally complain that it is doing no good; the quantity may then be increased, until on inhalation the exhibitor finds that she cannot take a full inspiration without cough.

4. In the second stage of labor, chloroform may be given when the head is approaching the perineum, or before then if the pains become intolerable. This may be known not merely by their greater intensity while the uterus is in action, but also by the restlessness of the patient in the intervals. She is watchful, dispirited, still crying, but in a more subdued tone, from pain and a feeling of soreness.

5. When the head arrives at the perineum, chloroform may be given in a fuller dose, if it have not already accumulated. The perineum yields more easily under its influence, and the severity of the pains is controlled without any loss of force. This rule applies especially to cases in which powerful forcing pains are acting against the perineum at the hazard of its laceration.

6. When operations are necessary, if they are not severe—as, for instance, some forceps operations—chloroform may be given in the same manner as in natural labor, but always after the instrument is applied. If severe, it may be given as in surgical operations, but not to the same extent. Hence an assistant is necessary who is conversant with the properties of this anæsthetic. It is obvious that the same person cannot operate and give simultaneously the full soporific dose of this agent.

7. The inhaler should be applied to the mouth just before the pain commences, two or three full inspirations taken, and the moment the action of the uterus ceases it should be withdrawn. The inhaler should never be applied in the interval between the pains, and if used in the middle of a pain the cries of the patient blow away the vapor and no relief is given.

8. When inhalation has been continued in this interrupted manner for some time, if any alteration be observed in the countenance or manner of the patient—if the face is flushed, or bloated, or tinged with a slight lividity—if she ramble or become hysterical, let the inhaler be withdrawn, and the face of the patient fanned. Wait until the pains return to their original severity before renewing the inhalation, when it is probable that these symptoms will not return.

9. In some instances, the patient is very intolerent of her pains, and if given chloroform to relieve them, she becomes hysterical, crying, perhaps louder than before it was inhaled. In these cases it is better to induce sopor, which may easily be done, without stertor. For this purpose, a sponge and folded handkerchief applied to the nostrils is preferable to the inhaler. Whenever sopor is brought on, the closest attention should be given to the countenance—observe the irritability of the eyelids; to the respiration—notice its frequency, and especially stertor; to the pulse —mark its strength. The handkerchief should always be held at a distance at first, and be gradually brought nearer, but the sponge should never be applied quite close to the nostrils.

10. There should be the freest circulation of air in the apartment; and if, after delivery, there should be any feeling of faintness or nausea, ammonia in effervescence will relieve it.

ART. IX.—*New Treatment of Gonorrhœa.*

Dr. LEVRAT PERROTON, one of the most prominent physicians in Lyons, has just published in the "*Gazette Medicale*," of that city, an article on the efficacy of a new method which he proposes for the cure of Gonorrhœa. After numerous experiments, for the purpose of ascertaining the best treatment to be employed in the disease, at once so common and so obstinate, he has adopted the following prescription:—

1. Take three pills in the morning and three in the evening, (or two in the morning, two at noon, and two at night) of the following preparation:—

℞ Copavia	16 grammes,
Alcoholic Ext. Cubebs	8 grammes,
Camphor	12 decigrammes,
Powder of Cubebs	q. s.
Ft. pil. No. 48.	

Roll them in magnesia to prevent their agglutination. These pills may be given even in the most acute stage of the disease. No change of diet is requisite, but the patient should abstain as much as possible from beverages of every description. Occasionally the excessive pain caused by the emission of urine ceases in two or three days; it rarely lasts longer than the eighth day, and, in the majority of cases of simple Gonorrhœa the discharge completely disappears, and the cure is completed, in fifteen days.

When the Gonorrhœa is complicated with syphilitic symptoms, such as chancres or buboes, 19 or 24 and even 52 centigrammes (according to the symptoms and idiosyncracy of the patient) of proto-iodide of mercury should be added to the composition of the pills, so that the patient takes each day 2, 3 or 4 centigrammes of this mercurial salt; and at the same time, a glass of a decoction of sarsaparilla and liquorice should be taken with each dose of the pills. If Chancres are developed in the progress of the Gonorrhœa, they should be bathed at first with a lotion consisting of 5 centigrammes of nitrate of silver dissolved in one gramme of water. And, should this application prove ineffectual, mercurial or neapolitan ointment may be substituted. In cases where the lymphatic glands of the groin become swollen and painful, they should be rubbed four or five times daily with an ointment composed of 44 grammes of fresh lard, and 4 grammes of the deutophosphate of mercury. As soon as the gonorrhœal discharge ceases, the pills should be stopped, and the specific treatment for syphilis continued until the complete disappearance of all the symptoms which have manifested themselves in the progress of the Gonorrhœa. A very few cases have fallen under the observations of Dr. Levrat Perroton where the Gonorrhœa and these symptoms have disappeared simultaneously.

The treatment for Gonorrhœa above described should be accompanied by the use of the following injection, three or four times daily. Should the patient, however, be unwilling to use it, the pills alone will effect an equally certain but more tardy cure:—

Distilled rosewater,	250 grammes.
Sulphate of Zinc,	1 "
Laudanum,	80 drops.
Goulard's Extract,	60 "

If the patient is annoyed during the night by painful erections, he should take, before going to bed, four pills composed of 75 centigr. of Lupuline, 3 centigr. of Extract of Opium, and 5 centigr. of Camphor; and if there should be constipation, an enema of tepid water should be given.

If high inflammatory symptons should manifest themselves during this treatment, it will be proper to combat them by the use of emollient draughts, by bleeding in the arm—if the patient is of a plethoric habit—by application of leeches to the perineum, by mucilaginous and laudanic injections, by general and local baths, and, in cases where this condition is complicated with Orchitis, by cold applications frequently

renewed and made to the scrotum with a compress consisting of several folds, and saturated with the following mixture:—

Saturated solution of Goulard's liquid,	250 grammes
Laudanum, - - -	30 grammes

These applications, made at the beginning of Orchitis, invariably afford immediate relief from the excessive pains to which Gonorrhœa gives rise. As soon as these pains have nearly disappeared, the diseased testicle should be covered with a mercurial plaster, which soon restores it to its normal condition. The great advantage of this mode of treatment is its secrecy, it being unnecessary for the patient to adopt any particular diet, especially in cases of simple Gonorrhœa.—*Jour. de Médecine et de Chirurgie.—Char. Med. Jour.*

ART. X.—*Neutralization of the Syphilitic Virus, by the Perchloride of Iron.*

IN a report made to the "Administration of Hospitals" at Lyons, Dr. Rodet has communicated the composition of a liquid which possesses the property of decomposing the syphilitic virus, and thus preventing contagion. After numerous experiments made for the purpose of discovering some substance which would, without cauterization, prevent contagion, this physician has fixed upon the perchloride of iron, and has deduced the following conclusions from his varied investigations.

1st. The most suitable dose of perchloride of iron and citric acid, is 4 grammes of each to 32 grammes of distilled water. By adding to this solution 1 gramme of hydrochloric acid, preservation from contagion may generally be secured. With 2 grammes of hydrochloric acid, preservation is more secure, and with 4 grammes still more so. The prescription would therefore be as follows:

Distilled Water,	-	32 grammes.
Perchloride of Iron, Citric Acid, Hydrochloric Acid,	a a -	4 "

A liquid endowed with properties almost identical, may be found by leaving out the citric acid, and increasing the quantity of hydrochloric acid one third, according to the following prescription:

Distilled Water	- -	32 grammes
Perchloride of Iron,	- -	4 "
Hydrochloric Acid,	- -	6 "

This latter preparation is, however, slightly more irritating than the former, and therefore not as desirable.

2d. The most simple manner of employing this liquid is by dropping a drop on the part innoculated by the virus, and allowing it to remain

there ten or fifteen minutes, or by placing upon the part a small piece of lint or charpie previously dipped in the preparation. If the liquid remains in contact too short a time the prevention of contagion is incomplete, and an ulcer makes its appearance which develops itself slowly, and which may be regarded as an imperfect chancre.

The prevention of contagion will be complete if the lint or charpie is applied for an hour. Even a shorter time will probably suffice, but no inconvenience will be experienced if it is allowed to remain twenty-four hours.

3. As soon as the liquid is brought into contact with the innoculated spot, the patient experiences a burning sensation which lasts, however, only for an instant. Immediately this spot begins to rise and assume the form of a papule which gradually extends from the centre to the circumference, and resembles the bite of a gnat. At the end of twenty or thirty minutes it ceases to spread; in two hours it commences to dry up, and after several hours more no trace of it remains. This blotch is an infalliable sign that the liquid has penetrated into the point of inoculation, that it has passed into the meshes of the reticulated tissue of the skin, and that the virus which seems to insinuate itself into those parts more slowly, has been completely destroyed. In order to render the prevention of contagion certain, it is necessary that the blotch should acquire a considerable extent, and this is produced by the absorption of the liquid, hence the necessity of leaving the liquid in contact with the contaminated part a certain length of time.

4th. The prevention may be secured before the virus has produced any appreciable effect upon the part. At the expiration of two, four or six hours, the prevention is as complete as if the application were made sooner, provided the liquid has been allowed to remain sufficiently long in contact with the infected part.

If the inoculation has already produced any sensible effect, either a pustule or a papule, the liquid is not readily absorbed, the blotch does not form in a regular manner, and consequently the prevention remains incomplete. Cauterization with a fragment of solid nitrate of silver is then more sure, and therefore to be preferred.

5th. The effects of this preventive liquid may be modified, not only by the quantities of active substances which enter into its composition, and by the duration of its contact with the parts affected, but also by the activity of the virus, whose effect it is intended to counteract. Weak doses, which in some cases act as complete preventives against contagion, produce in others only an imperfect result. M. Rodet thinks he can prove that the syphilitic virus is much more active when it is derived from a recent chancre, than from one in a later stage. He supposes that the virus may renew itself by a new generation in the chancre; but that the soil in which is it implanted may become exhausted, or the chancre itself become so enfeebled that it can produce but slowly its first

effects, and resist more feebly the neutralizing effects of the preventive liquid.

6th. This liquid seems to be susceptible of many other applications.

First. It modifies the simple chancre with a rapidity truly remarkable, destroying sometimes in twenty-four hours their property of secreting virulent pus.

Second. Vaccine matter is neutralized by this liquid in the most complete manner. This considered by itself is a matter of small importance, but it induces the hope that we may be able to modify the varioloid irruption and prevent the disfiguring marks which it sometimes leaves behind it by bathing with this liquid at an opportune time the parts of the skin which we wish to preserve.

Lastly. Is not this liquid capable of neutralizing the virus of hydrophobia as well as that of syphilis and vaccine? If experience enables us to answer this question affirmatively, science will have made an important conquest. As this remedy does not cauterize the tissues, even suspected bites may be bathed with it without fear, while cauterization not only is rejected by a large number of victims on account of the dread which it inspires, but even when employed, does not always reach every part of the bite, and is not always successful in destroying the virus.—*Ibid.*

ART. XI.—*Radical Cure of Hernia by Iodine Injections.*

M. JOBERT has presented to the academy an account of three cases of inguinal hernia which were radically cured by injection of the tincture of iodine into the hernial sac.

The first case was that of a young man, aged 18, who was affected with a complete ingvinal hernia of the left side. It did not, however, descend to the bottom of the scrotum, and below was separated from the testicle by an elongated constriction. The bowel was readily reducible by the taxis, but immediately the patient coughed or stood on his feet it was again extruded. The patient stated that his disorder in no way interfered with his ordinary occupations, but he was extremely desirous to be completely cured of it, as he was judged unfit for military service in consequence of its existence.

In compliance with the patients wishes, M. Jobert determined to accomplish, if possible, a radical cure, by injecting the tincture of iodine.—On the 12th of May, therefore, having made an incision over the inguinal canal, he introduced a fine trocar, and injected through it five drachms of pure tincture of iodine. The patient suffered some litte pain

in consequence of the proceeding, and upon its completion, the wound was united by the twisted suture, and dressed with simple ointment. In the evening, there was slight swelling in the inguinal region, but no constitutional disturbance.

On the 14th, the swelling and redness were considerable, and, on removing the sutures, the wound was found imperfectly united. After some days, however, the redness and swelling disappeared, and cicatrization was accomplished. On the 5th June, the patient left his bed, walked about, and coughed without causing the least unnatural impulse of the abdominal viscera, or the slightest reäppearance of an external tumor.—The left testicle (that on the affected side) remained of the same size as the right. He was directed to wear a suspensory bandage for some time as a precautionary measure.

In the second case, the patient, aged 33, was admitted into Hôtel Dieu, on the 18th of November, 1853, with a hydrocele and a congenital inguinal hernia of the same side, and the two swellings being separated from each other by a kind of hour glass contraction of the tunica vaginalis, the upper part of the sac being occupied with intestine, and the lower part with serous fluid and the testicle. M. Jobert resolved, if possible, to obliterate the tunica vaginalis, and so to cure, at the same time, both the hernia and the hydrocele. With this view, having first interrupted the communication between the tunica vaginalis and the peritoneum, by means of pressure applied to the inguinal canal, he passed a trocar into the lower portion of the constricted sac, and, after having let out the contents of the hydrocele, injected a small quantity of the pure tincture of iodine. On the following day, the scrotum was red and slightly tender and the affected tunica vaginalis distended with effusion of serum. The patient, however, manifested no constitutional disturbance and complained of no pain. Day by day the swelling and redness diminished, and within seventeen days after the operation the scrotum had regained its ordinary dimensions; but, on the affected side, both it and the spermatic cord were firmer than natural. A cylindrical cord existed through the whole of the inguinal canal, and extended along the course of the spermatic vessels to the testicle. A complete cure was obtained, and the patient left the hospital, able to walk without fatigue, exhibiting no reappearance of the hernia, in whatever position he occupied. No serious local inflammation, nor any constitutional disorder, resulted from the injection.

The third case was that of a congenital hernia of the left side, quite reducible, and equal in size to a large pear. The patient was twenty-seven years of age, and had been ruptured eight years. He had worn various bandages, in order to counteract his infirmity, only one of which had at all answered the purpose. As the patient ardently desired to be cured of his disorder, M. Jobert, in the presence of his colleagues, punctured the hernial sac, and injected into it a small quantity of the pure tincture of iodine. The patient was then placed on his back, with his legs flexed slightly on the thighs, in which position they were maintained

by a bolster. Almost immediately after the injection, the hernial sac began to swell, and in fifteen hours the sac had become as large as if filled with intestine, and communicated a fluctuating half-solid character to the finger. The parts remained in this condition for eight days, after which the swelling rapidly diminished. Twenty-eight days after the operation, the track of the spermatic cord was occupied by a cylindrical substance so compact and hard that the patient was able to rise from his bed, to walk about, and to sit down, without the smallest appearance of an intestinal protrusion exhibiting itself.

The cure remained complete four months after the operation, the testicle had not atrophied, and the inguinal canal was occupied by a firm, solid cord, into which the vaginal process has become converted by its obliteration.

M. Jobert, does not allow the tincture, to remain permanently in the sac, but withdraws it by means of the syringe. In all cases of congenital hernia, or whenever the sac is distended with fluid, or is thickened and condensed, and has become adherent to the surrounding structures, M. Jobert, penetrates it at once with a trocar, without first dividing the skin with a scalpel; but whenever the sac is thin, movable, and easily displaced by pressure, he prefers to divide the skin with a scalpel, and expose the sac before puncturing it.

The superiority which the method by injection offers to all other proceedings which have been devised for the radical cure of hernia, depends, says M. Jobert, on its harmlessness and simplicity; and M. Velpeau deserves the credit of having in his *Annales de Chirurgie*, published ten years ago, first noticed the advantages of iodine injections for effecting the radical cure of hernia.—*American Medical Gazette.*

ART. XII.—*Post Mortem appearance of a Lady, of 94 years, who had never Menstruated nor borne Children:* by A. K. GARDNER, M. D.

I WAS called about midnight of the 1st of Aug. 1854, to see Mrs. H——, St. George's Place, attacked with cholera. With the ordinary remedies she perfectly recovered from this attack, but her constitution received a shock from which she never recovered. The day previous she had been walking about her room, and once subsequently she was found, in the middle of the night, sitting in a chair near her bed; with this exception, she never left it subsequently to this attack, except as lifted from it, and placed in a chair for a few minutes. Her appetite failed; and after a long struggle of several weeks, with the great conqurer of all, she finally yielded to his supremacy, Oct. 6th; and on the following morning, assisted by my friend, Dr. H. W. Brown, I made a post-mortem at 9 o'clock.

Mrs. H——, although twice married, never had any children. Her

second husband was a widower, having a large family by his first wife. More note-worthy was the fact of her having never menstruated, either naturally or vicariously, and her absence of all sexual feelings and appetites.

During the greater part of her life she was troubled with dyspepsia, so she never indulged in the pleasures of the table. Pie-crust and cakes were tabooed articles to her. It was for this delicate condition, supposed to originate from the absence of the menses, that she was advised by her medical men in Massachusetts, where she lived, to marry. This she did; but this natural stimulant to the generative organs produced no local or general amelioration. She subsequently was married to her second husband, whom she also outlived, to act as a mother to a large family.

The entire absence of all sexual propensities, she herself attributed to her strong devotional character, being an attached and ardent member of the Baptist church. In character, Mrs. H. was somewhat acerb, and apt to look upon the moral delinquences of the young with a severe and unpitying eye. In life she was not wanting in activity and promptness, and conducted her household with a prudence and regularity somewhat noted.

The *post-mortem examination*, the morning after her decease, disclosed no active or latent disease. The lungs were perfectly healthy, the stomach and other organs in like condition. The generative organs showed an uterus of the usual size, and normal in its condition, except that the cavity of one-half was obliterated. The ovaries were both present, although much atrophied; but whether this condition was due to her advanced age or to an original condition, it was impossible to say.

Save a double fracture of the hip, the last broken and united within a few years, and marked with a peculiar change in the bone, as seen in all the old, nothing else was noticeable.—*N. Y. Medical Times.*

Art. XIII.—*Death from Old Age, or Natural Death.*

The following account of death from old age, by the distinguished divine, Dr. A. L. P. Green, of Nashville, will be read with great interest by every student of nature. The death of Aunt Phillis, as the Dr. expressed it, was indeed "a natural death," for death from disease is not according to nature, but might truly be classed under the head of "accidents," or "casualties."—*Edit. Nashville Medical Journal.*

Dr. Eve—Dear Sir: I promised you that I would furnish you with some of the facts connected with the last days of Aunt Phillis, an old negro woman of mine, who died last fall. Aunt Phillis was, at the time of her death, at the lowest estimate, 111 years old, and the probability is that she was several years older. For fifty years she has enjoyed un-

interrupted health, and as far as I have been able to learn, she was never sick in her life except at the birth of her children. For thirty years of her life, and down to within three years of her death, she did not seem to undergo the slightest change in her appearance, time exercising little power over her. The first sign of decay was that of sight, which took place about three years before her death; up to that time she was in the full enjoyment of all her senses, and at 104 years she would have married an old negro man of 75 if I had not objected. Her sight failed, not in the usual way, but she became near-sighted, not being able to see objects at a distance. Soon after this her hearing declined, but up to the time of her death she could still hear better than old persons generally do. The first indication of mental failure was that of locality, she not being able to find her way to a neighbor's house, yet her memory seemed perfect in all other respects. She recollected her friends and old acquaintances, but could not find her way to their houses. I at first supposed that this was owing to defective sight, but on examination found it was in the mind. Still her locomotion was good—she had the full use of herself, and could walk strong and quick like a young person, and held herself up so straight that when walking from me I often took her for some of the younger servants about the premises. The next, and to me the most singular sign of decline was, that she lost the art of walking—not that she had not strength to walk, but forgot how to walk. The children would lead her forth and interest her for a while, and she would get the idea which seemed to delight her very much, and she would walk about the yard and porches until some person would tell her she had walked enough—but she would no sooner take her seat and sit for a few moments, before all idea of walking would be gone; and she would have to be taught over again. At length she became unwilling to try to walk unless she had hold on something; take her by the arm and she would walk, and walk well, but just as soon as you would let her go she would stop, and if no further aid was afforded her she would get down and crawl like a child; and at length became so fearful that she refused to walk altogether, and continued to sit up during the day, but had to be put to bed and taken up like a child. After a while she became unwilling to try to get up altogether, and continued to lie until she died. All this time she seemed to be in good health, took regular meals, and her stomach and bowels were uniformly in good condition. I often examined her the best I could, and she had no pains, no sickness, no aches of any kind, and from her own account, and from all that I was able to learn, she was in good health and all the while in fine spirits. The intellect and the mind seemed to be perfectly good, only that she did not seem to know where she was all the time. At length one of the children said to me that Aunt Phillis was getting cold, and, on examining her, I found it even so; the extremeties were cold; still she took her regular meals, and did not complain of anything, and the only change that I recollect of, was that she slept a little more than usual. The coldness increased for two days, when she became as cold as a dead person. Her breathing began

at length to shorten, and grew shorter and shorter till she ceased to breathe. Death closed in upon her like going into a soft, sweet sleep, and for two minutes it was difficult to tell whether she was breathing or not. There was no contortion, no struggle, no twisting of the muscles, but after death she might have still been taken, on slight examination, to have been in a deep sleep. So passed away Phillis—the only natural death I ever witnessed.—*Nashville Med. Jour.*

Art. XIV.—*Longevity.*

M. Flourens brings forward the example of Lewis Cornaro, who, by dint of extreme moderation and sobriety, prolonged his life to the length of nearly a century. The age of one hundred years is regarded by M. Flourens, on the following physiological grounds, to be the period of human longevity. Taking the period of increase or growth of the human frame—that, namely, up to the age of twenty—by which time the epiphyses of the long bones are found to be firmly united to their shafts, and multiplying this age by five, the period of one hundred years is obtained. It must not, however, be forgotten that M. Quetelet and others have fixed upon twenty-five years as the period of increase; and that very different multipliers and multiplicands have also been given by other physiologists. M. Flourens supports and illustrates his theory by an examination of the various stages of existence or periods of growth, maturity and decline in man, and in the lower animals.

"The duration of life," observes Buffon, "is not regulated by climate, food, manners, or external condition, but by fixed laws of the animal economy. This opinion is based upon correct observation. We observe that each species has its distinctive characters; however nearly they may resemble in some points, there are features belonging to each sufficiently different to establish their distinctness.

Each species, remarks M. Flourens, has its determinate duration of gestation and of growth, as well as its determinate size, figure, &c.; wherefore, then, he asks, should there not be a fixed law of duration of life in each species? Buffon, accordingly, thought he saw the operation of this law in the multiplication by seven of the period of growth, which he fixed at the age of fourteen. This gives about the same duration of life as is deduced from the more philosophical and exact observations of M. Flourens.

There are countless instances of longevity on record in which persons have been said to have lived beyond one hundred years. We admit that the truth of many of these is placed beyond doubt or dispute; therefore, without incurring the charge of scepticism, we may observe that these instances are met with before accurate registration was enforced.

M. Flourens points out a relation between the principal phenomena of animal life; thus, the duration of life is measured by the period of growth; the period of growth has also given a relation to that of gestation; the larger the animal, the longer the period of gestation; the

latter, in the rabbit, occupies thirty days, in women nine months, in the elephant nearly two years.

Of the duration of life in the elephant, observes the author, we are ignorant. If, however, the author's theory be applicable in this instance, the age of an elephant may be as great, as is commonly received; thus, 9 months (the period of human gestation) × 25=20 years; (the period of growth) × 5=100 years (the extreme duration of life in man). Applying the same calculation in the case of the elephant, *e.g.*, "nearly two years," (say 22 months) ×25=nearly 46 years (the period of growth of the elephant) × 5=230 years, we have the duration of life in the elephant. Observations are wanting for the verification of this calculation, but the result does not differ widely from recorded instances of elephantine longevity.

M. Flourens cites from various authors numerous instances of extraordinary longevity in men and lower animals. Dr. Van Oven has given tables comprising the names, condition, country, date of death, and ages of fifteen hundred and nineteen persons who have attained to ages between a hundred and a hundred and ten years; of three hundred and thirty-one who died between the last-named age and one hundred and twenty years; of ninety-nine who reached the age of a hundred and thirty; of thirty-seven who lived to be a hundred and forty years old; of eleven who reached a hundred and fifty; and of seventeen who exceeded the last-named age. Besides these, Dr. Van Oven has collected notices of fifty living persons at ages varying from one hundred to one hundred and *eighty* years! Nor are these all that Dr. Van Oven has brought together. Four hundred and ninety "additional instances" of longevity, two thousand one hundred and seventy-nine instances of ages, above one hundred in Russia, seven hundred and fifty ditto in Sweden, and the quotation from the Registrar-General's Reports of seven hundred and eight deaths above one hundred years of age in England and Wales, in the five years 1838 to 1844. In all, seven thousand who have lived from a hundred to a hundred and eighty-five years.

Dr. Van Oven does not vouch for the genuineness and authenticity of all these records; but they may be received, in the words of the author, "as more than enough to justify a fair presumption that human life might endure much longer than it usually does, and to encourage the exertions of those who desire to promote healthful longevity."

Dr. Van Oven's work has a chapter upon the Causes of Longevity, which he finds in the original constitution of the individual, his habits, avocation, mode of life, immunity from disease, equanimity of temper, and freedom from great and frequent excitement. The attaining that (to some persons) very desirable point, an old age, is in consequence resolved, in the work of Dr. Van Oven, into the regulation and care of all these conditions. The same author moreover, devotes a dozen chapters to "Diseases of Age," and to "The Decline of Life in Disease;" having introduced the study of longevity by several chapters "On the Process of the Organization of Man, from Birth to Maturity."—*Brit. and For. Med. Chir. Rev.*

Art. XV. — *Oxalico-Ferruginous Lemonade* (*Limonade Oxalico-martiale.*)

In Intermitting Fevers: translated from the *Gaz. Hebdom. de Méd.* of May 18. 1855, by Mrs. M. E. V.

Ferruginous preparations have often been used in Intermitting Fever, not so much on any specific claim to combat the lesion of the organs, but for the cure of the different cachexies by which this disease is complicated.

Some practitioners, however, attribute a directly anti-perodic influence to iron. Joseph Franck has found it very successful, Marc prescribes the martial sulphate, Wheaton the phosphate, Zollikofer the hydrocyanate; Benherald even prefers the sub-carbonate of iron to Peruvian bark.

These are the authorities which induced M. Gamberini to undertake his experiments. He chose the sulphate of iron which he administered in different methods and quantities. He has seldom been completely unsuccessful, and in such cases, M. Gamberini attributes more to the irritability of the viscera than to any want of power in the medicine. According to him, if this salt does not deserve to be placed above quinquina, it renders at least the radical cure more certain when the fever is kept up by engorgement of the spleen.

For the rest, M. Gamberini, believing that the febrile principle exercises a special influence on the spinal marrow, has thought proper to join to the ferruginous remedy an adjuvant which might moderate the nervous suceptibility. This sedative which has been used by Coindet and Christison, is oxalic acid. The formula for this lemonade is thus composed:

Sulphate of Iron,	60 centigrammes	(℈ss.)
Oxalic Acid,	30 "	(gr. v.)
Distilled Water,	1500 grammes	(lbiij.)
White Sugar,	45 "	(℥ ix.)

This preparation, administered during the apyrexia, should be given several days after. Care must be taken to shake the bottle containing the medicine, so as to suspend the proportion. Although it possesses a strong martial taste, the sick soon get used to M. Gamberini's composition (*apozème*). As to curative results, our Italian confrère has used it in tertain, quotidian quartan, simple and complicated fevers. A single dose often suffices to break the fever, or to ameliorate the access considerably. In some other cases the preparation had to be administered two or three times; in nearly all these cases there was obstruction

of the spleen. This, however, diminished invariably and yielded completely to a continuance of the medicine.

An epidemic of Intermittent Fever, breaking out at Bologna, in Sept., 1853, and 1854, M. Gamberini had a great many of the pontifical soldiers to attend to at the hospital of Sainte-Ursale. The oxalico-martial lemonade fully answered in these cases, as formerly, the expectations of the experimenter.

M. Gamberini communicated these results to several physicians, among others to MM. Leonesi and Bottazzi; they made use of this prescription with the happiest results, even in cases where quinine had failed.

We have thought it right to publish these facts, for, although a multitude of substitutes for quinquina have proved nearly useless, it is always right to encourage experiments which may result successfully. (*Bollettino de Scienze Med. di Bologna, Feb.* 1855.)

ART. XVI.—*Comparative Anatomy. Brain of the Elephant.*

[Translated from the *Gaz. Heb. de Méd.* of May 18, 1855, by Mrs. M. E. V.]

M. GRATIOLET, having been charged with making the anatomical examination of an African Elephant, which recently died at the Museum of National History, at Paris, reported the result at a session of the Academy of Sciences, May 7, 1855, from which it appears that the elephant's brain is three times smaller than that of man, differing, most from the latter in the entire absence of the posterior horn of the lateral ventricle, as well as in the development of the lateral masses of the cerebellum, in the diminished thickness of the corpus callosum, in the narrowness of the interpeduncular space and the *tuber cinereum*, and lastly in the absence of all traces of the mammillary eminences.

The cerebral hemispheres are largely developed, being widely separated posteriorly, leaving the cerebellum uncovered, and offering only one rudimentary fissure of Sylvius.

The olfactory bulb sare very large, being deepened, having a fossa, which communicates freely with the anterior horns of the lateral ventricles.

It follows, consequently, that if the brain of the elephant be almost human in the cerebral hemispheres and olfactory bulbs, it is in the parts constituting the isthmus and cerebellum, the brain of an animal, and of an animal of an inferior type, too, ennobled, nevertheless, by the excessive development of all its convolutions, especially the anterior. (Committee: MM. Serres, Flourens, Geoffroy St. Hilaire.)

ART. XVII.—*Physic in New Orleans in the second decennial period of the present century.*

THE progress of medical science is often accelerated by taking a step backward—by making stand-points of past eras—by re-visiting the tombs of predecessors—by recalling the thoughts of the *dramatis personæ*, whose opinions and actions, prejudices and passions, learning and genius, swayed the destinies of their cotemporaries for weal or woe—who rose to distinction in their generation—crossed life's narrow isthmus, and staggering for a moment on its verge, dropt into the realm of death forever. In reviewing the past, passion, envy, and interest, all powerful over the present, form but dark, retiring, dumb figures in the back-ground, while truth and reason stand forth confessed in their native beauty.

It happened in one of the longest days of June, A. D., 1855, that in turning over the leaves of MS., vol. xii, the following extracts, made many years ago, from a rare work, were noticed. They are now reproduced not for therapeutic criticism, but for instruction—not for their strong medication, but for reflection.

EDITOR.

Report of the Committee of the Physico-Medical Society of New Orleans on the Epidemic of 1820; published by order of the Society: Dupuy, printer, 1821.

Thermometer ranges in winter from 20° to 70°; summer steadily above 80°, frequently above 90° and 93°. Comparing the heat of 1820 with the four preceding years affords no "explanation of the uncommon malignity, which characterized the epidemic of the present year.

The fall of rain, though great, did not appear to exceed, in frequency or quantity that of the preceding year, during the same period. Wind S.; about the period of the disease N. and N. W., with increase of the malady.

As in former years, the earliest and latest instances of the fever were observed on board the steamboats and shipping. First week in July several cases—epidemic late in August,—diminishing until the 10th of October, when it was apparently arrested by the recurrence of cold weather.

Symptoms.—Few epidemics are so uniform as malignant Yellow Fever.—This disease was confined to strangers, that is all persons "not inured to the atmosphere of the city." The Creoles of Louisiana, living a few miles in the country, on returning into the city "were liable (though in a less degree than Northern strangers) to the disease in its milder form." Residents of the city for many years during the healthy months were also liable, no trade or pursuit exempt;—a few remarkable instances of exemption of the pregnant as well as in 1817, 1819.—Old females,

children, and negroes had it in its mildest form. The report represents those who escaped as being more or less sick! Pains in the head, back, and lower extremities, preceded or accompanied by a chill, generally announced its onset.

"The *Re-action* from the general or partial chill which ushered in the disease, presented in most cases, a flush on the face, neck, and breast, with throbbing of the temporal and carotid arteries; an increase of pain in the head, watery suffused eye; great heat on the surface of the body, while the extremities remained cold, &c." "The tongue, if changed at all from its natural appearance, was slightly overcast, particularly about its centre, with a light buff or pale yellow, and sometimes slightly swollen." After the first stage as above, continuing generally to the third day, "succeeded an entire remission of the febrile, and most other unfavorable appearances." "The temperature of the skin sunk below its natural state, and the pulse below its natural force; in frequency the pulse did not deviate much from its healthy state; the patient often fancied himself well, &c." "Petechiæ appeared on the skin. The disease was fatal in from three to five days; many cases were protracted to the seventh day." Black vomit "ever fatal." Deaths 1 in 6 adult whites [males]; 1 in 10 women, children, and blacks.

Examinations *post-mortem*.—The stomach reduced in size, and contained that black matter resembling coffee grounds. Its lower or right orifice, together with the duodenum, was effused with black blood. The remainder of the *primæ viæ*, together with the lungs, spleen, kidneys, liver, and biliary ducts, indicated no alterations in the structure of parts.

Without any where saying that the reporters examined a single brain, they say, "from the symptoms detailed, we considered the primary injury as seated in the *sensorium commune*, and our efforts were principally directed against the consequences of irregular organic action." This is all that is said of the morbid anatomy.

Treatment.—Blood-letting was generally indicated in the first stage, and in most cases, was carried to a very great extent with the happiest effects.

Tepid baths and frictions when the pulse was sluggish; otherwise they were hurtful.

Cathartics.—"No physician in this place has ever doubted their utility."

Cold water, after v. s., "a powerful auxiliary; applied to the stomach it averted vomiting."

"Clysters of cold water deserve commendation." "Blisters highly recommended the first 36 hours." Mercury, especially ptyalism, denounced. But, "when exhibited on rational principles, we still think it a medicine of much worth." Emetics, "pernicious." "Opium in many cases highly beneficial, after copious depletion, in tremulous pulse, great restlessness, and tossing on the bed."

"*Cinchona* and *mineral* acids were exhibited, without, however, any

manifest benefit."—"Capsicum, ammonia, camphor, champagne, brandy, &c., were preferred."

The report, in an appendix, gives six cases, occupying 4½ pages. The following three first cases are slightly abridged in a few instances.

No. 1. August 21st, 1820; J. P. C. Sampson, Esq., aged 26, of sanguine temperament, seized in the morning with pain in the head, down the back, and throughout the extremities—prostration—hot—pulse, sluggish; tongue of a leaden color—eyes suffused with blood; v. s. ℥xx—tepid bath, scrubbed with brushes, cal. gr. xv. jal. ℈j, rice water.

Noon.—Cathartic operated partially; pain of the head more severe; pulse full and sluggish; bath and brushes repeated—while in the bath 2 lbs. blood abstracted—Jal. ℈j sup. tart. pot. ℥ss.

Evening.—Med. operated copiously; head painful; preternatural heat of the skin; no thirst; bath and frictions; v. s. 2½ lbs.; after which he was lifted from the bath, and four buckets of cold water thrown over him—relieved—tam. water.

August 22nd. Restless night; some pain over the eyes; dry skin.—Enema, tepid bath, and cold affusions; frictions with Cologne water.

Noon.—Pulse soft and natural; absence of thirst, cal. ℈j, cast. oil two hours after, ℥jss.

Evening.—Green fœted stools. Lemonade.

August 23rd. Pain over the eyes, nausea. Blister to the forehead and epigastrium. Cal. 5 grs. every two hours, and rub with mercurial ointment throughout the day.

Evening.—Deficiency of urine. A teaspoonful of turpentine every hour throughout the night; enema and more frictions.

August 24th. Pulse small and sluggish; eyes suffused with yellow. Infus. serpent. and cinchon.; cal. and turpentine at short intervals.

Evening.—Hiccough and black vomit. Cal. and musk with champagne for common drinks. Mercurial frictions.

August 25th. Every bad symptom aggravated; last prescription not exhibited; the patient resolutely refusing compliance.

He continued throughout in the possession of his mental faculties, and died between 1 and 2 P. M.*

No. 2. *Mr. Brown*, aged 22, of delicate habit, was seized on the morning of August 31st, with rigor, succeeded with severe pains of the head, and prostration. Pulse expansive, tongue natural, eyes suffused with blood, v. s. 4 lbs., syncope, frictions of Cologne water; lemonade.

Noon.—Preternatural heat of body, with pain of the extremities; cathartic and tepid bath.

Night.—Better; med. operated freely; stools fœtid and greenish.

September 1st. Severe pains: v. s. ℥xij, enema and frictions with Cologne water.

Afternoon.—Still pains of the head; skin moist: blister to the forehead; enema; lemonade.

* The above named gentleman was a most learned and highly distinguished lawyer and writer.—Ed.

September 2nd. Tremor; restless night; pulse small and intermitting. In attempting to rise, he was seized with a spasmodic paroxysm. Cobweb 3 grs. every two hours, and frictions of vol. linim.; chicken broth.

Afternoon.—Much better; continue the cobweb.

September 4th. Better; nausea; cobweb and porter.

September 5th. Conval.—10th, discharged cured.

No. 3. Monday, August 28; *Rev. Slyvester Larned,* aged 24, of sanguine temperament and plethoric habit, was seized at 2 A. M. with a chill and pains in the head, back, and lower extremities;—visited at 6, A. M.; chill continues, pains in the back intense, eyes suffused and watery, stomach unaffected, pulse small; prostration. Jal. and crem. tart. and diluent drinks.

Noon.—Cathartic operated partially, stools liquid; great heat about the neck and breast; countenance flushed; throbbing of the temporal and carotid arteries; eyes more inflamed; v. s. ℥16, and gave mercurial cathartic, to be followed with castor oil: commenced mercurial frictions in the afternoon, and continued them throughout the night.

Tuesday, 29th. Symptoms continue with little variation. Skin of the extremities cool, with increase of heat about the head, neck and body; pulse small; muscular strength prostrated; tongue slightly discolored; no fæcal evacuation; med. continued, with the addition 5 grs. cal. every two hours; enema.

Wednesday, 30th. Restless night; mild delirium, and frequent liquid stools; great anxiety and restlessness, tongue red about its edges, gums swollen, pain of the head somewhat abated, slight irritability of the stomach and soreness of the epigastrium; coldness of the extremities continues, with dull pain in the muscles of the legs; castor oil has passed through the bowels unaccompanied with fæcal discharges; medicines and drinks occasionally rejected by the stomach, without bile—paucity of urine. Mercurial frict. and med. continued, with mustard to the feet, blisters to the extremities and epigast.—stimulant injections.

Thursday, 31st. Delirium through the night, without sleep; stomach rejects everything—black vomit at 10 A. M.—no discharge of urine. Fever and pains entirely abated; skin cold and moist, tongue inflamed and contracted, hæmorrhage from the nose; pulse small and feeble, face and neck slightly tinged with yellow; black vomit continued throughout. Blisters had drawn well and were dressed with mercurial ointment; stimulant injections frequently repeated; diffusible stimulants were exhibited with the use of the hot bath. Arterial action rapidly declined, difficult respiration supervened, pulsation at the wrist ceased at 6 P. M., and at 10 he expired.*

* Thus perished this learned, eloquent, and almost idolized young clergyman. The monument erected to his memory, at the entrance of the church, on Lafayette Square, singularly escaped destruction when the walls and towers of the church fell during the late conflagration of that edifice. The inscription on the monument is as follows:

In memory of Rev. Sylvester Larned, first Pastor of the Presbyterian church in this city, who died August 31st, 1820, aged 24 years. His last sermon was preached on the 27th of August, from Phil. i. 21. "For me to live is Christ, and to die is gain."—ED.

ART. XI.—*Remarks on Therapeutics*; by M. MORTON DOWLER. M. D. of New Orleans.

(*Continued from Page 54.*)

UNHAPPILY physiology, pathology, and therapeutics are by no means in such state of advancement as to enable the physician to determine in most instances how medicines act, and in what manner they remove disease. He can often learn very little beyond the mere fact, that the disease has been removed by the means which he has applied. Medical platforms have been laid by men of genius, in succession, for centuries, and all have proven too narrow to sustain the broad fabric of medical truth. The latest of these have been among the worst, as for instance, the gastro-pathic foundation of Broussais. We can neither assume the "*similia similibus,*" nor the "*contraria contrariis,*" without falling into stupendous and dangerous fallacies. The manner in which the most familiar agents of the Materia Medica cure disease is very imperfectly understood. There is no therapeutic agent in the efficacy of which all christendom is more generally agreed than Peruvian bark, and yet its *modus operandi* embodies a controversy which remains unsettled.

The idea of allopathic action, and antagonism of disease with disease and remedy with remedy, and the doctrinal monstrosity of "*contraria contrariis curantur,*" have undeniably had immense weight in the practice of medicine, and lie at the very foundation of the extravagant system of depletion and exhaustion in the treatment of acute and febrile diseases, to which we have alluded, under these very exceptionable notions, the efficacy of remedies, in these diseases, has been to a lamentable extent measured by the number of ounces taken from the arm, the amount of discharges *per anum*, in response to purgatives, the number of grains of calomel or antimony which has been swallowed, and the extent to which the patient has been subjected to the process of starvation. Cups and leeches have been deemed curative in proportion to their number. The first step in the treatment of the acute phlegmasiæ and fevers has been under the auspices of "*contraria contrariis,*" to simulate death in the form of syncope. There is a strong and growing disposition on the part of the profession to throw aside the lancet in these affections; nevertheless, the routine of extracting blood by cups for the local pains and general excitement of yellow fever is so generally looked for, that the physician often yields to the outside pressure; and there is no physician who has practised in this disease here, who has not been frequently accosted, by enterprising candidates for patronage with the question

"who cups for you ?" The cupper is a powerful and influential personage, who is seen hurrying and fussing every where. He is "nothing if not critical," and is scarcely second to the doctor, lecturing the by-standers and enlightening their weak minds on the terrible state of the patient's blood. He is indeed superior to his master in the important fact, that his profound services always command the ready fee. He takes the professional reputation of medical men in his high keeping, and in his journeyings from house to house takes care to proclaim their respective merits in the ratio of the number of cups ordered. Now as we before observed, we do not deny that this adynamical routine abounds in curative power, but we do insist that its countervailing morbid effects, are such that they cannot be too seriously considered. How far these assaults on the vital functions may be laid aside or mitigated, without detriment to the patient is undeniably a most momentous subject for inquiry. It is fully conceded that mercurial salivation is demanded by the exigencies of the case in certain morbid conditions, but the physician who unnecessarily subjects his patient to that morbid effect of remedies, has committed a gross outrage on humanity ; and yet how many millions of mouths have been unnecessarily poisoned, and constitutions ruined by this venomous drug! The abuse of remedies, of which we have spoken has brought immense opprobrium on a noble profession, and has given an onward impulse to the organization of Botanical quacks and Eclectic and Homœopathic Charlatans, into schools, colleges and societies.

It cannot be expected, in the nature of things, whatever class of agents we may resort to in the treatment of active disease, that these agents can do otherwise than exhibit morbid, as well as curative effects. The best that can be done is to select these agents which in this view, are the least objectionable. Now we hold that the class of medicines commonly called *narcotics*, are quite as replete with curative power, both in the acute phlegmasiæ, and in active febrile diseases, as any or all of the adynamic agencies of which we have been speaking; while the former lay the vital functions under comparatively limited and temporary depression. Thus, opium in ample doses has been found to be at once antiphlogistic, febrifuge, diaphoretic, and anodyne, with almost inappreciable and quite temporary morbid effects.

It must be confessed that the ordinary horn-books of the profession do not admit the fact. In 1836, Dr. George G. Sigmond, one of the ablest and most distinguished physicians in London, delivered a course of lectures, which appeared in the London *Lancet* of that period, in which he utters

the following important truth : "*Of all the different classes of medicine we possess, we may safely consider narcotics, skilfully, judiciously, and watchfully administered the most important.*" As a pretty fair representation of the teachings of the horn-books of medicine, we subjoin the following remarks on the above taken from the "Institutes of Medicine" by the distinguished professor, Martyn Paine, of the University of New-York.

"On the contrary," says Professor Paine, "I have endeavored to show in the various parts of this work, that narcotics are but little more than humble auxiliaries to more important remedies, and then only in a comparatively small number of cases of disease; or they are mere palliatives, giving a temporary ease by blunting sensibility where death is probably inevitable, and thus easing the sufferer out of existence."

"That narcotics are extremely deficient in curative virtues, should be sufficiently apparent from what has already been said of the uses to which they are constantly applied. But even these intentions can rarely be fulfilled by narcotics, where much disease is present. We must resort to the class of antiphlogistics for our curative means; and, if the narcotics be summoned to their aid, it should be done with the greatest caution, or they may prove fatally morbific. We may exhibit opium, &c., for the relief of mere spasm of the stomach, or to procure rest, &c., where no important acute disease is present. But he who should employ them to assuage the pain of pleuritis, enteritis, or any other active form of inflammation, and, in a general sense, of chronic forms, would either most seriously aggravate the disease, or destroy the patient.

"Whenever there is any affection of the head, or any tendency to cerebral disease, so great is the liability of narcotics to induce congestion of the brain, that they are totally inadmissible where that organ is increased in its susceptibilities. And let us consider their never-failing effect in their ordinary doses, of so injuriously modifying the action of the glandular organs, that the secretions of the whole, especially of that most important organ the liver, are more or less diminished; whereby nature is obstructed in one of her greatest processes natural and curative; and morbific influences are reflected upon all diseased parts, and upon the whole organism. Should there be set up in the skin a perspirable action, it is not of a salubrious nature; and here again we see the evils that arise from regarding the product, and not the nature of the action upon which it depends." * * *

"The most extensively useful effect of narcotics is that of procuring sleep." * * *

"In serous inflammation of the bowels, on the other hand, they [opiates] are entirely inadmissible. * * * It is in all such instances a subordinate agent. * * * The pain of mucous and serous inflammation of the intestines may be exactly the same, and opiates curative in the former, but certainly fatal in the latter."—*Institutes of Medicine*, pp. 584–6.

"In respect to the agents now before us, (narcotics) there is a yet smaller class who are equally unhappy in their estimate of their virtues; and while the *stimulating* school exhaust the energies of nature by adding to the intensity of the disease in their peculiar way, the *narcotizing* school do the same mischief by a similar neglect of the pathology of disease; and what, in either case, should be attacked by the lancet, cathartics, antiphlogistic alteratives, &c., is roused into greater immediate violence by tonics and stimulants, or indirectly by other morbific influences which appertain to the narcotics."—*Ibid.* p. 584.

We have annexed these long extracts from the fact that they emanate from a high authority, and are a portion of the general doctrine which medical students devote their time and money in acquiring, and from the fact that they embody doctrines which it is meet that they should unlearn as speedily as possible. Since we have ceased to rely on printed books and magisterial authority in the practice of medicine, we have had occasion to arrive at conclusions in the premises something like the reverse of the views put forth in the above quotations. We are not content to shut out all faith in curative resources in active disease save in the ordinary bleeding, purging and "alterative" routine. In regard to one narcotic agent, opium, our observation and experience lead us to regard it as one of the most highly curative agents of the Materia Medica when administered in free sedative doses at the inception of the acute organic phlegmasiæ, and of various febrile disease, controlling and preventing the development of phlogosis and fever. We have tried it in the early stages of the very diseases which Professor Paine adverts to, in large doses—tried it in pneumonia, peritonitis, enteritis, and puerperal fever; and we have found it a most reliable agent as a febrifuge, an antiphlogistic, a refrigerant, a diaphoretic, and anodyne. In acute dysentery, opium unaided, except by mild aperients, is equal to the cure of the disease. In the No. of "the Journal," for *November* last, I gave a sketch of my experience with opium in the treatment of yellow fever. At the onset of this disease, so powerfully curative are its effects, that administered in large doses, it is capable of putting an end at once to the febrile symptoms,

and rescuing the patient. Such treatment, according to Professor Paine, must "either seriously aggravate the disease, or destroy the patient," not being applicable, according to him, when "any acute disease is present." Every one knows that in yellow fever there is "a tendency to cerebral disease," there is "an affection of the head," and the brain "is increased in its susceptibilities;" and so far from opium being "totally inadmissible," in that disease, our experience proves to us that under its use, the routine of purging, bleeding, and "alteratives" represented by Prof. Paine, as alone "curative" in active disease may become unnecessary; and that opium, "skilfully, judiciously, and watchfully administered," to use the language of Dr. Sigmond, may be confidently employed. In puerperal fever, I have found opium to possess the highest curative powers. To represent narcotics, therefore, as "humble auxiliaries;" "mere palliatives, giving temporary ease, and blunting sensibility where death is inevitable," and, "easing the sufferer out of existence;" as given merely to "relieve spasm of the stomach, and to procure rest, &c., where no important disease is present;" as being useful only "to procure sleep;" as "entirely inadmissible in serous inflammation of the bowels;" as being "in all such instances subordinate agents;" as likely to be "certainly fatal in serous inflammation of the bowels;"—and all this too in our present unsettled, unsatisfactory, and imperfect knowledge of the *modus operandi* of medicines,—affords an example of the strong tendency in medical teachers to contract the sphere of the Materia Medica to a narrow routine in acute diseases, and to leave them to be exclusively, (in the language of Professor Paine) "attacked by the lancet, cathartics, antiphlogistics, alteratives, &c." On the morbid as well as the curative effects of these remedies, whole volumes might be written, and they are like most other known therapeutic agents, lamentably deficient in curative power. The learned professor need not have gone out of the way to denounce either the "*stimulating*," or "*narcotizing* schools." When he condemns these schools, he had no reason to grant an immunity to the *evacuating school* of physicians on whose platform he rests. The whole must be confessedly unsatisfactory so long as patients so numerously succumb under all modes of treatment, and melancholy enough are the records of the adynamic routine in the practice of medicine. We should rather add to, than contract our resources. In future I purpose to recur to this subject.

The doctrine of *similia similibus curantur*, if detached from the follies, and impostures of homœopathic pharmacy and posology, contains per-

haps as much truth as the doctrines of antagonism and *contraria contraiis*. It cannot be denied, however, that diseases *apparently* the most similar, may have in *reality* more points of difference than similiarity. This, for all that can be proven to the contrary, may be invariably the case. Certain narcotics produce an eruption of the skin resembling, to the eye, scarlet fever, but in its absolute and essential character, the dissimilarity is of course overwhelming. Violent drastic purgatives and powerful antimonial emetics have been known to cure cases of algid cholera. This kind of treatment applied to a person in health, is of course capable of producing cold clammy perspiration, cramp, vomiting, fluid stools, and even collapse. But who can be so ignorant as to pronounce the medicated and choleraic conditions to be really similar to each other? A few mere symptoms constitute all there are in common, the difference wholly preponderating over the resemblance. This remark will probably hold good in relation to almost all diseased conditions assumed to be similar to each other. Upon the whole both the doctrine of *contraria* and *similia*, labor under the logical infirmity of being true and false at the same time, that is to say, partially true, and partially, and not very partially, false.

Whatever cause of complaint the medical profession may have against the mass of the people, the former surely can never accuse the latter of a want of faith in medicine. A readiness to swallow medicine, and to rely on its efficacy, is one of the characteristics of the sovereign mass. Their error generally lies on the side of excessive faith and hope. And not only do they rely on medication, but they are strongly impressed with the absolute necessity of powerful, active, and severe treatment. There is not the least likelihood that the mass of the people will ever countenance such *niaiseries* as homœopathy. They will leave the latter system for the exclusive benefit of Czars, Emperors, Kings, and Presidents, and to languishing dames who are about "to die of rose in aromatic pains," who will never consent to be physicked like common people; and who can never swallow the black decoction. The common mass very well know from their daily avocations, that every effect which it is desirable to produce, must have an agency adequate to the production of that effect, and that something cannot come of nothing; their error lies in overdoing; and hence in every acute and febrile disease, the routine of exhausting treatment is constantly expected, and even required by the patient. In 1854 we were called to visit a stout, athletic, plethoric Irishman, who had just been violently smitten with the yellow

fever. We ordered him, at once, ten grains of opium, and to take two other five grain doses, one every six hours. The first dose produced as it were a torrent of perspiration, calmed the action of the heart and arteries, removed the severe pains of the head, back, spine, and limbs, and threw him into a tranquil slumber; he took both of the other doses in the next succeeding 24 hours; and no other medicine was administered during treatment, excepting a dose of Glauber salts; and he became rapidly apyrexial and convalescent. On presenting him our fee-bill, he prayed that the same might be reduced, from the fact that "the powthers did not give him an operation, and that he had never been cupped, bled, or blisthered, *entirely*." The people have taken their cue from the profession, in which they have any amount of faith, and advertising quacks and nostrum vendors take advantage of faith and confidence to swell the mighty mass of physic bought and swallowed, worse than unnecessarily.

In sthenic disease, the discipline which the patient is required to undergo in regard to diet, is often highly injurious. The gastro-enteropathy of Broussais, amongst other extravagancies which must always attend the *one-idea system* in medicine, gave an impetus to the starvation system in the treatment of active disease. Every fever, according to him and his disciples, being a true *gastrite*, or *gastro-enterite*, the phlogosed mucous membrane was deemed to be in imminent peril for a long period; and the most rigid abstinence was enjoined,—no ingesta being allowed in the meantime, save gum-water and other mucilaginous and acid slops; while blood was abstracted from the arm, and scores of leeches were applied to the epigastrium. The adynamia induced by starvation was always excessive, and doubtless many succumbed for want of proper nourishment. A case once occurred to us in this city which impressed us strongly. About 18 years ago we were called into what is now named Jefferson City, to visit a young man who had been confined to his bed for 23 days; and who losing confidence, had discharged his physician. From all we could learn he had originally been attacked with a light ephemeral fever, of no serious character. His attendant treated him altogether *à la Broussais*, regarding his case as a true "*gastro-enteritis*." He was freely bled, and leeches had been repeatedly applied to the epigrastrium, and he had had little other nourishment, than the slops to which we have alluded. Depletion and inanition had given him an irritable pulse, and an excited nervous system, and a general sense of distress which he could not define. He had no local manifestations of disease whatever. He insisted that his case must necessarily terminate

fataly, as he could no longer endure his undefinable and wretched sensations—die he must! I told him that small portions of tender beefsteak taken frequently during the day would most assuredly bring his case to a favorable termination, and he tried this treatment with complete success.

The errors of this theorist have not yet completely passed away with regard to diet; and now that the gastro-enteric phantom has been got rid of, it behooves the profession to reflect seriously on the untoward and morbid effects of suspending nutrition, repletion, and hæmatosis during the treatment of active disease. The morbid effects of the starvation system often far out-weigh its curative effects, and how far it may be dispensed with, without prejudice to the patient, should be constantly considered by the physician.

REVIEWS.

REV. I.—*A Dictionary of Medical Terminology, Dental Surgery, and the Collateral Sciences:* by CHAPIN A. HARRIS, M. D., D. D. S.; professor of the principles of Dental Surgery in the Baltimore College; member of the American Medical Association; member of the Medico-Chirurgical Faculty of Maryland; author of Principles and Practice of Dental Surgery, &c. &c. Second edition. Philadelphia: Lindsay and Blakiston. 1855. Pp. 800. 8vo. Double columns.

IT has been said, by whom it matters not, that an individual who had read the entire Dictionary consecutively throughout, declared the book was very entertaining, though the stories were too short. A medical journalist not having the leisure, nor the taste to read these short stories *seriatim*—8000 more having been added to the present, not found in the former edition, may, nevertheless, turn over the pages of the work for an hour, and then give an opinion, perhaps an impertinent, presumptuous and imperfect one.

The result of this examination may be on this occasion accurate, or otherwise, but in either case it will be honestly given.

The materialistic qualities of Dr. Harris' Dictionary are attractive, the paper being white and strong, the type clear and of goodly size. Its

internalities correspond with its exteriorities—its immaterial, with its material excellence. Its execution, if judged by its purpose, which is the proper test for such a work, unrivalled.

The plan of the work, however, concedes to Dental Medicine a prominence and an importance unparalleled in a Medical Lexicon. This preponderation of a speciality, how desirable soever it may be to the dentist, lessens its value to the medical profession as a whole, and the more so because the author has apparently planned without having fully executed his work, so as to comprehend, not only the medical sciences strictly so called, but many of the collateral and auxiliary sciences, all important to the scientific physician who looks but looks in vain in medical dictionaries for a vast many words used by naturalists, physiologists, and others. As this dictionary now stands, its fulness is one of its chief merits, notwithstanding the disproportionate extension of the articles relating to Dental Science.

By retrenchment in the latter, room might be found without augmenting the size of the work for thousands of words, which have been excluded, and which can only be found properly defined in dictionaries of natural science, and in encyclopædias which but few students in a new country have access to beyond the limits of large cities.

The goodness of the book is a reason why it ought to be much better. A perfect dictionary is not to be expected, particularly in the English language, which is composite and dynamical to an extraordinary extent.

The rapid progress, modification, improvement, and discoveries in art, literature, and the sciences must be reflected in the lexicography and technology of the language. In some respects the best dictionary becomes obsolete or barbarized in a single generation, (as for instance in chemistry) and the more so in a language like the English, which borrows freely from many tongues. The more a language becomes compounded, extended, varied, enriched, and corrupted, the more necessary is the dictionary. The Greeks formed their copious language, not by borrowing words from others, but by reconstructing or rather combining new words from a small inventory, as some affirm, about 200 primitive ones. Of course such a language uncorrupted by foreign words and idioms, must be to a great degree self-explaining and intelligible, rendering lexicons less imperative. The English tongue requires a continuous semi-translation of Grecized, Latinized, Italianized, Gallicized, and Germanicized terms. This instability, if not counteracted by the re-construction of the dictionary, at intervals, is rendered comparatively harmless, or

rather beneficial, because new ideas, truths, and discoveries, would, in a language the most fixed and durable, require new words, phrases, etymologies and definitions in a progressive nation. In a population doomed to social, literary, and scientific inertia, the dictionary need not be dynamical.

The principal, though probably intentional omission in Professor Harris' Dictionary, relates to its restricted synonyma and lack of equivalent technical terms, particularly as it regards modern languages. A copious vocabulary and varied nomenclature, (of which Prof. Dunglison's Dictionary is an admirable example) are neither pedantic nor useless. The student, whether lazy or industrious, will find great facilities in having the varied names of things brought fully before him in an authentic form.

Definitions are sometimes impossible, or at least difficult, apart from their etymology, because the matter to be defined may be undefinable, or it may be in itself clearer to the mind than the most elaborate explanation can possibly make it. Prior's definitions of music, and light, which follow, excel those of the ablest philologist:

> Your music's power, your music must disclose.
> For what light is, 'tis only light that shows.

All attempts to define the soul, matter, thought, sensation, force, volition, life, and the like, have proved unsatisfactory. Even in the demonstrative sciences wherein the word and the thing, the definition and the experimental phenomena, go hand in hand, a complete, all-comprehending nomenclature will enable the student to advance with railroad velocity. Dictionaries of words, facts, and things are virtually modern improvements, as well as railroads.

In turning over the leaves of this Dictionary, two words, taken almost at random, will serve for a few critical remarks, from which it will probably appear, that the lexicographer is right, though much may be said on both sides, as to the definitions of "*Physician*," and "*Nascent*," the two words alluded to.

"*Physician.* One who has received the degree of doctor of medicine from a regularly incorporated institution. In France, a professor, or student of natural philosophy." The French have no such word; they have the word *physicien* which signifies physicist or one skilled in natural philosophy and may even apply to the mere student. The French Academy say that this term was applied in the colleges, in former times to the scholar who studied physics.

Mr. Worcester, in his excellent English dictionary, falls into the same etymology in making physician synonymous or identical with *physicien*—thus:

"*Physician*, (*physicien*, *Fr.*) one who professes or practices physic or the art of healing." The old French and Latin dictionaries, as far as recollected, as well as the modern, translate *physicien*, *physicus*, physicist, or one skilled in physics; and *medicus*, *médecin*, or physician. In the old obsolete French, *physicien* was sometimes translated by *medicus*, *médecin*, or *physician*.

Dr. Harris defines the word *Nascent*, thus: "the act of being developed. In *chemistry*, the act of being produced or evolved, as a gas." * This definition does not appear fully to express the fundamental idea represented by this word, though it probably is warranted by many authorites. The *nascent state* is not so much the act of development, as it is the state immediately preceding the developmental act—the primary static, or incipient dynamic condition—the inceptive, rather than the resultant act. "The Nascent state," says the National Cyclopædia of London, "is a term proposed by Dr. Priestly to express the moment at which a gaseous body is liberated from previous combination and *before* it has assumed the gaseous form."

Messrs. Abel and Bloxam thus define the *nascent* state: "the affinities possessed by a substance in its *nascent* state, *i. e.* at the moment of elimination from a compound, are often much more energetic than under ordinary circumstances.

Prof. Kane says: "in order to obtain the full chemical action of gaseous bodies, they must be brought into play at the moment of their being set free or formed; in their *nascent state*, as it is termed. It may well be, that, when water is decomposed and hydrogen is liberated, there is a moment before the hydrogen actually assumes the permanently elastic form; and being then, perhaps, liquid and in a highly concentrated condition, its affinities are manifested with extraordinary force. It is the same with other gases; they act always with their full power only in their nascent state." (Elem. Chem.)

Nacent. Lat. *Nacens*, growing from *nasci*, to grow—growing, rising, or springing up. Richardson.—He gives but one example of the application of this word, which is taken from Berkeley, namely—"the asperity of tartarous and the fiery acrimony of alcaline salts, irritating and

* This word is not found in Prof. Dunglison's admirable Dict., 7th Ed.

wounding the nerves, produce passions *nascent* and anxieties in the soul." Here *nascent* passion has as its antecedent, a lesion of the nerves. Growth or development accords with the literal or etymological meaning of the word nascent. The scientific import of a word frequently varies greatly from its etymology, which latter would mislead altogether, if literally interpreted. Dr. Harris's definition has, however, the advantage of harmonizing with the literal meaning of the word, which, in the absence of a recieved signification to the contrary, would be decisive.

Dr. Harris's definition of yellow fever, as being the "severest form of malignant remittent fever," though erroneous in the latitude of New Orleans, cannot now be examined.—In more than one place, *carneæ* is spelled *carmæ*, which is not the usual orthography.

Several words looked for, have not been found in this dictionary, as etherization, ovulation, homologne, analogue, subjective, objective, inquest, etc.

"Hyperæmia. Sanguineous congestion. Local plethora." This is a good literal interpretation, but is scarcely comprehensive enough to include all that is generally meant by *acute hyperæmia*, particularly as it regards the vocabulary of those pathologists who adopt this term in place of the word inflammation.

"*Institutes of medicine.* The theory and practice of medicine." This definition is too narrow for the literal, and to broad for the medical meaning of the term. The institutes of medicine are nearly synonymous with the elementary principles, or the philosophy of medicine, being the fundamental truths of physiology, and general pathology, and constituting theoretical medicine. It is possible to exclude the practice of medicine from the institutes without destroying the fundamental idea associated with this term; nay more, these terms are sometimes placed antithetically, just like the following, faith and practice; profession and conduct; word and action; speculation and experiment; theory and practice, and so forth.

The following extract from the preface of this work, together with a recommendation to the student to procure the same, will close this notice:

"The present edition contains about eight thousand more words than the first. The introduction of these without very greatly increasing its size, which the author was anxious to avoid, rendered it necessary to rewrite and compress the heavier and more elaborate articles into much narrower limits than were originally assigned to them, and to strike out the bibliographical and biographical departments altogether. The last

was done the more willingly, as a work embracing these subjects, by a very able pen, has already been announced as in preparation. The character of the book in this respect being changed, a corresponding alteration of title became necessary. All the words, technicalities, and other subjects belonging to dental surgery proper, have been retained, and all new terms, descriptions of subsequent discoveries and improvements in the art and science, have been carefully added. Numerous synonyms have also been introduced, and it is believed that no important word, in any of the specialties of medicine, which has at all passed into general use, has been refused a place and a minute and careful definition in the present edition of the work."

EDITOR.

REV. II.—"*An Act to establish Quarantine for the protection of the State:*" Approved *March* 15, 1855.

THIS act provides "That there shall be a board of health of nine competent persons; to be *selected in reference to their known zeal in favor of a Quarantine system—they shall file and subscribe an oath well and truly to enforce and comply with the provisions of* 'an act to establish a Quarantine'—shall have power to fix the number of days of Quarantine not less than ten—to contract for building—to authorize the Quarantine physician to employ an assistant, at $2,000 per year—to employ nurses, assistants, and others to attend the sick, and to fix their compensation —to determine how Quarantine shall be performed, making legal regulations, enforcing fines not less than $500—to make police regulations, imposing penalties—to appoint a secretary and treasurer, at $1,500—to remove any substance detrimental to the health of New Orleans—to impose additional duties, issuing warrants to any constable, police officer, or sheriff in the State—to apprehend and remove persons or vessels, &c., &c."—to appoint an officer to require of captains of vessels, &c. permits from the resident Quarantine physicians—to appoint physicians at each station—to advise the Governor when to issue his proclamation, declaring what places are infected, and the number of days of Quarantine—to require of the physicians compliance with their regulations for vessels, crews, cargoes," &c. Other plenary powers are given to the Board. The refusal or neglect to obey any order of the Board is punishable summarily with imprisonment and fine.

The President of the Board (who receives $2,000) during the adjournment, has power to issue "all orders and warrants to constables or

sheriff." "He shall be removed only by impeachment." "The Board shall authorize him to employ an assistant physician," at a salary of $2,000 per year.

Among the powers of the resident physician are the following:

To detain vessels, cargoes, crews, passengers from an infected district—vessels foul, or having yellow fever, cholera, &c. on board, not less than ten days; to compel the captain to land the sick, to fumigate and cleanse the vessel, the latter to pay all costs including five dollars for every patient—to inspect all sea-going vessels, and charge from 20 to 15 dollars for each, and to receive for his services $5,000 per year, and to have such other powers as may be delegated to him by the Board. He must tell the Board when it is necessary to establish Quarantine, whereupon the Board tells the Governor, and the Governor issues his proclamation, "declaring any place where there shall be reason to believe a pestilential, contagious, or infectious disease exists, to be an infected place, stating the number of days of Quarantine to be performed."

The Act as a legal document is by no means remarkable for lucidity, consistency, or possibility; its material features, pains, and penalties will be here subjoined.

"Be it further enacted, &c., That there shall be a Quarantine station at some point on the Rigolettes, and another on the Atchafalaya river, two miles below 'Pilot Station,' at the north of the Wax Bayou; the Board of Health is hereby empowered and it shall be their duty to locate them agreeably to the provisions of this section; but the provisions of this act shall only apply to the station at the Rigolettes from the day of the issuing of the proclamation of the Governor as provided by section thirteenth, declaring any port on the Lake shore or on the Gulf of Mexico to be an infected place, and shall remain in full force until suspended by a vote of two-thirds of the members of the Board of Health. The provisions of this act shall apply to, and be enforced at the Quarantine station on the Atchafalaya river, from the 1st of May to the 1st of November of each year; and also when the Governor shall have issued his proclamation as provided by the thirteenth section, and in such a case shall remain in full force until suspended by a resolution voted for by two-thirds of the members of the Board of Health.

"That the buildings to be erected at the Quarantine station, shall consist, at the station on the Mississippi river, of two separate buildings, as hospitals for the sick, of a small house as residence for the officers appointed under this act, and of a well-ventilated store for the reception of the freight of such infected vessel as the resident physician shall deem necessary to cause to be unloaded.

"That the Governor of the State shall issue his proclamation, upon the advice of the Board of Health, declaring any place where there shall be

reason to believe a pestilential, contagious, or infectious disease exists, to be an infected place, stating the number of days of Quarantine to be performed. It shall be the duty of the resident physician to give timely notice to the Board of Health of the necessity of such proclamation. After such proclamation shall have been issued, all vessels arriving in the port of New Orleans, or at the Rigolettes, or at the Atchafalaya station, from such infected place, shall be subject to Quarantine, and shall, together, with their officers, crews, passengers, and cargoes, be subject to all regulations passed by the Board of Health, or provided by this act. Every master of a vessel subject to a Quarantine or visitation, arriving in the port of New Orleans, who shall refuse or neglect either—first, to proceed with and anchor his vessel at the place designated for Quarantine at the time of his arrival; second, to submit his vessel, cargo, and passengers to the examination of the physician, and to furnish all necessary information to enable that officer to determine what Quaratine shall be fixed for his vessel; third, to remain with his vessel at the Quarantine ground during the period assigned for her Quarantine, and while there to comply with the directions and regulations prescribed by this act, or by the Board of Health, or with such directions, prescribed for his vessel, crew, cargo, and passengers by the resident physician, shall be guilty of misdemeanor and be punished by a fine not exceeding two thousand dollars, or by imprisonment not exceeding twelve months, or by both, at the discretion of the court.

"That from the 1st of May to the 1st of November, all tow-boats, plying from the mouth of the river to New Orleans shall be liable to inspection and quarantine.

"That the captain of any tow-boat or steamboat who shall receive on board his boat, freight, goods, or passengers from a vessel liable to inspection or Quarantine, or who shall receive goods or passengers from the Quarantine ground, without the permission of the resident physician, shall be punished by a fine not exceeding two thousand dollars and by imprisonment at the discretion of the court; and all violations of the provisions of this act at the Quarantine station on the Mississsippi river, and at the Rigolettes shall be tried at the Criminal Court of New Orleans, and all violations of this act at the station on the Atchafalaya river shall be tried by the District Court of the Parish of St. Mary.

"That every person who shall violate the provisions of this act by refusing or neglecting to obey or comply with any order, prohibition or regulation made by the Board of Health, in the exercise of the power herein conferred, shall be guilty of a misdemeanor, punishable by fine and imprisonment, at the discretion of the court by which the offender shall be tried.

"That the captain of any sea-going vessel, steamboat or tow-boat, violating the provisions of this act, or the rules and regulations established or to be established by the Board of Health, shall be considered guilty of a misdemeanor, and sentenced to pay a fine not exceeding five hundred dollars, and imprisonment not exceeding one year.

"That the resident physician shall have the power, and it shall be his duty, to detain at the Quarantine ground, with their cargoes, crews, and passengers, all vessels coming from an infected district, as provided by section thirteen, or in a foul condition, or having on board persons affected with cholera, yellow fever, pestilential, contagious or infectious diseases, during such time as he may deem necessary—not less than ten days—to compel the captain to land the sick at the Quarantine ground, to fumigate and cleanse all such vessels, and to submit to such rules and regulations as will be hereafter provided by the Board of Health, and that all costs incurred for vessels found in a foul condition, including the sum of five dollars for the support of each and every sick person landed at the Quarantine station, shall be borne by the captain and owners, and shall be paid to the resident physician, before a certificate, as provided by section eight, shall be given.

"That the resident physician shall have such other powers as may be delegated to him by the Board of Health, not contrary to the provisions of this act, and necessary to carry them into effect.

"That the resident physician of the Quarantine ground shall receive a salary of five thousand dollars. He shall require the captain of every vessel inspected to pay, for every ship, bark, or sea-going steamer, the sum of twenty dollars, and fifteen for all other vessels.

"That every person who shall go on board of any vessel while performing Quarantine, without the permission of the resident physician or his assistants, shall forfeit the sum of fifty dollars.

"That the Board of Health and their successors is hereby created a Body Corporate.

"That the sum of fifty thousand dollars be and is hereby appropriated, out of any moneys in the treasury not otherwise appropriated, to be paid to the secretary of the Board of Health, on a resolution of a majority, &c."

On the 30th of May, 1855, the Board of Health issued its proclamation announcing "the existence of Epidemic Cholera in our midst." It does not appear, however, that either the Governor, or the resident physician participated in this act.

The act creating the Board does not, or does it, require of the latter as one of its duties to proclaim officially the existence of epidemics in New Orleans? If the Board intended to proclaim the city "an infected place," to be quarantined against by the residue of the State, or parties beyond its territory, it would appear that the Governor's proclamation only could give legal validity to an act having this purpose in view, declaring "the existence of epidemic cholera in the city." Cholera and yellow fever are the principal diseases enumerated in the Quarantine act, which says "the Governor shall upon the advice of the Board of Health issue his proclamation declaring any place infected," &c. The

physician believes, the Board advises, the Governor proclaims. In the momentous concernment alluded to, it is presumed the Board acted from prudential motives, under a belief that the public good might be promoted by their announcement. The authorities of Cuba, as might have been expected, soon established Quarantine against vessels from New Orleans, as "an infected place." It remains to be seen whether other ports will pursue the same line of conduct.

It is worthy of remark that, of late years, the newspaper press of New Orleans has given the strongest possible proof of a willingness to make known, without concealment, whatsoever might enlighten the public as to the true sanitary condition of New Orleans, by publishing the daily or weekly bills of mortality—figures which cannot misrepresent. This ought to satisfy over-zealous statistical missionaries, foreordained and appointed to prove "New Orleans the most sickly City upon earth," and, who for a consideration will, nevertheless, "render yellow fever an impossibility whether it originates here or is imported."

The Governor, by a proclamation bearing date June 4, 1855, "upon the advice of the Board of Health, declared all vessels coming from *any port* in the Torrid Zone, or vessel which may have cleared from *other ports*, but has last *sailed from a port within the Tropics*, subject to a Quarantine of *not less than ten days*. The ports of Savannah and Charleston shall also be included."

This interdiction, agreeably to the advice of the Board, irrespective of the actual or known sanitary condition of the ports from the Tropic of Cancer to that of Capricorn, encircling the Globe, covers about 47 degrees of latitude, exclusive of Savannah and Charleston, including of course the West Indies, and many American, African, Asian, and Insular regions. Virtually this interdiction extends to much more than half of the Globe, because all vessels coming from beyond the Tropic of Capricorn would, with few exceptions, be compelled to touch at some inter-tropical port for supplies, business, or other cause.

It is not intended to inquire into the truth of the doctrine of contagion in its application to yellow fever, cholera, and quarantine. A single remark, however, may be allowed, namely, that the best test of a well-established belief is found in the conduct of persons whenever they are placed in a condition wherein they are compelled to act. In the yellow fever and cholera epidemics of New Orleans, separation, isolation, and avoidance of the sick, dying, and dead, are not practised even in the hospitals, and, therefore, not really believed. People who never have

been protected by vaccination, and who never had the small-pox, show by their conduct that they believe this disease to be contagious.

Waiving, therefore, the question of contagion, inasmuch as Quaratine exists and is based on its affirmation, the main purpose of this paper is to make a few general remarks on the Quarantine Act, practically speaking, so that it may be strictly and consistently carried into effect. It is not by legislative enactments, drafts on the treasury, published documents, skill in controversy, private declarations, mental reservations, nor even by the sanctions of oaths of office, that Quarantine can be effectuated and the sincerity of quarantinists and contagionists be tried and established. Action, disinfection, isolation, and non-intercourse—these are the watchwords—these constitute the platform. The parties who contrived the Quarantine law, required that "*the Board should be selected for their known zeal in favor of Quarantine;*—[where there is money, is there not "known zeal"?] "The Board shall file and subscribe an oath well and truly to comply with the provisions of an act to establish Quarantine." Swear! Subscribe! Swear, by five hundred thousand lives as believers, "of known zeal in favor of Quarantine" and disinfection, that you will be inexorable in arresting contagion, and that you will not permit an infected box, bale, ship, passenger, or newspaper to enter the city, to poison the community—"so help you God." "Suit the action to the word," or "Swear not at all."

> *Casca.* And let us swear our resolution.
>
> *Brutus.* No, not an oath: If not the face of men,
> The sufferance of our souls, the time's abuse,—
> If these be weak break off betimes.
> ——————What other oath,
> Than honesty to honesty engaged,
> That this shall be, or we shall fall for it?
> ——————Unto bad causes swear
> Such creatures as men doubt: but do not stain
> The even virtue of our enterprise,
> Nor the insupportive metal of our spirits,
> To think, that, our cause, or our performance,
> Did need an oath.
>
> JUL. CÆSAR.

In 1821, when a strict Quarantine was established, the Legislature did not require the swearing to speculative doctrines! The oath was as follows: "You swear that whatsoever may be your opinion of the origin and infectious nature of yellow fever, you will be as vigilant in preventing

its introducton as if you knew it to be infectious and of foreign origin, and as careful in detecting and removing the causes which are supposed to produce it in this city, as if you believed it might originate here, and that you will well and truly perform the other duties of your office."

"As the Lord liveth," this is swearing enough in matters of simple fact, but fortunately it does not include "known zeal in favor" of "fumigating" and the other dogmas and dubiosities, about which the Quarantine sectaries themselves differ. The Legislature did not require "a selection" to be restricted to, or trammelled by a private or a public confession of faith. It contemplated capacity and character, as sufficient guarantees in the execution of the laws, whatever might be the private opinion of its officers, as in all other administrative or executive offices.

Henceforth let swearing "by Him who liveth for ever and ever" give place to fumigation—subscribing, to scrubbing—proclamations, to chlorinated soda—"known zeal," to a heating apparatus of 200° of Fah. for all articles of merchandize—aërial documents, to ventilation with pure air, in large, dry warehouses—acerb dogmas, to thieves' vinegar or aromatic vinegar, diluted sulphuric, nitric, and hydrochloric acids, together with alkalies, soap, boiling, washing, and other materializing processes, without chopping logic any more.

Louisiana, the Torrid Zone, Charleston, and Savannah are quarantined *de facto* and *de jure*, and must be fumigated. Quarantine has existed at intervals, in various lands for more than four centuries, and the best proof *"of known zeal in favor of it"* must be manifested henceforth in adopting and effectuating its most reliable agents and methods for disinfecting passengers, cargoes, and ships. *"Known zeal" "is without knowledge,"* and without consistency if it go not thus far. Action! Action! Nothing but action.

The disinfecting processes may be seen in Dr. Copland's new and authorative Dictionary of Practical Medicine, Art. *Infection;* § 61. *et seq.* These methods are costly. Probably no cargo but such as consisted of a few "*non-susceptible* articles" disinfectable by washing, would pay the cost of a thorough scientific disinfection. It is satisfactory to know that the precious metals form an exception; in former times they were charged with conveying infection, but at present they are little feared! But a "zealous" that is a consistent contagionist fearing that he might poison a whole community, would not send even these into the city without disinfection, and the more so, because coins are apt to circulate more than other articles.

Mr. M'Culloch, in his Dictionary of Commerce and Navigation, gives a "list of articles most liable to infection;" as beds, brooms, books, brushes, canvas, carpets, cordage, cotton, articles made of cotton, silk, wool, and thread; feathers, flax, hats, hemp, leather, linen, mats, paper, hides, straw, sponges, letters, &c. (963.)

"If no infectious disease break out within 40 days, or six weeks, no danger need be apprehended from the free admission of the individuals under Quarantine. During this period, all the goods, clothes, &c. that might be supposed capable of retaining the infection, are subjected to a process of purification. This last operation, which is the most important part of the Quarantine system, is performed either on board ship, or in establishments denominated *lazarettos*." (*Ib.* 959.)

"Quarantine regulations respecting *men* and *animals* are founded on the assumption that the contagious poison, after having been taken into the constitution, may remain dormant for a certain time, and that a seclusion of a certain duration is necessary in order to allow the disease time to show itself, or to afford a certainty that the disease is not latent. Quarantine regulations respecting *goods* and *letters* are founded on the assumption that the contagious poison may be contained in *goods* and *letters*, and transmitted," &c. (*National Cyclop.* ix, 995. London, 1850.)

If morality be not strictly a local invention, no exports, particularly no exports of cotton should be allowed without a thorough disinfection by the authorities of New Orleans, because all quarantinists allow that "cotton is the most susceptible article" and, consequently, adapted to spread contagion and destruction over the world. Even in case of war, this would be a disreputable way of "taking off" an enemy actually in the field.

Whatever learning, morality, and disinterestedness quarantinists may possess, consistency of conduct is not one of their characteristics when their speciality is in question. When reason becomes popular and ratiocination epidemic, their fallacies will become apparent to the public. As the matter now stands, Quarantine legislation sets all reasoning at defiance, and a palpable absurdity needs not despair of a majority of suffrages. New Orleans cannot afford a better example of this than that of the authorities of Mobile during the last year, who, on the 28th day of August, issued their Quarantine proclamation, at great length, publishing the same not only in Mobile but in New Orleans, declaring Quarantine against "all vessels from infected ports, *except the United States Mail Steamer from New Orleans!*" Now as the latter was at that time

by far the worst infected port in the world, and as all know, the yellow fever principle implanted in the system remains dormant frequently many days, to break out in Louisville, Cincinnati, St. Louis, or in places still more remote, it follows that, if the authorities of Mobile had determined to infect and destroy their city, a more effectual method could not have been taken, with that view, than the one which they fell upon, namely, the introduction of a steamboat load of passengers daily and freshly from New Orleans.

Quarantine and contagiousness of yellow fever and cholera are now established as the law of the land. Charleston, Savannah and all ports in the tropical regions are infected, legally at least, and passengers, ships, cargoes, and tons of letters, papers, magazines, and other mail-matter, of a susceptible kind, arrive daily without disinfection and without even ten days detention. Louisiana has a Quarantine, but is not *de facto* a quarantinist while she admits daily without disinfection tons of mail matter from, or passing through the tropics, Charleston, and Savannah. Mobile, the nearest, and, therefore, the most dangerous place of all, is at present legally exempt from Quarantine, though the mails passing daily from or through Charleston, Savannah, and Mobile are not! To one blessed with mother-wit these things appear self-contradictory.

It is believed, from the most reliable accessible evidence, that there is not in the whole world, at present, an example of the honest and complete enforcement of the Quarantine laws. Quarantine is nominal, illusory, fraudulent. In the present commercial relations of the world, with an increasing steam marine, Quarantine is utterly impracticable. The longest voyages by steam are too short for the development of even small-pox in many cases.

The yellow fever contagionists of New Orleans, whose opinions are entitled to the most respect, because the most logical, deny the utility of Quarantine, which latter can never be enforced so as to exclude every letter, paper, box of oranges, bale, &c. It is the the opinion of Professor ————————that the contagion of yellow fever is transmissible in a corked bottle.

In the Report of the General Board of Health, on Quarantine and Yellow Fever, (pp. 414. London, 1852.) it is maintained "that whether cholera be contagious or not, Quarantine has had no influence whatever in checking its progress, and that wherever, in the recent course of this pestilence throughout Europe, Quarantine has been put in force as a measure of prevention, it was speedily abandoned as useless and even mischevious."

As it respects yellow fever, this report concludes "that there is no evidence to prove that yellow fever has ever been imported, and consequently the means of protection are not Quarantine restrictions and sanitary cordons. There is a general agreement that the substitution of hygienic measures, for Quarantine, isolation, and restriction, would afford more certain protection."

Experience abundantly proves that the time which elapses in voyaging by steam from Havana, Vera Cruz, Mobile, &c. is too short to enable the Quarantine officer to determine whether the seeds of a disease implanted in one port, will, or will not, develop themselves in another, even later than ten days after exposure. At all events, ten days detention is the present minimum, being only one-fourth of the usual period. Ships and their crews, however clean and healthy, should, on coming from an infected district be quarantined without a single exception, and all merchandize be treated as if saturated with contagion—otherwise the whole Quarantine system is but a hidious imposition, a contradiction, and a nullity.

None of these remarks have reference to acts of the existing Board of Health. Although it appears that none of the vessels, cargoes, and passengers from infected ports, bound for New Orleans, have been as yet subjected to the ten days of Quarantine, fumigation, &c., for the three weeks during which Quarantine has existed, it is easy to conceive that the difficulties incidental to the new undertaking will require time, preparation, and the coöperation of the State and City authorities. Rome was not built in a day.

EDITOR.

N.B. Since this article was in type, the Board of Health on the 20th of June, "declared Cholera no longer Epidemic."

REV. III.—*Medicine a Science; or, Disease a Unit:* by H. BACKUS, Selma, Ala. 1855. Pp. 46. 12mo.

Dr. BACKUS' fundamental theory is, that all diseases, like all the phenomena of the Universe have a common origin in one cause, namely, gravitation or pressure. He says, "all pathological phenomena are produced by pressure." 10. "We feel authorized to assert that all pathological phenomena are produced by pressure—that Disease is a UNIT—Medicine a SCIENCE." 27. "Disease being a Unit, obstructed circulation—there is but one indication of treatment: namely, to remove the obstruction, locally and generally, to its normal state." 30.

Such is Dr. Backus' theory—which it is not intended either to adopt, or criticise on this occasion. It may be proper to remark that Hippocrates, in his book on *Flatus* says "that the essence of all disease is one and the same." Professor Coxe, of Philadelphia, who, a few years ago translated and epitomized the works of Hippocrates—not from the Greek but the Latin version, remarks upon this passage, that "the unity of disease, as laid down by Dr. Rush, and regarded as altogether his own, and as such taught by him in the University of Pennsylvania, is here unquestionably sustained: '*Morborum autem omnium cum idem modus sit, locus tamen diversus est. Morbi igitur ob locorum varietatem et dissimilitudinem, nihil inter se habere simlei videntur;*'—which is correctly rendered from the Greek text." EDITOR.

REV. IV.—*Surgical Reports and Miscellaneous Papers on Medical Subjects:* by GEORGE HAYWARD, M. D., President of the Massachusetts Medical Society; Fellow of the American Academy of Arts and Sciences; late Professor of Surgery in Harvard University, &c. Boston: Philips, Sampson & Co. New York: J. C. Derby. 1855. Pp. 452. 12mo.

THESE papers, now revised and arranged after forty years of experience of the distinguished author, had been for the most part published previously, at different periods, relating to hospital cases—surgical operations —hernia—diseases of the knee-joint—statistics of amputations—the division of tendons—ligature of the carotid—wounds in dissection—vesico-vaginal fistula—anæsthetic agents— remarks on burns—measles—hydrophobia—paruria inops—statistics of consumption—legalizing anatomy—cholera—medicinal springs of Virginia—diseases of a literary life, professional trials of the young physician—duties of the medical profession.

These papers, rich in tables, facts, and thoughts, written by the hand of Hayward, cannot fail to be acceptable to the medical profession, in the enduring form of a handsome book.

A mind enriched with knowledge, an enviable reputation founded on modesty, ability, merit, and professional success, and withal crowned with prosperity, and judging from his *physique* as it appeared in the American Medical Association in 1850, not yet old, Dr. Hayward must be one of the happiest of Æsculapians. Such a day preludes a beautiful close so happily expressed by La Fontaine:

La mort est soir d'un beau jour. EDITOR.

REV. V.—*Elements of Human Anatomy, General, Descriptive, and Practical:* by T. G. RICHARDSON, M. D., Demonstrator of Anatomy in the Medical Department of the University of Louisville, &c. Philadelphia: Lippincott, Grambo & Co. 1854. Pp. 734. 8vo.

THIS beautiful book is a most excellent summary,—a kind of grammar of the principal anatomies, general, descriptive, and practical, worthy alike of a place in the library, and in the dissecting-room, the paper being good, the type clear, the illustrations (nearly 300) fine and intercalated into the text so as to economize space and facilitate reference. The medical students of the present day, who do not receive such a book with grateful alacrity ought to have been born fifty years ago, and to have studied medicine thirty years since, when a dead body and a dry book of anatomy, without illustrations, were the sole guides.—ED.

REV. VI.—*An Essay to prove the Contagious Character of Malignant Cholera; with brief Instructions for its Prevention and Cure:* by BERNARD M. BYRNE, M.D., Surgeon U. S. Army. Second Edit. Philadelphia: Childs and Peterson, 1855. Pp. 160. 8vo.

DR. BYRNE relying entirely upon contagion as the cause of Cholera rejects "the atmospheric and telluric influences, the local origin, and a variety of other exploded hypotheses, which have served so long to bewilder and delude the public mind." x. Dr. B. criticises "the non-contagionists because they have of late abandoned all speculation on the subject—pronounced the progress of Cholera a 'mystery' and found their sole occupation in opposing the doctrine of contagion. Had they succeeded in disproving the truth of *this* doctrine also, they would then have established the deplorable and humiliating fact, that the mode by which Cholera traverses the earth is indeed a mystery."

The force of this criticism, in view of the vast accumulation of evidence in all countries, showing the non-contagiousness of Cholera, is not annihilating to those who not being born to solve the "mysteries" of the universe including Cholera, honestly say so; and if only Dr. Byrne and two others out of 140 physicians in Baltimore, believed in the contagiousness of this disease, as Dr. B. affirms, this does not prove that the three were right and that the 137 were wrong. At the time Dr.

Byrne wrote, the greater portion of the world having been ravaged with Cholera, notwithstanding quarantine restrictions, and sanitary cordons, those who had seen most of this disease had seen no satisfactory proof of its contagiousness as defined by any recognized description, type, or test of contagion. Later observations and researches, including Dr. Byrne's 21 hearsay cases, so positively asserted by him to prove the contagiousness of Cholera, have added nothing at all satisfactory to the affirmative of this question beyond coincidences happening in every epidemic. Science may not pronounce upon the ætiological potentialities of Cholera, though it may premise that its contagiousness remains to be proved.

Aristotle and Kant's categories are as ingenious and comprehensive as Dr. Byrne's are dogmatical and narrow; he chains Nature down in the causation of Cholera by his four categories, all objective, and maintains, no others as being in his philosophy possible. Nature, according to him can neither originate nor propagate Cholera but by one of four methods, "viz: progressive atmospheric influence, local atmospheric influence, terrestrial emanations, and human intercourse,—these being "all the hypotheses that have been, or ever can be invented." 28. This exhaustive analysis, or rather *à priori* synthesis of all the possibilities of Nature in the causation of disease, implies infinite knowledge of causes, conditions, and processes, which, in the present state of ætiology, is *not* admissible, as no finite intelligence can comprehend all possible causes and their modes of operation. Cholera, may for anything known to the contrary, have a subjective origin, just as thought, volition, sensation, love, indigestion, headache, insanity, hysteria, &c.; it may be the resultant of a composition of causes, and have, as many other phenomena, a multitude of antecedents the finalities of which may be an unity or a multiform recomposition.

The force of this criticism, in view of all the evidence extant is not sufficient to damage the anti-contagionists and others who very justly "pronounce the progress of cholera a mystery;" for the evidence of its contagiousness is wholly unsatisfactory when viewed upon a large scale and when tested by the acknowledged standards of contagion in other diseases—a point however which will not be discussed in detail on this occasion. It may be sufficient to say that, "the disproval of the truth of the contagiousness of cholera" would not be if "established," either "a deplorable" or "a humiliating fact" for the plain reason that truth is preferable to falshood—a knowledge of ignorance to an ignorance of ignorance—an open question to one decided erroneously contrary to the law and the evidence. It is not contrary to philosophy to admit ignorance in cases where the connection between cause and effect eludes

the most careful observation, nor is necessary to the dignity of science that it should positively affirm or deny every dogma which may possibly be advanced concerning the causation of events. If cholera be not of an atmospheric origin, it does not follow that it must be contagious; it may be animalcular; it may arise from changes originating in the animal tissues; it may emanate from the earth, from the planets, from the will of Omnipotence, from innumerable sources of which man may plead ignorance so long as he remains unable to make an exhaustive synthesis and analysis of the potentialities of the Universe. "It is a deplorable and humiliating fact" when he pretends to know and decide what he does not understand—what he is incompetent to decide and what perhaps is utterly beyond human ken and human accomplishment. It is a grave error in philosophy to assume the existence of a cause, and from this assumption to claim superiority in science over more cautious reasoners, who, not being able to assign the essential cause of an event, honestly say so.

If Cholera be contagious, a valid judgment to that effect will be founded, not on difficult ratiocinations and profound scientific calculations, but upon simple observation and experience, in which careful observers, though non-professional persons may be competent to decide as well as the faculty, provided, that among all parties, theoretical biases be avoided and the proper criteria of contagion be adopted in the investigation.

Authentic examples might be recited showing that vessels leaving ports where Cholera did not exist, have been visited with the disease in the midst of the ocean, the crews and passengers dying in great numbers, the remainder escaping or recovering before reaching their destination; or the sick may land at ports without communicating cholera to the inhabitants.

"An experience of 37 years,"* says Dr. Byrne, "has clearly demonstrated in every part of the world, the total inefficacy of cleanliness and *fumigations* as preventive measures." "The measures which the contagionists have always recommended, are indeed the *only* measures;—but they will *not* fail." Dr. B. claims to have "published twenty-one facts," which he thinks are as convincing as "twenty-one thousand," to prove the contagiousness of cholera.

* Although it is not intended to advert to the literary merits of this work, its anachronisms deserve remark. It was published in 1833, yet later dates and later speculations have not been ignored. It is also worthy of remark, that Dr. B. was a thorough believer in the contagiousness of Cholera before he had seen it—before it had visited America, and in opposition to nearly everyone who had witnessed the disease in foreign lands—a foregone conclusion!

Dr. B. says, "there is no distinction, except a hypothetic one, between contagious and epidemic diseases; hence, a disease which progresses from person to person, and one which attacks a whole population simultaneously, are equally contagious, how much so ever they may differ in their origin, nature, and ratio of progression," *there is* says he, "*no law common to all of them, except that of communicability*;" of that imaginary constitution of the atmosphere, to which the term epidemic has been so generally applied, we are in all respects entirely ignorant; and if such a state exists at all, it must certainly exist in opposition to those atmospheric laws with which we are acquainted—"the poison of cholera is communicable from one human body to another; it is extremely subtile and diffusible; in a large majority of cases, it is incapable of developing disease unless assisted by an exciting cause." (22, 24, 43.)

These quotations are given, not for the purpose, of examination which indeed the remaining space of this Journal forbids, but to show the opinions of the talented author, who is at least "a good hater" of anti-contagionists, because the latter fail to account for epidemic cholera.—Let the Dr. recal to mind the dying words of La Place;—"what we know is little—that which we know not is immense." "I have gathered," said Newton, "a few pebbles on the shore, but the great ocean of truth lay before me unexplored."

EDITOR.

SCIENTIFIC CORRESPONDENCE.

MOBILE, 18*th June*, 1855.

DEAR SIR:—From the difficulty of getting reliable facts, I have been much embarrassed in working out the problem of *hybridity* in the human race. The origin of the domestic dog, and the *unity* of dog races even, has caused much discussion. The dog in Europe has generally been supposed a descendant of the wolf. Flourens has just disproved this, at the Garden of Plants. He says the dog and wolf become sterile after the 3rd, and the dog and jackal after the 4th generation. Thus establishing degrees of hybridity.

Now the question is simply not whether mulattoes are prolific, but whether there is a limit after a certain number of generations?

I have been told that there are settlements in Louisiana where the mulattoes have been intermarrying for several generations. Is this so? Can you give me any *facts* touching their prolificacy? I am engaged in editing a work, now translating by a friend, by Gobineau, "*sur l'inégalité des Races*," in which I wish to use, &c. Very respectfully, yours, &c.

DR. B. DOWLER. J. C. NOTT.

Unable to answer the above-mentioned queries, it has been thought best to publish them, hoping that some of the readers of this Journal, may help the learned writer to satisfactory solutions of the same.

EDITOR.

SANITARY CONDITION OF NEW ORLEANS.

Cholera.—The health of the City up to the second week of May, had been good, the mortality having been from 130 to 140 per week. In April, the weekly mortality did not much exceed 100. In the fourth week of May (the prolonged drought not having been mitigated) Cholera appeared very suddenly; the mortality amounted to 385, that from Cholera alone, to 204. The week ending June 4th, gave a mortality of 504—from Cholera, 278. The interments during the next week, ending on the 11th, fell to 381—Cholera to 201; the following week, ending June 18th, the total mortality declined to 236, and that of Cholera to 76.

At present, June 21st, the health of the City is improving, and the mortality is declining to the minimum of the most healthy summer seasons.

Isolated Cases of Yellow Fever.—Wm. Barneman, born in Germany, aged 21, resident one month in Girod-street; worked on the Levee; late steamboatman on the boat Opelousas; sickened June 15th; entered the hospital on the 18th, having Yellow Fever, with yellow skin, black vomitings, &c.; died on the 20th. On the following day an autopsy was made: blackish matter was found in the stomach, &c. Dr. Wedderstrandt, formerly house surgeon, who has probably witnessed more cases of yellow fever than any physician of his age, assured me that this man's corpse was yellow and had the usual appearances of yellow fever. Dr. Choppin, house surgeon, Dr. Canter, assistant, and others, pronounced this a genuine case of Yellow Fever.

John Kramer, aged 23, resident in the United States five years, and in New Orleans since the 1st May, 1855; entered the hospital June 19th; sick one day. On the evening of the 21st, I examined this man, whose history, given by himself, by Dr. Canter and others, warrant the opinion that this is a case of Yellow Fever, though not very strongly characterized. I saw, at the same time, another more strongly marked case. The patient was tied; delirious; had incipient stertor; a tendency to coma, vomiting, &c.*

These three, and one or two other reputed cases, are probably all that have occurred in the City, except one reported in the *N. O. News & Hospital Gazette*, of June, 1855. This case is one of great interest, having been the first of the season. The patient died on the 3rd of May, after having thrown up black vomit. The post-mortem examination, witnessed by the editors, and by Drs. Crawcour, Brickell, Grier, Baldwin, Clapp, and Canter, confirmed the diagnosis. The subject, aged 17, passed the summer of 1853, in the interior—was a cook successively on the steamers Louisa, and Rapides—was taken sick while descending the Mississippi River.

These cases are noted for the purpose of calling the attention of candid contagionists to their domestic origin. Here the evidence is, as it always has been strong against the theory of importation. EDITOR.

* For several notes of the above cases, I am indebted to Mr. Bickham, resident student of the Hospital.

Editor's Office.—Notices.

JULY, 1855.

COMMUNICATIONS RECEIVED.

Translated Paper, from J. S. Meng, M. D., of Natchez.
A Paper, by G. S. D. Anderson, M. D., of Alexandria, La.

BOOKS AND PAMPHLETS RECEIVED.

Anniversary Discourse, before the New-York Academy of Medicine; delivered in Clinton Hall, 1854. By John H. Griscom, M. D., published by order of the Academy. New-York: 1855. Pp. 58.

A Report on Solidified Milk. By the Standing Committee on Public Health and Legal Medicine. Trans. N. Y. Acad. Med. New-York: printed for the Academy. 1855. Pp. 10.

Letters on Yellow Fever, the Cholera, and Quarantine addressed to the Legislature of the State of New York. Second Edition. By Alex. F. Vaghe, M. D. etc. New York: 1854. Pp. 106. 8vo.

Analysis of The Bladon Springs. By Prof.'s J. L. & W. P. Riddell, University of Louisiana, and Professor R. T. Brumby, University of Alabama. New Orleans. 1855. Pp. 23. 12mo.

New Journal of Dentistry: The Dental Obturator; devoted to the Science and Art of Dentistry. Edited by John S. Clark, D.D.S, New Orleans: May, 1855. No. 1. Quarterly. Pp. 30. From H. D. McGinnis & Co., 36 Camp-street, Publishers.

Constitution, By-Laws, and Code of Ethics of the Brazos Medical Association, (Texas.) Organized May, 1854. Pp. 31. From J. C. Davis, M. D., Sec.

Dr. John Gorrie's Apparatus for the Artificial Production of Ice in Tropical Climates. New-York: Maigne & Wood, 1854. Pp. 15. From the Author.

Pustule Maligne; An Inaugural Essay for the Degree of Doctor in Medicine. By Daniel Wadsworth Wainwright, of New-York City, A. D. 1854. Pp. 32. From the Author.

Statistics of Injuries of the Heart: Observations on Wounds of the Heart, and their Relations to Forensic Medicine, with a Table of Forty-two Recorded Cases. By Samuel S. Purple, M. D., &c. &c. &c. New-York: Samuel S. & William Wood. 1855. Pp. 32. From the Author.

Report upon the International Exchanges, undertaken by M. Alexandre Vattemare, and upon the actual state of Letters, and especially of Historical Investigations in the United States of America. By M. Guizot. Meeting of February 24th, 1855. Pp. 55. French and English. Translated by Maunsell B. Field, A. M. Paris: 1855. From Mr. H. McCulloch.

Transactions of the Medical Association of the State of Alabama, at its Eighth Annual Session, begun and held in the City of Mobile, Feb. 5, 6, 7, 1855; *together with the Code of Medical Ethics and a List of Members.* Mobile: Middleton, Harris & Co., Printers. 1855. Pp. 148. 8vo.

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Journal de Pharmacie et de Chimie.
Revue Médicale Française et Étrangère.
Gazette Médicale de Paris.
Archives Générales de Médecine.
Gazette Médicale de Lyon.
Gazette Médicale de Strasbourg.
Journal de Médecine de Bourdeaux.
Annales d'Hygiène publique et de Médecine légale.
L'Union Médicale.
Il Progresso, Genoa.
El Siglo Medico, Madrid.
Revue de Thérapeutique Médico-Chirurgicale.
Dublin Quarterly Journal of Med. Science.
Medical Times and Gazette, London.
The Glasgow Medical Journal.
The Edinburgh Medical & Surgical Journal.
British and Foreign Medico-Chirurgical Review.
London Lancet.
The Indian Annals of Medical Science, Calcutta.
The Dublin Hospital Gazette.

NOTICE.

Mr. H. McCulloch, of New Orleans, having recently purchased from the succession of the late Dr. Hester, the goodwill, subscription list, and the assets of the New Orleans Medical and Surgical Journal, and having contracted with the undersigned, before a Notary Public, to Edit the same for Five Years, the projected Quarterly Journal of Medicine, though partly printed, has been cancelled, and its interests wholly merged in the first named Journal.

The patrons of the N. O. Med. & Surg. Journal may rest assured that its proprietor, Mr. McCulloch, well known in New Orleans for his industry, accuracy, and integrity, will conduct its business affairs in a manner altogether satisfactory, and thereby relieve the Editor from an onerous task, enabling him to devote more time to serve all who may honor this Journal, as worthy of their attention and encouragement.

Although the subscription list of this Journal is large and increasing, it should be borne in mind that prompt payment is indispensable, inasmuch as the cost of printing is high in New Orleans, while the difficulty of collecting small sums distributed over vast territorial expansions of the Southern States, is great as well as expensive. Justice, expediency and the mutual interests of all parties concerned in this Journal, demand payment in advance, through the medium of the post-office, or through city agents or merchants.

A large edition of this Journal is printed; so that new subscribers may get the back numbers from the beginning of the volume, which commences with July; notices of discontinuance should be given two months before the end of the subscription year which closes the issue of the May number. Provided no discontinuances can be made except at the option of the proprietor unless all arrearages shall be settled.

Postmasters will please to return, without unnecessary delay, all numbers of this Journal not called for in a reasonable time, as the law directs. The same request is made of all to whom specimen numbers may be sent, should they decline subscribing for the work.

Foreign editors are notified that their journals, in exchange, will reach this office free of expense upon being put into any post-office in the United States. Parcels from foreign countries may be sent by ships to the care of Mr. McCulloch, "Delta Office," 76 Camp-street, or to the Editor's Office, 80 St. Charles-street.

All Letters on the business of the Journal, Advertisements, and Moneys, should be addressed to Mr. H. McCulloch, proprietor of the N. O. Med. & Surg. Journal, "Delta Buildings," 76 Camp-street.

Communications, parcels, books for review, and exchanges should be sent, free of expense, to the address of the Editor,

B. DOWLER, M.D.

Office:—80 St. Charles St.

Residence:—Delord St., between Camp and Magazine.

New Orleans, April 1st, 1855.

10*

University of New-York.

MEDICAL DEPARTMENT—SESSION 1855-6.

THE Lectures will commence on MONDAY, *October 15th*, and be continued until 1*st* of *March* following. The session of 1854-5 was attended by a class of 307 students; on 106 of whom the degree of Doctor of Medicine was conferred.

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NEW-YORK, March, 1855.

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SESSION 1855–6.

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The Fee for the entire Course is $105, payable in advance. Matriculation Fee $5, Graduating Fee, $25; Anatomy and Dissection $10, to be taken once before graduating. Rooms open from the 1st of October.

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CHARLES A. POPE, M.D., Dean.

TABLEAU

OF THE

YELLOW FEVER OF 1853.

With Topographical, Chronological and Historical Sketches of the Epedemics of New Orleans since their origin in 1796, *illustrative of the Quarantine Question.*

BY BENNET DOWLER, M. D.

New Orleans: 1854. 66 large octavo pages. Price—50 Cents per copy; three copies for $1; 100 copies for $25.

☞ Orders should be directed to H. McCulloch, Delta Office, 76 Camp-street, New Orleans.

The editor of this journal considers this pamphlet the best that has been written on the subject. It contains much valuable matter in a small compass, and adds to the many laurels already won by the indefatigable author in this and other branches of investigation. His last chapter, while it has all the vigor and truthfulness of the poet, introduces us to the bedside of the dying and the dead—goes beyond the usual boundaries of observation, and brings back a wreath to crown the altar of Science, from a region too sterile for the poet, and even for the less energetic philosopher.—[*Phil. Med. and Surg. Jour.*]

In the sixty-six pages, of which this pamphlet consists, Dr. Dowler has contrived to condense more matter of an important and instructive character, bearing directly upon the etiology and character of Yellow Fever, than would suffice, if fully developed and examined in all its relations, to fill a goodly sized volume of several hundred pages; and that, too, without any undue extension of subject or prolixity of style.—[*The American Journal of the Medical Sciences.*]

THE NEW ORLEANS

MEDICAL AND SURGICAL JOURNAL

FOR SEPTEMBER, 1855.

ORIGINAL COMMUNICATIONS.

ART. I. *Typhoid Fever:* by W. G. LITTLE, M. D., Sumpter Co., Ala.

In the present article, we propose nothing novel, but it shall be our endeavour to be a faithful recorder of facts as we have seen them.

THIS locality has been healthy without a parallel, with the exception of a few families, and one in particular, that was visited by an epidemic of typhoid fever; during the past year we think there have been but two cases of typhoid fever in the location, since we commenced the practice in 1852, until '54: we are clearly of the opinion that there has been a a typhoidal predisposition in the diseases of this location, since we commenced the practice. For instance, in remittent fever, undue purgation, or bleeding, as recommended by many, would almost certainly produce a low grade of fever, approximating typhoid. We also believe if quinine be withheld the tendency would be of a typhoidal nature.

We now propose giving our views of the nature and treatment of typhoid fever. When typhoid fever prevails in a locality where fevers of a malarial origin are common to the location, we then believe typhoid fever has a malarial origin. We believe it conceeded, and the opinion unchallenged, that all diseases are subject to epidemic influence. Thus the diseases common to a locality will assume phases, and even end with symptoms of any epidemic that may visit the locality.

During the spring of '51, this neighborhood was visited by a fatal epidemic of dysentery. During its prevalence, the diseases of the location partook of dysenteric symptoms. Remittent fever was very apt to terminate in dysentery, as I have been informed by a medical friend. Such being the case is it not as reasonable to suppose, that typhoid fever will have a malarial origin, or in some way be connected with malaria, as the diseases of the place will partake of the nature, and even end with symptoms of any epidemic which may visit the locality? what goes still further to prove to our mind satisfactorily, the malarial origin of typhoid fever, is, that in the incipient stage quinine will cure it. We were induced to try quinine, having previously received such marked success from its use in the autumnal remittent; and having no diagnostic symptom which would enable us to distinguish between the two, we then naturally came to the conclusion: If it will cure remittent fever, why may it not cure a fever which we cannot distinguish from intermittent during the first week of the attack? We will state with regard to the use of quinine that it should be given during the first week. If given after typhoid symptoms have supervened, then an irritating, instead of a beneficial effect would be the consequence, viewing it as we do, strictly an interic fever. We do not remember of failing in a single instance where quinine was given in time, and in sufficient quantities. With regard to the dose we were governed by circumstances.

All physicians who have practised on negro quarters, know that when any disease is among them which has proved fatal, they will work as long as they can go. Notwithstanding a caution to come in as soon as they feel indisposed. They become alarmed, and have a superstitious idea that they can work off the disease. When they come in, the disease will have developed itself to such an extent, that it would be to the detriment of the patient to give quinine. The same cause acted differently upon other cases: for instance, fear caused one set to work; another set were urged from a sense of fear to come in as soon as they felt indisposed.

The attack in typhoid fever is so very gradual, that a patient can go about a week suffering but little inconvenience. We remember one patient who had typhoid fever three weeks and never took his bed.

We used quinine in but three cases after typhoid symptoms were developed, unless there was a remission. The first case that we used it in, (after the fever had assumed a typhoidal character) was that of a woman who had been confined four weeks. It caused the tongue to clean off

and become perfectly red. We also believe it produced an abortion, in her case, though we are by no means positive as to the quinine causing her to abort. In a few days her tongue began to coat over, and assume a more natural color. We gave it in two other cases under similar circumstances, with a like result, (except producing abortion.)

We now propose noticing some of the remedies that have been recommended, and their claims urged. From some of them we derived much satisfaction, while from others we were equally disappointed.—From the veratrum viride we expected much, coming so highly recommended from others, that have used it in typhoid fever, and also from having previously been so much gratified from its use in pneumonia and in other diseases. We must admit that we were much disappointed, not having derived any benefit from its use. As to calomel, we view it directly as an irritant, it causes an increased flow of bile over an already highly irritated surface. From it we have seen a vast deal of injury accrue, while nothing beneficial resulted. We were forced to the conclusion, that to be giving calomel in typhoid fever, was only adding fuel to the flames. We are opposed to blisters, not having derived any material benefits from the application. All the benefits can be derived from a stimulating poultice that would accrue from a blister; when a blister is placed over the bowels we are then debarred from the use of any other external application until the blistered surface is healed. We did not try with many, the very popular remedy, argentum nitratum, from the fact that we believed it impossible for it to reach the diseased surface as a nitrate, unless given in very large doses—then we think it would have created an injurious effect upon the mucous membrane of the stomach. We remember reading an article, where the writer advanced the idea that a mucous membrane did not suffer detriment from the use of nitrate of silver. We remember treating a young gentleman, when nitrate of silver was given to the decided injury of the mucous membrane of the stomach. We have used the acetas plumbi, as recommended by Dr. Atlee, of Lancaster, Pa., with much gratification to ourself, and benefit to our patient. Much pleased have we been with the turpentine emulsion of Prof. Wood, such has been our success from the use of turpentine and sug. lead, that were we to confine ourself strictly to any two remedies in typhoid fever, they are the two upon which we would rely. Did it devolve upon us to sum up the virtue of sugar of lead and turpentine in the treatment of typhoid fever, we would say, so far as our experience goes, that either was *ipse agmen.* As to the use of cathartics we are decidedly opposed to them,

after the bowels in the first instance have been unloaded. The books and most of the writers upon typhoid fever recommend that something should be given to produce an action of the bowels every day or two.—We thought it ridiculously absurd to let a patient go a week or longer in typhoid fever without an action from the bowels, when we first commenced the treatment of it. We were told by Dr. R. Perrin, a retired physician, that he had been more successful when he had kept the bowels quiet. We had not treated many cases before we come to the conclusion that the principle was correct. However strange and ridiculous it may appear, we have seen patients go as long as three weeks, without an action from the bowels, in typhoid fever, and get well. We were not governed by the length of time a patient went without an evacuation from the bowels, but by the effects. In the event the bowels pained the patient or from the confined state produced any undue irritation, they were unloaded by an enema, which gave relief. We had to be cautious how we brought about an action from the bowels; diarrhœa was an attendant at any stage of the disease. We regarded it when not easily controlled as a very unfavorable symptom. In many cases it was with difficulty that it could be arrested; succeed in checking it, and the least imprudence on the part of the patient will bring it on again; we generally consider its recurrence unless easily controlled, an index to a fatal termination. In the event of a second attack of diarrhœa, not arrested in four days the issue was almost certainly fatal. But two cases died in which diarrhœa was not the messenger of approaching dissolution. Morbid alteration was confined to the glands of Peyer and caput coli, as was manifested by physical signs and exemplified upon post-mortem inspection.

Delirium was of a low and garrulous nature; it generally supervened just before dissolution.

It has been recommended when a disease is endemic on a place, to have both sick and well removed from the exciting cause. We have the greater number of the sick, and all the well removed into comfortable tents, about $\frac{1}{4}$ of a mile from the negro quarter. The tents are built on a hill, surrounded by a dense pine forest. There is a thick growth intervening between the quarter and the tents. The removal appeared not to exert the slightest check on the onward march of the disease. It may be urged, as has already been said, that they were not carried a sufficient distance from the cause.

The overseer's house was about two hundred yards from the quarter,

several negroes in the yard, where the overseer lived, always had a communication between the negroes of the quarter, and those of the yard; nothing intervened between the yard and the quarter. Not a case originated in the yard. It is conclusive to us, that they were as free from the cause in the tents, as if they had been ten miles off. Might it not be that all being exposed to the same cause, and the system of each being impregnated with the cause, a removal would act as an existing cause developing the disease? Persons residing in a malarious district, may reside there for years, and not be subject to intermittent fever. Let them visit a location where chills and fever were never known to exist, the change of location acts as an existing cause, and the malaria which has been so long dormant in the system, will develop itself in intermittent fever. While the negroes were in the tents, it commenced raining to such an extent, that we were compelled to move them back to their houses; afterwards had them carried to some vacant houses, a distance of three miles off. The sick convalesced; there were no other cases, from the fact that there were no other subjects to operate on.

We have been foiled in divining the cause. The location is high and dry, and to every appearance healthy. Its past history has been that of being as healthy as any place in the vicinity. Such has been the case, thus far during the present year.

If you think the foregoing worth an insertion in your valuable journal, please insert it; if not give it to the flames.

ART. II.—*Clinical Histories:* from the Case-Book of the late Dr. A. HESTER.

CASE 1. *Phreno-Pneumonitis.*—E. J. æt. about 35, of small stature rather dark complexion; tolerably muscular; dissipated (judging from his appearance,) entered Ward 24th on the 5th of August. I saw him for the first time on the morning of the 6th, at 8 o'clock. He had some fever; was quite delirious during the night. He stated that before he applied for admission that he had suffered from diarrhœa; for which he had taken "25 cents worth of opium" at one dose, and becoming alarmed on account of the quantity, he swallowed a mixture of calomel and jalap half an hour afterwards which made him throw up the opium; after this, his bowels were relieved; but in a few hours he was seized with hic-

cough, which continued (three days) up to the time I saw him. I found him sitting up in bed, with a pale, uneasy and sickly appearance; troubled with the hiccoughs, at every respiration; the delirium had left him. He had applied a sinapsism to his epigastrium, which left the skin very red. He complained of great pain in the epigastrium, extending posteriorly towards the spine of the left side, and running up to the scapula. He had no cough,—no expectoration, respiration pretty regular, only interrupted by the singultus; his pulse about 90, and rather soft, skin warm, but without great heat; tongue nearly clean, moist, but of a light pink hue; thirst; eyes not injected, but brilliant and staring:—ordered cups freely to epigast., and to left and lower part of the chest; cataplasm to follow cups; purgative enema; Hoffman's Anodyne liquor; iced gum water; absolute diet.

August 7th, *Mane:*—Delirium through the last night; hiccough left him after the cups had been applied, and after using H.'s liquor. Skin now warm and moist; tongue red and dry; pulse quick but soft; respiration hurried; pulls at everything he can reach, seems agitated, constantly talking; says he has a great pain in his head; forehead moist but hot: ordered blisters to each *mastoid.* Blisters to the side of the thigh; enema lax.; cold applications to head; iced drinks.

Evening, 6 o'clock.—The nurse was compelled to fasten his hands to the bed post; found him with a wild expression of eye, constant muttering, endeavoring to unloose his hands; pulse quick and soft; skin bathed in perspiration, but quite warm; tongue dry, and of a *blue color*; respiration, frequent and panting, increased no doubt by his powerful exertions to release his hands. Ordered turpentine enema; cold douche to head; carbonate of ammonia, grs. 5; dose every hour. But he continued to sink, and expired struggling, raving and delirious at about 8 o'clock the same night.

Autopsy.—The following morning, at 8 o'clock I made the examination. Countenance much distorted; no yellowness.

Brain.—Adhesions between the dura mater and arachnoid; this was so close, that when I attempted to strip off the dura mater, it carried with it patches of the arachnoid membrane. On thrusting the handle of scalpel beneath the torn border of the arachnoid, it was so much thickened by a deposit of lymph and so opaque that the instrument was scarcely visible. Two or three ounces of a muddy serum beneath the dura mater in the lateral portions of the brain; at the base of the brain, around the medulla oblongata, was a quantity of the same

fluid. The whole surface of the brain highly vascular; the medullary portion was more vascular than ordinary; some water in all the ventricles.

Thorax.—Right lung collapsed and crepitant; left upper lobes partly crepitant and partly engorged. The middle and lower lobes at first sight appeared as solid, firm, and hard as an ordinary liver; indeed these two lobes, were as unlike the pulmonary structure as possible; of a dark grey color; partially attached, through the intervention of inflamed pleuræ to the ribs above and the diaphragm below; on cutting into this portion of the lung, it was of a dark greyish appearance; contained not a particle of air; indeed it was as heavy and compact as a half disorganized liver; friable, on pressing it there poured out an abundance of dark, thick, purulent fluid, mixed with blood; some few well defined-abscesses here and there; at the division of the bronchiæ, we found a rough uneven, calcarious deposit, perfectly hard, resisting the edge of the knife, and giving out the sound of a hard rock, when scraped; it was as large as an almond with its shell. The liver was attached to the diaphragm closely, from point to point, and I was compelled to make a close and careful dissection to separate it. On trying to remove the spleen, found I had, notwithstanding my great care, torn off and left a large portion of the capsule covering this organ, closely attached to the diaphragm. On removing this portion of the diaphragm, I found it highly vascular, with its vessels highly charged with blood. A portion of the covering of the spleen was blended with the diaphragm by adhesive inflammation, that it was utterly impossible to dissect the one from the other; substance of spleen otherwise healthy; I have omitted to mention that the heart was healthy; no water in the pericardium; large, yellowish, fibrinous clots in the cavities of the heart, covered with very dark shreds of coagulated blood, and so tough as to almost seem organized. Stomach slightly injected, near the cardiac orifice, and along the greater curvature; mucous membrane very little altered—perhaps a little thickened; stomach almost empty; duodenum same as the stomach. Intestines appeared only slightly vascular, in small patches; kidneys healthy.

Case 2.—*Typhoid Pneumonia.*—May 28th, 1843. Ward 10: A man, æt. 40, had been under treatment 3 or 4 weeks; at first, for pneumonia complicated with typhoid, was regarded at the end of the second week as convalescent, and treated for debility, but suddenly he expired.

Post-mortem: Emaciation to the last degree; skin about the hips and other prominent points upon which the patient had rested, was abraded and ulcerated; muscles wasted and flaccid.

Thorax.—Left lung of a pale light pink hue, perfectly healthy; no effusion in this side of the chest, no adhesion; *lung, right side;* the two pleuræ and the lung adhered to the ribs from the clavicle above to the diaphragm below, and from the commencement of the cartilages in front, round to the spine behind; on attempting to separate the adhesion, a portion of the lung was torn and left adherent to the ribs; before we had proceeded far in separating the adhesions, we found we had ruptured an immense abscess, seemingly between the two pleuræ, but this could not be ascertained by dissection, as the thick purulent fluid inundated the right side of the chest, and so great were the alterations, and displacements, that it was impossible to measure the exact limits of the purulent collection. That portion of the lung which was attached to the ribs, through the pleuræ and cellular substance, was torn off in the separation, and yet it did not seem seriously involved; the remaining free portion of this organ was forced back and pressed by the abscess along the fossa on the right side of the vertebræ, formed by the curvature of the ribs and the projection of the bodies of the dorsal vertebræ; it was so much pressed by the abscess, that it was utterly impervious to the atmospheric air, and was dense, free from crepitus, engorged with blood, yet exhibiting no other morbid changes.

Quere. Would not an operation have discharged the contents of the abscess and liberated the lung from such a compression?

CASE 3.—*Hepatitis.*—Wellington Snider; a German laborer, æt. 35, of small frame, delicate muscular system, entered the hospital the 27th April; sick five days. Was attacked with a chill, to which succeeded febrile phenomena, attended with pain in the lower region of abdomen, extending upward as far as the right hypochondrium, and fixing its seat in the liver; considerable heat of skin; dark complexion; *icterode:* occasional pain beneath angle of the the right scapula.

On the day in which he was admitted, he was cupped freely over the epigastric and hypochondriac regions. The pain was particularly severe at the epigastric centre, just at the scrobiculis cordis; the extent of the pain might have been covered with a five franc piece. Evident fulness in that side, corresponding to the region of the liver. The cups relieved the tenderness over the epigastrium, only for a short period: A blister was next laid over the epigastrium, extending along the *linea alba* as far as the umbilicus, (this blister should have covered the liver, as that organ was evidently affected.) An emollient cataplasm followed the blister; calomel was freely administered. Thirst intense; tongue red at the point, coated *papillæ magnæ* projecting towards the base.

May 5th, *Mane.*—Pulse 70; respiration 35, quick and embarrassed, in consequence of the liver being enlarged and encroaching upon diaphragm, also producing frequent dry cough.

Prescribed.—Prot. hydrag.et pulv. ipecac, comp. a a. gr. xx, M. et divid. in chart. No. x.; one every three hours: *emollient enemata*: drink *gum-water;* repeat *emplast. vesicat.* over the right side.

Percussion indicated that the liver extended over a space far beyond its usual limits, when in a normal condition: this operation though performed with much precaution, produced considerable pain.

May, 6th *Mane.*—During the night, three or four thin bilious dejections; great thirst through the night; skin rather dry; countenance expressive of great uneasiness; says "he has no pain;" complains of blister only; teeth and gums loaded with dark sordes; tongue dry and smooth along its centre; but reddish and moist at its borders; clamorous for cool drinks; dry cough; no expectoration; right side obviously enlarged, fulness extending along the course of the floating ribs of right side, as far as epigastrium. *Prescpt.* — Ungt. hydrag. to dress blistered surface; bowels rather costive; infus. fol. senn. cum man.; gum-water iced; continue subm. hydrag. cum pulv. doveri, after operation of infus. three times through the day.

May 7th, *Mane.*—Passed the night in much uneasiness; pulse 72 per minute; skin hot, respiration accelerated; features contracted and stamped with suffering and apprehension; no perspiration on the surface; blistered surface, deeply red and rather dry; free purgations during the early part of the morning; right hypochondrium still enlarging; superficial veins coursing over the chest charged with blood and of a deep leaden hue.

Abdomen slightly *bombé*; intense thirst; decubitus dorsal; slumbers with eye-lids half closed; tongue destitute of moisture, in the centre smooth, shining in some parts, and covered with dark spots, as if smeared with mercurial ointment; teeth and gums very dark; no ptyalism; does not complain of any pain. *Pre.*—.Emollient enema to be repeated three times *per diem;* ungt. hydrarg. for dressing of blister, followed by suppurative cataplasms; gum-water.

May 8th, *Mane.*—Frequent operations from the bowels yesterday during the day; delirium at night, at intervals; but little sound sleep. I am informed by the nurse, that the patient's discharges yesterday were mixed with dark blood, but I suspect this to be a mistake, as the loss of strength did not by any means correspond with the amount of blood which the patient was supposed by the nurse to have lost. Thirst un-

quenchable; respiration from 30 to 32; no pain; breath fœtid, for first time; tongue loaded with a black coat, marked with deep fissures in the centre; involuntary dejections, or rather patient, is sensible that a motion is about to take place, but it overtakes him before he has made the necessary preparations. *Pres.*—Lavement, solut. amyl. cum. 40 gtt. tinct. opii, to be repeated if required; warm fomentations to abdomen; dress blistered surface with morph. sulph. ℥jss, ungt. simpl. ℥jss, one half to the blistered surface.

May 9th, *Mane.*—The first anodyne injection arrested the purging; after dressing the surface denuded by the blister, with the unguent morph. the patient fell asleep, and continued to sleep quietly until nine o'clock, P. M.; thirst unabated; slightly delirious through last night. Suppuration from the blister; calls for "*wasser*"; some heat of skin. On rising up in bed to take his usual drink, he fell back on the pillow quite exhausted.—Pulse 80; tongue still dry, dark and fissured; fulness and enlargement of right hypochondrium sensibly diminished; icterie hue, more universal and deep. During the day (9th) he was extremely restless, frequently rose from bed, delirious at intervals; frequent dejections from the bowels. In the evening much worse; he began to sink and expired *suddenly* at 11 o'clock, P. M.

The following morning (the 10th) between the hours of eight and nine o'clock, we proceeded to make the *post-mortem* examination, and the following phenomena were recorded on the spot: general emaciation; but little sub-cutaneous adipose tissue; muscles somewhat rigid; no discoloration of the body, except an uniformly diffused icteroid hue.

Chest.—Dulness on percussion in the right side. I was forcibly struck with one fact, viz., the almost complete disappearance of fulness on the right side, that is to say, in the hypochondriac region. On dividing the cartilages of the upper ribs, a thick yellowish fluid poured through the incision; in fact the right side of the chest was completely filled with a mixture of thin pus and a fluid deeply tinged with bile. I was satisfied from the circumstance that the fluid proceeded from the biliary organs. Adhesions between the *liver* and *diaphragm;* an ulcerated opening through this latter membrane, by which the hepatic abscess had discharged its fluid portions into the right cavity of the chest. The exact quantity of this fluid could not be determined, but it filled the right side of the thoracic cavity; ancient adhesions on the left side between the two *pleuræ*; that partition of the lower lobe of the right lung which was in contact with the diaphragm, just opposite the abscess, was engorged

with blood, was dark, but slightly crepitant; immense abscess of the right lobe of the liver, almost empty, containing flakes of a whitish, albuminous matter without tenacity, being pulpy; the abscess had an abrupt termination, that is, but little apparent change in the structure of the part of the liver, bordering the abscess,—perhaps it was denser than natural, was of a mustard color, with *acini* slightly enlarged.

Stomach, contracted about its middle, but healthy; intestines free from disease; gall bladder distended with *bile.*

Case 4.—*Intermittent Fever.*—Alexander M., a Kentuckian, æt. 26, stout, tolerably muscular, dark hair, fair complexion, light eyes, habitually healthy, entered Ward 24th, bed 320, July 26th, sick 12 hours before admission. He stated that he was attacked at 12 o'clock *at night*; had at the time influenza. When he entered, he was laboring under fever, nausea, and vomiting. The attack was ushered in by *malaise*, pains in the joints, chills, rigors, &c. He now has fever, skin hot, pain on pressure over the epigastrium, intense thirst, face intensely red, eyes injected. Dr.——, saw this man in the evening, and ordered a free bleeding, as his pulse was frequent, 115 per minute, strong and fully developed, Ol. Ricini; hot foot bath, and iced water to the head. He was bled *ad nauseam* (which required 20 oz.) Submurias Hydragyri, grs. xv, *statim.* Soon after the above prescription was made, and enforced, I saw him at about 6 P. M. of the same evening. Skin now moderately hot, but soft; pulse 100, soft but quick; eyes brilliant, and extremely sensible to light; face flushed, cephalalgia: he vomits half a pint of dark greenish bile; has intense thirst; tongue moist, but thick, and loaded with a long yellowish white fur, red at the tip and on the edges; has powerful epigastric pulsations.

July 27th, *Mane.*—Slept between 3 and 4 hours last night; the calomel produced 3 good operations; little or no thirst in the night; free perspiration; eyelids injected and less brilliant; tongue coated and papillæ prominent; intensely red at the tip and borders; thick, but not contracted; no jaundice, but a reddish blush about the face, neck, breast, and arms; no thirst of consequence. Complains of a bitter, disagreeable taste in the mouth; some stricture across the lower part of the chest; pulse 90, soft and regular; no cough; no appetite; tenderness over the epigastrium; feeble cœliac pulsations; full flow of urine, deeply colored; prescribed cups to epigastrium, to be followed by a cataplasm; gum water iced; sinapised pediluvia.

About 6 o'clock in the evening of the same day, I again visited Alexander, and found him shivering beneath a pile of blankets; pulse small and contracted, lips blue, thirst, features contracted; in fact, with all the attending phenomena ushering in a paroxysm of fever. I requested the nurse to administer some tepid drinks, and left him.

On the morning of the 28th, I was informed that considerable fever followed the chill of the previous evening; that his skin was hot and dry; his thirst great; pains in back and head during the night. However, the fever passed off in the morning by sweat, &c., and at eight o'clock, A. M., I found him without fever and pains; skin soft, pulse regular, 80 to 85.

Anticipating a second paroxysm, I ordered a solut. quiniæ, and a cath. enema, and left him.

On the morning of the 29th, he informed me that the chill came on about six o'clock of the previous evening—the hour of the attack on the evening of the 28th, mainly, no doubt, because he was unable to keep the solut. quinine on his stomach, as the medicine had vomited him as often as he took it. Now his fever has abated, skin moist; tongue cleaning, little thirst, pulse soft, regular, 90; as his stomach was still irritable, I prescribed 30 grs. of quinine three times daily, per enemata; hot foot baths, &c.

July the 30th, *Mane.*—He was calm; free from fever; had missed his chill; pulse quite natural and all the functions in healthful action. I repeated the injections of quinine twice, and again the chill was stayed, and since then he has convalesced up to this day, August 2nd, and will be discharged in one or two days, cured.

The case just detailed demands a few remarks:—This man, when he was received into the hospital, presented many of the symptoms of the yellow-fever; such as the condition of his eyes, their color and sensibility; the complexion—the florid cheek, the neck, breast; the respiration; the cephalalgia, lumbalgia, thirst, the white thick coat on the tongue—its intense red color at the tip and edges; the epigastric pulsations; the nausea and vomiting; the frequency, strength, and rapidity of the pulse; the dry, hot and burning skin, especially at the epigast.; all these phenomena as developed in this case, certainly led myself and Dr. *** to regard the case, if not yellow-fever, at least, as likely to run into that formidable disease. But as this man presented himself for treatment within the first 12 hours of the attack, we had a fair opportunity to combat the fever. Boldly attacking the malady *in limine*, by free

bleeding, cups, calomel and the like, we soon changed the formidable character of the symptoms, and arrested the disease. Having recently witnessed cases which were brought to the hospital with less alarming symptoms, gradually run into black vomit, it may be logically correct to infer, that this would, in like manner, have met with a similar fate. How far I may be correct, I will leave others to determine after reading the facts.

[I have no hesitancy in terming this, a case of intermittent fever. Such cases, during the prevalence of yellow-fever, do sometimes "run into" the latter. This, though a severe quotidian, was, nevertheless, a simple one; the second paroxysm, on the 25th of July, assumed an anticipating character by six hours, after which, it recurred regularly, every day, at the same hour, until arrested on the 29th. The patient had, also, well marked intermissions. Hence, the importance of giving a faithful history of a case like that above-mentioned, so as to allow each reader, in the writer's modest language "to determine for himself after reading the facts."]—Editor.

Case 5. *Febris Gastrica.*—W. C., a German, æt. 22, entered Ward No. 5, on the 15th of May, sick eight days; rather stout; of a good constitution; temperate; light complexion; hair dark brown; blue eyes; muscle well developed.

The following were the symptoms on the day of his entrance: fever; thirst; considerable heat of skin; tongue coated with a whitish layer; red along its borders and towards the apex; pain at the epigastrium, extending into the right hipochondrium; cephalalgia; cheeks flushed; bowels costive; Dr.*** prescribed cups *ad epigast.* and over right hypochondrium; to be followed by warm catap. lini; pediluv.; gum water; cold applications to head: I saw him for the first time on the morning of the 16th; patient some better; pulse full and slightly tense; skin hot, but rather moist; face high colored; pulse 90 per minute; cephalalgia; thirst. *Prescpt.—Enem. emoll.; cucurb. ad nucham; hot pediluv.; gum-water iced.*

May 17th.—The enema yesterday determined four or five dark yellowish evacuations; skin moderately warm and moist; tongue charged with a white coat at its base, but very red at its apex and on the edges, papillæ prominent; the patient emits a disagreeable typhous smell; complains of pain and tenderness at the epigast.; some cephalalgia; respiration easy, natural.

May 18th, *Mane.*—Little or no change since last account, perhaps some improvement; temperature of the skin above the natural standard; bowels free; pulse of a full volume, compressible; some moisture over the entire surface; tongue red about its apex; great thirst; some nausea; no cephalalgia: Does not the absence of the cephalalgia, during the continuance of the nausea, show clearly that the former symptom emanates from, and is dependent on the inflamed and irritated condition of the gastro-mucous membrane? Abdomen somewhat tense; some tenderness on the application of the hand over the left hypochondrium, in the vicinity of the spleen; respiration normal; the hue of the skin of a dark pale aspect. *Pres.:*—Lavem. emoll.; gum-water; cups to left hypochond., to be followed by warm cataplasms; diet, barley or rice-water.

May 19th, *Mane.*—Quiet during yesterday; two or three dejections in the mean time; some sleep through the night; pulse full, soft, regular, from 75 to 80 per min.; skin moderately warm and moist; still tenderness on pressure over the *epigastrium;* the skin of a dingy, ashy hue; patient sighs profoundly, at intervals, as in cases of *yellow-fever;* vessels of conjunctivæ injected, tongue as heretofore, perhaps presenting still stronger marks of departure from the normal state; thirst.

May 20th, *Mane.*—Patient improving slowly; but little heat of skin; abdomen soft and shrunken; no pain; tongue of a deep rose color along its borders and at the apex, but moist; skin soft, and tending to general diaphoresis; slept well last night; bowels regulated by emoll. enema; gum-water; half diet.

This man continued in this manner to improve slowly up to the 25th, when the pain at the epigast. was renewed, caused doubtless by eating something which reproduced and aggravated the gastric irritation; yet he had little or no fever. I ordered an emplast. vesicat. to the epigast.; mild enemata, and this course has relieved him. He is now free of fever; pulse regular, soft and natural; I confine him to gum-water; and a light, fluid diet. To-day (the 28th) he is entering rapidly on the convalescent state.

29th and 30th.—Still continues to improve; tongue clean, and bowels regular; appetite; countenance cheerful; secretions normal; blistered surface not quite healed; simple dressings; light diet.

June 2nd.—Discharged cured.

CASE 6.—*Hepatitis; Jaundice; Iritis.*—S. R., entered ward No. 5, May 10th, 1843, sick five days; took Ol. ricini twice; is a dealer in staves

and lumber; stout, well-formed, muscular, fair complexion, deep blue eyes, habitually healthy; *æt.* 37; native of Troy, N.Y.; has resided in New Orleans 18 months; never had an attack like the present. The following is the history of his case, as noted soon after his entrance: pain in the head, flying pains in the scapulæ, wrists, neck, arms—in a word, more or less intensified over the entire muscular system. He attributes his indisposition to over exertion in the sun on our Levee, and the too free use of the Mississippi water (!); universal yellow tinge diffused over the entire surface of the body; considerable thirst; tongue rather clean, but dry.

Dr. *** pres. prot. hydrargyri, gr. xv, to be taken at noon, to be followed by Ol. ricini at night. The above medicine procured ten or twelve small operations, accompanied with considerable pains in the bowels.

May 11th, *Mane.*—Pains in frontal region of head and in the limbs; intensely jaundiced; pains particularly severe in the ankle joints; tongue of bright red color, but moist; tunics of the eye of a deep saffron color; considerable restlessness; pressure over the region of the liver produced intense pain; pulse 85 per minute, quite strong and resisting; considerable thirst.

11th, *Mane.*—Pres. v or v jcups over the hepatic region, to be followed by emollient cataplasm. During the night of the 11th he had frequent vomitings; thirst.

May 12th, *Mane.*—Complained of having had great pain in the lower extremities during the night; calls them "rheumatic pains;" sleep interrupted at short intervals; better this morning; pulse 90, small, soft, no resistance on pressure; skin cool and moist; some thirst; tongue slightly coated, moist; supra-orbital pains; pains in the legs and ankles. On the day of his entrance his urine was of a deep red, of the color of blood, according to the patient's own account; but is more natural at present. The entire cutaneous surface of an intensly icteroid hue; the patient rather drowsy; eyes sensible to light; by pressing with my hand the knee joint, and the muscles inserted into the rotula of the right leg, the patientcried out from the severity of the pain caused thereby. Hæmorrhage from the nose; expectorates clots of coagulated blood. *Prescription:—emollient enema, satim; pediluv.; cold drinks, acidulated with elix. vit.;* catap. to parts over which cups were placed.

May 13th, *Mane.*—After the warm pediluv. of yesterday, a gentle perspiration covered the surface of the body; considerable diminution of

pain in the lower extremities; skin cool and moist; pulse 80; tongue slightly coated with a yellowish fur, but moist; slept some through last night; little thirst. The patient was pleased with elix. vitriol, as a drink; no cephalalgia; no operation from the bowels yesterday, because the enema was not administered, as ordered, patient having refused to receive it, on the ground that he suffered from hæmorrhois, and was apprehensive thatthe instrument might aggravate them; was assured that, with due caution, the contrary results would ensue, upon the use of emoll. lavements;—complains of dryness in the fauces and throat; *icteric* hue universal, and a shade deeper; *adnatæ* intensely yellow.

May 14th, *Mane.*—Quiet through the day, lavement operated three times; slight (febrile) reäction in the forenoon; some pain in left foot and leg yesterday; thirst moderate; slept well last night; says he awoke but once or twice; complains of debility; says his diet (rice water) is not sufficiently nutritious; free from cephalalgia; pulse 50 to 55; moist tongue, coated about its middle and base; icteric hue still persists; urine reddish yellow, staining a piece of linen cloth deeply, abundant. The patient insists that the acid drink has cured his head and relieved his toher pains; skin quite cool and soft; declares that "he feels like another man."

May 15th, *Mane.*—Slept lastnight, but does not feel refreshed thereby, this morning; slight pain in his right foot and leg; no thirst; mouth rather dry; tongue clean; no cephalalgia; intellect quite clear; two or three operations from bowels yesterday; pulse quite natural; only indicating slight debility, 65 to 70; icteric hue less intense; urine of a deep saffron color, and abundant.

May 16th, *Mane*—.Sound sleep last night, patient rapidly improving; tongue clean, appetite; intense shade growing fainter; pulse good, in a word, all the functions are on the point of resuming their accustomed healthy play. Drink yesterday and to day water of tamarinds with cream. tartar. Patient dressed and on foot; half diet.

On the 18th, patient was attacked with *Iritis*, attended with great intolerance of light, injection of conjunctivæ, pupils almost extinct, from the intensity of their contraction; slight head ache. Prescribed, divided doses of calomel; light diet. On the second day of the treatment, pupils less sensible to light; diminution of redness of the conjunctivæ; calomel operates freely on third day; the eye was entirely relieved.

Case 7.—*Mental alienation; dropsy; influenza.*—P. C. was transferred from the insane department, into which he had been received on the 14th of June, 1843, for mental alienation and some symptoms of rheumatism, and entered ward 24, on the 23rd of July; is a Frenchman, between 50 and 60 years of age, short, stout, and as compactly put together as a gladiator. After a slight examination of his case on the morning of the 24th, I felt satisfied that he was laboring under the epidemic influenza. He sat on the edge of his bed, seemed cheerful, did not undress himself, had fits of coughing, his legs and ankles were swelled, and bore evidence of suffering from old ulcers, which were quite healed; these I ordered to be bandaged; as he seemed almost free from fever and any serious gastric derangements, I only ordered him a dose of castor oil. For his cough, I put him upon a light diet, and gave him equal parts of syrp. pappav. and syrp. tolut.; during the night he vomited and retched several times. On the morning of the 25th, he arose from bed, walked several paces, and seated himself in a chair, until the nurse adjusted his bed, after which he returned and fell senseless, and expired without a struggle. About three hours afterwards, his body was opened. His face and neck were of a dark livid appearance; the jugular veins were distended; the limbs relaxed; I opened the jugular vein, and about 20 oz. of dark, thick blood flowed from the puncture.

Autopsy.—Serous effusion in the abdomen, and a general tendency to dropsical effusion in all the cellular tissue and cavities; lungs sound, mucus and froth in the bronchiæ; heart greatly enlarged and softened.

Head.—Between six and seven ounces of a yellowish serum found effused between the membranes and the brain; ventricles full of a similar fluid.

Stomach.—Mucous membrane thickened and highly injected; intestines healthy and loaded with fat.

Case 8.—*Sloughing Ulceration of the Colon and Rectum.*—[Dysentery.] D. R., a native of Germany, *æt.* 45; laborer, small stature, muscular system corresponded to the size of his skeleton, light hair, integuments flabby; large head: entered the Charity Hospital, June the 1st, sick ten days. The following is an accurate synopsis of his state on the morning of his entrance. He stated that his bowels had been deranged for a week or ten days before he came to the hospital; he had taken some purgative medicines, and continued on foot as long as he was enabled to attend to his affairs. I found him stretched on his back, with a frequent, but soft and compressible pulse; great prostration of the muscular

system; pulsations per minute 115 to 120; thirst; tongue but little coated; neither nausea nor vomiting; little or no tenderness over the epigastrium; excessive pain on pressure over the hypogastric and right and left iliac regions; abdomen a little tympanitic; difficult micturition; from fifteen to twenty thin fluid injections in the 24 hours, mixed with blood and mucus—sometimes like the water in which fresh reeking muscle has been washed, of a horrible nauseating smell. Prescribed: emollient lavements, with tinct. opii; emplast. vesicat. *ad regio hypogast.;* infus. ulm. flav. *ad libitum;* hydrargyri mass.; sodæ carbonat.; mucil. g. arab. He refused to retain the blister until it could act effectually; the emoll. enemas *cum* tinct. opii failed to relieve the tenesmus, and to check the almost hourly evacuations; he continued to sink, his pulse increasing in frequency, and diminishing in strength; the respiration abdominal and not less than 40 to 43; tongue dry, rough, and of a yellowish tinge; eyes dim and sunken; skin shrivelled and almost destitute of elasticity; constant evacuations, with some tenesmus.

June 4th.—Presp.—Sinapsisms to inside thighs; an emulsion of camph., opium and quinine. He continued in spite of all that was done, to sink, and calmly expired, on the morning of the 5th, at about three o'clock.

Post-mortem, 8½ A. M., of the same morning, or about six hours after death. Body wasted; skin pale, no ecchymosis, or internal cadaveric hyperæmia; the omentum majus considerably injected, all the vessels of which were distended with a dark looking venous blood; the intestines were exposed to view; we first sought for the caput coli, and found at the junction of the ilio-colic portion of the intestine, some dark gangrenous spots, as large as a ten-cent piece; we then traced the ascending colon, the transverse arch, and the descending section, as far as the reflection of the peritoneum, from the *bas-fond* of the bladder to the rectum, and throughout this extent, we found the intestine on its peritoneal surface, of an uniform dark and inflamed appearance, with small specks of gangrenous appearance. The colon was then laid open with an *enterotome*, and viewed from within; and here we found the seat of the disease; the whole intestine was thickened, with large sloughing ulcers the size of a dollar, covered with an albuminous secretion, attached to shreds of the muscular coat, which had been softened down, and as it were, dissected by the ulcerative process; in other places we found dark inflamed spots; in short, a large number of sloughing ulcers, like artificial eschars, dark, gangrenous spots, and a high degree of inflammation diffused over the entire mucous membrane; the liver and the stomach healthy; gall-bladder full of healthy bile.

ART. III.—*Physiological Experiment; with Remarks:* from DR. HESTER's Case-Book, dated at Clarkesville, June, 1836.

DR. HESTER gives a long description of a common beetle, three-quarters of an inch in length, and then adds the following:—The most striking peculiarity of this insect is its extraordinary tenacity of life. This insect having been drawn by the light of my taper last night under my observation, I accidentally decapitated it, and observed that the head still retained the power of life, independent of the body; with its forceps, it could with power grasp bodies, and seemed conscious of an attack. The body, however, did not seem to require any connection with the cephalic portion to possess all its locomotive endowments, only so far as the direction of its body was concerned; for, it seemed unable to direct the body; at first it made efforts to retrograde, when it was touched, still possessing perfect power to move and resist. This all happened at 10 o'clock, P. M. I laid the animal by, still living, and next morning it was still capable of as perfect and powerful strength as it possessed the moment of decapitation. I then saw the independent vitality of such an animal. The head had ceased to give signs of life, but the body seemed endowed with all its original life. I applied some muriatic acid to the part from which the head had been torn; it immediately, by its contortions, gave evident marks of pain; its joints were excited to motions; it made efforts to escape, but its powers of direction were destroyed, and it could not. I then touched the same parts with tinct. opii; at first it was quiet, but in a short time it began to move its limbs, quiver and seem in all the agony of a perishing giant, and now, at 10 o'clock, 12 hours since the head was separated, it is still living, and moving, and will doubtless live some hours longer. The brain in such an animal is of little importance to life, if it is situated in the head, *only to direct its motions.*

Remarks.—There is a sufficient reason why a decapitated animal, in losing its head, loses its ability to direct its motions in an intelligible manner, unless under the circumstances hereafter to be mentioned. A decapitated animal has lost the special senses along with its head. It can neither taste nor smell—neither hear nor see. But a decapitated animal, as for example, the alligator, can, and always will direct its motions in an intelligible manner, or purposely, provided the proper method be adopted to elicit its volitions and motions, by proceeding to excite the only remaining sense of the headless body, namely, the sense

of touch. It has always been affirmed by experimenters that decapitation rendered an animal incapable, not only of voluntary motion, but of all forward linear motion whatever. But these assumptions, I found, after experiments continued for years, to be wholly erroneous. Much evidence to this effect, confirmed by numerous eye-witnesses has already appeared in this Journal. For several years, however, my experiments appeared to confirm the dogma that a decapitated animal was unable to escape from a painful irritant by going straight forward, though it showed abundantly, by lateral voluntary motions, that it was ever aware of an irritant, which it invariably receded from, or attempted to remove with its limbs. At length, on applying an irritant not to the sides or the limbs, but *directly over the spine*, so that the animal could not avoid the offending cause, it attempted to escape by going straight forward, judging correctly that as the irritant was neither on the right nor on the left, but central, curvings in either direction would be useless. Hence it moves forward. Experimenters who seemed to expect a blind animal *to see how to avoid its tormentors*, have erred both in their modes of operation and reasoning. They had no right to expect that a decapitated animal could hear them, smell them, or see them. If decapitation should even improve the sensational and volitional powers instead of mutilating them, the animal would, nevertheless, lie still, or act in a blind, insane manner, as it regards the physiological observer and his acts, so long as he failed to apply his tests in a proper manner to the only remaining sense, that is, touch. It is not intended at present to enlarge upon this topic.—ED. N. O. MED. JOUR.

ART. IV.—*Note on Castor Oil.*

DR. Hester says: A druggist informed me that he was once engaged in transferring castor oil from three barrels to small bottles. He was stooping over the vessels for hours together, and in a few hours after finishing his labors, he was harrassed with the most violent purgation. He thinks it proceeded from the smell of the oil.

Remarks.—The late Dr. Periera mentions a remarkable case, reported by Dr. Ward, concerning a woman on whom castor oil does

not act as a purgative, but exudes from every part of the cutaneous surface.

Castoroil, though a fixed oil, is vaguely referred to by several writers as containing besides several acids, a volatile principle, but whether its cathartic power is inherent solely in its fixed element, or is shared by its volatile, has not been determined. The experiment noted by Dr. Hester, as above mentioned, indicates that the latter may be inhaled so as to produce a cathartic effect. This view is, to a certain extent corroborated collaterally by certain facts recorded by Periera, showing the probable existence and the effects of a volatile acrid principle. " Gibourt (*Jour. de Méd. t. i.* 111,) experienced a feeling of dryness of the eyes and throat, in consequence of having been exposed to the vapor arising from a vessel in which bruised castor seeds and water were boiling.—Planche obtained a permanent odorous principle by distilling, &c." (*Mat. Med. ii.* 223.) "Injected into the veins, castor oil gripes and purges, and causes a nauseous oily taste in the mouth." (*Ib.*)

The analysis of castor oil has received but little attention on the part of chemists: Löwig thus alludes to some of the principles of castor oil: "*Hydrate of Ricinic Acid:* HO, C_{38} H_{35} O_5. The oil of the seeds of *Ricinus communis* consists of palmitate and ricinate of glycyl. We obtain the acid from *ricinus oil*, like the oleic acid from almond oil. At common temperature it forms an inodorous clear wine-red acid of syrup thickness, and an unpleasant sharp burning taste; specific gravity 0.94; it stiffens at from 6° to 10°;* mixes with alcohol and ether in all proportions; the alcoholic solution gives an acid reäction. By dry distillation we obtain oenanth oil and oenanthic acid. By the action of *nitrous acid* upon ricinous oil, we obtain a white wax-like mass—*Palmin.* If the same be saponified with potash-lye, and the soap decomposed by an acid, we thus procure *palmic acid*, which crystalizes in silky, stelliform needles, melts at 50°, and, probably, arises out of ricinic acid in the same way as elaidic acid out of oleic acid.

Ricinic Acid Salts.—Ricinic acid expels carbonic acid from its combinations. Nearly all the salts, even those with the alkaline earths, and metallic oxides, possess the property of crystalizing; neither the acids, nor their salts, are oxidized in the air. According to its constitution, it belongs in the series of the oleyl group, but in its properties it is allied to the solid fatty acids. The oil is saponified, and

* The *centigrade* scale is supposed to be here used.—Ed.

the acid mixture, separated from the soap by hydrochloric acid, is digested with the oxide of lead; the dry mass is digested with ether, and the undissolved part treated with hydrochloric acid and alcohol. Out of the fluid filtered from the chloride of lead erucaic acid is procured by evaporation. It crystalizes in shining needles, which melt at 34°; in the solution of ether a lead salt occurs, whose acid is oily, &c." (Organic and Phys. Chem. 175, 6.)—EDITOR.

ART. V.—*Medical and Miscellaneous Notes and Observations in Mexico:* by the late A. HESTER, M.D.

[THESE fragmentary notes, written by the late Dr. Hester, while a medical officer in the army of Gen. Taylor, were commenced in the form of a diary, but extend only to the first few weeks of the doctor's service. They seem to have been written amid the scenes which they describe. The ink is of various colors, and the composition, though good, indicates haste. The original design of writing a continuous journal, appears to have been abruptly abandoned, nothing having been recorded beyond what now appears.

The topographical, climatic, and medical observations in these notes, are deemed of sufficient importance to justify their publication in this Journal, of which Dr. Hester was so long the editor, and the more so because the medical department of the late conquering armies of the United States in Mexico, has contributed but little medical or other information concerning the latter country.

Larrey's celebrated "Memoirs of Military Surgery and the Campaigns of the French Armies," far from being confined to medical matters alone, contain sketches of battles, topography, manners, customs, antiquities, natural history, agriculture, weather, climate, &c.]—EDITOR.

The commencement of hostilities between the Mexican forces under Arista, Ampudia, and De la Vega, and the little American army under General Taylor, took place in the early part of May; but there was no regular engagement between the two armies until the 8th and 9th of May, 1846. The Mexicans were defeated and retreated to the right bank of the Rio Grande del Norte, in Matamoras; but the large number of the Mexican forces and the limited number of regulars under Taylor, induced the latter to make a requisition upon the four States nearest the

seat of war, for eight or ten thousand volunteers. To this call Louisiana responded by sending into the field, four regiments; to the second of which, commanded by Col. Dakin, I was offered the situation of surgeon, and accepted the appointment.

By the 18th of May, the regiment was safely quartered in the barracks, below New Orleans, and on the morning of the 20th, between one and two o'clock, the main part of the regiment, with the requisite camp equipments, &c., (the rest of the regiment having sailed a few days previous in the brig Orleans,) being on board, the fine ship *Ondiaka* was towed out to sea by the Mary Kingsland, and on the second day by two o'clock, we were fairly out to sea with the wind tolerably favorable. The captain steered South by South West, for Point Isabel. For the second day, the Mary Kingsland kept us in tow, but on the third, the breeze sprang up, and we cut loose our cable from the Kingsland; before ten o'clock at night we were at least 20 miles ahead, but about day-break on the next morning, the wind lulled, and the Kingsland passed, and left us pitching and plunging in the trough of the sea, with no breeze to belly the sails, or balance the ship. We were compelled to lie in this position, making only such headway as the waves allowed, whilst the Kingsland gradually disappeared on the horizon, and left us to unavailing regret, notwithstanding our signals of distress. The captain of the ship growled, the officers of the companies swore and vowed bitter complaints—all of no avail. We had to take our breakfast with what appetite we had. About two o'clock in the afternoon, a gentle breeze began to wave our sails; all hands began to cheer up; every sail was spread—and by sun-down we were pitching at the rate of ten knots the hour, and this speed was continued until about day-break next morning, when the wind again died away, but came again to our relief about nine A. M., when our speed reached eight miles an hour.

When we were about one hundred and fifty miles from shore, a shoal of Dolphins began to play about the stern of the ship at night, and as they shot through the water, a beautiful luminous track marked their course, caused by the phosphorescent quality of the water. It was a beautiful phenomenon and resembled a torch of fire driven through the water with great speed. I watched this spectacle for at least an hour, when these sportive beings gradually wandered from the ship and took their course to the right, and with them, we lost sight of the phenomenon.

On Sunday evening, the 4th day after we left New Orleans, we anchored off Point Isabel, having made land without beating to the right

or left. Here we found several transports outside the bar waiting for lighters; some were scarce of provisions, others out of water, and all eager to reach land and escape the sea sickness. As for myself, I entirely escaped this disagreeable companion of the voyager in his first trip on salt water.

Late the next morning, Monday—for we had to wait our turn—the steamer Monmouth came along side, but the tide was so high, she had to lay by us until next morning before she could venture to take our men and freight, on board.

Early next morning (Tuesday), the 29th of May—we embarked in the Monmouth, passed over the Bar, opposite Brazos Santiago Island, the breakers running high and gradually neared Point Isabel, a distance of eight or nine miles inside the Bar.

We pitched our tents about three quarters of a mile in the rear of the Point, on the narrow neck of land which runs down to the water, and forms the Isthmus in which the houses, &c. stand. Here we were compelled to use bad water, which gave rise to bowel complaints, such as diarrhœa, and in some cases to dysentery. We had a stiff breeze from the Gulf both night and day, but it was rendered unpleasant in consequence of a fine sand rising and floating with it. It pervaded everything, and was so severe as to excite slight opthalmia in some of our men, myself among the number. Remaining at the Point four days, we were then ordered to strike tents and take up our quarters at Brasos Santiago Island—a barren sand-bank almost entirely surrounded by water, the only growth on it being a tough sea-weed which cattle can hardly masticate. I have said that we reached this place the 29th of May, and hardly had we pitched our tents when the wind began to rise, the sea to roar, the heavens to darken, and by ten at night the storm began to rage, and it continued to blow until next morning, the 30th, when the wind ran higher, accompanied with torrents of rain. It continued to blow and rain for three hours, prostrating more than half the tents on the ground, and drenching every man to the skin. It was truly terrifying—with the wind and rain above, the roaring of the breakers in front, and the rapid rise of the water on the island in the rear, all combined to make us feel some apprehension for the result. Such confusion is rarely witnessed: we hourly expected that the sand-banks which stayed the breakers from the Gulf would yield or melt before the heaving of the giant waves, and that all would be swallowed up in one common watery grave. But the fates decreed it otherwise: the water rose in

our rear, and was driven up to the camp of the Montezuma Regiment, pitched in front of us. During the tornado a corpse was carried out by the Montezuma Regiment, and deposited in a sandy grave, wrapped in his blanket, his dirge being the peals of thunder which accompanied the storm. Never shall I forget that morning; it filled me with forbodings when I saw about fifteen hundred men exposed to the merciless storm. I reflected on the dangers—the exposures—the sufferings which awaited us in an enemy's country, to which we were hastening with such impatience, some of us, perhaps, never to return to our friends; but I had forgotten, the soldier must never suffer his mind to anticipate, for it is emphatically in a campaign that the evil is sufficient for the day.

At Brazos Island we remained seven days, and on the 5th of June, 1846, we struck tents and marched into the department of Tamaulipas, Mexico. The soldiers and officers, with the exception of the sick, together with the camp equipage, marched for La Bareta by land, crossing the Rio Grande at its mouth, and marching up its right bank; the sick and baggage were transported on the steamer Sea around the Gulf, up the Rio Grande, to La Bareta, I being on board and on the sick list.

During our stay at Brasos Island, our men suffered severely with the diarrhœa and dysentery, produced doubtlessly by the bad water. I had my share of suffering, and verily believe that four days delay would have been sufficient to have buried me, with several others, in the sand. The Montezuma Regiment buried three or four soldiers during their sojourn on this island. We had the good fortune to lose none of our men.

Tradition has it, that a considerable Mexican village once stood on this island, but during a severe gale which lasted several days, the waters rose and inundated the island, carrying off houses, inhabitants, and all.

Hardly had I put my foot on board the steamer, when I began to feel better, and in 44 hours I began to convalesce. The same was the case with most of our sick. The col. of our regiment, J. H. D., was the subject of tic douloureux of the temples, from the time we left New Orleans up to the 4th of June, when after trying every available remedy, at his request, I divided the middle temporal artery, with the accompanying nerves;—soon after this he began to mend, and has been gradually improving since.

Before our regiment had all crossed the Rio Grande at its mouth, in the evening on which they set out for La Bareta, a storm attended with torrents of rain overtook them, and found them thus exposed for the night, without food or shelter. They bore all this with a soldier's

fortitude, none were made unwell for this cause, though they slept, either standing or on the wet ground, which was low and swampy.

The march from the mouth of the river to La Bareta, by land, is about eight miles; by water, twice that distance. The course of the Rio Grande, as far as I have examined it, may be said to be truly serpentine, changing its direction every few hundred yards. The water is of a reddish muddy color, pleasant to the taste, and when allowed to settle, its taste is much like that of the Mississippi. It is considered healthy; at least, it does not disturb the bowels.

The force of the current is directed chiefly against the right bank, which is more precipitous and seems to consist of alluvium, with a fine, light soil. The left bank is generally low, and gradually slopes to the edge of some thick chapparal, the intervening space being a deposit of sand, covered with a tall grass and a fine sea-weed. The depth of the river at the mouth is usually not more than five or six feet; its general depth from 10 to 25 feet. The current is not as rapid as that of the Mississippi, being between four and five miles an hour. From the mouth to La Bareta, the river winds through a beautiful valley of rich alluvial soil, and save the hedge of low undergrowth which lines the bank, scarcely a shrub or a bush is to be found in the prairie which stretches itself in the distance towards the Gulf on the right bank. Except the above-mentioned hedge, there is nothing to lead the traveller to suppose that he was approaching a river of two or three hundred yards in width. The steamer winding its way up this stream looks, at a distance, like a vessel driven along some of our big Northern canals through some splendid pasture ground. Large flocks of birds and droves of wild Mustangs were to be seen on the Mexican side, as if they, too, had retired to the right bank. Occasionally and anon, the *puff* of the steamer would startle from his quarters, the large Mexican rabbit (a beautiful animal), more than twice the size of the largest American hare, and I was told that its meat was of delicious flavor. This wiley animal has ears as broad as one's hand, and about ten inches in length. It is dotted like a fawn, and some have black, others white spots about the head and ears. It is, I believe, peculiar to this country and the adjoining parts of Texas. It burrows in the ground, and is said to be quite prolific.

The first point of high land is, as already mentioned, about eight miles from the mouth of the river; upon this the little village of *La Bareta* stands; it is a neck of elevated land, projecting towards the

mouth of the river, on the right bank, and about 200 yards distant from the water's edge. On the opposite, or the side from the river, lies a large prairie, of low land, and swampy in wet weather. It is about four or five miles wide, and is interspersed with shallow salt lakes. This low land or prairie abounds in English snipe, curlew and other species of delicious water fowl. Here the sportsman may "bag" his game to his heart's content.

La Bareta contains from 30 to 40 small huts or cabins, thatched with a long tough grass, procured from the neighboring swamps and edges of the water courses. The walls of the houses are built of small round poles, of various sizes, generally the size of the arm, and lashed together by strips of raw cow-hide, and over this is laid a thick coat of mud intermixed with grass to hold it together. The walls of some of these cabins are more than two feet thick. The rafters and other timbers required in roofing, are all lashed together by thin strips of bull's hide; scarcely a nail is to be found about any part of the house, except the pannels of the doors. No provision is made for fire,—this is placed in the open air, where they do their cooking, &c.

When the American flag was planted upon the heights at La Bareta, the majority of the inhabitants retired to the interior of the country—a few, however, of the old residents, both women and men, remained, determined, if protected, to make capital out of our army.

I am happy to be able to state that, property has been respected; a fair—a high price being paid for every article purchased by the volunteers. This is right and will do more to reconcile the Mexican people to our army, than plunder and pillage could accomplish in the way of intimidation.

The Mexican here is exceedingly simple in his habits and frugal in his fare; the wealthiest is content to shelter his family beneath a thatched roof and to slumber upon a dirt floor. They seem to enjoy good health and live, I am told, at least in some instances, to advanced old age. The women, like the men, are of a mulatto color, some being of a dark mahogany color; others, again, like the fairer Quadroons of the South.

I was surprised to learn from an old Mexican woman, long a resident of this section, that a few years since, a considerable village, occupied a site at the mouth of the Rio Grande, on the right bank. It was destroyed, with most of its inhabitants, by inundation from the Gulf, at the middle watch of the night. A tornado swept the face of the deep when the inhabitants were wrapped in sleep, and so sudden was the rise, that many found a watery grave. The few that were not swallowed up

made good their way to the elevated points of land on rafts of timber and pieces of furniture. Not a vestige of the town was left, and the only things that remained to designate the spot, are three or four old miserable thatched huts, which afford shelter for the wild mustang from the sun, when he comes from the interior to procure water. It may be as well to state here, that at the mouth of Brazos Island, years ago stood a neat little village, of that name. It was swept away by the breakers from the Gulf. It was soon rebuilt to be again inundated; and the people, not disposed to give it up after a second trial, it was re-constructed a third time on *piles*, but the storm came, the breakers dashed against these puny obstacles, and the town was overthrown, leaving literally not a trace behind.

Thus it seems old Neptune will not suffer a people so rude as the Mexicans to encroach upon his dominions.

The face of the country on the right bank of the Rio Grande is generally level, rather low, with here and there a beautiful salt lake of clear water, divided from each other by narrow strips of elevated land and covered with a peculiar growth about ten feet high, called by the natives "Chapparal." The soil is a mixture of fine sand and alluvium, no doubt, with a little draining, well adapted to the growth of cotton and sugar. A constant sea breeze sweeps from the Gulf across the Rio Grande at this point; doubtlessly it travels a great distance in the interior of the country, since there is little or no timber to obstruct its progress. This breeze renders the climate delightful. The thermometer in the shade, stood but little above 80° to 85° throughout the month of June, 1846. In consequence of the brisk current of air, both by day and night, there is little or nothing falls in the shape of dew; yet, the air comes charged with moisture and as it pervades all objects, it renders every thing humid.

During our stay on the Rio Grande, near Los Lamitas, above La Bareta, the wind has been S. S. W. At this season of the year (25th June) it is very unusual to have much rain, this being the dry season: yet since the 20th it has rained daily, sometimes the rains are accompanied with squalls of short duration. When a shower of rain falls, the soil on the top becomes soon wet and so adhesive that the pedestrian finds it difficult to shake the "dust" from his heels. The effects of a rain soon pass away, the ground becoming speedily dried, from the rapid evaporation caused by the swift currents of wind which come from the Gulf.

From what I have observed, the Mexican women are a grateful

people for small favors. I will mention one or two instances. During our short stay in the village of Bareta, I was requested to visit a sick child of a Mexican family. The house being near my quarters, I stepped in to visit the child, and found it a stout lad about four years old, laboring under the effects of a phymosis, produced by the bite of an ant. I soon relieved it by the usual remedies, and when about to pay my last visit, the good woman made a very modest attempt to slip a few *reals* in my hand. These I declined, and at the moment a look of surprise, mingled with an expression of gratitude, stole over her rather handsome face. This simple act made her my friend, for she never ceased to remember me at mealtimes, after testifying her deep sense of my trifling services in the most substantial manner. Indeed, so frequent were the acceptable presents made me, that the obligations now reverted upon my shoulders, which, however, I took every opportunity to acknowledge. Soon after this, being called to see the young wife of a good-looking Mexican, in the same village, I found her lying on a sort of cot, with her first-born wrapped in a blanket near her side. She was young, of handsome features, and had been accouched a few weeks previous. I prescribed and sent the medicines, which she swallowed with great confidence. The next day the husband called at my quarters, and reported his wife well. The gratified husband next inquired how he could reward me as he had no *reals*. I merely requested some green corn for my horse, which he promptly delivered, in order to lessen his sense of obligation to me. Not content with this, his wife, it seemed, was now determined to show her gratitude. Accordingly, they began to prepare a feast, to which they intended to invite me; they sent to the country for good things. But the day previous to the feast, orders arrived for us to strike tents and leave the place in one hour, and before two hours the little village faded from our sight. These simple incidents prove what has long since been conceded, that the females of all countries are the kindest and most grateful for favors conferred.

The main difficulty to be encountered in settling this country is the great scarceity of timber, and the consequent difficulty in procuring fuel for propelling steam engines, &c. A partial supply might be floated from above on the Rio Grande. But, from the scarcity of drift-wood, even during considerable freshets, I am disposed to believe that there is a scarcity of timber on the shores of this stream. The Rio Grande is one of the most tortuous streams in the Southern country; it runs towards all points of the compass, as if nature intended to supply as

many of her creatures with this healthful beverage as possible on its course to the Gulf. Nor is this the only advantage. Were the Rio to pursue a direct line to its *embouchure*, the current would be too rapid for any kind of navigation.

Friday, June 26th.—The last three days have been showery, the wind blowing from North-East. To-day, about twelve, it began to rain and has continued to fall in floods for four or five hours, attended with heavy gusts of wind. The ravines are overflowing, and the neighboring salt-lakes are much swollen. Even now the rain is falling rapidly, and everything about the camp is drenched and uncomfortable. It will probably continue to rain until the wind changes from its present direction. Yesterday, 25th, received orders from head-quarters to hold ourselves in readiness to march at any moment. Now awaiting vessels to transport camp equipages and stores to Matamoras.

It is a custom with the Mexicans, in this department, to plant over the graves of their deceased friends the Prickly Pear or Cactus, which is almost sure to prevent the bodies from being disturbed, as the plant grows rapidly, and is certain to wound him who approaches it too rashly.

In my rambles about La Bareta, I chanced to stumble upon a grave yard, on a hill, just without the intrenchments. Here I found that every grave that dated a few months back covered with the prickly pear, with no other protection to guard the shrine of the silent dead, and at the head of each grave was planted a rude cross, an emblem of their holy religion. To one of these, much taller and larger than the rest, was bound a bouquet, as if weeds in bloom were gathered from the valley below—a simple, but doubtless a sincere tribute to the dead. As this is a Catholic country, almost every individual wears about his or her neck a rude cross, with Christ crucified, bearing some device commemorative of some cherished saint. Of such I saw many; on some, the inscriptions were in Latin, on others Spanish. The language spoken by the Mexicans along the shores of the Rio Grande is not the pure Castilian. It bears about the same relation to that beautiful dialect that the Creole-French does to the Parisian.

June 27th. In my notes of yesterday, I stated that the rain was falling up to 12 M. in torrents. It continued in this manner all the afternoon, through the night, and until this morning about half after eleven, the wind blowing a perfect hurricane from the South all the while.

During the 26th and 27th, the thermometer (F.) rose to 82°, and fell to 79°. Between these two figures it continued until sunset of the 27th, the heavens being obscured with clouds. As well as I could ascertain from observing vessels exposed during the twenty-four hours' rain, there must have fallen, from 12 M. of the 26th to the same hour of the 27th, between seven and eight inches depth of water. To-day, about 12 M., the rain ceased to fall; the clouds began to disperse, and the weather bid fair to give us an opportunity to dry our clothes and baggage. We were doomed to be disappointed, for about night-fall the clouds began to roll from the South, and before 9, P.M., the rain came down in gusts.

In consequence of the inclemency of the weather for the last day or two, and the scarcity of provisions, some of our companies were detached to go out in the prairies, foraging for fresh beef. They soon returned, ladened with several quarters of fresh meat, to the no small delight of the entire camp. In the distribution of the plunder! we rejoice to say, that our soldiers did not forget the doctor, for they sent me, with their compliments, a splendid steak, equal to any I ever ate. Such instances of liberality deserve to be recorded as displayed in the character of the common soldiers, when in a campaign. Indeed, they will divide their meat in a moment with their fellow-soldiers, and the next, perhaps, steal his last coat or shirt; such is the inconsistency of human nature; such the display of generosity at one moment, to be changed into cupidity at another.

The heavy rain does not seem to swell the sick list very materially. It has slightly aggravated the few cases which were already on hand, and produced some cases of remittent and intermittent fever, curable in all cases by sulph. quinine. As the soldier becomes somewhat acclimated, attacks of cholera morbus and cramp colic, so frequent the first few days after we encamped on the banks of the Rio Grande, become less frequent.

June 28th, Sunday.—Showers of rain and gusts of wind until late in evening, when the rain ceased. Thermometer during the day stood at 80° to 81°. No incident to attract attention.

Monday, June 29th.—Rain ceased; sun arose amid a few scattering clouds, and shone at intervals; wind East; charming day; thermometer at 10, A.M., 80°; at 2, P.M., 84°.

ART. VI.—*Researches into the Natural History of the Mosquito;* by BENNET DOWLER, M. D.

(*Continued from page* 77.)

Additional Remarks on Nomenclature and Zoological Classification.—Notwithstanding the researches of Aristotle, the founder of scientific zoology, his successors for many ages, made but little progress in this department of knowledge. Even Pliny's almost encyclopædic compilation made in the 78th year of our era, (a few months before its author perished by an eruption of Vesuvius) called Natural History, comprehending astronomy, physics, commerce, geography, agriculture, minerals, medicine, and the arts, as well as plants, and animals, abounds equally with fable and facts. He describes winged horses, as well as winged mosquitoes. Headless mouthless men—men with long ears and one foot—men's heads joined to scorpion's tails—the very sight of whom killed the beholder at once—these figure largely in this, the most elaborate work of which antiquity can boast.

There is yet much to learn in comparative anatomy and physiology—many differences of opinion are to be reconciled, not only as it regards special textures of certain animals, but as it respects a correct appreciation of these as classificatory standards; whether the teeth, claws, fins, skin, articulations, bones, nerves, embryonic development, or the digestive, circulatory, or motory organs, or mental phenomena, afford the most reliable characters by which animals can be scientifically arranged into species, genera, families, orders, and classes. "M. Comte, blames Cuvier for having formed his natural groups with an undue degree of reference to the mode of alimentation." Other writers without departing from the natural method, pursue, nevertheless, different routes. This method, how difficult soever it may be in its application, is valid, not an arbitrary invention of the learned—not a frightful catalogue of hard unmeaning technical terms.

Let it not be supposed that any right thinking naturalist will be over anxious about mere technical classification, or names. Nomenclature has occupied a vast amount of attention, has been expanded, altered, and often been made so incomprehensible in both Botany, and Zoology, not to name Medicine, that instead of aiding and alluring the student, by a natural method, simple, clear obvious, sure and uniform, it has repelled, or discouraged him. Words and their definitions do not constitute a natural system—a positive knowledge of things. When words are properly or systematically applied to indicate known things, as in

the present chemical nomenclature, they become, not the clogs, but the wheels of science. Nomenclators, particularly during the last century, in imitation of the Artificial System of Linnæus, spent a vast amount of learning in classifying insects, each having formed a system for himself, with too little regard for typical forms, structural adaptations, uniformity of organization or functional analogy. D'Alembert, the able philosopher, says: "I wish not to extirpate nomenclators; they strive to give our knowledge some arrangement; but I will venture to say, that a mere nomenclator will never make any discovery. I set a higher value upon a good treatise concerning *single insect*, than upon a whole entomological nomenclature. We ought not to be so anxious to make a catalogue of human knowledge, as to increase it. Let us collect more materials before we think of erecting a temple to Nature. She will else refuse to dwell in it. Instead of corresponding to her majesty, it will be only proportional to the meanness of the architect."

Some naturalists class insects into orders or sub-classes by the anatomical conformation of the mouth, as, 1st, The *Suctoria*, which have a trunk for sucking fluids, as the *Papilionidæ* (butterflies) and *Culicidæ* (gnats); 2nd, The *Manducata* or *Mandibulata*, having horny jaws for dividing their food, as the Coleopterans, of which the *Scaribeidæ*, or beetles are types; 3rd, The *Arachnidæ* (spiders, &c.) Others have classified insects by their legs, as 1st, the *Hexapods*, having not more than six legs; and 2nd, the *Myriapoda* having more than six articulated legs.

Linnæus' classific criteria have more or less regard to the organs of locomotion. He divided the Hexapod insects into seven orders: 1st, The *Coleoptera*, having four wings, the outer being hard or corneous, as the beetle; 2nd, The *Hemiptera*, four winged, the outer less firm, as the *Cicadidæ* or locust family; 3rd, The *Lepidoptera*, four winged, covered with scales, the *Papilio*, butterfly; 4th, The *Neuroptera*, four membranaceous wings, of which the dragon-fly (*Libellula*) is the type; 5th, The *Hymenoptera*, four wings, membranaceous, as the bee (*Apis*); 6th, The *Diptera*, two winged, as the mosquito; and 7th, The *Aptera* or wingless, as the flea.

About one-sixth of Cuvier's *Règne Animal* is devoted to the *Coleoptera* (one of his twelve orders of insects), while the *Culicidæ* occupy little more than ten pages, three species only of the tribe, being enumerated; *le cousin commun* (*culex pipiens*, Lin.); *anopheles*, and *ædes;* though he refers to Desvoidy who had added three more.

It is remarkable that even the technical names and varieties of the mosquito are not fixed and known; one calls it the *culex pipiens* as named by Linnæus—another *culex*, simply; while others call it *culex vulgaris*.*

M. le Docteur Geoffroy, in the 2nd edition of his elaborate work, (2 vols. 4to, pp. 1,297, with 22 plates) has given a summary of Entomology up to the commencement of the present century. He gives under the generic term CULEX (*le Cousin*) two species:

1. CULEX *cinereus abdomine annulis fuscis octo.* Two lines in length; half line in breadth.

2. CULEX *alis maculis tribus obscuris, antennis apice bifurcis.* Length one-quarter line; breadth one-eighth.

This last is supposed to be identical with the small gnat which prevailed extensively in the earlier settlements in the Western and other States, and which is no longer annoying since the country has been improved. It has received numerous names: *Culex alis aqueis maculis tribus obscuris—Culex pulicularis—Culex lapponicus minimus.*

M. Geoffroy, in the appendix to his work on Insects, adds, p. 733, a third species of this family, namely, "Annulatus. 3. CULEX *fuscus, alis nervosis,*" (with corneous divisions,) *pedibus albo intersectis.* Le cousin à pattes panchées," (striped) ; length three lines; breadth two-thirds of a line. His description agrees with that of the large mosquito called the gallinipper.

Some of the *Asilici* of Geoffroy, have been named by others, *culex:* as the *Asilus lanigerus*—a dipteran four or five lines long and nearly half as broad. Another dipteran, the 4th species of *Bibio,* (Geoffroy,) two-thirds of a line in length, and one-third in breadth, has been called *Culex parvus cinereus.*

The late Mr. Say has given, in the Journal of the Academy of Natural Sciences of Philadelphia, (vol. iii, 9, et seq.) the fullest and most accurate account of what is now termed the Culicidæ that I have seen, but in the absence of plates, and sometimes without measurements, it is difficult to identify his four species included under the term Culex: 1 *Culex punctipennis;* 2 C. 5-*fasciaties;* 3 C. *damnosus;* 4 C. *triseriatus* —names, it is believed, not generally used by others. The microscope, with drawings and accurate descriptions would enable naturalists to

* In De Wailly's Dictionary, adopted by authority in the French Colleges, the mosquito is described entirely by its supposed *habitat,* as if peculiar to Louisiana: "*Moustique,* insect de la Louisiane. ' (21st. edit. 1844.)

understand each other, and agree in the history of the species of the *Culicidæ.*

Cuvier's authority with many naturalists is paramount; though one of the most eminent critics and historians of philosophy of our day says Cuvier's character as a scientific man has been greatly overrated—"*sa reputation infiniment exagerée.* (*Philosophie Positive. Par M. A. Compte. t. iii,* 324.)* Those persons who are familiar with Cuvier's able work on Comparative Anatomy, and on the Animal Kingdom, must have observed that his account of the Saurians is one he appears to have elaborated the most, and yet it contains material errors, anatomical and physiological—errors, even as it regards the skeleton—errors, faithfully copied into our school books, nevertheless. But as it regards the true method of studying the natural history of animals by means of their internal, and external characters, organs and functions, plans and purposes, essential conditions and adaptations, he was probably unsurpassed by his predecessors, although he doubtlessly borrowed his method from the celebrated botanist, Jussieu, who long before had adopted and applied in botany, the anatomical and physiological method.

Is the Nervous System the sole criterion of Zoological classification?

Professor Owen, of London, one of the greatest living naturalists, divides the animal kingdom into five sub-kingdoms, "in accordance with the nervous system respectively characterizing them, *Myelencephala, Heterogangliata, Homogangliata, Acrita;*" and yet he characterizes this latter division thus: "the Acrita, in which nervous filaments are rarely distinguishable." (Brande's Ency. Art.—*Zool.*)

Mr. Solly, an estimable writer, but disposed to magnify the importance of the nerves at the expense of every other part of the animal economy, thus speaks in his work on the brain: "In fact, the size and complexity of the nervous system are a good criterion of the endowments of the animal, and its relative position in the scale of animated existence. And the nervous system is now universally allowed to afford the best principle for the classification of animals. The animal kingdom has been divided into five grand divisions or sub-kingdoms, and named in accordance with the form and arrangement of the nervous system. 1st, the Arcrita, &c. "In the first of these divisions the nervous system is indis-

* Mr. Mills, author of the able work on Logic, thus speaks of M. Comte's *Philosophie Positive*—"a work which I hold to be far the greatest yet produced on the Philosophy of the Sciences;" "his view of the philosophy of classification, in the third volume of his great work, is the most complete with which I am acquainted." (209, 433.)

cernible, neurine, if existing at all, is so minute in quantity, and so transparent that it cannot be demonstrated as forming a separate system. In the second, the ganglia are so extremely minute that the whole presents a mere thread-like appearance". (51-2.) A more self-contradictory, self-refuting statement than this, cannot be imagined. For if the fundamental principle fails in the first division and scarcely appears in the second, it must be the worst ever yet proposed, as according to these authors themselves, neither the naked eye nor the microscope can detect nerves in the polygastrica, medusæ, entozoons, and many other animals belonging to the *Acrita*. A bad point of departure truly!

In the fourth and last sub-kingdom, the *Radiata of Cuvier* and others, this system is, as these same authors say, sometimes wanting, and at best but little more than rudimentary, being scarcely developed, consisting of faint threads and gangliated knottings, never prominent. A fundamental criterion ought not only to be prominent, well-marked and always present, but it must be easily recognized in its typical form and varieties in the first as in the last division, inasmuch as the peculiarities or characteristic differentiations of the nervous skeleton can, alone, according to this test, guide the naturalist in referring each animal to its proper class. Suppose that a naturalist shall undertake to classify the Coleoptera, one of the seven orders of hexapod insects of Linnæus, now known to include nearly 25,000 species, it will not be sufficient for him to show that they have nerves agreeing in typical form throughout this particular order, but he must also show that there are 25,000 differentiations or special differences. Can any candid man assert that this criterion has ever been experimentally applied? How is it *possible* to apply it in animals in which nerves are "*indiscernible?*" Have the advocates of this plan discovered, described, and made known all the structural analogies, affinities, differentiations, identities, and changeless uniformities, in every mammal, bird, reptile, fish, insect, worm, mollusk, zoophyte and infusorium, so that the nervous system of each will serve as sure foundation for grouping the whole into divisions, classes, orders, families, genera, and species? Ought professors of anatomy to withhold this sort of demonstrative knowledge from their classes? Is the anatomy of the nerves abstract or concrete?

In Cuvier's fourth and last grand division of the animal kingdom, the *Radiata* (*les animaux Rayonnés*), the existence of a nervous system is, by him, doubted. Of this entire sub-kingdom, Cuvier says: "On ne leur voit ni système nerveux bien distinct, ni organes de sens particulier

(t. i);" "Le système nerveux n'est jamais bien évidente (t. iii)." Of this class, *Échinodermes*, he says: "On voit même dans plusieurs espèces des filets, qui pourraient remplir des fonctions nerveuses, mais qui ne sont jamais distribués avec la régularité et dans l'ordre fixe," etc. (t. iii).

Although the types and processes of the transcendental and experimental philosophy tend alike to simplify that which seems complex, reducing apparent multiformity to the fewest possible fundamental elements, as in chemistry,—yet a limit there is. A zoologist cannot reduce all the elements of his classification to one tissue, test, or basis, any more than the chemist can. Practically considered, zoological classification, based wholly on the structural likenesses and unlikenesses of the nerves, has no existence even in books; while many useful systems have been formed, and with success, by means of the teeth, bones, skin, &c. At the present, M. Agassiz is making brilliant advances in zoological classifications by means of embryology.

At all events, naturalists have not yet made known the special anatomy of the nervous system in all the animal species, so as to afford a complete classification founded exclusively on this basis; and, seeing nature has achieved all the ends and conditions essential to animal existence without nerves, the conclusion follows that a natural qualification must be drawn from other sources—from the external and internal characteristics, organs, tissues, adaptations and functions; the nerves being important, but not the only criterion, having been, as yet, used more for speculation than for practice.

It is a curious but unexplained fact, that naturalists and physiologists, how rigid soever they may be in their philosophical principles in general, lay these latter aside, with few exceptions, when they enter upon the investigations of the nervous system. They receive, or rather assume theories, and then, unwarrantably, assume structures to suit, demonstrating the latter by the former! Thus they begin by asserting that there are four functions performed by the nerves, and that there are, of course, four different and distinct sets of nerves—the sensory, the volitional, the excitor, and the motor; the special anatomy of which no one can prove even by the microscope. This bias in favor of the nerves as being the exclusive organs of all the animal functions, sensational, psychological and dynamic, the whole *Ens*, the entire of existence, has been gaining strength ever since Sir Charles Bell's supposed discoveries in the nervous system.

If the intricacies and irregularities of the nerves be considered; if

the great labor and time that must necessarily be consumed in getting an accurate knowledge of the character and distribution of these, even in a single animal, be duly estimated, the best anatomists will probably be the most incredulous as to the practicability of many or of any individuals becoming so perfectly acquainted with all the special structures of the nervous system of all organized beings as to be competent to classify several hundred thousand species of animals understandingly by this very difficult internal standard exclusively.

The Nervous System of Mosquitoes.—In his Physiology, Blumenback says: "Brutes are as really endowed with mind—with a consciousness of personality, with feelings, desires, and will, as man;" and "that superiority of mind in the animal creation is exactly commensurate with superiority of brain." Many brutes surpass man in more than half of the special senses, as in seeing, hearing and smelling.

Infidels in phrenology, inclined to chop logic with true believers, cannot be at a loss, so far as mosquitoes and other dipterans are concerned, judging from the plates that have been published by microscopic anatomists, illustrating the form, size, and developments of the brain in these insects. The nerve-chains and their gangliated knottings and branches constituting the nervous system of dipterous insects belonging chiefly to the chest and abdomen, take precedence over the small cerebral mass or ganglionic ring representing the brain, and throw discredit upon the theory propounded by phrenologists and some other neurologists, seeing that the cerebral organs, in size and form, compared with the size of the body, small as it is—compared, with the other parts, of the nervous system,—compared with insect propensities, senses, intelligence, volitions, and actions,—seem out of all proportion to the nervous system, particularly if the brain and cerebellum, which are wanting in the mosquito, be the sole seats of intelligence, sensation, and voluntary motion.

Well might Pliny exclaim, "*Ubi tot sensus collocavit ut in culice!*" "How," says he, "in these little bodies can one comprehend the reason, the power, and the inexplicable perfection that nature has therein shown? How has she bestowed all the five senses in a gnat?"

Muscular Force of the Mosquito.—The mosquito, in its earliest state of development, or larva state, seems to delight in violent zig-zag contortions. After it takes wing, it has power to pierce the thickest skin,

even that of an alligator; thin shoes, gloves, and garments. It sustains itself on its tireless wing for indefinite periods, and flies off after having gorged itself with blood so as to increase the normal weight of its body, perhaps, fifty fold! It is a Sampson for strength—a thousand times stronger than man in proportion to its size. "A beetle has been known to raise a mass five hundred times heavier than its own body;" a flea jumps a thousand times the length of itself—a strong man, at this rate, should jump with ease nearly the third of a mile! The willow-eating caterpillar (*cossus ligniperda*) has, according to M. Lyonnet, no less than 4,061 muscles!—a number eight or nine times greater than in man.

Of the muscular force of insects, Professor Owen says:—"The power of traversing space is given in greater fulness and perfection to the class of insects than to any other created beings on our planet. A peculiar condition of the breathing organs, and a peculiar animal tissue (chitine) which combines great strength, elasticity and levity, co-exist in insects, and in insects only. If, therefore, the highest of living created animals contain the characteristic structure of all the lower forms, as some transcendental anatomists assume, then man is not the acmé or apotheosis of animal organization; for neither anastomosing tracheæ, nor a particle of chitine is present in his system; nor does he possess a thousandth part of the locomotive energies of certain insects."

An unbiassed review of the *Radiata* and *Articulata*, in which the nervous tissue is either wanting or is reduced to its zero of "indiscernibility," would not fail to refute theorists who attribute all dynamism or force to the nerves alone; for, instead of finding throughout these great departments of the animal kingdom that sensuous and motory phenomena are in an exact ratio to the nervous development, the contrary is, to a great extent true, at least among insects, incomparably the strongest of all animals whose muscular forces augment with the diminution of their nervous tissues.

Longevity of the Mosquito.—Insects are comparatively speaking short lived. "The honey-bee lives about ten years," while the ephemeridæ or ephemerans, often live but a few hours after attaining their final metamorphosis, or perfectly developed form, in which state they sometimes suddenly rise in myriads, especially towards sun-set, in the summer, flitting in graceful undulating columns, or balancing themselves in mid-air, in varying, but often symmetrical figures.

Some naturalists think (for proof do they give any?) that mosquitoes are extremely short lived. Mr. Harris, in his elaborate Report, (in 1841, to the Government of Massachusetts, upon Insects injurious to Vegetation) says, that mosquitoes live but a few weeks after hatching, (404). If mosquitoes lived as long as man, it might be difficult to prove it in a satisfactory manner; but that they live several years, or at least one year, any person may ascertain with reasonable certainty by going into swampy regions in mid-winter, after one or two warm days, where, especially at the approach of spring, he will quickly discover by sight and feeling, large, vigorous, fierce, venerable, and experienced mosquitoes, very different from the tiny, timid, delicate, almost transparent youths just hatched out of the water, and inexperienced in the ways of the mosquito world. The same fact may be witnessed indeed, in every house, where the same kind of weather will bring out full-grown mosquitoes.

Upon the usual estimate the development of a mosquito from the egg, requires three weeks of continuous warm weather (no progress being made in cold). Hence, full grown mosquitoes could not be developed in a day or two in the spring. They must have lived during the preceding year, or years. The large mosquito often called the gallinipper, supposed by some to be a distinct species, is probably only a patriarchal, well grown member of the family.

Longevity, however, is such only by comparison. The mosquito is long lived compared with the ephemerans which are born and expire in an hour, —short-lived compared with the following animals: "Buffon speaks of a carp, in the moat of Comte de Maurepas, which was 150 years old. Gesner gives an account of a pike marked with an appended inscription dated in 1230, caught in Suabia in 1497—at least 267 years old—19 feet long, weighing 350 lbs.;" (Inconographic Ency.) "The eel, the parrot, the raven, and the swan live from 80 to 100 years; a goose was known to have lived near a century." A gentleman a few years ago in London, says Hufeland, "received from the Cape of Good Hope, a falcon that had been caught with a golden collar on, which was inscribed in English, 'His Majesty K. James of England, Ann. 1610.' It had been at liberty 182 years." (Art of Prolonging Life, Edit. by E. Wilson, F.R.S., 1854). "A frog kept in a house 36 years, was still living." (*ib.*) Probably no animals live longer than tortoises, and crocodiles or alligators. Mr. Audubon killed some of the latter in Louisiana, which he supposed to be several centuries old.

If moralizing on a mosquito be allowable—that it is allowable all

history sacred and profane showeth, seeing every beast, bird, and snake, and not a few insects, have afforded themes for classic allegory, sentiment, passion, instruction, and moral speculation, and have been made to reason and even to talk—if it be allowable to moralize on the mosquito, it will appear literally true, that man's life compared with his vast plans and expectations is as ephemeral as that insect's.

Of the infant in the cradle, Schiller says:

> "Happy suckling! to thee an infinite space is thy cradle:
> Grow to man, and then narrow the universe seems."

Most happy Mosquito! thy life is not distracted by the illusions of hope, the fear of evil, and anticipations of the impending oblivious tomb. Wouldst thou accept of a boasted reason which reveals but its own insufficiency, the vanities of life, of fame, of riches and of power—a reason ever puzzling itself in unsuccessful attempts to solve the enigma of its own destiny—ever baffled and driven back in its attempts to explore the infinite realm of the Universe, and the unknown future?

Is the Mosquito a social or solitary insect? And here, again, a moralizing answer may be permitted. That the mosquito is not an inveterate *solitaire*, is probable from the following circumstances: they sometimes seem to congregate together, particularly at night, and most of all at early dawn, as may be inferred from a kind of song or chaunt in which they unite, keeping time with more or less precision. These monotonous cadenzas accord not only with the gravity of the mosquito character, but indicate a slight tendency to sociology without vulgar familiarities. If their friendship be without warmth, this defect is redeemed by the fact that they do not fight among themselves like the more social insects, though well armed with swords. This, however, may be owing to the perfect equality in their tribe, which has no aristocrats, no absolute monarchs like the bee (*Apis* mellifica)—no individual property to defend—no jealousy—no ambition—no comprehension of the *ultima ratio regum*, thundered from the cannon's mouth—a logic, well known to a social, loving race placed at the head of the animal kingdom and flatteringly characterized by Linnæus, under the specific name, SAPIENS! Witness, ye conflagrations upon the Baltic, the Black Sea, the Sea of Azof! Witness, ye gory rocks and ravines flowing with blood, and ye countless ghosts "untimely slain" upon the blackened blasted Crimea! In this behalf wolves and bears, tigers and leopards, hyenas and lions, insects and snakes, are less injurious to each other and to man, than man is to man.

Partiality of Mosquitoes to Foreign Blood.—If what everybody says must be true, scientific writers upon Southern climates do not greatly err in coinciding with the popular opinion concerning the prejudices or preferences which mosquitoes show for the blood of strangers. Dr. Williamson, in his work upon the West Indies, affirms that the mosquitoes carry on their attacks against new-comers with unmerciful severity. Humboldt says the same. It is stated in "Chambers's Information for the People" that "the mosquitoes in the West Indies are very troublesome, and a new settler may almost be at once recognized from the blotched and swelled appearance of his face, hands, &c. After a short residence they cease to be any annoyance to Europeans, who become callous to their stings, and whom, indeed, they cease to fix upon after being some time in the country. They do not at all trouble the Negroes whose oily skins are impervious to their stings," (i, 366)—a statement that must be somewhat qualified for the latitude of New Orleans, although "there is something in it." Certain it is, that strangers suffer more pain and inflammation from mosquito punctures than natives.

Mosquito Hours.—Byron asserted that the moon was made for mischief. Twilight, moonshine and hours nocturnal, are chosen for rendezvous and mischief by the North American mosquitoes; although, in some other countries, it would appear, that a different rule of etiquette prevails, open day being preferred.' Damp, cloudy days seem nearly equal to night for actions mischievous.

In his work on the West Indies (1798), Dr. Williamson says, that "while the sun exercises its influence, the mosquitoes seldom appear." As the delightful autumnal season approaches in New Orleans, they become, if not more numerous, at least more bold and active, biting vigorously, remorselessly and without hesitancy, like the wild, fearless mosquitoes of the country swamps, many of which are occasionally and involuntarily carried by strong winds from a considerable distance to the city.

According to M. Humboldt, the mosquitoes of South America generally begin their suctorial operations at half-past six, A.M., and retire at five, P.M.; while at Magdalena they sting day and night, excepting two hours in the afternoon. In Egypt, as some recent travellers say, they come forth for mischief at night only. That they can see at night as well as in the day, any one may prove by trying to kill them when they alight on the face or hands; they will dodge an intended blow very adroitly in the darkest night, especially before the insertion of their

trunks into the skin, being in the latter case very often unable or unwilling to release themselves instantly.

Hygienic Character of Mosquitoes.—M. Humboldt, in a somewhat noncommittal manner, asks, without fully answering, the following question—"Do mosquitoes increase the salubrity of a country? On the Magdalena the people regard them as salutary, preventing scarlet fever and other diseases; while on the Orinoco they are charged as being the cause of all diseases."

Mr. Darby, an able geographer and contributor to the topographical history of Louisiana, concludes that mosquitoes are useful "sentinels placed by nature at the portals of diseases to warn man to beware—indicating a state of air injurious to health—the prevalence of bilious complaints and the yellow fever," while others regard any increase in the number of mosquitoes as a certain prelude or precursor to yellow fever epidemic—opinions, which, however untenable, many persons believe firmly. It is evident on taking an enlarged view of the climatic range, habits, and stations of the mosquito, that its appearance cannot be a reliable sentinel or precursor of yellow fever, as for example, in the Polar Regions; nor in high and dry districts where it is not found, but where yellow fever has often prevailed.

Medical Indications of Mosquito Bites; Mosquito Petechiæ.—The use of mosquito-bites as indicants of the actual or approaching hæmorrhagic stage of yellow fever and some other fevers was noticed by the present writer many years ago, and an account of the same published under the name of "*Mosquito Petechiæ*," in 1843, and which need not now be reproduced. These bloody effusions or spots around punctures in the skin, had been regarded, in New Orleans, so far as the writer knows, as genuine *petechiæ*, or spots as found in spotted or petechial fevers, such as typhus, typhoid, purpura, and so on. These sanguineous effusions or ecchymoses appearing from mosquito-bites, appear also from the neatest orifice made by the lancet, by the scarificator in cupping, by leech-bites, and sometimes by sinapisms and blisters. They are precursors or accompaniments of a hæmorrhagic state of the system, of solemn import to the physician and the patient, both as it regards the prognosis and treatment of the yellow fever. If the mosquitoes be excluded by netting—a difficult matter with a restless, often delirious yellow fever patient—the so-called *petechiæ* will not appear. Indeed, the thick linen shirts used in the Charity Hospital will so exclude these insects that only the

open part of the breast, face, neck, wrists, and hands will exhibit this supposed petechial eruption. *Mosquito petechiæ*, are therefore of great significance, being often indicants of a diminished vital force, approaching hæmorrhages from the mouth, nose, and bowels, and of black vomit.

The Mosquitoes of New Orleans.—Remarks on Insects, &c.—The ovulation, development, *habitat*, food, and physical conditions of the mosquito tribe already alluded to, may deserve further examination. The re-productive power of this insect is, as already stated, enormous, in a climate like that of New Orleans, in which three-fourths of the year, with few interruptions, afford a temperature sufficiently high to hatch the mosquito egg, provided humidity and extensive sheets of stagnant water exist simultaneously. The great drought of the year 1855, restricted the range of the mosquito to the vicinity of ponds, canals, and swamps. In many rural districts of Louisiana, as well as in many parts of New Orleans, these insects did not show themselvs until after the rains began in the first summer month, and now, in midsummer, scarcely any mosquitoes have visited the office where these lines have been written, though they became very prevalent before the close of June, in most parts of the city.

The late rains have reproduced the physical conditions favorable to mosquito life. Abundance of stagnant, filthy waters, alive with microscopic animals and plants, as the *infusoria*, *algæ*, *confervæ*, and innumerable aggragations of animal and vegetable organizations, which a luxuriant soil, a hot sun, and a compound of fresh and saltwater can alone generate, all of which guarantee the fertility of mosquito eggs and the certainty of several winged crops. The close embrace of the cypress swamp, the arms of which reach into the streets, ditches and ponds, not to name rotten cistern-water; the proximity of aquatic plants, grasses, palmettoes and dense forests; the style of building by which the lower story of the houses make a near approach to the marsh in humidity, all tend to make New Orleans a mosquito city. With all these happy episodes and advantages of mosquito life, reckon, if possible, the total sum of these insects for a square mile in the city and its environs. It is not the commerce of the city, however great, but the cultivation, the mowing, or the close pasturage of the reclaimed soil, from the river to the lake, that will prove detrimental to the city increase of mosquitoes and cause them to emigrate to stations more congenial to their habits—

an emigration which will be a mutual advantage to the mosquito and human races, for no animal seems to degenerate more rapidly than the mosquito by exchanging a rural for an urban situation.

As the mosquito does not require blood—perhaps not one in a thousand ever tastes any—the best way to get rid of them will be to keep the houses and streets dry and clean, to drain the swamps so as to make them into gardens and pasturage, thereby preventing those vast expansions of putrid water, loaded with microscopic animals and plants, shrubs, trees, and whatsoever affords food and shelter to these insects ought, as far as possible, to be removed.

The mosquitoes which hang about the city are small, weak, coquettish and effeminate, compared to the rural inhabitants of the swamps, where they are stalwart, powerful, fearless, dotted with white and black, nicely striped, and think no more of attacking man or woman than an aquatic plant, while a town mosquito dodges like a politician.

Other things being equal, mosquitoes, like Indians, flourish best remote from civilization, provided that the former find filthy water, without which none can possibly be hatched. The *ova* can never become *larvæ*, nor the *larvæ* mosquitoes without this element, and the fouler it is, the better it is for them.

It is worthy of remark that most animals injurious to man recede or become extinct as he advances into their dominions, as wolves, bears, tigers, leopards, lions, reptiles, and the gnat family; the smallest of the culicidæ—the common gnat, once the great plague of the new settlements West of the Alleghanies—has now, as already mentioned, almost completely disappeared. On the other hand, many animals by no means desirable, tread in the footsteps of civilization, as the rat, the mouse, the house-fly, the cock-roach and the bed-bug. The latter, the *cimex lectularius*, did not appear in London, as it is said, until after the great fire in 1666. Happily, this insect does not prevail in New Orleans, though many are imported in goods and furniture from the North.

The honey-bee (*apis mellifica*), originally imported into America, flourishes in proximity with civilized man, occupying a zone near the settlements, and is, therefore, the harbinger of civilization; while on the other hand, the mosquito flourishes most where human improvement is least.

As illustrative of this subject, the following extract, showing the increase and ravages of certain insects, is interesting:—"Such insects as Hessian and wheat flies, curculios, weevils, army and boll worms, anually

destroy crops to the amount of twenty millions of dollars. If a pirate on the high seas, or an Indian savage on land, injures the property of a citizen to the amount of a few dollars, millions are expended, if need be, to punish the offender. This is right. But when public enemies of a different name do a thousand times more injury to a whole country, are its citizens under any necessary restraint which forbids their making a common effort to protect their property from insect devastators? Parasitic plants, such as rust on wheat and many fungi, as well as injurious insects, are on the increase. To attempt to explain *why* this is so, would lead at once into questions in animal and vegetable physiology. Government can do much to check the ravages of insects by collecting and diffusing useful information as to their habits, times of transformation, and the best means of destroying or avoiding them. If farmers fold their arms and say nothing can be done by the science of entomology, what but an increase of the evil is to be expected? Not *to try* to escape the infliction, is treating one's enemies with unmanly forbearance, and evinces a belief in fatalism worthy of a disciple of Mahommed." (*Congressional Report on Agriculture*, for 1849: by Hon. Thomas Ewbank, commissioner, &c. Pp. 9, 10.)

Although the climate of New Orleans and Lower Louisiana has been usually considered remarkable for its humidity, yet, it is remarkable also, for the other extreme, that is, rapid desiccation in exposed places. The prevalence of almost constant breezes, an unusual number of cloudless days, and a powerful sun, all calculated in the highest degree to produce evaporation, render the drying process rapid, particularly where the soil is cleared and properly drained, nature aiding art to expel the mosquito and dry the ground.

The river and the improvements on the shore opposite New Orleans, afford considerable protection against the mosquitoes, which, it is believed, seldom cross the river. Those that do not remain permanently in houses, shrubberies, dark, damp and sheltered, nor in alleys of the city proper, but invade the city in the evening, belong, doubtlessly, to the swamps bordering upon the streets in the rear, as might be made evident by sundry facts.

Influence of winds, rains, and other physical conditions affecting mosquito life.—Mosquitoes which venture from their depressed protected situations amid grasses, shrubs and forrest fastnesses are not only carried off by strong winds, in many instances, but are drowned by heavy rains.

For, although in their larva-state, they cannot live without immersion in water, yet, as soon as they pass from this state to that of perfect insects, they are liable to death from submersion, and multitudes when on the wing are suddenly overtaken by heavy showers by which they are battered down and drowned. They can walk on the water, but do not re-enter it after casting off their nympha-robes. They do not, as has been affirmed, spend the greater portion of their lives in the water, though they often alight upon it where it is foul and stagnant. A quiet atmosphere, a mild temperature, a subdued light, a humid and sheltered situation bordered by marshes, are elements the most favorable to the comfort and increase of the mosquito family.

Elliotson, in his notes on Blumenbach, says, "some animals become torpid on being deprived of moisture. A common garden snail falls torpid if put in a dry place, and may be revived at any time by the application of a little water. Moisture has revived some animaleules after a torpidity of twenty-seven years." "Many warm blooded animals do not drink at all." (Blumenbach, Phys. § 332).

The mosquitoes' long probosis, long limbs, feathered antennæ, expanded wings, present a large surface to the force of the winds which they dread, and which they carefully avoid by settling on that side of one's person opposite the windward. For this reason they avoid industrious people, or rather those who walk, ride, or engage in business requiring locomotion, and take to the lazy, sedentary and studious.

The dread of the wind is probably one reason why mosquitoes are little migratory. They are nevertheless carried involuntarily by the winds to open, treeless, cultivated, and urban localities,—to rivers, lakes, and seas, where, of course they cannot remain, unless they find all the elements necessary to their comfort. In favorable weather, dark, damp and warm, they extend their flight, and if they find a dense, moist shrubbery or damp, dark, filthy houses in the city, there they may tarry. Trees, shrubberies, and shade, so desirable in Southern cities are open to the objection, that they favor the multiplication and protection of these tormentors, particularly in the vicinity of stagnant water. A house enviroued by sunshine instead of green groves, is not without the benefit of the law of compensation, in the diminished number of the suctorial tribe. No degree of improvement in the elongated narrow city of New Orleans, will expel the mosquitoes, while the city is bordered throughout its length upon one side, by oozy marshes, reeking with the filth, and sheltered by the cypress forest, matted with shrubs, vines, and aquatic plants—green,

shady, dark, and sheltered—a true mosquito kingdom. If the day is too hot, dry or windy they suck the juices of plants incessantly, and microscopic vegetables and animals of the water, and when they want blood, the town and swamp being near neighbors, they have no difficulty in reaching the citizens of all classes.

Elevation, ventilation, light and sunshine, will in a great degree expel mosquitoes.

Mosquitoes infest the lower, more than the upper stories of houses; they prefer rooms which are sombre, damp, largely stocked with furniture, unventilated, sheltered from the sun light and wind, and withal environed with plants, shrubbery, trees and waters.

As humidity is one of the conditions most favorable to the mosquito plague, the builders and proprietors of houses in New Orleans seem to have studied—at least, they have adopted, the most effectual mode of attaining and perpetuating that condition,—than which, few things can be more insalubrious to the inhabitants, though highly salutiferous to the mosquito family.

At least nine store houses in ten, have the lower floors placed directly on the oozy ground, on a level with the adjoining streets, all of which sink below the level of the river during its prolonged high water stage that lasts half of the year. The same faulty construction prevails in many dwelling houses and hotels.

Were all the streets of New Orleans built up in precisely the same manner, there can be little doubt that those which lie in the centre and between it and the river, would have—indeed they now have—the smallest number of mosquitoes, although they afford from their lack of ventilation and dryness, shelter to these insects.

A line corresponding with Mexican Gulf Railroad, in Good Children-street; Rampart-street; and the New Orleans and Carrollton Railroad, in Nayades-street, at a mean distance from the river of a quarter of a mile, following the curves of the shore for five miles, will include the highest, driest, and most improved portions of the city, in which there is not probably one-fourth as many mosquitoes as would be included by a second line drawn a quarter of a mile in the rear of the first. The second line would approach or pass into the swamp region; the streets of which have at all times a greater number of mosquitoes than any other part of the city, though each locality is more or less infested according to the presence or absence of humidity, shade, shrubbery, stagnant water, and the refuse of the city, both vegetable and animal. When-

soever it shall happen that improvements between the first and second lines, shall equal those now existing between the first line and the river, it may reasonably be expected that the mosquito plague will be greatly reduced in the latter or older portion as well as in the former or that which lies nearest the swamp. Thus the maximum line of the mosquito invasion will recede as their stations shall be replaced by improvement, desiccation, and cultivation.

In some geographical districts, even remote from marshes, it has been found necessary to destroy every tree, that birds and insects injurious to man may find no protection.

Baron Larrey, in his account of Madrid, says, "the mountains gradually declined, and formed a circular plain three or four leagues in diameter. This plain, in the centre of which stands the capitol, would be dry and sterile, on account of a substratum of silicious rock, were it not covered with manure, and cultivated with great care. In this plain there is not a tree to be seen; for the Spaniards are unwilling that any should be planted, as they afford shelter to birds that injure the crops. For the same reason we seldom find trees in any fertile fields." —(Military Mem.)

Were the plain in which New Orleans stands, cleared and drained to an extent half as great as that of Madrid, it is probable that mosquitoes would cease to be troublesome. At present, the streets lead directly into their favorite stations in the swamps and canals.

Additional Notes on the Waters of the Lower Mississippi.—While the tributaries of this mighty river abound with Mollusks as their shelly shores sufficiently indicate, it is believed few, if any are found in the Lower Mississippi, which latter flows through a vast alluvial plain having shell-banks on both sides of its channel. These vast shell-banks may be ranked from their number, form, extent, altitude, and position, among the wonders of the world, not being satisfactorily accounted for by either known natural, or artificial causes. Is this absence of bivalves and many other headless shell-fishes, owing to the muddy, unfavorable bottom and shores of the river-channel? Is it not owing to the purity of the water, that is, to the absence of infusorial animals and microscopic plants on which these animals feed, as well as the mosquito? Is it not reasonable to suppose that the production, alimentation, excretion, and decay of molluscous animals themselves must deteriorate rivers and other waters in which they abound? All of which naturalists, better informed than the writer, may answer.

Among plants there are doubtlessly some peculiarly adapted to the mosquito for their untritious qualities and for easy suction. The bee delights in the clover meadows, in the buckwheat field, the flower garden in full bloom. The silkworm prefers the mulberry grove; and the *cossus ligniperda* (catterpillar) for the same reason, prefers the willow, because in them are found the food adapted to these animals. Some insects prefer buds, fruits, roots, and even the hardest kind of wood—others fur, wool, books; the manuscript records, in many parts of South America, have been often totally eaten up by the white ants (*termites.*)

Additional Remarks on the Geography of the Mosquito. The Future. -Careful scientific observation will, doubtlessly, soon or late, account satisfactorily not only for the presence but also for the absence of the mosquito in many latitudes and localities which, at first sight, now seem to possess the physical conditions favorable to the generation and perpetuation of that insect. Indeed, a party in purchasing lands and in selecting the site of buildings, ought to regard, as a fundamental consideration, the practicability of repelling the mosquito by improvement. To build a house upon the margin of an irreclaimable marsh, is to expose its inhabitants to permanent annoyance.

In 1849, I spent a week in the deep wilderness of the Delta of Pearl River, about thirty miles from its debouchures into Lake Borgne, where the whole plain is very depressed, subject to inundation, divided by bayous, being densely covered with large trees, colossal canes, gigantic grasses, &c; yet, here the mosquitoes were scarcely seen, the water of the bayous, though exceedingly low, consisting of almost stagnant pools joined by a feeble, running stream, two or three inches deep and but a step in width, was, nevertheless, sweet and palatable, and without the larvæ of mosquitoes or other insects; while, near the mouths of East and West Pearl Rivers, these insects were multitudinous, fierce, and annoying.

The impurity of the water is, as has been stated already, probably one of the most essential conditions favorable to the development of this insect. The following statement from Capt. Sir Edward Belcher's Narrative (1848, Lond., i, 273), though it does not indicate the quality of the water, is worthy of note. Of the Sooloo Islands in the Indian Ocean, (5° to 6° 50′ N. Lat.) he says:—"The nights are sensibly cool, and although the island abounds with water, the mosquitoes are not troublesome. The range of the thermometer during our different visits was between 88° and 84°."

In his book on Texas (1836), Col. Fisher says that mosquitoes are not met with in that country, except in a district from forty to fifty miles deep from the sea. Beyond this district, even pools of stagnant water, are, as he affirms, free from putrefaction, being good and sweet.

The late Mr. Darby, (author of a work on Louisiana) who resided in the country during the sixteen years commencing with the cession of the territory to the United States, had many opportunities of observing mosquitoes in different districts to which his duty called him as public surveyor. He says, "The mosquito now presents millions in the swamps and woods adjacent to the lakes or marshes; is constantly found more numerous near wet places; every pond is its native bed—every leaf in the swamp its dwelling. Nothing but flight from their abodes or a curtain that bars their attacks, will defend the traveller from their cruel ferocity."*

M. Humboldt affirms that in South America, "the mosquitoes diminish as the forests and stagnant waters diminish."

Father Labat, an intelligent priest and naturalist, who travelled extensively in the West Indies more than one hundred and fifty years ago, mentions that upon the sea-shore, as well as in the interior of those islands, the clearing and improving of the land caused a corresponding decrease of the mosquitoes. (T. 7, pp. 258, 9.)

Mosquitoes, says M. Humboldt, pass two-thirds of their lives upon the water. They love a fertile soil covered with plants, stagnant waters and a humid air never agitated by the winds, preferring to an open country shades, softened day, a temperate degree of light and caloric.

Of West India mosquitoes, Dr. Williamson says:—"Moisture and the foul air of marshes seem to be their peculiar element. In such situations they appear in myriads—are larger and less intimidated."

M. Humboldt, in his work on the equinoctial regions of America, says that "mosquitoes disappear at an elevation of 200 *toises*." Mere depression, however, does not indicate their presence, unless other essential conditions co-exist, as may be witnessed in many districts in the South, where mosquitoes are scarcely found, or, if found, give little annoyance, being few.

* In the comparatively cold climate of Canada, and New England, there is, according to Mr. Harris, (Report on Insects of Massachusetts, 1841) a desperate little insect which rivals the Southern mosquito: He says, "the people of Canada and New England are in some places very much molested by a very small gnat, (*simulium molestum*) swarms of which fill the air. Every bite they make draws blood, and is followed by inflammation and swelling which last several days." (405).

Early in the present century, the common gnat, a minute dipterous insect of the same genus with the mosquito, but so much smaller as to appear utterly insignificant, prevailed West of the Alleghany Mountains for many years, until repelled by extensive clearings and settlements. These little blood-suckers, in the evening invaded the cattle yards and cabin doors of the early settlers who were compelled to defend themselves by smoking fire-heaps. As these little insects are now no longer troublesome in the regions alluded to, it may rationally be inferred that a like fate is reserved for their more colossal brethren, the mosquitoes, as soon as marsh vegetation shall be replaced by crops—suburban morasses, by gardens —stagnant water, by dry streets—filth, by cleanliness—and dense forrests, by dense population.

In answer to a circular issued in 1845, with a view of obtaining information upon this subject, several physicians–some of whom had practised forty years in Louisiana, replied, assuring me that the clearing of the land, and other improvements had diminished the number of mosquitoes in a striking degree, in different parishes of the State within the circle of their observation—a conclusion which is confirmed by all historical evidence.

ART. VII.—*The Practice of Midwifery:* by R. H. WHITFIELD, M.D., Gainesvile, Ala.*

THE ungrounded and unreasonable prejudices, existing in the minds of females, in regard to the management of their sex in cases of parturition, and in the many diseases peculiar to them, have led us to the consideration of the present subject; not that we think we can in any

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* GAINSVILLE, ALA., *July 6th*, 1855.

DR. DOWLER,

DEAR SIR—With this I send a short communication, which was suggested to my mind by reading Dr. Slemon's (Ark.) case of Prolapsus Uteri, in consequence of "female interferences." I have always been violently opposed to the whole system of female practice, and earnestly wish that some method would be devised by which interference from all such sources could be prevented. I have a valuable negress who has been made useless by the forcible extraction of the placenta immediately after the birth of her child, by an ignorant midwife.

If this communication is worthy a place in the *New Orleans Med. and Surg. Journal*, you can place it there, not for its elegant diction, but for the suggestion which it is intended to make.

Respectfully yours, R. H. WHITFIELD.

way eradicate the existing popular prejudices, but for the purpose of bringing the subject before the profession, hoping that, eventually, something may be done to alleviate that portion of the world which "is suffering under a load of pretended or false modesty."

The evil about which we design more particularly to write is, the conduct of labor by ignorant and unskilled midwives. Also, to show that the office properly belongs to the well educated and skilful physician.

The numerous evils, injured mothers, protracted loathsome diseases, and even deaths, caused by the unskilful management of ignorant women are enough of themselves to condemn perpetually their employment.

In our own Southern States, negresses are almost universally employed, and to their bad management is to be attributed most of the diseases to which our females fall victims. Should this state of things be permitted to exist?

So far as we are able to ascertain from history, the management of parturient females was, for many years after the creation of man, under the entire supervision of midwives. No where in the Sacred writings can we find an instance of obstetric aid having been rendered by a physician. The evidence that there were *no* male obstetricians is, however, only negative.

Up to the time of Hippocrates, all the knowledge of obstetries, as contracted as it was, was confined to the midwife. He became partially acquainted with the positions of the *fœtus in utero*, the action of the uterus in labor, and the use of simple instrumental means in the delivery in difficult cases. From his time the physician began to be employed in cases of unnatural and difficult labor, in which the limited knowledge of the *art* possessed by the midwives would not allow them to interfere.

There was, however, no other division in the science of medicine at this time than that of surgeon and physician; nor was there any other made until about the beginning of the sixteenth century, when a work was published by M. J. Rueff, which caused a revolution in medicine, and obstetrics was made an independent branch of the science.

The attention of enlightened men being now directed especially to this branch of the profession, with but rare opportunities for investigation, it began to rise; and improvement was added to improvement, until it has, at length, reached its present state of approximation to perfection.

A comparative view of the progress of obstetrics before and after this period will convince any sound mind of the superiority of the male over the female obstetrician. On the one hand, the unnecessary pain, suffering, and even death, from ignorance of the means of relief, are painfully contrasted with the ease, comfort, and safe terminations on the other. From this fact, without further argument, it is evident that the practice of obstetrics should be wholly entrusted to educated physicians, since they have, in this respect, rendered greater benefits in a few years to the human race, than woman has for centuries.

History tells us that for the many years in which the practice was confined to females, nothing was added to the science, and consequently no relief was nor could be given to suffering woman in any case, but in that of purely natural labor, in which, however, Nature herself is always adequate to the task. History also tells us that, as soon as the physician entered upon the duties of obstetrics, thousands of females were safely delivered, who, before, in like circumstances, would have been lost.

From all these facts the inference arises, that the mind of woman—woman herself—is unfit for such an occupation being generally incapable of acquiring the knowledge requisite for the practice of such a profession. Were such views not true, evidences more general would have been manifested long before this proving the contrary. The study and practice of obstetrics require peculiar mental powers, a vigorous intellect, a well disciplined mind, and a sound judgment. Are these found in females generally? With all due deference and respect to the sex, we think not. She is generally styled the weaker sex, and has been so considered as far back as the creation. Such was her weakness of mind and instability of purpose, when placed in Eden, that, notwithstanding the promise of life or the sentence of death tendered her, she yielded to the flattering insinuations of the smoothe-tongued deceiver. The Prophet Isaiah seemed conscious of the fact, when reflecting upon the condition of the rulers of his people—"Like woman, feeble and effeminate, weak and fearful."

A rare instance may occasionally be cited of a strong and masculine minded, and highly intellectual woman who has distinguished herself in some particular science. The names of La Chappelle and Boivin, female practitioners, will ever be remembered and honored in the history of obstetrics in connection with their invaluable additions to the science.

Woman ordinarily is versatile, instinctive, and imaginative, wanting

in self-possession, moral courage, and the quality of judging for herself —Shakspeare, who seldom falls short of an accurate description, has pronounced her "soft, mild, pitiful, and flexible."

In natural labor, she who has had but little experience or education, is sufficiently skilled to do the little duties required. But labor is not always natural and uninterrupted, and in severe cases the midwife is too apt to yield to her want of self-possession, to become painfully confused, and to leave the patient to struggle unaided through her excruciating sufferings. She is too apt to throw aside her reason and judgment, and to be guided by a mistaken observation and badly formed experience, and to forbid the entrance into her practice of any thing like the principles of medical science. What could the delicately nerved female do in a case of severe uterine hæmorrhage, rupture of the uterus, or placenta prævia, when, often the mere sight of venesection, or the simplest surgical operation makes her sicken and faint?

In the next place, to be well qualified for the practice, requires a thorough knowledge of anatomy and physiology, especially of those parts connected with the gestation and parturition. This can only be acquired by dilligent study, deep research, and a frequent attendance upon the dissection table. Are such opportunities offered to woman? Would she avail herself of them? We think not. Men engage in these labors who know and feel their importance and necessity.

Happily for those who place themselves under the care of the female practitioner, woman dreads and shrinks from responsibility attendant on the administration of potent remedies, and the performance of surgical operations which are foreign to her practice and never enter her imagination. Her remedies are simple, perhaps harmless to the patient, but powerless against the disease, and in the latter instance the injury lies.

Imagine the world with its medical cares in the hands of female physicians. Medical science, like the withering leaves of Autumn, would fade and fall into everlasting oblivion. Empiricism would stalk abroad through the earth, and disease and death, uncontrolled would have their sway. But this we may never fear, each sex, as a general rule, will ever move in the sphere in which its Creator designed it should. The rude, rough, and laborious occupations belong to man. Those of a softer and gentler kind to woman. Her place is the quiet shades at home, there to be the wife, the mother, the nurse, and friend. Her duties are sufficiently arduous within her own natural boundary, without transcending its limits to mingle in the coarse and rude occupations of men.

ART. VIII.—*Observations on Amenorrhœa:* by GEORGE S. D. ANDERSON, M. D., of Alexandria, Louisiana.

THE diseases of the Uterus, form a group of the most important of any to which the human female is liable. A large proportion of woman's sufferings are from these diseases. They should therefore be carefully studied; and we propose to call attention to some of them in this article.

Systematic writers have divided the diseases of the uterus into functional and organic. We will confine ourselves to the consideration of the former in one of its forms or varieties only.

Functional derangements of the uterus are an important class of diseases, and physicians are perhaps oftner consulted in regard to them than any other functional derangements to which females are liable during the child bearing period. It is our purpose, therefore to briefly consider some of the more common of them.

Functional derangements of the uterus have been divided into three classes: to wit,—

First, Amenorrhœa, including retention and suppression of the menses, and vicarious menstruation.

Secondly, Dysmenorrhœa, or painful menstruation.

Thirdly, Menorrhagia, or excessive menstruation.

It is only to amenorrhœal suppression, or suppressed menstruation, that we propose to call attention in this article.

In this form of menstrual disorder, the catamenia have made their appearance, and the uterine function has been fully established; but from some cause interfering with or interrupting the functional activity of the vessels of the organ, the discharge has been arrested. Suppressed menstruation may be acute, or it may be chronic. That is to say, the menses may be suppressed in a female in the enjoyment of perfect health by some accidental circumstance, or disease may gradually invade the system impairing the general health, and the menstrual disorder may only be the sequence or concomitant of it. Or the acute form of the disease may become chronic from neglect or improper treatment. In the former acute form of the disease, there may be, and often is, a hyperæmia whilst in the latter or chronic form, there is an anæmia state of the system. The pathology and treatment of the two forms of the disease, are, therefore, essentially different; and the want of a discriminating judgment on the part of practitioners, by which they are enabled to draw the proper lines of distinction between the two forms of the disease, as well

as the different states of the system, have been the cause of a great deal of improper, and in many instances, highly injurious practice. The lack of this discriminating judgment on the part of practitioners accounts for the many failures, in attempting to reëstablish the discharge, and constitute a sufficient, or perhaps an insufficient apology for the host of remedies that have from time to time been vaunted by ignorant pretenders and lauded by *scientific* gentlemen as *specifics* for the disease. The truth is, we have no specifics for it. In treating it we are thrown back upon the fundamental principles of science and of our art. We must therefore resort to such medicines as are known to have a general action upon the system, and exert an influence upon the functional activity of all the organs.

Cause.—Acute suppression of the menses may be caused by the patient leaving a close warm room in the winter, or during cold damp weather, and exposing herself to the chilling influence of a cold damp atmosphere, especially if she has been tenderly and delicately raised; or it may be caused by getting wet in a shower of rain; or by getting the feet wet; by standing upon the damp ground; standing in cold water, as we have frequently known to be the case with washer-women; by powerful mental emotions, as joy, anger, fear; by disappointment of the affections, &c.

Symptoms.—In a case of acute suppression of the menses, especially if the patient be of full plethoric habit, we generally find great constitutional disturbance. There will be found violent head-aches and pain in the back (the lumbar region); throbbing of the carotid and temporal arteries; full-flushed face, suffused eyes, hot skin, thirst, nausea, coated tongue, a sense of fullness, weight and tension between the hips, a hard, full, and sometimes bounding upulse, high-colored scanty rine, inactive bowels, and the symptoms generally of constitutional disturbance and febrile reäction. This state of constitutional disturbance may lead to, or terminate in, local inflammation—the uterus itself or some other organ being the seat of the inflammatory action.

Treatment.—Depletion, both local and general, is clearly indicated by the symptoms we have enumerated. A full bleeding from the arm—say a pint, more or less, according to the constitution of the patient, and the state of general plethora of the system. Cups may then be applied to the sacrum and in the hypogastric region, and by relieving the uterus

of hyperæmia or congestion, they will most probably afford relief to the patient and recall the discharge. But should they fail, the patient should take an active purgative immediately. A dose of Epsom salts combined with a teaspoonful of cream of tartar should be administered, and its operation assisted by giving an enema of warm or tepid water, in the course of two or three hours. In this form of the disease purgatives have an admirable effect. They rid the bowels of their fæcal contents, and stimulate the exhalents to increased action, producing copious watery evacuations, thereby diminishing the quantity of the circulating fluid, relieving the uterus of hyperæmia, subduing inflammatory action if it exist, and reducing febrile excitement. Whenever the purgative shall have sufficiently operated, the patient should be put into a warm bath, and Dover's powder in the dose of about three grains every three or four hours may be given. If, however, inflammation should have existed, and is not entirely subdued, this remedy should not be administered. Sweet spirits of nitre given every hour or two in the dose of from half a drachm to a drachm in water will probably have a good effect by assisting the diaphoretic action of the Dover's powder. The liquor ammonia acetatis, spiritus mindereri in the dose of from one to two drachms given in sweetened water, and repeated every three or four hours, may be administered with a view to its diaphoretic action. The patient may break out into a profuse perspiration soon after taking it, with all the beneficial effects attending diaphoretic action. Or a warm infusion of serpentaria, or some warm tea or "hot drink" may have the desired effect by recalling the discharge.

In probably much the largest proportion of the cases of acute amenorrhœa, the above treatment will succeed; especially may this be hoped for if too long a time have not elapsed since the suppression. Bleeding alone will sometimes do it, if early resorted to. Our esteemed friend and preceptor, Dr. James Fulkerson, of Tazewell, Tennessee, told us during the time of our pupilage, that in several instances he had had the satisfaction of having the menses return before the bleeding from the arm had been stopped. These patients were of full habit and plethoric, and were bled soon after the suppression.

We wish it to be distinctly understood that the treatment above laid down is suitable only to those cases in which the patient has been in the enjoyment of good health previous to the suppression of the menses, with all the organs in the regular and healthy performance of their functions, and an abundance of rich blood. Should there be an anæmic state of

the system, the patient being feeble and delicate, with the vital powers below the natural standard of health, such heroic treatment would be highly injurious. Bleeding, unless by cups, should not be thought of. If purgatives are used, they should be of the mildest and most unirritating kind; such as only will increase the peristaltic action of the intestines with the view of merely causing them to rid themselves of their fæcal contents—nothing else. Castor oil, assisted by an enema, will have an action sufficiently powerful. The tincture of rhubarb, or its compound tincture given in the dose of one or two fluid drachms an hour or two after the oil has been taken, will be a valuable adjuvant in cases in which there is much debility, where its use is not contra-indicated. But we are to hope most from the warm bath in these cases. The patient should be put into one immediately, and should drink freely of some warm tea or "hot drink." Blisters applied to the sacrum and sinapsisms to the insides of the thighs, with warm injections into the vagina, by increasing the vitality of the parts, may arouse the uterine vessels into action and recall the discharge. Blisters and sinapisms, however, should not be resorted to except in cases of extreme debility, with a low degree of vitality.

We have now laid down the treatment most likely to be successful in this disease in the two extremes—hyperæmia and anæmia of the system. Between these extremes there will be every shade of difference met with by practitioners. They must therefore carefully examine into the condition of the system of each case and regulate their treatment according to the indications presented. No arbitrary rules can be laid down. Each case must be treated as it is found; not according to any thing said or written.

Should we not succeed in recalling the discharge at the period at which it is arrested, it is our duty to endeavor to prepare the system for its return at the next menstrual period. To effect this object, the patient, especially if her health has not been very good before, or if she be debilitated, should take moderate exercise in the open air, should live on low diet if her health has previously been good, but her diet should be generous if she be debilitated, using wine, &c., and gentle purgatives so as to ensure at least one free operation on the bowels in the twenty-four hours. Castor oil will, probably, answer the indication best in the first class of patients; the compound syrup of rhubarb in the latter.

When the next menstrual period arrives, we are to endeavor to establish the functional activity of the organ. But the practitioner should bear in mind that too much medicine does harm.

Let us suppose, for example, that our patient, previously to her menstrual derangement, had been in the enjoyment of good health; then let us suppose that the menses did not return after having been suppressed, and that we have succeeded in keeping her bowels regular; that we have caused her to live on low diet; that she has taken sufficient exercise; that all the other organs are, as far as we can judge, in the healthy performance of their functions when the period arrives; that there is no hyperæmia or congestion, or inflammatory action of the uterus; that the skin is cool, the pulse soft and regular; that there is no headache nor pain in the back, and that the urine is normal in quantity and quality;—then, in such a case, very little will need be done.—The patient may take a dose of rhubarb and aloes, ten grains of the former and five of the latter, six or eight hours before the expected return, and its action may be assisted by an enema of tepid water.—Cups may then be applied to the sacrum; dry cupping will probably answer the purpose; they may also be applied to the hypogastrium, and the patient may take a tepid or warm bath, and drink some warm tea or the warm infusion of serpentaria; and we have but little to fear that the discharge will not return in due time. Should the patient be debilitated, she should take some diffusible stimulant, and, instead of cups, blisters and sinapisms should be resorted to, with warm stimulating vaginal injections. But these are applicable only to such cases as those in which there is great debility, with a low degree of vitality and atony of the uterus.

In the use of blisters and sinapisms, we would advise practitioners to exercise a careful discrimination between the cases in which they are indicated and contra-indicated; to consider well the physiological and therapeutic action of these very potent remedies; for they are capable of doing a great deal of good or a great deal of harm, in proportion as they are judiciously or injudiciously used. In the commencement of our professional career, before we understood well the pathology of the disease under consideration, entertaining erroneous views of the physiological and therapeutic action of the remedies, we used them in some acute cases to the great annoyance of our patients. They increased the febrile excitement and aggravated our cases. Experience soon taught us to abandon them in such cases. Cups should have been used, and we have seen happy effects from them.

When there is much febrile excitement with a high grade of action, blisters are contra-indicated and cups should be used. When there is

much debility, with a low degree of vitality and atony of the uterus, cups are contra-indicated, and blisters and sinapisms are the proper remedies, with warm or stimulating vaginal injections, as previously mentioned.

June 1*st*, 1855.

ART. IX.—*Experimental Researches into Animal Heat in the Living and in the Dead Body:* by BENNET DOWLER, M. D.

(*Continued from page* 63.)

PART 2.—*Methods and Means of Experimentation.*—The most convenient points for demonstrating the temperature of the living body, are the following: the palm; the bend of the arm; the axilla; the groin; the perineum; the popliteal region; and the tongue. The legs may be crossed, both above and below the knees, so as to include the thermometer. The sole of one foot may be applied to the instep or ankle of the other; both of the palms may be brought face to face and secured by pressure or a bandage; the fingers may be so arranged as to grasp the instrument; the same effect may be gained by binding, or flexing the fore-arm upon the arm—the leg upon the thigh—the arm upon the side of the recumbent body, while the weight of the latter, in the most perfect manner, compresses the axilla, or any other part of the limb. The tongue which has been generally selected, as the test of the human temperature, is ill-adapted for that purpose; as the breathing, the moisture, evaporation, the exposure of the cavity to the air, the difficulty of covering the bulb of the instrument completely, are circumstances unfavorable to this method—a method repulsive to the patient, requiring the operator to compress the tongue with his fingers, and, moreover, being often dangerous to both parties, as in cases of delirium, during which, the operator might be bitten, and the patient destroyed by the crushing and swallowing of the glass.

In every application of the thermometer, the external air must be, of course, excluded.

The duration of the experiment is a matter of great importance and of no little difficulty. The mercury may reach the maximum or sta-

tionary point in one or two minutes—more generally in five, and, sometimes in fifteen or later. Occasionally, there seems to be a peculiar and unexplained condition, giving rise to the acceleration or retardation of the calorific dynamics. The conduction may be rapid—the mercury stationary for a time, and, subsequently it may rise considerably. If the instrument be colder than the body as is generally the case, it must produce a local refrigeration of the part with which it is in contact. If the thermometer be at 50°, and the body at 100°, the former will rob the latter (at the point of contact) of much heat. This inequilibrium must be removed before the real temperature can be truly ascertained. This desirable result is obtained, as I judge, by two routes, namely, by the mere physical conduction and by the physiological generation and circulation, of animal heat. That animal heat in the recently dead body is generated and circulated in currents differing from physical heat in manner, time, velocity and direction, will be proved hereafter by numerous experiments.

The thermometer at a very low temperature cannot be applied without a loss of time; nor without the risk of arriving at an unsatisfactory and inaccurate result. Hence the instrument should be heated by the operator's hand or by some other means so as to approximate the natural temperature. If the patient be colder than is the healthy state, as in cholera, the mercury will quickly fall; or if he be hotter, as in fever, it will rise to the stationary point.

I prefer thermometers from six to eight inches long, for general use, though for exploring the great cavities they should be somewhat longer. The stem and the paper scale are enclosed in a hollow cylinder of glass which arises from the bulb. The latter is not exactly round, but oblong, having a pointed termination so as to pierce the brain, liver, &c. The scale, which is divided into degrees and half-degrees, begins with 70° and ends at 120°, thus covering all the ground necessary to human physiology and pathology. This gives a range to the mercurial column of only 50°, which being distributed to a space of from four to five inches, allows of subdivisions as low as the fourth of a degree, with a distinctness equal to that of most thermometers which have but five marks for each decadal interspace, that is, one mark for every two degrees, instead of twenty subdivisions as in my pathological thermometers. As the enclosed stem is delicate and the bore for the mercurial column very small, while the bulb is comparatively large and contains, of course, considerable quicksilver, the expansion of the metal gives a very considerable elonga-

tion to a degree, insomuch that the fractions become distinct and well marked.

As these thermometers include neither the freezing nor boiling points, they must be constructed by such as are known to be accurate by testing both of these points. These instruments easily carried in the pocket, in a small tin cylinder, are at once accurate, portable, and useful in diagnosis. They were planned by myself, and executed by a young German, for a short time resident in New Orleans. They are far superior to any instruments which I was able to procure at home or abroad. It is melancholy to reflect on the waste of time which other ill-adapted instruments with which I operated at first, required, particularly in reaching the maximum temperature. A further description of these thermometers without engravings, would scarcely be satisfactory.

The temperature of the weather, and of the room, deserve to be noted simultaneously as well as the duration of the experiment. The conductive power of the human body is very variable. The maximum as already hinted, is sometimes not attainable short of 5, 10, or 15 minutes. Oscillations occasionally happen. The mercury may be stationary for many seconds, and then, mount several degrees; or, it may arise steadily, yet very slowly. The essential conditions giving rise to these variations, I am not able to designate either physically or physiologically, statically or dynamically. Certain it is that the calorific force of the human body does not move the mercury in all cases with an uniform velocity. Thus the temperature of the surrounding media and of the persons examined may afford the same point of departure, though the maxima sought may require unequal times, on different occcasions. Does the maximum represent the equilibrium resulting from the two or three antagonistic forces, namely, those of gravitation, cohesive attraction, and caloric?

The comparative velocity in heating the quicksilver of different thermometers as those of Réaumur and Fahrenheit, so as to reach the maxima or stationary points, and the ratio of refrigeration so as to reach the minima of bodies, are variable, owing chiefly to the method of construction as favoring or retarding calorific conduction and radiation, illustrative tables of which might be given; but it is sufficient for the observer to know that the experiment should be continued until the stationary point be reached, usually from one to five minutes. The temperature, as well as the form of the instrument, has a great influence upon the ratio of heating the quicksilver to the stationary point, both in the

living and dead body. Suppose that the temperature of the quicksilver is 50°, the bulb on being applied to the body at 100°, 113°, or any other degree exceeding that of the quicksilver, a local refrigeration is produced at the point of contact, which cannot be removed until perhaps the heat of the entire body shall be reëstablished, the equilibrium of which will often require 5, 10, 15, or more minutes, as I know from dearly bought experience. Instead of applying a cold thermometer, and then waiting for the calorific circulation to restore the equilibrium, it is better for the operator to heat the instrument in his own hand before applying it, keeping it heated nearly to the probable maximum of the subject during his experiments, by which he will save time and secure accuracy; or he may place the instrument in one axilla or other region, of the living or dead subject, by which it will soon be sufficiently heated to insure a quick and satisfactory result by transferring it to the other axilla or region.

With respect to the dead body, the calorific laws are peculiar and very complex compared with those of the living body, so that, for example, it may require many hours to reach the ultimate maximum in one or several regions, as will more fully appear hereafter.

In operating on the dead, the same points of demonstration already indicated in the living body are available, together with many others of greater value, as the natural passages, that is, the rectum and vagina, and artificial punctures into all regions. The puncture should be no larger than is absolutely necessary to admit the thermometer aided by a suitable force, so that the external air may be excluded; for this latter purpose, the skin may be drawn aside before the puncture is made,—after the puncturing, and introduction of the instrument, the skin from its resiliency returns, and acts as a valve. In this manner punctures of the heart, chest, and abdominal cavities may be made without introducing the external air. The instrument may be forced into the spleen, liver, brain, pleura, peritoneum, and some other tissues and organs without cutting instruments, if the thermometer terminate in a point as it should do.

The method which I have adopted in reaching the brain by dividing the tissues at the inner canthus of the eye, pushing the globe aside, and then passing an iron punch or bit of wood, the size of the thermometer, through the thin bones of the orbit, allows the thermometer to pass into the brain with great facility without permitting air to enter.

Two thermometers are sufficient—one involves too great a loss of time—three, or more, may lead to confusion and mistakes, where there

is no patient persevering assistant. In using one only, the observations will be, of course all consecutive, the instrument being removed from region to region, thus passing through a circle again and again, until completed. Two thermometers, a scalpel, a pencil, a book, and a watch, together with the writing of the notes, all by the same hand, as occurred in these experimental researches, will be sufficiently complicated for one observer to manage with precision, nothing being trusted to memory for a moment.

Calorific Dynamism.—A few words upon this topic in connection with the methods of procedure above mentioned, may not be improper in this place.

Dynamics, or the science of matter in motion, is chiefly due to the phenomenal manifestation of the calorific force.

Rigid physicists regard force as an endowment, property or condition of matter, and not as an entity, agent, essence or substratum, existing independent of materiality. Perhaps the experimental or materialistic philosophy can consistently go no farther, and should recoil from the contemplation of force as something in itself—as something more than the accident of an agent—the whiteness of silver, the hardness of the diamond—something more than even dynamical phenomena.

At every point of the universe both organic and inorganic, a great, varied, positive, veiled force seems to exist, hurling the great planets, as well as the minutest atoms, throughout infinite space.

It is equally difficult to prove or even to conceive that caloric is an entity or a nonentity. The rigid materialist asks, Is caloric extended, figured, cohesive, divisible, ponderous, visible, tangible? Call it an *essence*, and he will ask his apothecary for a sample. Yet, neither the soul nor caloric can be distilled and bottled. But the physicist has not a synthetic or an analytic formula, exhaustive of all the other potentialities of ontology in nature.

It is remarkable that the fundamental notion of force is derived from the subjective or spiritualistic element of humanity, being an intuition, self-evident to every mature mind, though not definable by words. Whether force be the agent and matter the patient, or whether force be inherent in matter as a mere secondary quality, still the primordial conception is derived from consciousness. Physical dynamism is divested of all volitional aim, lying as it does in the objective world, that is, out of the mind, although it would be wholly inconceivable, except

by means of the subjective or self-conscious dynamical type within. Indeed, the personal subjectivity of the individual combines types of all the forces, whether voluntary, involuntary or mixed.

The question whether caloric is to be understood adjectively or substantively will not now be entertained, although it must be regarded as the great motor of the universe. Its effects or phenomenal manifestations, as expansion, conduction, radiation, and its physiological and pathological actions, rather than its essential nature, interest the physiologist and physician.

Heat and Cold subjectively and objectively considered.—Neither by myself nor by others have the terms *subjective* and *objective* been adopted as applicable to animal heat, yet in this connection, and, indeed, in physiology, pathology and clinical medicine in general, the use of these terms would obviate much circumlocution, ambiguity and inaccuracy. For example, in symptomology, as in most other sciences, there are two sources of knowledge: 1st, that which is subjective, that is, proper to the patient's consciousness, sensations, self; and 2nd, that which is objective or observed by the observer. The subjective and objective may agree or they may not; indeed they often are fundamentally antithetical. Rheumatism sometimes has no objective symptoms, while the patient suffers severely from subjective symptoms or sensations of a painful character. In cholera, objectively the coldest of all diseases, the patient has generally in a subjective sense "an inward fever—an inward heat," &c., solely characterized by his own personal consciousness or feelings. In some other diseases, the patient is a living antithesis of hot and cold. Subjectively he is very cold, that is, he feels inly great coldness, shivers, covers himself with blankets, and surrounds himself with heated bodies, as in intermittent fever, and yet I have found objectively that not a few of such patients have been very hot as tested by the touch and the thermometer. So in algid fever, as congestive, the patient may feel inly oppressed with burning heat, while the thermometer shows him to be excessively cold.

The popular phrase, "inward fever," may therefore be strictly true in many cases wherein the skin is comparatively cool; that is, the heat may be not only unnaturally great, but unequally distributed in the central inaccessible organs, and therefore more dangerous than that which is fully developed and equalized upon the circumference of the body.—That such is the case may be inferred from what is witnessed upon the surface in different regions during febrile diseases.

The Law of Refrigeration.—In this experimental inquiry, particularly in reference to the laws of heat in the recently dead body, differing, as they do, from the laws of physical, chemical, physiological and pathological heat, it is of fundamental importance to keep in view the physical law of cooling first announced by Sir Isaac Newton, and clearly put by Pictet, from whose work on Caloric I translate the following concise statement:—

"For a long time it was thought that this law was exact; but when people wished to verify it, they found that it was only true in cases where the temperature of the body did not exceed that of the surrounding air more than from 45° to 50°," (113° to 122° Fah. covering the whole ground of my observations): "for still greater differences the law is inexact, and the more so as the difference of temperature is considerable. When a solid body of what form soever cools itself in a medium of constant temperature, it is evident that the temperature of the body ought to decrease from the surface to the interior, but that the difference of temperature will cease as the refrigeration shall progress, and that the temperature of all the points of the mass must terminate by becoming uniform, and equal to the surrounding medium, in a longer or shorter time: it is then only that refrigeration will be complete. M. Fourier has determined all the circumstances of the refrigeration and heating of solid bodies by setting out with the hypothesis that the relation of one molecule was proportional to the difference between its temperature and those of the surrounding molecules."

Dr. Whewell gives the following synopsis of the Newtonian law of refrigeration: "The simplest rule which can be proposed is, that the heat thus communicated in a given instant is proportional to the excess of the heat of the hot body over that of the contiguous bodies; there are no obvious phenomena which contradict the supposition that this is the true law, and it was thence assumed by Newton as the true law for radiation, and by other writers for conduction. This assumption was confirmed approximately and afterwards corrected for the case of radiation; in its application to conduction it has been made the basis of calculation up to the present time."—(Hist. Induc., Sci. ii, 520-1.)

In a vast many human bodies, for hours after death, the calorific laws of increment and decrement, oscillation and uniformity present fundamental antitheses to the received physical and physiological theories of the day, being altogether peculiar, and not conformable to the Newtonian law until after the lapse of a period more or less prolonged, when true physical refrigation predominates.

(To be continued.)

ART. X.—*Ætiology of Epidemics:* by M. MORTON DOWLER, M. D.

THERE is perhaps no department of human inquiry in which a greater amount of inconclusiveness, folly and pretention have manifested themselves than in relation to the ætiology of epidemics. The crude and inconsistent deductions which in this behalf regularly appear and are forgotten are well calculated to throw distrust over medical philosophy and to bring it into disesteem. The admitted truths of to-day become the errors and fallacies of to-morrow, and one pretended discovery succeeds another equally pretentious. In other departments of medical science, it is true, we constantly witness deductions which are lamentable enough, as for example, when the science of physiology is given over into the hands of mere men of retorts, galvanic batteries, and organic analyses and specious and plausible theories emanating from and uttered by the oracle of the laboratory, carry the medical mind into captivity—or as when the profession recognize the existence of motion, sensibility, volition, and intellection as localized and materialized by Bell and Hall on grounds very little more trust-worthy than those of Des Cartes when he fixed the seat of the soul in the pineal gland—or as when the skull-bump physiology and psychology of Gall and Spurzhein are acknowledged as real science, and taught in medical schools on grounds of no greater tenability than those of Aristotle when he proclaims the ventricles of the brain as idea-reservoirs and the *iter a tertio ad quartum ventriculum*, as a viaduct for the transmission of ideas into the fourth ventricle. Medical speculations, however, generally result in some real progress to the science when they come forth claiming the basis of observation and experiment, but, surely so far as the causes of pestilential diseases have been sought to be explained, but little has been given to the world which might not be forgotten without loss, and much has been put forth and received which it were for the public good and the cause of truth should be erased from the records of science. No class of medical philosophers have set up higher and more pompous claims to the title of public benefactors than those who have undertaken to look into causes of epidemics. And what have they bequeathed us? Why, we have inherited little or nothing but swarms of officers, useless and inhuman commercial restrictions, multiplied public burdens, and the establishment of theoretical falsehoods and fallacies by law and ordinance, to be re-asserted by oath to office. We have had plenty of public delusion, false security, deception and extortion, all based on pretended discoveries of the cause of epidemics and of the means of preventing their extension.

We have had boards of health and quarantines, which have been in their effects, little better than inventions to test the enormous endurance and credulity of the exeitable publie.

We are told by theorists, that epidemies have their origin in some great poison either atmospheric, terrene, sidereal, organie, electric, ozonie or some other eondition or combination of eondition, in relation to whieh no two observers are in aecord.

This term, "poisons," amongst ætiologists has been a source of endless confusion and has led to the utteranee of fallaeies and incongruities without number. In striet propriety poisons belong exclusively to the domain of toxicology, and are not assignable to the pathogenie category. There can be no harm, however, in so extending the signification of the term "poison" to include every ageney known and unknown, whieh, acting on the organism, causes it to depart from the healthy standard, provided, in so doing, we do not eonfound together objeets which are entirely distinct, and draw parallel eonelusions from the most divergent premises. Let us therefore follow the ætiologists, so far as to give this extension to the meaning of the term, and then it will necessarily follow that poisons must fall in two great elasses, namely:

1. The Toxieologieal, and
2. The Pathogenic.

Let us compare or rather eontrast these elasses of poisons and determine how far they may be identified with each other.

1. Toxicologieal poisons are eognoscible, appreciable, tangible, material.

Pathogenic poisons have hitherto proven in their external and material charaeter either unknown, inappreciable, and intangible, as in their relation to cholera, yellow fever, &c., or known and appreciable only when incorporated in, and eo-existent with animal matter, as in syphilis, variola, &c.; otherwise being wholly unknown.

2. The organie manifestations whieh attend the aetion of toxieological poisons are remarkably invariable and uniform, and respond to the agents administered.

The organic manifestations in those who have been exposed to the action of pathogenic poisons are so variable in intensity that they may be either absolutely null, or exist in every degree from the mildest form of disease to the most deadly, as is exemplified in eholera, yellow fever, small-pox, &e.

3. With toxicological poisons the uniformity of effect and organic susceptibility are remarkable.

With the pathogenic poisons of yellow fever, cholera, &c., the want of this organic uniformity in susceptibility is remarkable, absolute immunity attending one person, whilst a second is lightly, a third severely, and a fourth mortally attacked in the same apartment; proving first, that the pathogenic or objective cause must necessarily be endowed with an uniform potency; and secondly, that the *variability* of the organic phenomena must be owing wholly to unknown internal susceptibilities, and not owing to variable intensities of the pathogenic agency.

4. The intensities of toxicological poisons are known, determinate, demonstrable.

The intensities of power in pathogenic poisons, we have inferred to be uniform as in cholera, yellow fever, &c. This does not, however, enable us to determine the measure of intensity of that power, as characterizing it under the denominations of strong or weak. For example, immunity from the diseases might be urged to prove the intensity of organic resistance to a powerful pathogenic agent; whilst resulting mortality might be urged to prove intense organic susceptibility to an extremely feeble agent.

5. Organic toxicological poisons are normal, and do not reproduce themselves in the organism in which they induce toxicosis, as the poison of the crotalus, scorpion, hornet, &c.

Pathogenic poisons derived from an organic source, are abnormal and tend to reproduce themselves, as the poison of syphilis, glanders, hydrophobia, &c.

6. Toxicological poisons act with increased energy and danger on the young, the debilitated, the infirm, &c.; females being more easily affected than males.

The pathogenic poisons of yellow fever, cholera, &c., as manifested in the same apartment, often destroy the powerful and robust, while the tender infant and the invalid are lightly affected.

7. The treatment of toxicological poisoning is strictly antidotal, and with reference to throwing off, counteracting, rendering inert, and neutralizing the poisonous agent.

The treatment of pathogenic poisoning as in yellow fever, cholera, &c., is strictly anti-pathic, and is addressed to the morbid conditions present, and not to any assignable cause of those conditions.

8. No known toxicological poison is capable of producing organic conditions and manifestations identical with those exhibited in pestilential diseases.

No pathogenic poison is capable of producing organic conditions and manifestations identical with those superinduced by toxicological poisons.

9. Toxicological poisons generally teach avoidance by appealing to our sight, hearing, taste, smell, and touch.

Pathogenic poisons as in cholera, yellow fever, &c., have never yet objectively appealed to our external senses; nor do they give us notice of material existence: they are inodorous, invisible, intangible, inaudible, tasteless.

10. Toxicological poisons, administered in the maximum, act with mortal force and without considerable lapse of time.

Infants may be exposed to the continuous action of the pathogenic poisons of cholera, yellow fever, &c., for weeks, and finally suffer a slight attack, whilst the most powerful and robust subjects may fall victims after a single day's exposure in the same locality.

11. Feeble toxicological poisons produce feeble effects on powerful physical organisms, and it is not possible for them generally to act otherwise.

It is not at all improbable that the obscure pathogenic poison of yellow fever, for instance, may be intrinsically and extremely feeble agent acting on variable susceptibilities. The same may apply to the pathogenic poison of cholera, determining its violence, rendering small-pox distinct or confluent in the same apartment, and in the same, determining the intensity of scarlet fever as simple, anginose, or malignant.

12. The existence of toxicological poisons is of course proven by the evidence of our senses, no one doubts either their existence or the source whence they are derived.

The existence of pathogenic poisons is merely inferential, they having no sensible properties, nor have we apart from animal matter any conception of the material cause of variola, rubeola, equinia, or syphilis, no such substances as variolon, rubeolon, equinon, or spyhilon ever having been either discerned or heard of. Dr. Mitchell claims to have discovered *septon* it is true, but little has been heard of it since his time! The existence of certain external entities determining yellow fever,

cholera, &c., is an *ex necessitati rei*, and the only circumstance which renders such conclusion inevitable is the mere ultimate, naked, and inexplicable fact of the diseases prevailing in one locality and not in another declaring a local cause.

13. Toxicological poisons exhibit curative and therapeutical, as well as morbid effects; are employed as antidotes to each other, and will act any number of times on the same subject.

Pathogenic poisons are purely morbid, and are without therapeutic power. They merely, as in yellow fever, small-pox, &c., confer immunity against a second attack. As it so results that one in three die of yellow fever, as happened as a general result in 1853, and as yellow fever does not afford a guarranty of subsequent health and longevity, the doctrine that acclimation is worth the risk, is not correct—acclimation being simply *risky*.

The data on which it has been attempted to explain the origin of pestilential diseases by the condition of the atmosphere in relation to ozone, are at once simply inadmissible. As a scientific achievement, the disclosures in relation to ozone are most curious and important; but the ætiology of epidemic has not been advanced a single step thereby. Later investigations appear to have given a very satisfactory explanation of the nature of ozone, showing, beyond a doubt, that it is merely oxygen gas rendered chemically active and corrosive like chlorine, bromine, &c., by the action of electricity; and that by this means, from being inodorous and unirritating, it acquires a strong odor and chemical activity like these elementary bodies. Nothing, however, is known of the effects of this electrized oxygen on the animal economy, save that which relates to it as a toxicological agent, Schönbein and others having shown that it is highly oppressive to the lungs, and that small animals are speedily killed by it. The pathogenic power of either the hyper-ozonic or an-ozonic states of the atmosphere in the production of epidemics, comes to us with no other reason or recommendation than the *appearance* of novelty, for the electrical ætiology is not new. It is said that certain coincidences have been observed to exist between the existence of epidemics and the showings of the ozonoscope. The whole circle of reputed causes can boast of equally strong coincidences, and by the same system of reasoning, the whole might be proven to be true at the same time, however contradictory these reported causes might be. A hundred contradictory causes, doubtless, remain to be discovered

with equally invariable coincidences. The invalidity of the ozonic theory may be legitimately inferred without our going out of the chemical laboratory. The ozone of nature's laboratory cannot differ from that observed by the chemist. An abnormal state of the atmospheric oxygen must necessarily be equally visited alike on all; and were such a thing possible as a dangerous hyper-ozonosis of the atmosphere, the result would necessarily be an universal poisoning effect, as veritably toxicological as could be produced by chlorine gas. Whatever evils, on the other hand, might be produced by the anozonic state, must be equally uniform and toxicological. The strong would not be destroyed, and the weak spared, as is often seen in epidemics. The contrary of these positions can never be taken for granted. It must be proven.—Nothing but the strongest and most positive proof can ever be admitted to establish the ozonic explanation of epidemic diseases. The pathogenic poisons of cholera, yellow fever, &c., are endued with habitudes which wholly differ from anything which has ever been discovered, and by nothing which has ever been discovered can these diseases be excited, so far as is known. Nothing but direct experimental proof can be admitted. The pathogenic power can never be admitted on a weaker proof than the toxicological. Both require demonstration, and the former is disproven by the latter.

There is a toxicological poison known by the name of *sulphuretted hydrogen*, which, above all other substances has been accused of creating pestilential diseases. What sanitarians have mystified under the name of filth of all kinds, may be simply referred to this gas. It has, with more truth than poetry, been designated as "the essence of all stinks," constituting the nose-offending agent in all putrefaction and decomposition, whether animal or vegetable. It exhales from the dead carcass, from the filthy gutter, from the bilge water of the ship, from the privy, and explodes from the rotten egg. Toxicologically, it is in a concentrated state, a deadly poison. This gas mixed with the atmospheric air to the extent of only one part in three hundred, and allowed to remain in this condition for a single hour, would leave neither man nor beast alive throughout the city.

As given off from the sources of which we have spoken, it rarely exists in so concentrated a state as to produce fatal effects; though the putrefactive process in a confined atmosphere may readily destroy life. Chlorine and nitric acid, two strong toxicological poisons, decompose sulphuretted hydrogen, and thus destroy its odor. This process is called

disinfection, the disinfectants being equally noxious with the body decomposed, all producing deadly toxicosis when pure. The pathogenic power of the sulphuretted hydrogen in relation to epidemics is wholly unproven, or rather it is simply disproven It mingles with the intestinal flatus; and mineral springs bubbling forth the fœtor of this gas abound in therapeutic properties, and the waters of the same are imbibed without stint. This substance constitutes all that truly enters into the filth platform in relation to epidemics. It constantly abounds in the atmosphere, when the temperature and moisture admit of the putrefactive process. Door-plates, and other silver mountings in front of houses are blackened by it in a few hours. During the existence of the waters of the Sauvé Crevasse, decomposition of water, and animal and vegetable matter was so great where the water shallowed itself out into the city, that silver-ware both inside and outside of houses was blackened, and the white lead on the painted houses was changed to a dirty brown color. No pathogenic effect could be traced out. During the epidemic cholera which has just swept over Jefferson City and the Fourth District of this City, there have been about twenty soap factories in full operation in the rear of the Fourth District, in which a strong odor of this gas is constantly given off. We visited eleven of these factories after the subsiding of the epidemic, and found there had not been a case of cholera in the whole number visited. There had been none in the tanneries; in ten vacheries which we visited, there had been but two deaths from the disease. Gormly's Basin which had been recently almost entirely filled up, and that too mostly with manure, filth, and garbage, there being an extensive disturbance of the earth from this cause, has had, so far as we could learn, but one case on its margin—the case of a little girl who speedily recovered.

The experiments of M. Gaspard in the injection of putrid fluid into the veins of animals, are so extremely crude and inconclusive, that it is not a little astonishing that any importance whatever, should have been attached to them by the late distinguished and lamented Prof. Harrison. Putrid fish-water, and putrid blood and beef water, charged of course with sulphuretted hydrogen gas, were injected into the veins of dogs. Every one can readily realize that a solitary bubble of this gas introduced into the circulation would produce the most disastrous toxical effects. "Two ounces of a fœtid liquid," injected into the veins of a dog was a simple instance of toxicological poisoning by sulphuretted hydrogen, rendering the blood unfit for circulation. It would be very likely

to produce a throwing off of the epithelium, and a bloody oozing in the stomach and intestines. The capillaries would be extremely likely to give way before the rotting influence of a putrefactive poison diffused throughout the system. No light can possibly be thrown on the ætiology of yellow fever by such experiments; nor can any such morbid manifestations be admitted as being identical with those of yellow fever. If common air admitted into the veins is attended with fatal results, what are we not to expect from a poisonous gas?

The animalcular and cryptogamic theories which have been proposed to explain the ætiology of epidemics, are fully liable to all the objections which must present themselves to every mind on a comparison of toxicological and pathogenic poisons. These alleged living entities have never been discovered to exist. It is bad logic to assume the existence of a cause without proof, and to assume the competency of such suppositious cause to produce a given effect. This was the capital error of the astronomical system of Des Cartes. He assumed the existence of enormous vortices of subtle matter without proof, and then assumed the competency of their gyrations as the motor power of the heavenly bodies. Amongst the organisms, both botanic and animated, which have disclosed themselves either through the microscope or to the naked eye, none of a poisonous nature have ever been discovered which can be shown to be any other than of the merely toxicological kind, or that would on exposure fatally poison an adult, and lightly or not at all poison an infant, and produce any effect whatever on the great mass of the people exposed, as in cholera, yellow fever, &c. But the question as to whether the poison of these diseases be assumed to be organized or inorganic, or whether the great mass of the material world, as some have imagined, be but a mass of living organisms, are questions, however they may be decided, that in no way affect the inadmissibility of the animalcular and cryptogamic pathogeny in cholera, yellow fever, &c. When, if ever, the discovery of the venomous organisms is actually made, all analogy shows that they must be simply toxicological, the larger venomous animals and cryptogamia being simply of this character, there being no reason to suppose that the mere question of size could involve any circumstance of importance. The toxicological character thus resulting can never be reconciled with the pathogenic on any basis which has ever yet been discovered. A demonstration to the contrary would reconcile apparent incompatibilities so far as to solve an entirely new problem in philosophy and inaugurate a new era in science.

PROGRESS OF MEDICINE.

In another part of this Journal will appear Reviews of the Transactions of the Alabama Medical Society. It is intended to enrich this number of the *New Orleans Medical and Surgical Journal* by extracting largely from the above-named work as being highly interesting, particularly to Southern physicians, notwithstanding its literary delinquencies which more careful revisions and Southern pride can and must correct,—not that the Alabama Æsculapians should imatate the learned who lived 200 years ago, and who conducted their correspondence, wrote their transactions, and published their works almost exclusively in the Latin. The neglect of classical learning, for the purpose of acquiring a more thorough knowledge of the experimental sciences and their advancements from time to time, however justifiable, furnishes no excuse for the neglect of the mother-tongue. The climate of the South, not to name the mosquito, has been accused of exerting a deleterious influence on mental and literary labor, forgetful that learning first arose, extended most, and lasted longest under the burning sun of India, Egypt, Greece, Rome, and other sunny realms, while a protracted, dismal night of barbarism brooded, until long after the Christian era, over Northern lands,—lands now the most civilized and enlightened by means of the ancient Southern learning which as a waif drifted northward on the waves of a disrupted society.

The present preponderance of Northern over Southern learning is, other things than climate being equal, creditable to Northerners, as the climate of the latter is not really so favorable to mental cultivation as that of the South, for, upon the assumption that the natural capacities of men are equal in all climates, it is nevertheless true, that climates wherein the least amount of time and labor will secure the means of subsistence, must be the most favorable, inasmuch as they afford more leasure for mental cultivation than rigid, cold climates. Besides it might be shown contrary to the assumption of climatic equality, that men, animals, and plants, degenerate in cold climates. The Esquimaux Indians of Labrador and other cold regions in, and bordering upon the Frigid Zone, are the most diminutive in statue, and at the same time the least intellectual

specimens of humanity, being inferior to the savages of warm climates, while in other departments of the animal, and throughout the vegetable kingdom, the contrast is still more unfavorable to the realms of frost, ice, snow, and sterility.—Editor.

Art. I.—Dr. Anderson's *Address.*

Dr. L. H. Anderson, of Sumterville, Sumter Co., Ala., late President of the Medical Association of Alabama, for 1854, at the annual meeting of the Society in Mobile, (Feb., 1855), in his Address, replete with scientific interest, alludes to the contemplated permanent establishment of the Association at Mobile, a measure which was subsequently passed unanimously, and says:—

If in addition to this safe condition of our exchequer, means can be devised to replenish it to the extent of having always enough on hand to offer premiums for essays, if we can, (in the event of the permanent establishment of the Association at Mobile), raise a sufficient sum to provide a Hall we may call our own, with a museum, library, reading-room, &c., which shall be the rendezvous of the profession when visiting the city, an impetus will be given to the prosperity and influence of the association, which will be worth all the time we can spare from the immediate objects of our assembling, to devote to its consideration. I think it not impossible that this object may be attained, if each member will earnestly revolve in mind some means for effecting it.

The proposition made at the last meeting, to alter the constitution, so as to establish the Association permanently at Mobile, deserves our earnest consideration, and I cannot refrain from expressing the hope that it will be adopted. By doing so, and by fixing upon a convenient season for meeting, all uncertainty as to the time and place of our assembling will cease, and a certain stability, highly desirable, will be imparted to our union. The principal object intended to be effected by the change is the very important one of forming a Pathological Museum; and it will not be found difficult, I hope, by the united efforts of the members, to gather in time, a very respectable collection, as well as a library, and specimens of the geology and mineralogy, the medical flora, and some of the fauna of the State.

It requires not a second thought to be convinced that such a cabinet would add immeasurably to the interest taken in the association, to its reputation and efficiency. The materials for a collection among us are ample, and the disposition to make it, I think, is not wanting among our members. There is no one, perhaps, who has, or is able to procure specimens of this character, who would not prefer depositing them in a State collection, to keeping them unappreciated at home. The formation

of a cabinet would give an impetus to the study of pathology, an exactness to medical inquiries, and an interest derivable from tangible interest alone to the investigations of disease, which could be obtained by no other means we could adopt: and we may expect to see in a few years as one of its results, that medical science, among us, has taken a stride—a bound—and secured a position, which the feeble and scarce advancing footsteps of the present day, would require it a generation to attain. A positive contribution to science would be obtained, a home-reared monument of the industry of our own physicians, formed of materials gathered on our own soil, would be raised, which would challenge the respect of the scientific visitor, and be a fruitful source of instruction to us all in the medical history of our State.

What nobler, more enduring, more useful monuments have Hunter and Dupuytren left to attest their genius, and their life-long devotion to medical science, than the great museums which bear their names—which attract in increasing numbers, the student from every quarter of the globe, and through which, "being dead, they yet speak," with eloquence more instructive than the living lips ever uttered, to the attentive inquirer. How concentrated the lessons they teach, how much more they demonstrate in a moment to the eye, than the spoken word or printed page could ever impart.

Then let us by all means endeavor to have a pathological museum—a library, and as fast as they can be gathered, a botanic collection, a geological cabinet, specimens of our natural history, and anything else congenial to medical inquiries which may by degrees be gathered.—Most of us have already some pathological specimens on hand, and may easily obtain others; all have some books that could be spared towards forming a library; and there are, doubtless, among our members those who have paid particular attention to the various collateral branches, and would cheerfully contribute specimens to give variety and interest to the collection.

I take it for granted that every physician in the State who feels interested in medical progress—who has any ambition to be something more than a drone in the professional hive—who is willing to give and receive instruction, and who would gladly make an annual escape from that *isolation* of position, feeling, and interest, to which our profession is unhappily so much exposed; will, when the means of intercommunication now in progress throughout the State are perfected, ultimately become a member of this association. If reputation be the object of any, it is in his power with moderate exertion to acquire, by his connection with it, quite as much as he deserves or could reasonably desire. He has only to be assiduous in elaborating the materials which daily opportunity puts within his reach, and to present them in proper form to the association, to obtain a reputation, which will be readily acknowledged by his brethren within the State, and will speedily extend beyond its borders. At the same time he will enjoy the greater advantage of improving himself, and the satisfaction of instructing others.

Almost every locality presents peculiarities arising from moral, physical or social causes, which none but the observer who resides on the spot is in a position to develop, and it is a duty which he owes to his profession and himself, to bring them to light. The aggregate of information thus obtained from the observation of things, in themselves very trivial, may elucidate some practical point of the first importance in the cause, prevention or cure of disease.

Of the gigantic strides of modern Charlatanism, Dr. Anderson speaks fearlessly:

The subject of disqualification for fellowship with us, leads naturally to that of quackery and empiricism, some allusion to which seems almost indispensable on occasions like the present. Our association has done wisely in having nothing to do with those who soil their garments with quackery; and I am persuaded that, to "*let it alone very severely*," is the best course for us all to pursue with the foul thing. We but give it the notoriety it craves, and thrives upon, by any direct and public attacks upon it. To reason with the illiterate is confessedly vain, and experience shows that education and intelligence do not guard men against its delusions. It is among the so called intelligent classes, that the various 'pathies find their support, while the ignorant are the equally willing victims of less pretentious impositions. Unless men could be taught common sense, led to reflect how stupid it is to reject as worthless the labors of all the bright and pure minds that for over two thousand years have toiled to discover the cause and cure of disease—each taking as a starting point, the spot his predecessors had reached—and in place of their conclusions to adopt the misty theory of some shallow sciolist, or the crude notions of some illiterate quack, we cannot cure mankind of their proclivity to empiricism.

Taking men as we find them, the few only are capable of judging of the merits of any system of practice, or of him who dispenses it. They indeed steadily adhere to what they feel to be right, but like the true physician, make but little noise about it. But the multitude with capacious gorge, are ever ready, physically and mentally, to swallow any thing however monstrous, and if they escape alive, to utter loud hosannas to what fails to kill them. The Charlatan fails not more loudly to echo them back, and with big words, lying certificates, taking pictures, and every device the wit of those who are too lazy to work can suggest, ever draws fresh victims in his net. He is backed by the noisy many, the intelligent physician by the quiet few. How worse than useless then to enter the lists with such antagonists, and before such judges. No! Let the true votary of science go on the even tenor of his way, satisfied to do his duty to himself, his profession and his fellow men, assiduously studying out the hidden sources of disease, and ransacking the arcana of nature for their remedy—assured that "truth is mighty and will prevail," and that he owes it to the cause of truth, not to falter in its investigation; to its dignity, not to provoke a contest with mean assailants,

and to its public estimation, not to bring it to trial before a prejudiced and incompetent tribunal.

Be it ours therefore, in our treatment of quackery, to let it alone—to touch not, handle not, regard not the unclean thing—to eschew it not only in its vulgar and flagrant forms, but "very severely" also in its secret manifestations—scorning to increase our emoluments by pandering to the diseased imaginations of those who would gladly be imposed upon by a mixture of its delusions with an authorized system—avoiding religiously all encroachments on the just rights of our brethren; depreciating them never, by word or deed, gesture or grievance, but sustaining them by commendation when due, and avoiding censure for errors we may know they did not willingly commit—in short, following ever and to its utmost extent the infallible precept, so worthy of its Divine Author, of "doing to others as we would have them do unto us."

But I would fain quit so ungrateful a theme. It has been said by high authority that there is as much quackery in the medical profession as out of it, and with so much less excuse, that the illiterate empiric may be self deceived, the professional one cannot be. But the sweeping assertion is not to be credited. I hope that compared with true merit, quackery is a mere mote in the professional eye, but the mote is still an obstacle to clear vision, and ought to be removed. This done, we may then consider whether the beam that is in the eye of empiricism, and the great public eye, may be best cast out by direct effort, or by striving to render the merits of the profession so clear, that the beam may of itself fall out, by making our light so shine before men, that they may see our good works, and gladly receive us as their "guides, phlilosophers and friends."

ART. II.—*Diseases and Quarantine of Mobile* for* 1854: by GEO. A. KETCHUM, M.D.

THE following table exhibits the mortality in Mobile, for the year 1854. It must be borne in mind in examining it, that the country for miles around the city is tributary to our grave yards, and the table might therefore be said to represent a much larger population than that of the city alone:

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* According to the census of 1850, the total population of Mobile is 20,515; of which number 12,997 are whites, 715 free colored, and 6,803 slaves.—ED. N. O. MED. JOUR.

MONTHS.	WHITES.		BLACKS.		ADULTS.	INFANTS	TOTAL.
	Male.	Female.	Male.	Female.			
January	21	14	11	17	42	20	62
February	32	9	14	7	36	26	62
March	34	20	9	13	44	32	76
April	27	16	14	10	34	33	67
May.....	25	21	16	6	26	42	68
June.....	47	14	18	14	58	35	93
July	47	17	19	13	48	48	96
August.....	39	19	14	8	41	39	80
September ...	71	27	13	10	82	39	121
October	43	19	18	10	59	31	90
November ...	27	25	9	7	43	25	68
December....	17	23	11	11	38	24	62
Total....	430	224	166	126	551	394	945

An examination of the above table will exhibit the following suggestive facts; the deaths among white males are nearly double the mortality of white females. This fact we may attribute to two causes —first, that our city being a strictly commercial one, the males outnumber the females; and second, the males are exposed to all the vicissitudes of weather and climate, and the numerous losses of life from casualties, &c. Again, the table shows that the greatest mortality among males is during the warm months, from June to October. Their avocations, of course, expose them more to the sun and the influences that produce sickness and death, during those months, than females.— In September, the deaths of white males were seventy-one, whilst of females there were but twenty-seven during the same time.

It will be seen, too, how greatly the mortality among whites exceeds that among blacks, being as six hundred and fifty-six to two hundred and ninety-two. During the two months, August and September, when the whites record their greatest mortality, the deaths among the blacks are below the average of other months. The total deaths for the two months among whites, is one hundred and fifty-six; the total among blacks, but forty-five. These facts show that the blacks resist to a greater degree than the whites, the morbific influences that swell so largely the bills of mortality for that season of the year. * * * Lastly, look at the miserable failure of our own quarantine against the fever of 1854. *The decided presence of imported and native cases here last season, in spite of the quarantine, proves the utter worthlessness of the measure.* There were thirty-eight deaths from yellow fever in Mobile last season: say that one death occurred in every eight patients, which is a liberal calculation, and there must have been three hundred and four cases, and these were in every part of the city. Surely, if there was

any power in the disease to propagate itself by contagion, here were sufficient points to radiate from, but no such disposition manifested itself and we do not know of a single instance where, during the season, the contagionists could claim a single fact to support his doctrine.

Another significant fact in the same connection is, that the yellow fever was prevailing in Montgomery during the enforcement of this quarantine, yet we had daily communication with that city and did not quarantine steamboats plying continually between the two points. Why were we not scourged by this disease? Cases of it were landed continually from these boats. This simple fact shows the utter absurdity of attributing any protection to our city last season to the quarantine.

These examples might be multiplied indefinitely, but enough have been mentioned to demonstrate the truth that quarantine against yellow fever in a latitude in which the disease is native or endemic, when all the causes are operative which produce it, is useless. That the facts belonging to the history of this disease do not afford any ground for the enforcement of such laws—placing, as they do, ruinous and vexatious restraints on commerce and trade, squandering large sums of money, dooming their victims to cheerless insulation and withering neglect, and giving, at best, to the neglect of other more useful measures, but a false security to life.—Even admitting that it might be a measure of safety against the introduction of yellow fever in Mobile, there is another view that must be taken of the subject, as applicable to this place—that is, the impracticability of establishing here a *perfect* system of quarantine against yellow fever—and, therefore, the utter uselessness of any at all. To enforce a rigid or perfect system of quarantine it will be necessary to quarantine all vessels, boats, goods, and passengers coming from infected ports, for a period of not less than twelve or fourteen days, when any cases of the disease have occurred on the passage hither, for the period of incubation of this disease has been often proven to extend over even a greater time than that.

This rule must apply to the mail boats running between here and New Orleans, where they have native yellow fever every year. Passengers should not be allowed to land from those boats, &c., &c.

The first death reported yellow fever, was on the 7th of August. The case was an imported one, having occurred on board a vessel from Matanzas, two other deaths from it were reported during the month, both of which, were from abroad. In view of the excitement produced in the public mind by the importation of these cases, there was a cry for a quarantine against all vessels coming here from infected ports, therefore, on the 28th Aug., the mayor having consulted and advised with the board of health, declared the quarantine laws of the city in force; a quarantine station was appointed in the lower bay, and the laws were as strictly enforced as was practicable.

During September, there was much colic, dengue fever, and some cases of yellow fever. The mortality from the latter disease during the month, was twenty-two, many of these cases were from abroad; the

most of them from New Orleans; many persons coming here from infected places were taken sick after arriving. A good many cases originated in the city, but the disease showed no disposition to spread or become epidemic, nor do I know of a single case where the advocates of its contagiousness could find an argument to support their theory. The attacks generally were not of a very malignant character, and when they were treated early in the attack and were so circumstanced, that they could receive careful nursing and attention, the larger proportion of them recovered.

I believe that the abortive treatment, that is, the *judicious* use of quinine *early* in the attack is the treatment "*par excellence.*" Exceptions must occasionally be made in the use of this remedy of course, but it will be found admirably adapted to a large proportion of attacks. The cautious use of purgatives, baths, the exhibition of mercurials should receive early attention. Throughout the attack a careful attention should be directed to the condition of the stomach, the capillary circulation and condition of the skin, &c., &c.—(*Trans. Med. Asso. Ala.* 1855.)

ART. III.—*Report on the Diseases of Talladega County, Ala.:* by W. TAYLOR, M.D.

THE general aspects, soil, climate and productions of a country are considered essential in a report of its diseases. The topography of Talladega county has not, so far as we know, ever been embraced in a medical report.

Talladega county lies between the parallels 33° and 33° 50′ N. latitude—85° 50′ and 86° 30′ W. longitude—embracing within its borders an area of territory of about two thousand square miles. These estimates are not supposed to be entirely accurate, but are given as an approximation of the true figures. Her valleys lie at an elevation of about seven hundred feet above the level of the sea, while some of her mountains attain an elevation of from five to eight hundred feet higher. The face of the country is beautifully diversified with mountains and valleys. The principal valley, Talladega, runs in a north-easterly and south-westerly direction, through the entire length of the county, and, in point of fertility, abundance of pure limpid water, and the beauty of its scenery, cannot be surpassed in the State. The soil is usually a red and mulatto loam, and rests, as a general thing, on substrata of clay and limestone. It is better fitted for the production of the cereals than the great southern staple (cotton), notwithstanding the latter is largely and profitably cultivated. Limestone springs are abundant throughout the valley, furnishing water bright and sparkling as crystal, and many

of them affording sufficient in quantity to drive a mill. In addition to these numerous springs, the valley is traversed by several large creeks or streams which give to it a fertility and water privileges which Bœotia, in her most favored days, might envy. These creeks run with a quick, rapid current, and discharge themselves into Cooza river, which washes the western border of the county. The banks are usually high and present numerous sites for applying water-power to machinery. There is, comparatively little swamp land along the course of these streams, but it is not unusual for large bodies of "cotton land" to lie on them, which are subjected to occasional inundations. These lands, however, are never long submerged, and become quickly dry again on the subsidence of tides, which, owing to the rapidity of the streams when swollen seldom last more than a few hours.

Running parallel to the valley, varying in distance from eight to twelve miles to the westward, is a range of mountains rising to an altitude of about eight hundred feet above the level of the valley.—These mountains form a spur of the great Alleghany range, and bear with it many analagous characteristics. Intermediate between this range of mountains and the valley is a broken, hilly region which has been but little disturbed by the hand of the husbandman, and retains, even at the present day, most of its primeval aspects and features. This section of the county is sparsely settled and abounds in game, amongst which are found deer and wild turkeys; wolves, wild cats and foxes are also not unfrequently found.

The physical character of this region is altogether different from that of the valley. The valley is embraced in a silurian formation, while the latter lies wholly in the metamorphic; in the valley we have large lime stone springs, in this district are found ten thousand seeping perennial springs, with free-stone water, forming a thousand meandering streamlets, growing gradually into large creeks, which traverse the valley, and give to it its characteristic freshness and fertility. The soil of the valley consists of a red and mulatto loam, resting on clay and limestone, while the soil of this broken region is ordinarily gray, and usually rests on substrata of clay, mica-schist, talcose, slate, etc. In the growth of the forest timber there is also a marked and striking difference.

The district of the county lying south and east of this mountain range bears the same general features of the section spoken of in the preceding paragraphs, and, like it, presents all the characteristics of the true metamorphic system. There are, however, numerous small bodies of arable land in this section, which afford comfortable homes for a hardy, honest, and industrious population. This portion of the county is better known as "Hillabee," and, notwithstanding the unevenness of the face of the country, supports a heavy population, who are, as is the case with the inhabitants of mountainous countries, not so much distinguished for wealth as for virtue and patriotism.

West of the main valley of Talladega is an isolated chain of moun-

tains, running parallel to the greater range on the east. This commences in inconsiderable hills, immediately south of Cheahah, a large creek pouring itself into Chocolocco, one of the noblest streams of East Alabama, stretching out sixteen or eighteen miles in a south-westerly direction, it terminates rather abruptly several miles above the junction of Talladega creek with Coosa river, after attaining an elevation of several hundred feet above the level of the surrounding country. These mountains, like the valley, are salurian in their formation. Their blue waving outlines, seen from the distance in the valley, present a scene truly beautiful and fascinating to the eye; while the extensive forests and numerous purling streams of their sides, together with the myriad streamlets of the metamorphic range, give to our inhabitants an equality of temperature and a salubrity of climate rarely equalled, and, perhaps, never excelled by any section of the interior.

From the physical character of the country it would follow almost *a priori*, that the greater portion of the county, at least, would be healthy. The history of the county for the last twenty years, we believe, pretty well sustains this conclusion: anterior to that period we have little definite knowledge relative to its sanitary history. We know, however, that up to that time it was inhabited by the Creek Indians—a nation of aborigines, which, for mental vigor and physical prowess, were not surpassed by any of the Indian tribes of the Western continent—and if the climate was then adapted to the highest mental and physical development of the Indian, we can see no just reason why it may not now be well suited to a high development of the anglo-Saxon and anglo-Norman races; and such we believe to be the case. We believe that the climate of Talladega is consonant with the highest development of the physical and mental man; and that its sanitary condition, taken for a series of years, would rank as high, perhaps, as any other section of the Union. Yet we would not claim for it an entire immunity from disease. So long as man is mortal and continues to violate so many of the material laws of his nature, he must expect to be subject to the penalties—disease, suffering, death. The pioneers of the county, like the early settlers of all new countries, paid the penalty of encroaching upon the wild domains of nature, by felling her primeval forests and tilling her virgin soil, in suffering frequent attacks of bilious, remittent and intermittent fevers. For many years after the settlement of the county by the whites, the inhabitants suffered chiefly from diseases of a malarial character; and even at the present day, in the western part of the county, bordering on Coosa river, diseases of this character prevail to a very considerable extent during the summer and autumnal months. Diseases of this type are also, to some extent, prevalent during these months along the course of the larger streams traversing the valley. But in far the greater portion of the county the character of disease has changed, within the last few years, in a remarkable manner. Bilious, remittent, and intermittent fevers have measurably disappeared from many sections where they were once prevalent, and diseases with new phases, and presenting

different manifestations have taken their place. The simple forms of malarial disease have been supplanted by a more complex type; and diarrhœa, dysentery, typhoid fever, and other irritative fevers chiefly prevail. And here it may, perhaps, be worthy of remark, that in the mountainous districts of the county, particularly portions of that section lying east of the mountains, in the metamorphic system, the inhabitants have ever been relatively free from the common forms of miasmatic disease, but have been for years subject to dysentery and typhoid fever.

Until the year 1851 the valley of Talladega claimed a happy exemption from the visitations of epidemic dysentery. In September of that year, however, it made its appearance, marching down in a narrow strip, of only a mile or two in width, through the centre of the valley. Many of the cases were severe and protracted, but the mortality was light. In the year following, (1852,) it made its appearance, in a much more malignant form, on the eastern margin of the valley along the line of demarcation, between the silurian and metamorphic systems. Its influence was felt only a short distance in the silurian district, but its ravages extended several miles into the metamorphic. The greatest force of the epidemic was expended along the line, between the two systems.—During this year the other parts of the country were relatively free from the disease; only a few sporadic cases occurring, and these few mild, and yielding readily to treatment. In 1853 epidemic dysentery presented itself in a most malignant form in the north-western part of the county, where the silurian district of Talladega borders on the coal measures of St. Clair. It was here peculiarly fatal, and its visitation will long be remembered by many whom it caused to mourn the loss of friends and relatives, cut off by its ravages, alike in bloom of youth, and the ripeness of mature age. Dysentery prevailed, however, this year to a considerable extent in other parts of the county, chiefly as a sequel to the measles, which was also at that time with us. It was, in many instances, extremely difficult to manage, and several deaths occurred from it, under these circumstances, after the patient seemed to have made a good recovery from the original disease.

February presented a few cases of pneumonia, with quite a number of cases of catarrhal fever. Regarding pneumonia, as it commonly occurs in our southern country, little more than an inflammation of the lungs ingrafted on a remittent or intermittent fever, a liberal use of the sulphate of quinine, with a few adjuvants was resorted to with marked success. Blood-letting, in most instances, is sedulously avoided. However well patients laboring under this disease may bear venesection, in Europe and the north, experience teaches us that it is, to say the least, a doubtful practice with a southern patient. Towards the latter part of the month we saw several cases of typhoid fever, and observed a marked tendency in nearly all other forms of disease to assume a typhoid type.

March.—Typhoid fever still continued prevalent, with an increased disposition on the part of other diseases to assume a continued form. Our treatment of typhoid fever is simple and expectant, if the disease

were in its incipient stage, its form doubtful, and its characteristic lesions not properly developed, a liberal administration of quinine, with an occasional laxative, was most commonly resorted to, and often with entire success; and in this manner, we believe the disorder may often be cut short. But if, on the other hand, the characteristic symptoms of the disease had become obvious, manifesting themselves in tenderness of the bowels, tympanitis, delirium, subsultus and the various other symptoms which distinguish this disease from the simple forms of malarial fever, these remidies were discarded and an expectant treatment adopted.—Purgatives were sedulously avoided, and the quinine, if used at all, was only administered, with a view to its tonic properties, or, to break down any remaining periodicity which might show itself in the course of the disease. The condition of the skin in typhoid fever, as in all other forms of fever, was considered of great moment in its treatment—our constant aim being to keep it soft and pliable and gently acting. For the purpose of keeping the skin acting, small portion of tart. emetic—from the twelfth to the eighth of a grain—every two, three or four hours, as the nature of the case might require, were of essential benefit. But if, from irritability of the stomach or bowels, the tart. emetic was inadmissible, a diaphoretic pill, composed of one-fourth grain of ipecac, and one-sixteenth grain sulph. morphine, was usually substituted with great advantage. If the bowels were tender on pressure and the abdomen dry and hard, poultices and warm fomentations were considered of essential service in reducing the fever and quieting the system. If the bowels were tympanitic and the tongue presenting a dry brown coat, spts. turpentine in doses of eight or ten drops, repeated at intervals of six or eight hours, was confidently relied on as a remedy to remove those conditions. But if, as was sometimes the case, the stomach was unable to bear the spts. turpentine, the liquid chloride of soda or the dilute nitric acid, administered in their respective doses, every six hours, proved to be a happy and valuable substitute. As a remedy for the delirium, which usually accompanies this fever, we have found nothing more serviceable than a mixture composed of equal parts vin. antimonii, tinct. opii. et tinct. camphoræ. Of this mixture a tea-spoonful was administered every four or six hours, as the condition of the case required. I need not add that stimulants were regarded as peculiarly applicable in the advanced stages of the disease.

A degree of interest may be attached to the following case in the minds of some, as proving, in a remarkable manner, the length of time which medicine may lie dormant in the system: On the 9th of March I was called to see M—— S——, aged 19. Has been ill with typhoid fever several days; pulse about 100; deafness, stupor and delirium; bowels irritable and tender on pressure; discharges frequent; borborygmus and tympanitis; has a strong sulphurous odor. On inquiry, learned that he had taken an ordinary dose or two of cream tartar and *sulphur*, for itch, about the first of February; rubbed with sulphur ointment on the 13th of February, and was wet by rain a few days after-

ward; took cold, and has not been well since. Thinking that the sulphur was only attached to the skin and clothes, I ordered a thorough ablution, with soap and warm water, and an entire change of bed-clothes and linen. No trace of sulphur was now perceptible to the senses; but in less than thirty-six hours the sulphurous smell had returned as strong as before. Ordered warm bath and change of bed-clothes and linen, as in the first instance, which for the time freed the room from all the odor of sulphur. But the odor was soon again replaced by exhalation from the body of the patient, which remained until the hour of his death. How far the sulphur may have been instrumental in producing the disease, or in aggravating it, we are not prepared to say.

During this month (May,) I was called several times to the plantation of Mr. R. S. Jemison, who had twenty-four or twenty-five cases of typhoid fever among his negroes, besides a number in his white family, which consisted of six or eight members. I met those cases in consultation with the attending physician, Dr. J. W. Dowsing. The per centage of mortality was light, only two deaths occurred from the disease, Mr. D——, aged about 20, and a negro woman aged about 30. Both these cases were protracted, the former was clearly a case of relapse, and died about fifty days after the original attack, and about fifteen after the second; the latter died about the thirtieth day. The treatment was substantially the same, as laid down on a foregoing page.

June.—Generally healthy; a few cases of dysentery occurred about the last of May, and other cases continued to appear up to the middle of the present month; notwithstanding some of the attacks seemed severe at the onset, the disease uniformly yielded to remedial treatment. The treatment was commenced with saline cathartics, followed by anodynes, and so successfully did this treatment generally prove, that it was seldom necessary to resort to any other remedies.

The third quarter commencing with the first of July and ending with the last of September, was remarkably hot, dry and dusty, winds generally from an easterly direction. But little rain fell during this period, and the weather was perhaps hotter than has been experienced before for a great number of years, yet with all of these unpleasant conditions, it was generally healthy. In the first month (July) of the quarter I saw in consultation with Dr. West, a likely negro girl, aged 17, property of Maj. J. E. Roberts, the third case of a highly malignant grade of typhoid fever, occurring on the same plantation, all of which proved fatal in the course of four or five days. The outset of the disease appeared mild, yet it proved to be "shod with wool but armed with iron." The patient made no complaint at any time of illness, but seemed to sink down rapidly from prostration of the nervous system. It should be stated that there were several cases of a milder form of the disease on the plantation at the same time; and it is also worthy of remark, that all three of the fatal cases were members of the same family, of good constitutions, but did not all live in the same house. Would not these facts seem to argue something like an inherent (perhaps hereditary) predispo-

sition in some constitutions, favoring the malignancy of the disease?—Such cases will in all probability, never be treated successfully except by *premedication!* Like many cases of yellow fever, cholera and plague, the patient receives his death-stroke in the attack of the disease.—(*Trans. Med. Asso. Ala.*)

ART IV.—*Gun-shot Wound of the Lungs:* reported by E. P. GAINES, M. D., of Mobile, Ala.

THE pistol contained three balls and was nearly touching the body when it was fired. When first seen, blood and air were issuing out at one of the orifices near the right nipple, and that with fright and nervous shock he was nearly in collapse condition. He had taken a little wine; there was but little bleeding afterwards. He was kept perfectly quiet, put under the influence of arterial sedatives, and went on well for two weeks; fever then set in with a constant dry cough, and on percussing the chest, entire dulness of the whole of the right lung was made evident; believing there had been too great an effusion of the coagulable lymph, he was put upon the use of small doses of calomel and as soon as the gums became slightly sore, began to show signs of amendment. He is now perfectly well, and can take as much active exercise as any one. The case at first, had a very unpromising aspect, but so many recoveries of late years have been reported, of gun-shot wounds of the lungs, as to inspire us with hope in seemingly desperate cases.—(*Trans. Med. Asso. of Alabama*, 1855.)

ART. V.—*Remarks on Surgery:* by J. C. NOTT, M. D., of Mobile.

THE success of a surgeon depends much upon the climate, and peculiar circumstances in which he may be placed. No operator for Lithotomy, for example in any part of the world has had such uniform success as Dr. Dudley of Kentucky, and without wishing to detract from his well earned fame, I would say that his success has depended quite as much upon local influences as personal skill. If Dr. Dudley had performed his operations in London or Paris, he probably would not have been more fortunate than Astley Cooper or Dupuytren. The foul air of a large city, differs widely from that of a healthy little town like Lexington, Kentucky, and when we add to this cause the still more polluted air of large hospitals, the contrast becomes more striking.

The atmosphere around Mobile Bay, (I presume the same remark would apply to the Gulf coast of the United States generally) is peculiarly favorable to the success of surgical operations. Compound and complicated fractures which are considered by the best authorities as cases for amputation, generally do well here—amputations are much more successful than in any printed statistics, and so with all other surgical cases.

In amputations of the extremities, I almost invariably adopt the flap operation, and have every reason to be satisfied with it, except in amputations below the knee. In operations below the knee, the old circular operation is unquestionably the best; when one large heavy flap is made from the calf, the weight is so great that firm adhesions form with difficulty and cures are tedious.

I beg leave to call the attention of the profession to a pathological fact connected with *Cataracts* of Alabama, which I think worthy of more full investigation. We are informed by all writers on diseases of the eye, that the cataracts of adults, and particularly those of middle and advanced age, are almost always hard, and for this reason, the operation of extraction is generally preferred to that of depression or absorption.

I have now been practicing in Mobile nearly twenty years, and during this time, have had occasion to operate very frequently for cataract—very few of these have been congenital, and very few under adult age, and though my statistics have not been carefully kept, I am satisfied that four out of five of the cases operated on, have been soft and not a few milky. To this fact, I attribute a degree of success in my operations, which is remarkable, for I do not pretend to any peculiar merit as an oculist. I have always commenced my operations upon the presumption that the cataract was to be a hard one, and if so, my plan is to displace it in the usual way. I generally find the lens too soft to bear the pressure of the needle, and have broken it up and left to be absorbed *in situ*. I really approach a case of cataract with more confidence of success than any capital operation in surgery. The question arises, is there any thing in our climate or other local circumstances which can explain this peculiarity of our cataracts, or is it chance which has thrown so large a portion in my way. I should be glad to have the experience of others on this point.

Calculus is a rare disease in South Alabama; I have operated on but one case of stone in the last twelve months. Since my residence in Mobile, I have operated on but twelve cases and have heard of but one other presented for operation during that time. The operation selected has been uniformly the lateral, and with the gorget—all have been successful. One died from pleurisy, from imprudent exposure, a month after the operation, while fairly convalescent. It is worthy of remark, that the calculi operated on in Mobile, give an average of size, far beyond what I have seen recorded elsewhere. One operated on by myself, was as large as an orange, and another by my friend Dr. Levert, was not much less; they both had to be crushed before they could be extracted, several

others required also to be crushed. Out of the small number extracted by myself in Mobile, four will average higher than any four in the immense collection of Dr. Dudley; I examined his collection with care several years ago and was surprised at the fact.

The apparatus which I have used for twenty-five years, for fracture of the thigh, is a modification of the double inclined plane, and this apparatus is now generally adopted in our city; if the management of this apparatus is properly understood it is simple in application, more comfortable to the patient than any other, and more certain to prevent deformity.

I present to the association an instrument for the excision of tonsils, which simplifies the operation very much; it consists of a pair of strong scissors with a short curve and two little hooks on the blades to catch the parts excised. The operation may be compared to snuffing a candle, and is quite as easy. This instrument is now manufactured by George Tieman, No. 63 Chatam-street, New-York.—(*Ibid.*)

ART. VI.—*History of a Carcinomatous Tumor:* by W. C. HICKLIN, M. D., of Mobile.

On the 18th of December, 1845, I was called to see a little girl, the daughter of J. L——, two years and six months old ; a remarkably intelligent child, of precocious intellect; dark hair and eyes, swarthy complexion and lymphatic temperament. About three weeks prior to seeing the patient, the mother informed me the child was indisposed and occasionally complained of pain in the left hypochondriac region, yet imagining nothing serious ailed the child, deferred consulting a physician until she observed blood mixed with the urine and considerable swelling in the left side. At this time the little patient was suffering from fever and derangement of the secretory organs. On examination I found a tumor in the splenic region of considerable size, at least three inches in circumference, hard and unyielding. From its location, I did not hesitate to pronounce the tumor an enlarged spleen. The treatment consisted in small doses of calomel and ipecac until healthy secretions were established, warm bath at night and emollient applications to side; rubbing iodine ointment over the tumor daily; this treatment was pursued until the 25th, at which time I thought the swelling had decreased a little, and the induration less. The parents of the child being anxious to return home, (twelve miles from the city) I readily assented, believing the patient would recover in a short time by fully carrying out the treatment recommended. In addition to the above, I gave internally Lugol's watery solution of iodine, and iodide of potassium, night and morning. I heard no more of the patient until January 27th, 1846, and to my astonishment I found the tumor filling up the entire abdominal cavity, presenting a

uniform hard feeling, except a small space in the right iliac region.—Patient emaciated, constant hacking cough. I called in consultation an experienced medical gentleman, whose opinion after a careful examination, concurred with mine, as to the diagnosis of the case. Believing there was an abscess formed in the spleen, I at once introduced a trocar about the angle formed by the junction of the epigastric, hypochondriac, umbilical and iliac region, being the most prominent point. On a withdrawal of the trocar, considerable blood passed through the canula, and several small particles of matter of the consistence of brain; compressing the particles between my thumb and finger, I ascertained it had the consistence and color of brain.

Three days after the operation, the patient died, and by earnest solicitation, I was permitted to make a post-mortem examination.

The arch of the colon extended obliquely across the anterior part of the tumor and considerably to the right side; the stomach lay on the superior and posterior part of the tumor, pressed up against the diaphragm. Detaching the colon, I observed the spleen lying on the superior and posterior part of the tumor, perfectly healthy in size and texture, disconnected with every thing save the tumor, the attachment to that being slight. On the superior left portion of the tumor there was a projection of two inches in extent, pressing upon the inferior portion of the left lung. On dividing the diaphragm, the lung presented a dark livid appearance, engorged with blood, from the pressure of the offshoot of the part of the tumor above referred to. This pressure accounted for the cough which was so harassing. The adhesions were extensive, especially in the right and left lumbar regions, requiring considerable force in detaching the tumor. Its weight is from six to eight pounds. After removal, on making an incision into it, I found the central portion pultaceous, becoming more consistent the nearer the approach to the circumference, where it is as firm as the cineritious portion of the brain. The father of the child is of consumptive habit. Two of his brothers and a sister have died of consumption before reaching 30 years of age.

Here we have presented a carcinomatous tumor, of enormous size (considering the age of the patient) formed upon a serous membrane, compressing the abdominal and thoracic viscera to such an extent as to prove fatal in so short a time, and in such a young subject, as to make it a case of some interest to the profession. The question arises, whether or not there exists a relationship betwen tubercular diathesis and development of carcinoma. Dr. Carswell remarks, if carcinoma makes its appearance in individuals, however they may be placed in regard to the operation of what are called predisposing and exciting causes, there must be present in such individuals a peculiar condition or disposition of body, previous to the manifestation of the disease.—(*Trans. Med. Asso. Ala.*)

ART. VII.—*Report on the Diseases of Cahaba and its Vicinity:* by M. TROY, M. D.

THE valley of the Alabama river, in which Cahaba is situated, is at this point about four miles wide. It bears unmistakable evidence of having been in former times the bed of the river, when its waters and doubtless the waters of the whole country far transcended the present limits. The soil is such as necessarily results from the subsidence and settling of turbid waters; the heavier particles seek the bottom first, and the lighter ones are gradually deposited upon them. The surface is composed, therefore, of the finest clay and sand, almost impalpable, which is easily converted into mud or dust by rain or drought. It is not retentive of moisture, but becomes rapidly dry, after being perfectly saturated. As we descend, this fine clay becomes gradually more and more mixed with sand, until at the depth of six or eight feet, there is little else but sand, which becomes looser and coarser, until near the limestone upon which the deposit rests it consists of loose gravel, pebble and small stones.—These were all rounded and polished by the action of water at the time when four miles wide, the Alabama river poured its mighty flood of turbid waters into the gulf.

At a depth of about thirty feet the soft limestone is reached, which serves as the formation of the deposit, and in which the present channel of the river is worn. Before reaching it however, water is always found which suplies the surface wells of the town. This is of tolerable purity, and is used by about one-half of the people. The remainder are supplied by Artesian wells, bored through the limestone, to a depth of about four or five hundred feet. There are about fifteen of these in town, averaging about one hundred gallons of water per minute, apiece. This water is beautifully clear, and free from organic matter, and is not much impregnated with saline impurities. But it is too warm for pleasant drinking; its temperature being 71° Fah. and it is also said by those unaccustomed to its use, to have a flat taste, probably owing to its containing less carbonic acid than the water nearer the surface.

Either water is probably pure enough for all practical purposes, as I have never been able to detect any difference in the liability to sickness of any kind, between those who use the one and those who use the other. Neither can probably rank as an element in the production of the diseases of the place.

Where Cahaba is situated, the river occupies nearly the centre of the valley, the hills or bluffs being about two miles distant on each side.—Its banks are here of the same height on both sides, and both are occasionally overflowed, once in ten or twelve years on an average. The town is situated on a plain about a mile square, almost perfectly level but much cut up by ditches, ravines, or gullies to convey away the rain water, (which, owing to the extreme flatness of the situation would be disposed to stand,) and that of the Artesian wells.

There are no ponds or stagnant water in the immediate vicinity. But

the great quantity of water brought to the surface by the numerous Artesian wells is all conveyed to the river in open ditches, which in the summer, the hogs keep in not the nicest condition. These ditches converge on all sides to a large natural ravine, which, taking its rise by a number of gullies about the centre of the town, affords an excellent natural outlet to its entire drainage. A rapid stream of fresh water is constantly supplied to it, and near its mouth it is well shaded by trees.

The Alabama river here, flows nearly south, and the town is situated immediately upon its west bank. The Cahaba river empties just at the ferry, at the foot of the main street of the town, but does not skirt its north side as might be imagined, but immediately before emptying, makes a great elbow, so as to circle the town at least a mile from it.—A line (or street as it is) drawn at right angles to the Alabama river, commencing at the mouth of Cahaba, would at the distance of about a mile, again touch that river, at the north western extremity of the town, while at a right angle to the middle of this line, the river is at least a mile distant. Between this river and the town is a level flat, for the most part overgrown with brushwood, but containing one or two small fields.

A very small creek, after striking the western edge of the town, enters the Cahaba just where the street from the ferry again touches that river. It has steep banks and very little low grounds, is dry in summer, and is altogether too insignificant to exert any influence upon the health of the place.

To the south the country is also level and overgrown with thickets of brushwood. The town is not thickly built, except two or three squares in the business portion of it. The dwelling houses are scattered over the whole square mile, nearly every one having a garden and yard of one or two acres attached. There is no where any crowding or want of room, and ventilation is good. It is not more dirty than villages usually are, though it has not the neat swept appearance which would be desirable, and it is only moderately supplied with shade trees.

The population is about one thousand, and are nearly all able to afford the comforts of life.

Total deaths in 1854 in the town of Cahaba, twenty-seven; from the following causes—Typhoid fever, 2; intermittent, 1; remittent, 2; convulsions, 1; phthisis laryngea, 1; tubercular disease of the mesentery, 1; marasmus, 1; delirium tremens, 2; intemperance, 1; dysentery, 7; diarrhœa, 3; dropsy, 1; cancer, 1; ramollisement [?], 1; drowned, 1; overlaid, 1. Whites, 16; blacks, 11.

Of the dysentery in this district in 1854, Dr. Troy says, "that this disease did not affect negroes more than whites, nor did they bear the disease any worse. Children were more liable to it than adults, and in them the disease was more obstinate and severe."

The youngest patient I saw, was nine months old, another was only a year old; both had severe attacks though both recovered.

In a disease which is refractory under all treatment, a great many

remedies are always tried. In the beginning of the epidemic the favorite prescription was of course blue pill and opium, or calomel, opium and ipecac. The liver would respond with great readiness to the action of the mercurial, and we would be gratified to find on our next visit, a chamber full of dark bilious fæces, containing hardly a trace of blood; and though our patient would be complaining of increased pain, tenderness, griping and thirst, so strong was our confidence, that such discharges must be followed by amendment in dysentery, that it would not be until our next visit, when instead of finding our patient better as we expected, every symptom would be aggravated—discharging blood mixed with shreds of mucus, looking like pieces of the membrane itself; increased frequency of the pulse; dry tongue; great thirst and tender belly, that we would be fully undeceived. It did not require many repetitions of this experience to prove that the bile, which was poured out under the stimulus of the mercury, acted as a powerful irritant to the inflamed membrane over which it passed. The same may be said of the discharges produced by other cathartics, though in less degree. Nothing seemed to do so much harm as mercury. I very early abandoned all purgatives, but they, including the treatment by salines, were fairly tried by my professional brethren, but they inform me with very unsatisfactory results.

The various astringents were tried, and though they were used by others to the end of the epidemic, under the impression of their utility, I soon abandoned them all, as either useless or pernicious. Acet. lead was given in doses varying from 1 to 10 grs., but while it failed in any instance to check the discharges, it appeared to exert an unfavorable influence upon the stomach. Sulph. zinc was no more useful, and nit. silver failed to do any good.

The vegetable astringents, as kino, catechu, tannin, &c., were also tried, but abandoned as useless. The situation of the disease gave us great reason to hope for the best results from enemas; but to our great disappointment they appeared to do little or no good. They were tried of acet. lead, sulph. zinc, sulph. copper, nit. silver, (20 grs. to 1 oz. aq.) alum and the vegetable astringents.

A very favorite enema in my practice in dysentery previously, had been a sufficient quantity of fresh melted hog's lard, to which laudanum or sugar of lead may be added or not as seemed best. It has always seemed to act as a most soothing application to the inflamed membrane, and to supply in some measure the protection of the natural mucus. But I cannot honestly say, that in this epidemic it afforded any relief in a single case.

General bleeding was resorted to in two case by my friends Drs. Farley and Ulmer, but they did not think the course of the disease was favorably influenced by it. Blisters were used in a few cases, but they appeared to do more harm than good. The treatment upon which I relied with most confidence, was a combination of camphor and opium, given in full doses, and repeated so as to keep the patient constantly

under the influence of the medicine until the disease was cured; which if the treatment was commenced within twenty-four hours from the attack, and before any purgative medicine had been given, would in my experience always be in three days or less. I gave this first as a palliative in the advanced stages of my first cases, after everything that promised to do any good, had been tried in vain. The amendment was so prompt, and so obviously the affect of the medicine, that I was induced to give it earlier in my next cases, and eventually as early as I possibly could. The result exceeded my hopes, a severe violent attack yielded at once, and on the third day the patient would be able to be up, and this was not owing to the abatement which usually takes place in the severity of an epidemic as it advances, for cases treated on a different plan, or let alone, were as obstinate as ever. I gave this medicine without considering anything a counter indication, and had great reason to be satisfied with the result. The griping would be allayed, and the discharges lessened, first in quantity, and then in frequency, until they ceased. Sometimes the patient would have several calls to stool after they had entirely stopped. The disposition to stool was generally the last symptom which disappeared. In twenty-four or forty-eight hours after the dysentery ceased, the patient would usually have a healthy evacuation from the bowels, but I was careful never to hasten it, though the delay might be double this length of time.

The camphor was probably the curative agent in this treatment, and exerted a specific effect upon the disease, similar to that which turpentine, as it so nearly resembles in composition, is known to exercise in some bowel affections. The opium suspended to a great degree the secretions from the bowels and thus secured the inflamed membrane from irritation, besides allaying pain and mitigating the griping. A large majority of my patients took nothing else, by the mouth or anus, and in reviewing the epidemic now, I am confident that those did the best who took nothing else whatever. I did not treat children in this way, as I was afraid to give them sedative doses of opium, and it is to the difference in treatment that I ascribe the greater duration of their cases.

The disease ceased to be epidemic in about eight weeks after its appearance, though a case of it was now and then seen through the early part of the season.

About the last of August, dysentery again made its appearance among us, and twenty or thirty cases occurred in quick succession. Its type differed considerably from the disease as it appeared in the spring. It more frequently commenced with diarrhœa, there was less griping, less pain, but rather more tenesmus and straining, and in every respect it was of a lower and more typhoid aspect. The nervous system and the secretions generally were more gravely implicated. It was more a general and less a local affection than in the spring. As might be expected, it required or would bear a modification of treatment.—Opium was not so urgently indicated, as there was often very little pain. Camphor was still useful, and mercury which had been so very hurtful

in the spring, was not only well borne, but in several cases seemed to exert a salutary influence. The liver was not so readily aroused by it, nor did an aggravation always follow the appearance of bilious stools, neither were there any symptoms of amendment. I still preferred to treat my cases with it, merely adding a full dose of capsicum to the camphor and opium, as I had administered in the spring.

We are equally in the dark as to the cause of this new outbreak of dysentery. The weather had been intensely hot and dry for a long time, and there was no change or variableness in the temperature or winds about the time the first cases occurred, and during its prevalence the great change, from summer to fall weather, which this year, as is usual in this climate, was sudden and attended by storms of wind and rain, and great reduction of temperature, without influencing it in the slightest degree, either for better or for worse. Like the epidemic in the spring, it gradually ceased about six weeks after it commenced; its coming and going being alike unaccountable.

During the summer there were a good many cases of diarrhœa among young children. Those who had been weaned in the spring, and those whose mothers could not nurse them, suffered most.

I have endeavored by the closest observation to detect the connection if there is any, which exists between the seasons—heat, rain, winds, &c., and the generation of malaria, using this term to signify the cause which produces our fall fevers. But so far, the result has been purely negative. One cannot predict that any given combination of atmospheric causes will or will not be followed by fever.

The last summer has furnished some remarkable instances of the fallacy of the generally received opinions on the production of malaria.

Of all the causes the action of intense heat of the sun, upon a soil saturated with moisture and full of organic matter, is considered the most efficient. From the first to the 20th of June this year, it rained heavily almost every day; the earth was saturated, and ponds and watercourses filled to overflowing. On the 21st, it became clear and hot, and so remained for ten or twelve days, no such heat had been experienced here for many years. The thermometer stood above 95° every day, and was seldom much below 90° even in the coolest part of the night. Evaporation went on with almost incredible rapidity; ponds, creeks and stagnant water alike disappeared, and left their bottoms exposed to the broiling sun. But no bad results followed. There was no marked increase of sickness, nearly every severe case we saw during this time could be clearly traced to the direct heat of the sun, and there were comparatively few, even of these cases. There would no doubt have been many cases of sun-stroke if it had not been for the prudence of the planters, who as a general rule, did not allow their hands to go in the sun, between the hours of 11 a. m. and 4 p. m. But these precautions would have been fruitless to preserve them from the action of malaria.

The treatment of malarious fever is vastly more simple and effectual than it was a few years ago, and the plan which I prefer is still more

simple than any recommended in the books. Early in the season it was seldom necessary to give any evacuating medicine. During the fever if there was much pain or restlessness, it was my usual practice to give a full dose of Dover's powders with two or three grs. of calomel, which was repeated in three or four hours if the first did not relieve. More than two doses were seldom required. I preferred this to any other diaphoretic, and have never seen it disagree with a patient or do harm. Care was then taken that the patient should be fully under the influence of quinine at the time the next paroxysm was expected. This was accomplished by giving fifteen or twenty grs. in two, three or four doses according to the time there was to spare. If there was much fever, or no remission, quinine was always combined with opium or one of its preparations, and generally with a full dose of camphor also. It was very seldom that there would be another paroxysm. The small quantity of calomel combined with Dover's powder usually acted upon the bowels freely enough the next day, and when it did not, no cathartic was given to aid until after the time for the next paroxysm was passed, unless there was some urgent necessity for it. The action of a cathartic, about the time of an expected chill, always renders its prevention less sure. Calomel in these small doses acts merely by stimulating the hepatic secretion, and can hardly be considered a cathartic.

Of another practice which has recently been recommended I can speak favorably. It is to give a full dose of quinine, say grs. x. or xij. combined with ʒss. each of the tinctures of opium and camphor, *in the chill*. I adopted this plan in about a dozen cases this season, and in every one with good result. In several the paroxysm was cut short, the patient being in a perspiration within an hour, in others the paroxysm lasted from three to six hours, but never was attended by pain or restlessness. In no case was there any return of the chill or the fever, though in one or two no other medicine was given.

Later in the fall more active treatment was necessary. Mercury was absolutely necessary in most of the cases, grs. ij or iij of calomel, combined with an equal quantity of camphor, and repeated every three or four hours, till 10 or 12 grs. of each were taken, followed by quinine in smaller and more frequent doses than in the summer. In these cases there was little or no remission, and it was necessary to keep up the effect of the medicine constantly for twenty-four hours, so as to be sure to include the time of the rise of fever. In these cases, we always gave quinine in solution, using generally equal parts of paregoric and spts. nitre as a menstruum. The cases which occurred during the excessively hot weather of June were attended by almost apoplectic symptoms. They recovered more readily under the use of stimulants than any other treatment. Neither emetics, cathartics nor direct depletion would afford any relief; on the contrary, I believe the symptoms were always aggravated by them. Quinine, carb. ammonia, and camphor given in combination or alternated, would very quickly relieve patients who seemed almost beyond the hope of medicine. I saw three slight cases of sun-stroke, the

patients becoming suddenly blind and falling to the ground. In only one, was consciousness completely lost, and in that one only for a few minutes. They all quickly recovered under the use of very active stimulants, as brandy, camphor, and capsicum. This treatment of coup de soleil is the principal one here, and is almost uniformly successful where death does not take place before any treatment can be instituted, and it contrasts very favorably with the depleting practice which regards as congestive apoplexy, a disease which is more probably merely a state of nervous exhaustion. But the treatment was adopted by the planters, because they found it successful, and not from any theoretical notions of the nature of a malady they were treating. We had only one case of yellow fever in town this year.—(*Trans. Med. Asso. Ala.*)

ART. VIII.—*On the Treatment of Dysentery:* by F. E. GORDON, M. D., late of Marion, Ala.

I HAVE concluded to submit to the association the following brief statement of the result of my experience, derived from the successful treatment of some eighty additional cases of dysentery, during the spring of 1854. This is done the more cheerfully, as the opinions herein expressed are entertained by our local physicians almost unanimously, and more particularly since the success of South Alabama physicians, in this disease, seems to be questioned by Dr. Cartwright, in a late number of the New Orleans Medical Journal.

Treatment of Dysentery.—There are some points connected with the treatment of dysentery that deserve special attention. In the first place an attack of the most violent character, in a plethoric subject, can be strangled at once by free, *serous* evacuations, amounting to hypercatharsis, followed immediately by morphine enemata. Some care and judgment are required in the selection of proper cases for such *active* treatment. Milder cases are treated successfully by saline purgatives sufficient to produce fæculent operations, succeeded by anodynes—or, in many instances, with the following mixture:

℞. *Sulph. magnes.*, ℥j; *tinct. opii*, ℥j; *aqua font.*, ℥jv; *M.; dose a table-spoonful every three hours.*

Cases that have run for ten days or more and resisted ordinary treatment, where the discharges have assumed a pasty grumous aspect, may be relieved by injections of nitrate of silver, ten grs. to the oz. of water. In administering this remedy, it is best, I think, to use but the one oz. of fluid, and to take precaution to prevent its absorption. Although the pain is usually very great upon its first introduction into the

bowels, toleranee is sometimes established, and it would be retained unless washed out by a large mucilaginous enema. This should always be done if the silver is retained beyond ten minutes. The enema of nitrate of silver should not be repeated oftener than once in twenty-four hours, though it does not prevent the repetition of anodyne and mucilaginous injections in the intervals between its administration. Another important point is "to feed your patient." It is truly surprising how well the stomach does its duty when a continuous structure is so gravely affected. Dr. Graves insists ably upon feeding the fevers of Ireland, but fortunately, having no maculated fever here, we have escaped the task. In no disease, however, of this climate, is feeding so imperatively demanded as in dysentery. Egg-nog seems well calculated to supply the albumen drained away in this disease.

Collapses occasionally occur suddenly in dysentery, and what is strange, in most of the cases that I have observed, when the bloody discharges were giving away to more natural evacuations. They are generally fatal, more so I think than in most other diseases. I would judge that in about seven hundred cases of this disease, treated in this vicinity in the last four years, collapse has occurred five times—only one of these has recovered. Small doses of calomel and laudanum, one gr. of the former to five drops of the latter, were administered every fifteen minutes, as recommended by Dr. Ayre in cholera asphyxia, in addition to the stimulants usually given. The calomel was withdrawn after fifteen grs. had been taken, but the opium was largely increased, and had to be continued for several days. What agency the mercury had in effecting the recovery I leave for others to say.—*Trans. Med. Asso. Ala.*

ART. IX.—*Chemical Therapeutics and Novelties.*

THE multitudinous influences attendant upon chemical combinations and decompositions in the living body are so little under the control of art, and are so far removed from the mechanics (so to speak) of inorganic chemistry, synthetical and analytical, that scepticism may be allowable as to the validity of statements which virtually make the human economy a reservoir, or mass, saturated with the metals and their combinations, all of which, it would seem, upon this theory, may readily be decomposed in and parted from the living body by a little electricity! Plates are amalgamated! Quicksilver globules shimmer in bathing tubs! The carbonates, and oxides of lead, gold, &c., give place to the pure metals! It is somewhat remarkable in these electro-plating, electro-gilding, and amalgamating processes, that the metals constituting the

normal elements of the living economy, should not be also attacked, reduced, and parted, as the iron, for instance, in the blood! Copper and lead are normal constituents! How can electricity be so great a respecter of persons as to pass by one combination of metal, in order to attack a similar one in the same body?

In the decomposition of the metallic combinations in the economy, there is reason to fear that the organic combinations of carbon, oxygen, hydrogen, and nitrogen, might be also decomposed, vital chemistry yielding to inorganic—life to death—physiology to physics. The inorganic chemist, well acquainted with the primary elements, can in numerous instances, compound these elements into perfect bodies rivalling the products of nature. He can further decompose these formations into their original elements. He holds in his hand the synthesis and the analysis. But it is very different in vital or organic chemistry. However well he may know the primary organic elements and their varied combinations, he cannot combine the organic matter agreeably to the living type, nor according to the dead either. A lifeless cell, a dead muscle, nerve, brain, gland, membrane, blood, urine, bile, &c., he cannot make, neither can he combine these elements, however well he may know them, so as to make the virus of the small-pox, of the rattle-snake, &c., nor make a thinking, feeling, self-moving entity.

Of the validity of the following theories, facts, and documents the reader must judge for himself.

From the *Revue de Thérapeutique Médico-Chirurgicale* (1st of March 1855) the following article is translated: (sitting of the Academy of Sciences, Jan. 29th, 1855:)

New application of Electro-Chemistry for the Extraction of Metals introduced and remaining in the Organism.—MM. Virgnès and A. Poey, addressed a note upon this subject to the Academy, thus expressed: The first experiment was made upon M. Vergnès, who had upon the back of one of his hands, a bad ulcer, occasioned by the introduction of metallic matter during his manipulations in galvanic gilding and silvering. Having plunged his hands into the electro-chemical bath at the positive pole of the pile, he found to his great surprise, a metallic plate, 165 millimètres in length, by 109 in breadth, in contact with the negative pole, which in a quarter of an hour was covered with a fine stratum of gold and silver. This ulcer which had resisted the most active remedies, was completely cured by a few of these baths.

The original experiment was made in New-York, (United States,) April 16, 1852; this first experiment had been followed by others leading to the institution of a new method of extracting metals from the system.

The following is the arrangement of the bath: The patient is plunged up to the neck in a metallic bathing tub, insulated from the ground upon a wooden bench the length of the body, the limbs being horizontal and the body being insulated from the tub. The water is acidulated with nitric or hydrochloric acid in order to extract the mercury, the silver, the gold—with sulphuric acid for the removal of lead. The patient being in the bath, one extremity is put in connection with the negative pole of the pile by means of a screw, the patient taking hold of the positive pole, sometimes by the right, sometimes by the left hand. The arm is sustained by supports in contact with the seat. The extremity of the positive conductor, with which the patient takes hold, is armed with a massive iron handle surrounded with linen folds to diminish the calorific action of the electrical current, which is very energetic, and which without this precaution would cauterize the hands. The patient thus placed, the wave of the positive current entering the right or left arm, circulates from head to foot, neutralizing itself upon the sides of the bathing tub towards the negative pole. Being insulated from direct contact with the negative pole, as well as from the ground, the patient's body radiates from the electrical bath, multitudinous currents to and from the surface after they have traversed the internal organs, even the bones, becoming neutralized upon the negative side of the bathing tub.

We have withdrawn from the thigh and shin bones of one patient a large quantity (*une grande quantité*) of mercury, which, in the opinion of several physicians, had remained in the organism for fifteen years.—(Commissioners : MM. Dumas, Rayer, C. Bernard.) — EDT. N. O. Med. and Surg. Jour.

Removal of Metals from the System by Galvanism: by G. HUFF, M. D., Lexington, Kentucky.

To the Editors of the New York Medical Times:

GENTLEMEN—Having experienced the beneficial effects of galvanism in extracting metallic poisons from the human organism, and believing it to be a subject of much interest to the profession, I now place at your disposal a report of my experiments.

Very respectfully yours,
G. HUFF.

Case 1.—Mrs. W ——, aged 27 years, of lymphatic temperament, with auburn hair and white skin, had been under treatment for diseased spine fifteen months. During this time she had taken very large quantities of mercury; which, her subsequent medical attendant stated produced paralysis of the lower extremities.

I was called in consultation by the advice of her physicians, and it was decided that she should be put under treatment by galvanism. Her physicians having thrown upon me the entire responsibility of the case, I took charge of her; and, one day while making an application of this potent agent to the spine, the feet having been placed in a metallic* bathing-tub with acidulated water, her husband suddenly called my attention, exclaiming at the same time, "see the mercury!" On making an examination, I found several globules of metallic mercury lying on the bottom of the tub. I continued this (electric) treatment a long time, and she ultimately recovered, and now enjoys the powers of locomotion most perfectly.

Case 2.—Mr. B——, aged 40 years, of nervous temperament, with dark hair, white, and thin skin, had been treated for syphilis for a long period, and had been repeatedly salivated, from which he had suffered severely in the joints. The capsular ligament was so much elongated as to cause luxation of the head of the *femur;* separation of the *carpus* of each hand had taken place, and the metacarpal joints of the fingers were very much enlarged.† He had been under treatment by physicians who stood deservedly high in the profession, and had visited the warm springs in Arkansas by their advice. At this time he could scarcely move with crutches, even with the help of two attendants which he took with him. He remained there one winter, and returning without having obtained any relief. His friends then advised him to apply to me, and, with the consent of his physicians, he did so. On examination of his case I concluded to treat him, and commenced with warm bath, which invariably left him worse, the joints becoming more stiff and painful, and with less mobility. Believing that the remote cause of this aggravation of his disease was the presence of mercury in his system, I was induced to attempt to extract it. To accomplish this, after having placed him in a porcelain bathing-foot tub, with acidulated water, and a metallic plate ‡ beneath his feet, I completed the circuit, and after the lapse of twenty minutes I discovered a light-white precipitate, and the impress of his toes left on the plate of a light bluish color, with silvery lustre. I repeated this operation several times, and then commenced the galvanic treatment for rheumatism, and infused iodine into the joints in order to produce absorption of abnormal secretion that had formed there. From

* Metallurgists would be apt to conclude that "a metallic bathing tub," might have metals in its composition, rather than the bather's body. Zinc usually is alloyed with various metals, as copper, lead, iron, &c. Wrought zinc is sometimes coated with an amalgam of mercury to preserve it from the action of acids. Zinc is variously and much alloyed; so of lead. The composition of "the metallic bathing tub" is not adverted to, much less analyzed.—Ed. N. O. Med. Jl.

† A venereal, not a mercurial disease.—Ed. N. O. Med. Jour.

‡ What kind of metal? Was it pure?—Ed. N. O. Med. Jour.

this time he commenced to improve, and went on improving without a relapse. All the joints have now recovered their normal condition, with the exception of the left hip-joint, the femur of that side now remaining seven-eighths of an inch below the right, although it has ascended three-eights of an inch during my treatment; and his general health has very much improved; in fact, he says it is now as good as it has been at any period of his life.

Case 3.—Mrs. N——, aged 28 years, of bilious temperament, small size, hair and eyes black, of a very high order of intellect. At the birth of her second child there was very profuse hæmorrhage, and much inflammation of the uterus was superadded in consequence of medicines having been imprudently given by her physicians to facilitate labor. For the purpose of suppressing the hæmorrhage and restoring the uterus to a healthy condition, sugar of lead was given in small doses, and its use continued a long time. This treatment resulted in *lead palsy* (the total loss of muscular contraction of the extremities.) In order to extract the lead from her system, I commenced the treatment by galvanism in the same manner as in the foregoing case, and with the same results, except that the precipitate was of a dark gray color, and the impress of the toes left on the plate was of a darker hue. When the paralysis was nearly removed, partial amaurosis set in, and ultimately became total. I treated this without benefit, although I think the treatment has not been fully tested, as she was obliged to return home, in consequence of domestic cares, sooner than I anticipated.

LEXINGTON, KY., *May 18th*, 1855.

In a letter received from Dr. Huff, subsequently to his communication, he says that he had never seen the process, nor read in any work respecting what he calls "his method of extracting metals from the human system." He says, "my mode is constantly demonstrated by the ordinary course pursued for the electrolysis of metallic salts, by those engaged in electrotyping and electroplating." He speaks also of the solution of urinary deposits in the bladder by galvanism without any *difficulty or pain*, and promises to communicate some interesting results on the subject.

The report to the Imperial Academy of Medicine has been copied in different journals in our country, and has been hailed as embodying a valuable contribution to therapeutics; and if future results confirm the hopes thus entertained, the paper of Dr. Huff will be invested with additional interest.—*Eds. N. Y. Medical Times.*

Novel Application of Electro-Chemistry to Therapeutics.—Chemistry is about to save from death, or a premature old age, those artizans whom the exercise of a cruel profession condemns to breathe metallic dust or vapors, who poison themselves daily for the sake of living, and acquire so many dreadful infirmities in the silvering of looking-glasses, the preparation of white lead, or working in the mines. Science comes to the

help of the victims of industry or pleasure, and extracts from their bodies, atom by atom, the devastating metal that had fastened on their tissues, and weighed on the springs of life. These hopes are drawn from a memoir presented to the Academy of Sciences by M. Dumas, and the authors of which—MM. A. Poey, of the Havana, and Maurice Vergnès—will hold a distinguished rank among the benefactors of mankind, if experience confirms their assertions.

The invention consists in the application of electro-chemistry to the cure of the diseases we have mentioned; and surely, of all its marvellous uses, this would be the most admirable.

M. Poey takes an unfortunate patient, corroded by lead, mercury, gold, silver, or any other metal, and places him in a metallic bathing-tub, isolated from the ground. The man sits down, his legs horizontally stretched out on a wooden bench, isolated from the tub, which is filled with water up to his neck. The water is slightly acidulated, to increase its conductibility; and the acid varies according to the cases. Nitric or hydrochloric acid is used for the extraction of mercury, silver or gold; sulphuric acid for that of lead. This done, the negative pole of a pile is brought into contact with the sides of the bathing-tub, and the positive pole placed in the hands of the patient.

The work of purification is now in full activity; the electrical current precipitates itself through the body of the sufferer, penetrates into the depth of his bones, pursues in all the tissues every particle of metal, seizes it, restores its primitive form, and, chasing it out of the organism, deposits it on the sides of the tub, where it becomes apparent to the naked eye.*

The following experiment was made before the members of the Faculty of Medicine of Havana.

A patient had undergone during a whole week an external mercurial treatment (frictions, with mercurial ointment.) He had then taken several lukewarm baths, and it could not be supposed that any mercury still remained attached to the skin.

He was put into a water-bath mixed with muriatic acid. After having remained in it for five minutes, some of the water was taken out and afterwards analyzed by M. Baracca, who found no traces of the mercury in it.

The circuit was then closed; and, after the electric current had acted for about an hour, a new sample of the water was taken. Mixed with an alkaline sulphuret, the water became black; and a piece of copper having been dipped into it, gave sure signs of the existence of a small

* The authors employ a pile of thirty pair of plates, approaching, at the same time, that of Bunsen and of Grove, as coke and platina enter into its composition, by which its action is rendered more energetic. Each pair has a diameter of 40 millimetres, and is 217 millimetres high. The number of the pairs to be used at the beginning of the operation depends upon the temperament of the patient and the nature of the malady. Thus a delicate and very nervous person is at first submitted to the action of ten or twelve pairs only, and every five minutes the number is increased. A person of sanguine or lymphatic temperament is able to endure a greater number of elements. The same observation applies to the quantity of acid employed in the bath, less being required for a nervous than a lymphatic constitution.—(*Braithwaite's Ret., July*, 1855.)

quantity of mercury. Thus the water of the bath now held mercury in solution.

During the experiment, a perfectly clean piece of copper had been placed at the negative pole. When it was taken out of the water, towards the end of the operation, its yellow-greenish color not only testified an oxidation in which mercury had taken a part, but small white spots where scattered over the surface, one of which, of the size of a square line, was very brilliant, and of a mercurial whiteness. The plate having been heated underneath, the spot disappeared, and the original color of the copper was restored, which proves that the spot was mercurial.

REMARKS.

With respect to the Havana case, M. Baraceca admits, it may be suggested, quite too much in assuming that the patient, after having been rubbed with mercurial ointment for a week, and even "after having taken several baths," could have had no mercury adherent or embedded in the skin. He assumes too much in supposing that mercury, had any been on the surface, must have been removed in five minutes in a bath; finally, M. Baraceca assumes too much in asserting that the electrical current, after continuing one hour, reduced and extracted the metal from the internal organs. The probability is, that the prolonged electrial experiment effected nothing more than the removal of the quicksilver of the ointment which had been mechanically embedded in the tissue of the scarf-skin, and which had never been absorbed into the system at all.

The physiologico-chemical gildings and silverings in the case of M. Muriee Vergnès were, probably effected, not from the absorbed gold and silver mines of his internal organs, but from his sore hands, wherein these metals had accumulated in minute particles, and where they acted mechanically like setons, issues, or foreign bodies, and from which they were precipitated by means of acids and electricity.—ED. N. O. Med. and Surg. Journal.

Can Iodine Revive Mercury Latent in the System?—Dr. Bache desired to call the attention of the College to the question of the influence of iodide of potassium upon workmen in mercury and lead, and upon persons who have taken medicinal preparations of those metals. It is asserted, said Dr. B., that in such cases, the urine is found to contain a compound of the metal with which the system has been more or less impregnated, and that hence, when such metallic preparations have been for a long time taken, iodine must be cautiously administered. In the case of mercury, for instance, iodine is said to develop mercurial salivation with great facility. The iodine is supposed to unite with the metal deposited

in the tissues, to render it soluble, and consequently to renew its activity. The facts of the case must be admitted, and the theory is plausible. It must, therefore, be presumed that when the system is thus saturated with either of the metals mentioned, but mercury in particular, the iodide of potassium ought to be very cautiously administered. In like manner, when common salt is given to persons who have taken the milder preparations of mercury, a bi-chloride will be formed with whatever of the metal remains in the tissues, and may produce salivation.

Dr. Jackson referred to a case which he had already mentioned to the College, and which helps to illustrate the subject under discussion. A lady who had been taking blue pill; removed to the country, where she began to use the iodide of potassium in doses of five grains, three times a day. After taking three or four doses, she was salivated, and the medicine was suspended. When the symptoms had declined, it was resumed, and again produced the same effect.

Dr. Bell called attention to a class of cases in which the mercurial action was developed by the operation of physiological causes alone, such as cold, fatigue, &c. He had been sometimes struck with the rapid cure of syphilis where iodine was administered after mercury, and that not where full doses, such as five grains, but small and even minute quantities, were given. Yet, it was not necessary here to invoke the operation of a chemical law; the physiological operation of the iodide appeared to him sufficient to account for the results.

Dr. Page had repeatedly seen tenderness of the gums and even salivation produced by this salt, and in many of such cases no mercury had been taken, except, perhaps, in the way of a purge, but none, certainly, to impress the constitution. He doubted the proposed explanation of the ptyalism which sometimes follows the administration of the iodide of potassium. This ptyalism differs from the mercurial, and notably in the circumstance of its being unaccompanied with the so-called "mercurial fetor." Besides, nitric acid will produce salivation, and perhaps other agents still. He regarded the chemical hypothesis in the case as altogether gratuitous. If lead or mercury is retained in the tissues, it must either be quiescent, or, on the administration of the iodide, be dissolved and excreted with the urine. In the one case, it is innocuous, and in the other it passes out of the system. He believed the iodide of potassium to possess an independent and powerful physiological action, whereby it restores a healthy activity to the impaired functions.

Dr. Evans had never been able to believe that iodide of potassium developed the constitutional action of mercury. On the contrary, he knew that the salt in question was one of the best agents for checking ptyalism. Besides which, he felt sure that the iodide would of itself produce salivation. He referred to the case of a female who had never made use of any mercury, except as a cathartic; but who, on taking the iodide of potassium, became affected with a copious secretion from the Schneiderian membrane, and then from the salivary glands.

Dr. Condie had repeatedly seen tenderness of the mouth and ptyalism

produced by this salt, and that without the possible intervention of mercury, as none had previously been taken. Besides, salivation by the iodide is peculiar, it produces no fetor of the breath. Salivation may likewise be caused by nitric acid, accompanied by swelling of the gums, and of the salivary glands.

Dr. Jackson referred to the cases of Melsens, among which were some of paralysis cured, where the iodide of potassium developed salts of lead and mercury in the urine, although preparations of these minerals had not been taken for a long time before.

Dr. Neill called attention to the fact that metallic mercury has been found in closed cavities of the body after death. He had himself met with one case, where a considerable amount of mercury was discovered within a bronchial gland. No history of the subject of this case was attainable.

Dr. Jackson had also found metallic mercury in the brain of a man who had been accustomed to inhale the fumes of this mineral.—(*Trans. College of Physicians, Phil.*, 1855.)

Since the above remarks were sent to press, journals have been received announcing new experiments in electro-chemical therapeutics:—

"GREAT DISCOVERY!—*Mercury taken from the Human System by Electricity.*—Having heard a rumor on the street that mercury had been extracted from the body of a sick man in the form of quicksilver, and being anxious to witness such an experiment, we accompanied Drs. Youmans and Seltzer, the operators, yesterday, for the purpose of judging for ourself of the truth of the statement.

"We found Mr. Jacob Hymrod, the patient, living in the South part of the city, who has been afflicted with the chronic rheumatism for the last ten years, lying upon the bed in an enfeebled state, who told us that he had heretofore tried every kind of medical treatment without success. He had swallowed during his sickness vast quantities of mercury in the shape of calomel and blue pills, from the effects of which he nearly lost the use of his limbs. He showed us a globule of quicksilver larger than a good-sized pea, which he said had been gathered from the bottom of the electric bath in which he said he had been placed.

"He had been seated upon a metallic stool in an insulated zinc bath, well coated with paint, and his feet immersed in acidulated water. The galvanic battery was then applied, the positive pole held in the hands of the patient, the negative pole being in the bath. It is claimed that the power of the electricity upon the system is such as to eradicate every metallic substance, and, by means of the wire, it is deposited in the bottom of the tub. It requires some twenty hours for the globules to collect themselves, so as to be perceptible to the naked eye, when they may be seen by thousands clinging to the sides and bottom of the bath.

"We were informed by the doctors that three drachms of quicksilver had already been taken from the patient, who, together with his friends and relatives present, confirmed the statement.

"Although this pumping quicksilver out of the body of a man by

the means of a galvanic battery may seem strange and smell a little of humbug, we trust our scientific and medical men will not pass the experiment without a thorough investigation."—*Columbus (Ohio,) Jour.*

REMARKS.

It is probable that all the experiments hitherto truly reported may be explained without admitting quicksilver and other metals to have been "pumped out of the patient's body into the bath." Tubs painted, metallic seats, zinc and copper plates, iron handles, acids capable of combining with and sometimes actually containing various metals, not to name accidents, nor to assume tricks and frauds on the part of patients, quacks and doctors, may perhaps account for "the globules," even though no bathers had ever entered the electro-chemical baths. Mercury, for example, is often used in connection with galvanism. The zinc plates of the battery are often amalgamated in order to protect them from the action of the acid. Individuals using mercury are sometimes directed to apply ointment to the skin; in a word, there are many ways both accidental and intentional in which metals may drop into the bath, that never occupied the bones, nor the brains, nor the blood, so that their electrolysis, or decomposition, or reduction at the negative pole of the battery may not, after all, prove the living body to be like an inert mass, adapted to electrotyping on being traversed by the galvanic current, depositing metals in plates or in masses "larger than a pea."

"It requires," says the account of the Columbus cases, "some twenty hours for the globules to collect themselves, so as to be perceptible to the naked eye, when they may be seen by thousands clinging to the sides and bottom of the bath. Mr. Jacob Hymrod showed us a globule of quicksilver larger than a good sized pea, gathered from the bottom of the bath in which the patient had been placed." Now, it will be recollected that this tub was "*well-coated with paint*," which, of course, contained lead—the carbonate or white lead of commerce—an impure article, mixed, perhaps, with other metals. At least, the metallurgy of lead shows that it is, in its natural state, combined with other metals, as silver, &c.; zinc in water containing hydrochloric or sulphuric acid reduces lead; the carbonate used in painting dissolves in various acids. The probability is, that Mr. Jacob Hymrod, instead of having undergone *deoxydation*, was fortunate in escaping lead poisoning, called the painter's colic. The enemies of legitimate medicine have long denounced the regular faculty for using minerals, as if they were more poisonous than vegetable medicines. If minerals are deposited in the bones, as above indicated, the charlatans are right, accidentally, for once.—Ed.

ART. X.—*Iodine as a Disinfecting Agent in Cholera:* by A. BORIES, Apothecary of the First Class Marines at the Port of Brest. —Translated from *L'Union Médicale*, for the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL, by J. S. MENG, M. D., of Natchez.

FOR some time past new means have been offered to combat this terrible disease which has already made numerous victims in France, and which threatens to extend its murderous action into new localities.

Without wishing to prejudge any of the means of treatment proposed, we say that the antidote of this miasmatic poison is yet to be found, and that the researches of physicians concerning it may be, perhaps, for a long time unfruitful.

But, if the curative means are still unknown, is it the same with the means of prevention? This is what, in my sincre desire to be useful, I have asked myself, and it is the result of my reflections on this subject which I now communicate.

Let us admit for a moment, with the majority of physicians, the hypothesis that the Cholera is the effect of a miasmatic poison, originating in a particular and unusual state of the atmosphere, is it not possible in this case to modify the medium in which we live, the air which we breathe and in which we absorb the poison by our organs of respiration.

It was but a short time ago that the atmospheric air was, according to all chemists, a compound of oxygen, azote, and some traces of carbonic acid; to-day, M. Boussingault demonstrates to us that there is also ammonia in the air, and M. Chatin, iodine. Who will assure us that we have the final result of the chemical composition of the atmosphere, and that no other chemists will come hereafter to say and to demonstrate to us that there is in the air a new substance, a new body which we introduce in a named quantity into our lungs every twenty-four hours the same time that we introduce the oxygen, azote, ammonia and iodine?

In such case, then, why not seek to modify this vitiated air in epidemics, endemics, or contagious affections, which prevail and make such numerous victims?

It has been admitted in science, that disinfecting bodies exist, and the labors of Hallé, Gurston, Morveau, Fourcroy, Vauquelin, Bonis, Labarraque, &c., demonstrate the applications which they have made,

some of chlorine and others of chloride of lime, to purify cess-pools, disinfect cemeteries, destroy effluvia, contagious poisons, and deleterious miasms. My deceased father, P. Bories, Agégré professor in the Faculty of Medicine at Montpellier, reported that he had, in 1822, indicated the chloride of lime as preventive of contagious maladies.

If it is recognized and admitted that chemistry possesses disinfecting substances, and the labors of Pelletier and Vignier, of Montpellier, explain the chemical theory of the disinfecting action of certain substances, it will be admitted, then, that we possess a body superior to chlorine, in iodine, which may be considered one of the best disinfectants. In effect, the analogy of its chemical properties with those of the chlorine, the advantage of having constantly its slow and continuous disengagement, the facility of procuring it, and having it always prepared in in its solid state, are so many reasons in its favor, which ought to give it the preference over chlorine and even over chloride of lime, a great absorbent of moisture, which loses its properties in a short time.

Iodine, in effect, spreads, gives out its vapors slowly, and affects the organs of respiration but little, if not strongly inhaled, and it is precisely this slow action which causes its continuance for a considerable time.

No doubt that, if during the days of the chemists above mentioned, iodine had been known, or as much in use as to-day, the preference would not have been given to the chlorine. It was, in fact, not until 1811, the works of Courtois appeared, and during a long period this metalloid did not figure but in the reports of the chemical cabinet as a simple body. It is only a few years since it took a high place in medical matters, which daily increases.

It is iodine, then, that I would propose as a disinfecting agent of the air, and as preventive: for, in my opinion, its properties, antiseptic and disinfectant, are no longer in doubt, particularly after the remarkable labors of M. Chatin. Hence, in our hospitals, barracks, schools, churches,—every place, in a word, among crowds,—a continued evaporation of the vapor of iodine would modify and change, in a happy manner (in my opinion) the air which we breathe.

It will be sufficient to place in those places small vessels, such as saucers, plates, &c., containing small quantities of iodine, which should be renewed when the evaporation ceases. That which may be done in the public establishments may be done in private houses; each individual could have in his apartments a small vessel from which will escape, night and day, vapors of iodine.

Finally, physicians and nurses can have about them a phial of iodine loosely or imperfectly corked, so that their clothing shall be impregnated with its vapors.

Admit that the Cholera is not, as some suppose or believe, a miasmatic poison; that its effects are not due to the disturbance of the atmosphere—to a change in the molecules of the air which penetrates into our organs; and then admit, with the contagionists, that this disease originated on the banks of the Ganges, where it will really be endemic, whence it has been brought hither by travellers, merchants and ships, and that it does not penetrate into the countries visited by infected individuals: we admit, in one word, that the Cholera communicates itself by contact, on this hypothesis, still the plan which we propose will be otherwise advantageous; the healthy man, impregnated with the vapor of iodine, will find between him and the contaminated or individual infected a veritable shield, an element, a gas, which instantaneously will be able to destroy the disastrous effect of this germ of the contagious virus. However, it may be, in this note, I have had no other design but to call attention to the means of disinfection generally too much neglected, and I shall esteem myself happy if my ideas receive the approbation of men competent to appreciate them, and I can render a service and preserve some of my fellow-citizens from this disease, be it contagious or not.

ART. XI.—*Humboldt's Viperine Inoculation for the prevention of Yellow Fever :* translated by M. MORTON DOWLER, M. D. ; from the *Gaz. Heb. de Méd.*, of June 29, 1855, with remarks.

"SEVERAL American and Spanish journals bring us new details relative to *inoculation with the venom of the viper as a preventive means against the yellow fever*, with respect to which we have already taken occasion to offer some remarks. The new world has gone mad with the discovery. The discoverer, Dr. Humboldt, nephew of the celebrated *savant* of this name, is followed wherever he goes with praises and benedictions ; and the Captain-General of Cuba has authorized him to open a special establishment for inoculation, by a decree which trenches very remarkably by its caution, on the confident enthusiasm of the public. The following is the wording of the decree :

'I have received the application which has been made to me by Dr.

William Humboldt, asking an authorization to create a public establishment in order to experiment with the inoculation of the preventive virus of Yellow Fever, in which persons who wish to be inoculated will be taken care of till they are cured. I believe the time has not yet arrived in which we may be able to decide whether this virus does or does not truly protect against Yellow Fever ; but as the numerous inoculations made in the Military Hospital of this city has not produced any dangerous results, we see no reason for preventing Dr. Humboldt from practising them under the conditions and form that he has prescribed. I, therefore, authorize him to originate the establishment that he desires to place at the disposal of the public. This establishment will be held to the general rules of inspection and medical police, to which the general infirmaries are subjected.—Havana, *February 9th,* 1855. Concha.'

In the memoir that he read before the Academy of Medical Sciences of Havana, M. de Humboldt himself gives the history of his discovery. He remarked, about seven years ago, that a number of criminals, who had been brought from the interior of Mexico to the bagnios of Vera Cruz and of St. Juan d'Ulloa, arrived there affected with the primary symptoms of yellow fever, and that in these cases the disease put on a character of special severity. Wishing to find out the conditions which thus gave birth to the disease before having any communication with the infected place, where it is ordinarily taken by the non-acclimated, he concluded to accompany from the interior to the lands of Vera Cruz the train of condemned criminals. Very soon he remarked that the yellow fever developed itself constantly as a consequence of the bite of a little viper which is very common in this country, which had ready access to the convicts, as they walked barefoot. Having collected a great number of these reptiles, he caused them to bite numerous dogs, all of which, at the end of three or four hours, exhibited the ordinary prodromena of yellow fever, and sunk with fœtid hæmorrhages and signs of cerebral congestion. One could scarcely think of the employment of a prophylactic virus which produced such effects. It was necessary at least to mitigate it. With this object there occurred to M. de Humboldt the very singular idea, we must say, of causing the vipers to bite a piece of animal tissue, and allowing it to putrefy, to inoculate with the sanies. He selected sheep's liver. (This article of sheep's liver has been most happy ; it is the substance which he chose to cure hemeralopia, as given in one of our preceding articles.) A piece of this hepatic tissue, weighing thirty grammes, was bitten by six vipers and allowed to putrefy, and then the liquor was inoculated into six dogs. Experience showed that by taking care not to insert the matter in more than

from three to six punctures, nothing resulted from it but a slight febrile movement. The punctures neither inflamed nor suppurated. This is the practice which the author adopted on the human species.

The sanies above mentioned, was at first inserted under the skin of two criminals, four punctures to each. Cephalalgia, pains in the back, and fever, developed themselves almost immediately, and continued from four to twelve hours only, but the fever reproduced itself under the form of accession during the three or four days following. The innocuous character thus proved on man, induced him to continue his experiments. Of one hundred inoculated, belonging either to the category of convicts or of persons sent to Europe, not one had the yellow fever ; and, says the experimenter, statistics show that only four in one hundred of non-acclimated individuals who arrived at Vera Cruz, and there spend the summer, escape an attack of the scourge. Later in 1850, '51, '52, new experiments are made, the latest document showing the total number of inoculations to be 1,428. In seven cases only of these has the disease appeared in spite of inoculation, and these seven all recovered.

We may not forget to add, that in order to secure the inoculated from the alarming symptoms which are developed in some exceptional cases, the author causes them all to use a mixture composed of the syrup of guaco, syrup of rhubarb, of gum-gutta, and iodide of potassium. The guaco (family of the corymbifera,) is celebrated in the cure of the bites of serpents, whence it follows that M. de Humboldt hastens, with all speed, to cure the patients that he has punctured ; and for this we are far from blaming him.

Our object is merely to lay before the reader the progress of an event which has made more noise than did, in its origin, the discovery of Jenner. The reader will easily see for himself all that is wanting to the documents produced by M. de Humboldt in order to legitimize his pretensions. We wish with all our heart that these pretensions may be verified."

REMARKS.

The foregoing we translate from the "Gazette Hebdomadaire de Médecine et de Chirugie," of the 29th of June. Though the able editor, M. Dechambre, has discussed the subject in a rather semi-serious tone, exhibiting a well marked vein of doubt and incredulity, he has evidently intended to throw considerable interest around the subject of the Humboldtian inoculation. We may remark, *en passant*, that whatever future laurels may crown the brow of the yellow fever inoculator,

they can confer no additional honors on the house of the illustrious Alexander Von Humboldt, as he himself declares that he has no nephews that bear his name. If, however, the inoculating Humboldt be worthy of belief; if his pretensions shall stand the uncompromising test of observation and experiment, then, indeed, the venerable savant might well be proud to adopt him, with a waiver of all questions of "propinquity and property of blood," as the greatest benefactor of the human race either ancient or modern—as the greatest of all men bearing the name of Humboldt.

We may, however, remark that the Baron Von Humboldt has been more annoyed than flattered by claimants to relationship sojourning in the western world, which has led him to request his friends of the press in New-York, in order to get rid of the annoyance, to publish to all the world that he has no relations afloat bearing his family name. While the genuine disciples of the venerated Baron are but unfortunately too few, those of another traveller and very different Baron with a German name and a lively imagination, are by no means wanting. We allude to Munchausen. The editor of the "Gazette" has immeasurably overrated the public enthusiasm in relation to the inoculator's pretended discovery—the alleged excitement being quite imaginary. The "praises and benedictions" have not yet become manifest. The inoculator has one highly important thing to do, and that is to show himself worthy of belief; and the excitement, "praise and benedictions" will forthwith appear. The tenor of the authorization granted by General Concha, leads us inevitably to discredit the inoculator's whole history, and to infer the entire falsity of his asserted Mexican experience. If the fourteen hundred and twenty-eight inoculations at Vera Cruz be not a sheer romance, why did not the inoculator on making application to his excellency, General Concha, lay before him authentic and positive proofs of those, amongst the most marvellous results ever related by man? It is plain that the inoculator obtained a mere temporary toleration, and that General Concha had personally no faith in the pretensions put forth, excepting his belief that the inoculation would not kill or prove dangerous. Surely his excellency must be *cautus homo et difficilis*, if the fourteen hundred and twenty-eight results in Mexico, well authenticated and sworn to by the authorities at Vera Cruz, and laid before him, could not carry some kind of conviction. The whole account of the criminals, the snakes, and the fourteen hundred and twenty-eight results, stand out at present as a veritable Munchausenism. The inoculator, during last

summer, made his appearance in New Orleans, and in a long charlatanical manifesto, published in the city papers, proclaimed his discovery, and called on the unacclimated in this city to come and be "vaccinated," asserting in his advertisement that he had during seven years inoculated "more than two thousand persons," all of whom had been protected against the disease, rendered perfectly safe by the aid of his anti-septic syrup." His later account, however, as given to the Medical Society at Havana, and taken as above, makes the number only fourteen hundred and twenty-eight, *say six hundred less!* If the inoculator is no better at observing than at counting what becomes of our faith? We believe that he never inoculated any person in New Orleans, and we are very credibly informed that when closely pressed in this place, he acknowledged that he had no such thing as a prophylactic, and that his advertisement was put forth merely to attract public attention! In fact we have only to read his testimony before the Sanitary Commission of New Orleans, to see that he pronounces his own advertisement a falsehood by maintaining the doctrine that, "*Yellow Fever has no specific character, or pathognomonic symptoms, which can be defined in its cause, in its duration, or in its attributes; but that it is an accidental variety of a numerous and variable class of continuous and remittent fevers of certain latitudes; fevers from which it differs only by its violence, and the rapidity of its course, and its final phenomena. That its apparent causes, the principal and essential symptoms, and its pathological conditions, as also its periods of inception, of its greatest developmnt, and of its decline, all proclaim that it is, like these other fevers, a variety of the same kind, that cannot with exactitude, or with the view of reconciling the facts in contradiction in the history of the tropics, be subdivided for any essential or appreciable difference in their multiform varieties.*"

The above is an extract from a long communication which he laid before the Sanitary Commission, proclaiming himself a nephew of the Baron Von Humboldt, and everywhere distinctly and clearly denying the specific character of yellow fever, but never once alluding to the snakes, the convicts, the sheep's liver or the inoculations, the whole communication necessarily by implication going to show that if snake's poison be good for yellow fever, it is equally good for any other fever, whether remittent, intermittent, or continued; the yellow fever being, according to him, no more a specific pestilence than the fever and ague. The Sanitary Commission* were sadly remiss in their newspaper reading,

* It may not be amiss to remark that, according to the established "Code of Medical Ethics,"

or on wiping their spectacles and taking up the newspapers laying on their table in the Municipal Hall, they would have found a long advertisement in the public papers bearing the hand and seal of their witness, warning the people that the disease is altogether the reverse of what he had proclaimed it before the commission; that the disease is as specific in its character as the small-pox itself, and equally as amenable to prophylaxis. Why was this document withheld from the public? this testimony written and subscribed to? this solemn appeal to the people of New Orleans? "Silence is great," but not always! He appears in New Orleans playing two different rôles with great versatility: the one being as a theoretical assistant on behalf of the famous Sanitary Report; and the other as an advertising doctor, preaching a diametrically opposite doctrine as a mode of communing with the people. Either the inoculator's professional card, or his long communication laid before, and published by the Sanitary Commission, was coolly untrue; or else both were in the same category. No one reading both, can have any faith in the witness, or believe a word in relation to the snakes, convicts, dogs, sheep's liver, or inoculation. Besides, direct testimony from Havana goes to show that his inoculations have not the least prophylactic power whatever.

We hope our learned confrère of the "Gazette Hebdomadaire" will do everything in his power to calm and allay "les entraînements de la confiance publique," should they become as extensively epidemic in Paris as he has represented them in the new world.

Dr. Humboldt, in his testimony before the Sanitary Commission of New Orleans, says:

"*I am of opinion that in all countries which can engender fever, the yellow fever is its most concentrated form. I believe it intimately allied in its nature and its causes to ordinary fevers.*"

According to the inoculator's own showing, it is next to certain that the vipers acted merely a melo-dramatic part; and that not a single particle of the ophidian venom could have remained, as such, in the putrid liver at the time of using the revolting fluid. It is well known that all

"no one can be considered as a regular practitioner, or a fit associate in consultation, whose practice is based on an exclusive dogma."

Again, chapter II.; sec. 4. "Equally derogatory to professional character is it for a physician to hold a patent for any surgical instrument or medicine; or to dispense a secret *nostrum*, whether it be the composition or exclusive property of himself or of others; for, if such nostrum be of real efficacy, any concealment regarding it is inconsistent with beneficence and profesional liberality; and, if mystery alone give it value and importance, such craft implies either disraceful ignorance or fraudulent avaricc. It is also reprehensible for physicians to give certificates attesting the efficacy of patent or secret medicines, or in any way to promote the use of them."

the animal secretions, when excited to putrefaction, become completely and rapidly decomposed. It is, therefore, pretty clear that the inoculator might just as well have avoided this *coup de théâtre*, and plied his patients with his carrion alone, as to have complicated his experiments by mixing it up with the vipers. New Orleans filth—said to be surpassingly powerful—would have answered equally well for all that can be believed to the contrary.

Art. XII.—*Perforation of the Intestines.*

THE first article of the Review of the Medical Journals in the *Gazette Hebdomadaire de Médecine et de Chirurgie*, opens with a summary of Dr. Powell's case of perforation of the duodenum and appendix cæci—the latter communicating with the internal iliac artery. (See January No., 1855, of New Orleans Medical and Surgical Journal.)

The reviewer remarks, in speaking of this case, that perforations of the intestines are by no means rare in typhoid and in tuberculous affections—their seats being *almost* always in the small intestine. Perforations originating elsewhere have, on the contrary, their habitual seat in the cæcum. Among 28 cases of intestinal perforation that we have extracted from the *Bulletins de la Société Anatomique*, about half belong to the latter situation. The *Gazette Hebdomadaire* (t. i. iii.,) rendered last year an account of the cases given by Professor Forget (of Strasbourg) on *peritonitis by perforation of the ileo-cæcal appendix*, where that accident had appeared to be connected with existing stercoraceous calculi. But we have nowhere met with anything resembling this communication established between the ulcerated extremity of the cæcal appendix and the internal iliac artery.

Perforations in the duodenum are much more rare than in the residue of the intestines. We have met with but two cases of the perforation of the duodenum in the bulletins of the Anatomical Society; one more has been cited by M. Cruveilhier. In all of these cases the perforation appears to have resulted from old ulcerations. Two of the patients were aged, one was young.

It is difficult, in Dr. Powell's case, to make out a very precise idea of the nature of the perforation.—(*Gaz. Heb. de Méd and Chir.*, May 25, 1855.)

The outline of Professor Forget's three cases above referred to by the editor of the *Gaz. Heb.*, taken from the *Gaz. Méd. de Strasbourg*, is subjoined :

Peritonitis from Perforation of the Ileo-cæcal Appendix.—Professor F., in the first case, met with a foreign body within the peritoneal cavity, not unlike a kidney-bean, disengaged, swimming in a bed of pus at the cæcal region. The cæcum, its appendix, and intestine itself, were free from perforations. The characteristics of general peritonitis and pleurisy were evident ; the foreign body, or calcareous concretion, was formed by several concentric layers.

The case of an unfortunate *confrère* had greatly occupied the attention of the Medical Society of Strasbourg, in which it had not been conjectured that the origin and nature of the malady depended upon a calculus ; but since that time, M. Forget had found in a subject in which peritonitis proved fatal, an olive-shaped body, hard, suet-like, having the consistence of mastic. This body was impacted in the cavity of the cæcal appendix, which, towards its termination, had a longitudinal perforation, one centimètre in extent, with gangrenous margins. The author, upon comparing these two cases, concluded that it is very probable that in the first the calculus had fallen into the peritoneal cavity through a perforation of the cæcal appendix, which had closed by cicatrization. In the third case reported by Professor Forget, the cæcal appendix was similarly perforated ; but in place of a solid mass or nut-like body, fæcal matters diffused through the peritoneal cavity only were found, and which, without doubt, had been formerly concreted.—Ed. N. O. Med. and Surg. Jour.

Art. XIII.—*Therapeutical Slapping.* (La Tapotopathie).

Under the head of *La Tapotopathie*, the *Revue de Thérap. Méd. Chir.* of July 15, 1855, announces from the *Gaz. Méd.* of Toulouse, that a Swedish doctor named Engelstroëm has invented *la Tapotopathie*, which is nothing more than a new edition of Dr. Cartwright's slapping and strapping, which the latter has long used for curing certain diseases, and atrophy of the muscles, as the readers of the New Orleans Med. and Surg. Journal, know. Dr. Engelstroëm and his friends may see in this Journal, that Dr. Cartwright has a claim to priority in this therapeutic method.

The article referred to explains Dr. E.'s *Tapotopathie* thus: This new method of curing diseases consists in striking or slapping on the seat of the malady, the blows being at first slight, but gradually increasing in force as the patient may be able to bear. The painful sensations during the first period of this treatment are soon succeeded by an agreeable heat—an inexpressibly easy state, causing the patient to desire the continuance of the treatment, and the slapping doctor (*médecin frappeur*) having got the patient into this state (*un bien être-indicible*), assures him that the cure is complete.

The editor, however, in a facetious vein, dissents from this mode of treatment, not wishing to be struck by the disease or the doctor.

ART. XIV.—*Practical Anatomy.*

THE Glasgow Medical Journal, for Jan., 1855, contains an article by George Buchanan, A.M., M.D., on Mr. Warburton's Anatomy Bill, disclosing the deplorable condition in which practical Anatomists found themselves during the past and the early period of the present generation. This exposition affords a contrast the most striking to the anatomists of New Orleans, who have an unlimited gratuitous supply of subjects, and who are not embarassed by usages, prejudices, and laws, forbidding dissection before the lapse of twenty-four hours, or longer—a delay which will often mislead the dissector in his researches into the genuine morbid appearances characteristic of diseases, before their effacement by chemical and physical changes in the color, form, injection, vascularity and consistence of tissues and organs. The French pathologist, by making a *post-mortem* examination before the expiration of twenty-four hours, violates the Napoleon code—a delay fatal to the acquirement of precise knowledge as to the anatomical characters of a great variety of maladies, particularly such as are attended with acute congestions, hyperæmias, effusions, and alterations of the blood, &c. In England the delay in autopsies is usually much greater than in France.

The American student, bent upon prosecuting these studies, whether in normal or pathological anatomy, will find New Orleans not the second—not the third—but the first city of the Republic. Of about forty schools in the country, it is probable that thirty could be supplied with hospital and dissecting facilities in New Orleans.

"To what a lamentable degree these deficiencies continued to exist in the time of Dr. W. Hunter, who began to lecture in 1746, may be judged of from the following extract from one of his introductory lectures:—'In the course of my own studies,' he says, 'I attended as diligently as the generality of students do, one of the most reputable courses of anatomy in Europe. There I learned a good deal by my ears, but almost nothing by my eyes; and therefore hardly anything to the purpose. The defect was, that the professor was obliged to demonstrate all the parts of the body, except the bones, nerves and vessels upon one dead body. There was a fœtus for the nerves and blood-vessels, and the operations of surgery were explained, to very little purpose indeed, upon a dog. And in the only course which I attended in London which was by far the most reputable that was given here, the professor used only two dead bodies in his course. The consequence was, that at one of these places all was harangue, and very little was distinctly seen; in the other, the course was contracted into too small a compass of time, and therefore several material parts of anatomy were left out.'

"What a contrast does not that present to the present day, when the 'Res Anatomica' is included in two separate and distinct courses, taught simultaneously during a period of six months, and into which the whole subject can with difficulty be condensed! But what would one of those teachers have said, who was in the habit of teaching operative surgery on a dead dog, could he now walk into one of our dissecting-rooms and see the students in the pursuit of practical anatomy? And yet the importance of this branch has been much overlooked of late years, in consequence of the attention that has been drawn to the discoveries in microscopical anatomy and animal chemistry. These two studies are most important, and are peculiarly interesting from the light which they throw on physiological inquiry; but so much has been said and written about them, that anatomy, and particularly practical anatomy, which is, after all, the true basis of surgical proficiency, has been thrown into the shade, and has met with apparent neglect. This should not be the case, for it is one of the few branches of study which, in most instances, can only be acquired during student life. Others may be pursued as well, and even better, during the first few years of practice; but with regard to this, the practitioner is removed from his school, and except from an occasional inspection, his real anatomical knowledge remains in *statu quo*. It is idle to talk of books and drawings; the practitioner well knows that the anatomy which is to avail him, is what he saw while a student.

"The manner in which the schools in London were supplied is now well known. A set of men, of great bodily strength, and of usually low and depraved habits, as well as ungovernable temper, who were styled "resurrection men," undertook the supply of the dissecting-rooms. They resorted to the most extraordinary means to obtain bodies for disposal. They had men in their pay who assisted them in their actual labours, but they kept in their own hands the arrangement with the

various teachers. They bought over with large bribes the keepers of graveyards in and around London, and often paid large sums to watchmen to admit them to vaults and other places of interment. They sometimes succeeded in robbing houses of unburied bodies, filling the coffins with stones or other heavy substances; and on one occasion they were known to have taken from the outhouse of a tavern, a body which was lying for a legal examination by the coroner the day following.—They were not unfrequently detected, either by the vigilance of private watchers, or by the jealousies of some other *set*, who informed on each other, and were imprisoned for longer or shorter periods. They were liable to attacks from parties of friends, who sometimes watched the graves for several days, and were in various ways subject to danger.—In consequence of these difficulties, the sums they demanded from the teachers of anatomy were enormous, and had the effect of preventing the great body of the students from learning anatomy by dissection. For a considerable time the regular price demanded for subjects was £12, and even at that rate it was difficult to get the men to work. Besides the ordinary payments made to these men, the teachers had often to pay large sums for carriage and *douceurs* to get them to work, and often they had to pay their expenses at the rate of 10s. a-week when they were detected and fined, or lodged in prison.

"In reflecting on the difficulties of those times, one cannot help shuddering at the atrocious and inhuman expedients resorted to by those who supplied the anatomical rooms in Edinburgh for some time. The facts brought to light at the trial of the barbarian, Burke, and his associate Hare—names that will be execrated in all time to come—present a picture of brutality unsurpassed in the annals of history, and cast a blot on the science with which they were connected, that will not soon be eradicated. This in passing, for at present I am referring to the more legitimate but still disgusting means employed by the resurrection men, who gained a livelihood, and sometimes amassed large sums of money, in the pursuit of their laborious and loathsome employment. Such were some of the disadvantages attending the study of anatomy in London; but if the students had to expend considerable sums of money in obtaining dissection, they could, at least, do so without much trouble or danger to themselves, the duty of procuring the subject being entirely left to the resurrectionists.

In Glasgow it was different. There were no men who made it a business to obtain bodies, and the onus of supplying the dissecting-rooms lay with the teachers themselves, and with their students. The students were therefore compelled to band together, and perform the disgusting duty which, in London, was delegated to the resurrection men. Many of the surgeons of this and other towns, will remember with horror the escapades in which they were engaged while studying anatomy in this city. What would the students of the present day say, if, in addition to the details of their dissection, they had been compelled previously to become masters of the body by a laborious and disagreeable operation?

For the information of those who are now enjoying in ease and safety the fruits of Mr. Warburton's Bill, I shall detail the mode of procedure of the private resurrectionists of Glasgow, as related to me by one who was not unfrequently present at these predatory excursions. The grave of a recently buried body was carefully observed and marked during the the day, and a band of a sufficient number—usually four or six—was made up. The party, provided with a dark lantern, an old carpet, a a sack, shovels and pickaxe, took the advantage of the first dark, cloudy, perhaps windy night, in order that their proceedings might be the better concealed. Sentries were posted to give notice of any alarm which might get up, and the principals entered the graveyard by climbing the wall at a distance from the gate. The grave was then opened to about half its extent, and, by dint of hard labor, about one-third of the coffin lid was exposed. The strongest of the party now entered with the lantern to perform the most difficult part of the whole, and over the open grave was thrown the carpet above mentioned, for the double purpose of concealing the light and deadening the noise of the working. The coffin-lid was wrenched open by a short crowbar, and, by sheer force, was broken off where it remained covered with earth. The noose of a strong rope was now put round the neck of the body and handed up to the others outside, who soon pulled up the corpse to the surface. It was then wrapped up in the sack, and carried off to a convenient place, and the grave was filled up and covered, great care being taken to leave the surface as near as possible in the same condition in which it was found.

Such were the means that the students were necessitated to employ in order to gain a knowledge of their profession, and it may easily be conceived that, with such difficulties in the way, only a scanty supply could be obtained, and the bodies often considerably advanced in decomposition. Such as they were, however, it may be believed that the dissectors would be most diligent in the study of what it had cost them such hard labor to obtain. But, in addition to the difficulty and toil of resurrectioning, it was attended with no small amount of danger. The friends of those who were buried used frequently to take their turn of watching the grave, and sometimes were armed with loaded pistols, thus endangering the lives of their fellow-men for the sake of a dead body.

REVIEWS.

Rev. I.—*Transactions of the Alabama Medical Association, for* 1855: being the Eighth Volume.

We suppose we should be attempting to prove a very plain truism, if we should take for our thesis, the inductive character of medical science. There can be but few, if any, at this late day, in the ranks of the profession who would not admit, that all theories, however wise or plausible they may seem, must be brought to the test of observation or practice —the true "*experimentum crucis.*" He alone is the truly learned physician, or worthy of the name, who derives his theories from the consideration of facts; not he who shapes or moulds his facts to suit his preconceived theories. The science of medicine is one where wisdom is gathered by slow and laborious research, by long observation in practice, at the bed-side of the sick, and not merely by listening to a lecture, or poring over a book, however eloquent the one or learned the other.—Hence it is, that the transactions of our medical associations are of so much importance. We regard them as a most valuable acquisition to the learning of the profession, as their origin marks an epoch in medical literature. It is the object of these associations to collect and embody the facts in statistics of medical science falling within their several jurisdictions, and to bring them together, as it were, into one tabular view. If we may avail ourselves of an illustration, we find in the volume, the substance of whose title we have given above, in the valedictory address of Dr. Troy, of Columbia, the whole country, with its varying soil, climate, and social condition, is one vast hospital, where are gathered all the forms of disease that can possibly afflict humanity. The several States are the separate wards of that hospital, and the local districts are the beds in the wards, where the diagnosis of disease may be observed, and its peculiarities noted down. County and local societies first carefully gather up the facts and observations. The State societies then filtrate them through the alembic of their learning, classify and arrange them; and then the general association, after a still further and more diligent scrutiny, gives to them its weighty and authoritative sanc-

tion and stamps them with the true mark of their merit. Thus the walks of science are triply guarded and defended. At least, this is one theory upon the subject—we are an *unscientific layman*, and we trust the facts correspond to the theory; we are sure they ought.

Thus, every medical man in the land may have before him, year by year, a larger and more valuable repository of facts and observations, gathered from widely diverse sources, than he could acquire by going the rounds of many hospitals, were they all equal to Guy's or the Charity. He may add to his own the collected and digested experience of the whole faculty of the country, and, if he will, may possess the wisdom of a medical Nestor, without his grey hairs and age. These several organizations—local, state, and general—are all mutually dependent upon each other; they are links in the same chain, and if their duty was faithfully done, immense benefits would annually accrue to the cause of science and health. We should soon see the results in the improved sanitary condition of the country at large, and of every part of it, and the increasing stores of true medical learning would be almost without a limit.

But the value of these increasing stores will, in a great degree, depend upon the character of the facts and the accuracy of the observations that are made. The facts must be real and important, and the observations full and precise; or, otherwise, they will hinder and obstruct the progress of that science whose interests they were collected to promote. The mere fact-mongers will tell us that figures cannot lie, and that a fact is a fact. The latter may be true, and yet the fact not be worthy of a place in a work upon science; and as to figures, we are very sure that the impression they make depends very much upon the order in which they are arranged. The facts and figures of science are not a witch's spell, to read backward and forward the same.

But we must leave these speculations and turn to our more immediate object, which is to notice the volume whose title we have given in part at the head of this article. Upon one of its pages, we find the Association voted to distribute fifteen hundred copies of their Transactions, among the physicians, editors, and intelligent citizens of the State. By some mysterious process a copy has found its way to our table, and as we are neither a doctor nor editor, of course, notwithstanding our humility, we are compelled to follow out the logical sequitur, and place ourselves in the third class. With a grateful appreciation of the compliment, we desire in some sort to return it, and we know not how we can better do

so than by asking a brief space in your valuable Journal, for the expression of a layman's poor thoughts upon the volume in our hands.

We have read it with care, and, notwithstanding its defects, with interest. The Association numbers one hundred and fifty practitioners, and with rare exceptions, embraces the best medical talent of the State, and its numbers are annually increasing. Its sessions seem to have been well attended, and as far as we may judge from the record, its business was conducted with spirit and energy. Many important questions came up before it, and much action was had upon points which, we should think, must materially increase its future usefulness. The city of Mobile was selected as the permanent place of its sittings,—a wise step, for it certainly presents facilities for the transaction of its business, much greater than any up-country locality can do. The initiatory steps were taken to build a suitable hall, and to found a pathological museum, with reference, more or less remote, to the establishment of a medical school in the city, should the future of the State indicate such action. Nearly all the business of the Association, together with the annual oration of Dr. Taylor, and the address of the President, related to topics of a local nature, and would have but little interest for those not resident in the State. We except, however, the concluding portion of Dr. L. H. Anderson's address upon the opportunities of the country practitioners and the treatment of quackery—subjects which are handled with much power and skill. The annual oration treated, with much ability, of the advantages offered by Mobile as the seat of a medical school.

Thirteen reports or papers upon topics of professional interest were read, and are published, and more were promised than appears. We have read them all, and while some display ability and research, and are valuable contributions to science; others are meagre and jejune, and exhibit marks of carelessness and haste. It may be presumptuous in a layman to say so, but we opine the volume would have been more valuable, had it been many pages smaller. We do not know that the Association lies under any especial obligation to make an annual book, unless it can make a good one.

The report of Dr. Cabell, of Selma, upon the Medical Botany of Dallas County is, obviously, the work of a scholar. It is written with scientific precision, and does him much credit. He evidently believes that what is worth doing at all is worth doing well. We cannot award the same praise to Dr. Clanton, for his Medical Botany of Sumter Co. Much of it might have been omitted without injury to the profession or

to the people. The description of our common pine tree contains more poetry and eloquence than scientific accuracy, and the transactions were intended to be a repertory of facts and their logical inferences, and not of Belles-lettres. To the report of Dr. Troy, on the diseases of Cahaba and vicinity, the very highest praise may be awarded. It is clear and lucid, and what is rarely true of medical reports, is in "a tongue understood by the people." He writes to be understood and read, and will accomplish his object. The report is full and particular, and gives us a good medical history for the year. There are some facts detailed which go to show the fallacy of the prevalent notions upon the production of malaria. Several cases of typhoid fever are given at length, on account of the light they throw upon that disease. Appended to the report, as should be always the case, is a mortuary table, which shows a mortality of only two per cent. The report of Dr. Ketchum, upon the diseases of Mobile and vicinity, is quite an interesting paper. It contains a lengthy discussion as to the origin of yellow fever and the quarantine question is ably, if not to our mind convincingly, argued.—Here, too, we find a mortuary record. There are also papers on the diseases of Talladega, by Dr. Taylor; of Centerville and vicinity, by Dr. Crawford; of Selma and vicinity, by Dr. Reese; upon the treatment of dysentery, by Dr. Gordon; and upon metastasis, by Dr. Lopez. The reports upon surgery are exceedingly meagre, being, in one case, a badly arranged table, or rather list, of operations, running from 1838 to 1849, without note or comment, by Dr. Taylor. Thus, we are told of the amputation of the leg of a boy to cure a burn—an example, we hope, the profession will not follow, until they can get more perfect data, and especially as, for all that appears, though the burn was cured, the boy may have died. We entirely agree with Dr. Nott, of Mobile, that such a barren enumeration of operations can be of but little service.—The remarks of Dr. Nott upon some surgical cases are more to the purpose, but are brief indeed. A case of carcinomatous tumor is reported by Dr. Hicklin, terminating fatally; add to these a brief paper upon the surgery of Mobile, by Dr. Gaines, the appropriate valedictory address of Dr. Troy, and we believe we have gone over all the labors of the Alabama Medical Association for 1854. The result, as a whole, we cannot praise. The medical men of Alabama should be represented by a far more creditable volume than this, if they expect to retain the laurels which, in former years, they have won. To parts of it we have given our cordial approval. The Association ought not to feel bound to

publish every paper that is read before them, and they should publish nothing but what is so read. To us laymen, everything between the covers comes with their imprimatur and authority.

The typography of the volume, in its general appearance, is creditable; but, when closely examined, its errors loom up as "thick as leaves in vallambrosa." Of all printed works, medical works require the greatest accuracy, for sometimes a wrong word affects human life itself. But here we have all kinds of errors. There are mistakes in orthography, mistakes in grammar, and mistakes by substitution of wrong words and names for right ones. Danté is converted into a Spaniard, and some of the Drs. and patients would be puzzled to find themselves under the names they have received. There are errors of omission and commission. We trust the Association handle their patients more tenderly than they do orthography and grammar; for there has been a dreadful slaughter of the Queen's English. We are afraid, when the authors came to see themselves in print, that one might say of them, "Our army swore terribly in Flanders." What makes it worse, we have no table of errata at the end, the funds of the Association not justifying, probably, so large a publication. We trust, however, they will be presented at the next meeting of the Association, and then deposited in the pathological museum among the curiosities of medical literature!

A volume, containing so many and so grievous typographical errors, is not creditable to Alabama medical men. If they existed in the original manuscripts, and we fear many of them did, it was clearly the duty of the committee of publication to see them corrected; or, if this could not be, then they should have consigned the articles kindly to oblivion. If they were mistakes of the printers, they should still have been corrected, and in either case, we hold the committee responsible. They must see that it is quite preposterous for a learned profession to send out a book so full of such errors; it brings learning itself into contempt. If they had not leisure for their task, they should refuse to hold the office, and neither allow themselves nor their brethren to come before the public in so irregular a disguise.

Medical science in Alabama has no better friend than the writer of this article. We wish it all prosperity, and it is because we do, that we have spoken thus plainly. We have not the pleasure to know any of the gentlemen upon whom it has been our duty to animadvert, and no personal feeling has guided our pen. The Association ranks high

abroad, and its published transactions compare favorably with those of any state. We may well be anxious, then, lest by carelessness they should forfeit the reputation they enjoy. Nothing valuable was ever accomplished, without persevering labor, and we desire to see not only their professional learning and skill evinced in their published works, but also that "labor limæ," without which their works will be published in vain.

A Layman.

ADDENDUM BY THE EDITOR.

The following extract of a letter from a prominent and able physician of the Alabama Medical Association is published without the writer's name. The proper name of the critic, "A Layman," alluded to has been, by request, withheld from the public, though communicated to the editor. "For reasons of his own, the writer does not wish his name or his calling to appear, unless it should be necessary."

To Bennet Dowler, M. D.

Dear Sir:—That you will, after examining the accompanying criticism, give it a place in your journal, I do not doubt. Apart from its intrinsic merits as a literary production, its justice and truth will commend it to every reader of the volume it notices. Moreover, as this volume was printed for general distribution, it is but fair that the profession should know what an intelligent "Layman" thinks of it.

No portion of our medical literature is fraught with more promise of usefulness than the transactions of our Medical Societies; nowhere is such reprehensible carelessness seen. It is hoped and believed that the publication of an article such as I now send you, written of his own accord and suggestion, by a gentleman of ability and learning, not in any way connected with the profession, will tend greatly to mitigate this great evil, not only in Alabama, but wherever your most valuable periodical is read. As a sincere lover of medical truth, and a true friend to the Alabama Medical Association, I hope you will publish the article, &c.

* * *

The fairest mode of judging of Dr. Clanton's contribution, is to try it by its avowed purpose or aim, expressed in his own words: "Having been appointed by the Association of the State of Alabama, to report on the Indigenous Botany of Sumpter county, I shall confine my report to my own locality. The limited space of this paper will not permit me to enter into genuine descriptions of plants. For these I will refer you to the regular works on the science."

The avowal here made of not giving a "*genuine* description of plants," must not be construed to mean that a *spurious* and *false* one is intended. The orthography, at least, is not "*genuine.*" However much the printer may be blamable, the Committee of Publication cannot be exonerated from the neglect of proof-reading, especially in a case where a whole year is allowed for preparing and printing a pamphlet. It is, doubtlessly, neither expedient nor just to criticise typographical accidents and errors unless they are numerous and due to reprehensible carelessness or ignorance.

Of the thirty-seven plants named by Dr. Clanton, eight are spelt wrongly, and even more if the English orthography be taken into the enumeration: "Osulus" for Æsculus; "Pamila," for Pumila; "Hammonelis," for Hamamelis; "Laurus, (Sasafras,") for Laurus Sassafras; "Liquid Amber," for Liquidamber; "Phytollacca," for Phytolacca; "Falcota," for Falcata; "Juglans Cinerca Nigra, (Walnut);" that is to say, Walnut *White Black* instead of *Juglans Cinerea*, *Juglans Nigra*, &c. The typographical errors are, probably, as few and as little dangerous in the botanical as in most other parts of the Transactions. Of the five orders first mentioned by Dr. Cabell, it is believed that one only is correctly spelt—the penultimate of three having *i* instead of *e;* another having the final dipthong œ instead of æ—all of which occur in about one page. "Liahis" is written for liatris; "catisber," for catesbæi; "ararum," for asarum; "strigorum," for strigosum; "aneea," for aurea; "draconitum," for dracontium; "fauirosa," for farinosa; "diocea," for dioicia; "pedical," for pedicle; "pharmacopæia," for pharmacopœia; "tœnia capitis," for tinia capitis. What is meant by "steaming fresh leaves in lard?"

"A Layman" does not appear to know that bad grammar cured the quinsy in a French *savant*, who being nearly suffocated by an inflammatory tumor in his throat, became so enraged at his illiterate doctor, whom he cursed not only for poisoning him with his physic, but with his bad grammar,—whereupon the excitement and the efforts of the patient caused the abscess to break suddenly to his great relief.

"A Layman" complains that there is no table of errata. At the end of the volume there is a table of one *erratum*, which is itself an *erratum*, seeing that it is written in the plural "*errata!*"

Seeing that the errors of the press are very numerous in almost every page, the faulty grammar may be charitably referred to the same source, and for the credit of literature South, the printers must bear the blame.

How vigilant soever a proof-reader may be, errors will occur, particularly in the hurry of periodical publications, in which the labor of writing, reading, reviewing, and revising are concentrated chiefly upon one editor, as the New Orleans Med. and Surg. Journal will show. It happened at the time of writing these lines that in reading a chapter of the Bible, printed under the auspices of the American Bible Society, the word "*hear*," instead of "*heart*," was noticed—an error less momentous than that which occurred many years ago when it was discovered that a sheet of the sacred book was passing through the press with the word "*not*" omitted in one of the commandments, thus: "thou shalt commit adultery." A toast, intended to be complimentary to the fair sex, proved the reverse when put in type with a comma following "man," instead of "her," thus: "Woman—without her man, would be a savage." A mistake in placing a comma, in writing a prescription cost a life about two years ago, thus: "Take Strychnos, nucis vomici 40 grains." The apothecary understood this prescription to mean two articles, namely, strychnine, the alkaloid prepared from the Strychnos Nux Vomica, and the seeds of the Strychnos Nux Vomica themselves, whereupon he put up 40 grains of each! From the one-twelfth to one half of a grain of Strychnine is a dose, while the seeds have been given in doses varying from 5 to 50 grains.

Rev. II.—*Transactions of the Med. Asso. of the State of Alabama.*

1. Report on the Botany of Sumpter county, by S. W. Clanton, M. D.
2. Report on the Botany of Dallas county, by P. H. Cabell, M. D.

I. *Report on the Botany of Sumpter county, Ala.*, by S. W. Clanton, M. D.

Although not so advised, we may infer that the Medical Botany alone, is here intended, the number of species less than forty, is too small for the general botany of Sumpter county; even the medicinal plants all told, would probably amount to five times the number here given.

The alphabetical arrangement, adopted here, however objectionable, where the number of objects is large, and generalization and arrangement into groups are all important, answers very well in the present case.

We propose to point out only a few of the more striking errors and defects of the Report, which having received the sanction of the association, at least so far as to be published in its transactions, and which should not be allowed to pass unnoticed.

Aristolochia Virginiana.—Virginia Snake-root.—Several species of Aristolochia, under the general name of Virginia Snake-root are now employed in medicine and are confounded in the drug market. A. Virginina, A. hastata, and A. reticulata, (Nutt.), are common in Louisiana. The latter, the most robust of our species, grows abundantly in the open pine woods in the western part of the State.

Asclpias Tuberosa.—Pleurisy-root, Butterfly-root.—Two other species A. cornate (D. C.) and A. incarnata, (Linn.) both southern species, are recognised in the Pharmacopœia; several others are common, and are no doubt equally valuable; they should be investigated.

Cornus Florida.—Dogwood.—This species of cornus, with us grows in dry soils, not in "low-wet lands"; flowers March, not May, before the leaves are fully expanded; flowers in heads with a large four-leaved involucre of a beautiful white, or slightly pink color. Several other species, are indigenous to the South—one or two of which are officinal; they all possess analogous properties but being destitute of the large petaloid involucre, they are less known; flowers in cymes, white or yellowish white: berries globose blue or white, generally on low, wet lands.

Baptisia tinctoria.—Wild Indigo, Wild Coffee.—From the *habitat*, and the latter popular name, we are of opinion that two distinct plants, belonging to an allied genus, viz. Cassia tora and C. obtusifolia, have been mistaken for the one in question.

Æsculus Ohioensis.—Buckeye.—Torrey and Gray give Kentucky as the southern limit of this tree. From the height given by our author, 5 to 10 feet, and "the long spikes of bright red flowers;" we suspect another species Æsculus Pavia, a handsome shrub, common in the south, has been mistaken for the tree named.

Eupatorium Perfoliatum.—Boneset, Thoroughwort.—All the other species of this numerous genus, two of which are officinal, are passed over by our author, without notice. Many of them, no doubt possess medicinal properties of equal efficacy, with the one named.

Ipomœa Purpurea.—Convolvulus Purpureus, (L.)—Some other species is certainly intended, perhaps, C. arvensis,(Linn.)

Hamamelis Virginica, (Witch Hazel.) Fruit, a nut-like capsule, of a grayish color, not "bright red."

Juglans Cinerea, Nigra.—Black Walnut.—Two very distinct species; J. cinerea, (Linn.) and J. nigra, (Linn.) We were not aware the former grew so far south.

Populus Communis.—Yellow Poplar.—That the tree thus designated, is not a poplar, (Populus) is apparent from the concluding paragraph of the description, namely—"flowers March and April, large, white, petals numerous, disk yellow." From the size of the flower, and from the popular name, we infer it is the Liriodendron Tulipifera that is intended.

Phytolacca Decandra.—Virginia Poik-weed.—"Stem large, numerously branched, fleshy when young, of a light green, tender and edible; in more advanced life assumes a reddish hue, annual root, large racemes, perennial." The meaning is rather obscure. Can the idea, intended to be conveyed be that the root, often 4 to 6 inches in diameter and 1 to 2 feet in length, is annual, and that the racemes, on the extremities of the branches of an annual stem, are perennial !

Pinus Rigida, Palustris.—Pitch Pine.—The Pinus Tæda, being much the largest species of pine in the south, and the length of the leaves and the size of the cones, corresponding to those given by our author, of P. palustris, we might suppose he had mistaken the one for the other, but the P. tæda yields but little turpentine, the timber is likewise inferior and contains so little rosin, that when a tree falls in the forest it soon decays, and leaves no pine-knots behind.

Pinus Palustris.—(Linn.) Long-leaved Pine, Pitch Pine.—This is our most abundant species of pine, forming immense forests. It is an erreet, stately tree, bearing a profusion of leaves, 12 inches long, on the extremities of the branches, and cones 6 to 10 inches in length. It affords an exceedingly valuable timber and yields more rosin than any of our species.—Pinus Rigida is a rather small tree.

Rubus Villosus.—Black-berry.— R. Trivialis,—Dew-berry.—These two distinct species, are confounded, the latter is exclusively a southern plant, it ripens its fruit in April and May, the former in June and July.

Salix Nigra.—Common Willow.—"Silky foliage, and hanging branches," descriptive of no indigenous species we are acquainted with, certainly not of the one in question.

2. *Report on the Medical Botany of Dallas county*, by P. H. Cabell, M. D.

This Report occupies about twelve pages of the Transactions, and comprises some eighty species.

After some account of the manner of treating the subject, the arrangement of materials, &c., Dr. C. remarks, "Your Committee will avoid all detailed descriptions of the appearance of plants, their habits, &c., and confine itself to the medical properties supposed to reside in them."

In common with other readers of the report, we regret that the committee should have determined to avoid all description of the *habit* of plants, their general appearance, and mode of growth. A few words of general description, will frequently afford the unscientific inquirer more assistance in determining a plant, than a more elaborate technical description. Even the popular name, though it may lead to error, is better than no guide at all. Even this, too, has been withheld by our author; but to the Report.—*Exogenous Plants. Class Polypetalæ. Order Ranunculaceæ.*

"*Genus Clematis.*—Of this genus there are many species, all possessing similar properties, though the C. erecta, is the only one that has been much used in medicine. It is diuretic, diaphoretic and alterative, and has been used by Baron Störck in constitutional syphilis, severe headache, and foul ulcers. The fresh roots and stems have been used as a local application for the cure of itch, but is so much less effectual than many other remedies we posess, that it is not now prescribed."

Of this genus, comprising about one hundred known species, some half dozen are indigenous to the Southern States; what number or which of these are found in Dallas county, we are not informed, the only species named is an exotic!

Let the general reader be informed that a very common species, Clematis Virginiana, (Virgin's Bower) is a woody vine, climbing over shrubs and small trees, covering them with its green foliage and white fragrant flowers, and that these are succeeded by long feather-like carpels; he will recognize the plant at first sight, and be able to identify others, by a comparison with it.

"*Genus Anemone.*—With properties somewhat similar to the above; also acrid and narcotic. All the species are supposed to possess similar virtues and have been used for Tœnia Capitis," (Tinea Capitis).

Of the beautiful genus Anemone (Wind-flower) some sixty species

are known. Of these but a single species, A. Caroliniana, (Carolina Wind-flower,) is known to be indigenous to Louisiana. Our author has not informed us what or whether any species inhabits Dallas county.

"*Genus Ranunculus.*—All the species possess acrid properties. The R. bulbosus is officinal; when fresh, the bruised stems and leaves promptly vesicate; it is only used for this purpose, never being prescribed internally." Here again we have an exotic presented for our consideration—our numerous indigenous species being passed over without notice. We may observe, in passing, that R. sceleratus, (L.,) Water Crowfoot, abundant in our marshes and ditches, possess similar vesicating properties to the above, and, perhaps, greater activity when taken internally. Kropf found that two drops of the juice, or a bit of leaf or flower, produces an acute pain in the stomach and a burning in the throat, but when diluted, it becomes innocuous—so that half a drachm in six ounces of water may be drunk without danger; (Lind. F. Med.)

"*Genus Delphinium.*"—D., consolida, is officinal, and is reputed to be an antispasmodic; the tincture of the seed is the preferable preparation." Our indigenous D. azureum (Mx.) (Wild Larkspur) probably possess equal efficiency. It is passed over, and we have another *exotic.*

Order Magnoliaceæ.—Genus Magnolia.—M. glauca, (Bay tree,) &c., &c.—But we are admonished by the want of room to bring our notice to a close.

We would here remark that in an article on Botany, embracing less than one hundred species of plants, we do not perceive the necessity of the formal caption, class, order, genus, &c.; the continuous repetition of the latter, as Genus Liriodendron, Genus Podophyllum, becomes worse than useless when a large proportion of the genera are *solitary,* and most of the balance, as in the present instance, are represented by single species.

In conclusion, we must be permitted to say that, notwithstanding the real pleasure and substantial information the perusal of the two reports have afforded us, they bear rather the odor of the lamp than the fragrance of the field—more of the office than of the forest. We trust our friends will continue their labors, and devote a portion of their leisure to the collection, preparation, arrangement and exchange of specimens. In this way, and in this way only, are valuable results to be achieved.

J. Hale, M.D.

REV. III.—*A Manual of Pathological Anatomy:* by C. HANFIELD JONES, M.B., F.R.S., &c.; and EDWARD H. SIEVEKING, M.D., &c. First American Edition; revised; with 397 illustrations. Philadelphia: Blanchard & Lea. 1854. Pp. 733, 8vo.

IF pathological anatomy has not yet attained all the desiderated certainty and completeness of which it is susceptible, as some affect to think it has, neither has it proved itself to be, in skilful hands, altogether barren, as some sceptical sciolists and treacherous friends pretend. It can claim, without arrogance, the right to explain the apparent causes, progress and finalities of certain diseases by characteristic lesions, not less marked than those met with on the battle-field amid the shock of contending armies, as in consumption, pneumonia, cancer, dysentery, and many other diseases. And if many diseases remain unexplained by anatomical characters, analogy would favor the doctrine that all diseases cause morbid changes in the fluids and solids, although the present means of research may not be sufficiently extensive and accurate for the detection and the full exhibition of all the various morbid alterations.

The pathological anatomy of insanity and dementia, though not yet accurately known, may, from analogical evidence, be presumed to be as positive as that of cancer, consumption, or dysentery, though not recognizable by our present means of research. A blow, lightning, Prussic acid, strychnine, and various poisons kill; hysteria, epilepsy, paralysis, insanity, and not a few other diseases may kill; and yet, in all these cases, the lesions may often be slight or inappreciable to the touch or sight, though, perhaps, at the same time, the morbid alterations may extend to every atom of the body, changing the molecular arrangement throughout.

Thus, in the case of insanity, it will be found in some cases that marked alterations exist in the brain, as tumors, softening, induration, sanguineous or serous effusions and congestions. These afford analogical evidence that material alterations exist in all cases. A blow may cause concussion of the brain with obvious injury to the texture of the organ, or it may kill without such marked alteration, though in the latter case the molecular arrangement of the organ may be equally but differently injured.

The equivocal friends or opponents of pathological anatomy, affect the belief, that it is useless to go on examining dead bodies any longer, the field being, according to them, quite exhausted. And yet, the fundamental elements of pathological anatomy, the very tests and standards,

as to color, injection, vascularity, size, tenacity, figure, consistence, and so forth, are so little settled and known, that comparatively few pathologists, how learned so ever they may otherwise be, can give a discriminating and reliable opinion as to what is normal—what abnormal. To attain satisfactory results in these fundamental matters, requires an amount of disagreeable labor in dissection, observation, description, comparison and deduction, which genius itself cannot dispense with, and which the indolent contemner of pathological anatomy fain would avoid.

Among those not thoroughly initiated into these experimental researches, the chances are about equal that the pia mater in a natural state will or will not be pronounced to be highly vascular and injected; that the brain, the mucuous membrane, the spleen, &c., will or will not be considered vascular and softened—the liver engorged—the pancreas, mesenteric glands, or kidneys, indurated and hypertrophied. Post-mortem exudations, effusions, discolorations, injections, softenings and other physical alterations from the natural or morbid states may stand a good chance of being classified in the latter category as being due to disease alone.

A volume would be required for space to develop even the fundamental tests and principles of the philosophy of pathological anatomy, without which special pathological anatomy can scarcely make any certain advances.

One great defect, vitiating to a great degree the results hitherto obtained in all lands, is the delay and its consequences, in making post-mortem examinations.

These post-mortem changes are not simply physical, but often physiological! This postulate, based on many hundred post-mortem examinations, made a few minutes after death, is sustained by an overwhelming and voluminous amount of unpublished observations and experiments in relation to animal heat, contractility, capillary circulation, congestion, coloration, &c., not due to putrefaction or other changes purely physical, though these latter, a few hours after death, are great and paramount, effacing many morbid alterations, as well as the natural appearances independent of the disease.

Of books of pathological anatomy produced during the present century, the student can scarcely have too many; he should buy them all, from Matthew Bailie down to the admirable work named at the head of this article. There is, however, one class of works on pathological anatomy which the poverty of many medical men will exclude from the

library; as for example, such artistic works as M. Cruveilhier's, or Prof. Carswell's, in which costly colored plates predominate. Now it could be shown, that the element of *color* is not only of comparatively small value in this behalf, but is often illusory, changing rapidly on exposing the tissues to the air, especially in cool weather during dissection, the blood, the membranes, lungs, and other organs becoming very red in a few minutes. It is easy to refer color, in almost all cases, to fixed, well known standards, objects, or tests, while plain, cheap drawings of form, size and so forth are perfectly represented; but no degree of art can designate pictorially the more fundamental pathological elements of induration, softening, brittleness, tenacity, cohesion, density, weight, &c. Drs. Jones and Sieveking's Pathological Anatomy will cost 3 or 4 dollars, and will contain more solid information than some splendid works which could be named, and which will cost twenty times more money.

Even if space permitted, the elementary character of this excellent work forbids analysis, so as to do justice to its able authors. As is usual at the present time, the achievements of the microscope are not only magnified, but, perhaps, exaggerated, in so far as it relates to clinical medicine, diagnosis, and morbid anatomy.

Dissenting opinions in regard to the ascertained practical results and advantages of the microscope in pathology and morbid anatomy, however allowable and just, will vanish when minute and physiological anatomy are objects of investigation. The claims of the microscope are great, increasing, and ought not to be underrated, being not the less valid because they have been exaggerated in practical medicine. For example, micographers appear to have agreed that in one disease, at least, they had fully ascertained and fixed the peculiar anatomical elements of cancer beyond question, but recent events have thrown doubts upon this foregone conclusion.

In the work under consideration, there are nearly four hundred wood-cuts, chiefly microscopic, having, perhaps, two thousand five hundred sub-figures. It is believed that not one in twenty-five of these differ fundamentally from each other—that they are as nearly identical as the engraver could well make them—that not one micrographer in twenty-five could, without referring to the text, guess their pathological import or designate their differentiations. Even in cancer, the *experimentum crucis* of microscopic pathologists, the multitudinous figures differ essentially, having no common property of size, or form, rivalling the kaleidoscope in *bizarrerie*.

Let any unprejudiced reader take a figure, say twenty-five, and compare the subdivisions, with a view to ascertain their analogies, identities, or differentiations; from one to five in the figure aforesaid have twenty-five or thirty objects drawn representing the morbid cells in an ovarian cyst, cancer of the breast, inflamed lung, inflamed pia mater, and tubercular meningitis; and having made the comparison, he will be apt to conclude, that had the artist attempted to make these figures essentially the same, the realization of his purpose has been most happy.

In this volume the illustrations added to the American edition amount to two hundred and thirty—more than twice the number of the original English edition.

In turning over a few of these figures, not amounting to one-third of the whole, it appears that figs. 17, 24, 26, 29, 31, 53, 93, 99, 102, 110, 111, 118, 119, &c., are without explanatory references in the text, though these figures have numerous numerals, letters, &c.; a few in this enumeration have references, yet none are correct, except in part.

The pictorial exuberance of this work is so managed by interrelations as to occupy little space, while it adds much to the value of the work. The work is intrinsically valuable and worthy a place in every student's library. Its learned authors, it is hoped, will make it the foundation of a more extended work, having a more complete arrangement, with such generalizations as the progress of science shall warrant.

Dr. C. H. Jones, in his speculations upon neurology, at the beginning of this work, shows a great bias towards "the *true* spinal system," reflex physiology and pathology—an incomprehensible system, consisting of bizarre words and incoherent abstractions, without anatomical reality, without experimental proof, and directly contradicted by innumerable experiments. Imaginary sets of nerves, tracts, poles, batteries, centres, and other potentates and powers, centric, excentric, polar tensions, constituting the reflex kingdom, he calls "an *imperium in imperio* !"—"the clear light which Dr. Marshall Hall's discovery has shed !" This, though a bad beginning for a pathological anatomist, shows that,

> "A little nonsense, now and then,
> Is relished by the wisest men."

These reflex neurological speculations occupy but little of the work, and wholly vanish in its anatomical portion. The nerves and the sympathetic system occupy but seven or eight pages. Here the work almost completely ignores the nervous system, showing that its authors are too firmly imbued with the love of truth to claim more than is warranted by pathological anatomy.

In the opening sentence upon the nervous system, they candidly say: "It very rarely happens that individuals die of an affection residing solely in the nerves; consequently, we are left to surmise their morbid appearances in those diseases, in which they are manifestly affected, from analogy."

True: microscopic and normal anatomy, as well as pathological anatomy—subjective and objective physiology, as well as experimental physiology and vivisections,—so far from establishing the theory of four distinct sets of nerves, establish principles fundamentally incompatible with this sensori-volitional and excito-motory system of neurology.

EDITOR.

Contributions to the Natural History of the United States: by LOUIS AGASSIZ, M. D., LL. D., &c., &c., &c. (To be published in ten volumes quarto.)

AMONG living naturalists, Professor Agassiz must be regarded not as the second, but as the first in competency for the acheivement of the work which he announces in the following extracts, and which cannot fail to interest the readers of this Journal.

"From a careful estimate of the materials I have now on hand, I am satisfied I shall be able to include the most valuable part of my investigations in ten quarto volumes; each volume containing about three hundred pages, with at least twenty plates. I therefore now open a subscription for such a work, in ten volumes, quarto, in cloth binding, at the price of twelve dollars each volume, payable on delivery. Each volume shall be complete in itself, containing one or several independent monographs; so that, if any unforeseen difficulties should interrupt the publication of the whole, the parts already published shall not remain imperfect. As far as possible, I shall always select first such of my papers as contain the largest amount of new matter, or may contribute most directly to the advancement of science. Having devoted the greatest part of my time to the investigation of the embryonic growth of our animals, I shall make a beginning with the embryology of our turtles, several of which I have traced through all their changes. I trust this monograph will afford our medical students a fair opportunity of making themselves familar with the modern results of one branch of physiology, which has the most direct bearing upon their science, and for which the different species of the family of turtles, found in every part of the United States, will afford them a better opportunity even than the artificial breeding of hens' eggs. Moreover, the extent of my embryological researches, covering, as they do, all the classes of the animal kingdom, will furnish, I trust, a new foundation for a better appreciation of the true affinities, and a more natural classification of animals. I foresee the possibility, upon this basis, of determining, with considerable precision, the relative rank of all the orders of every class of animals, and of furnishing a more reliable standard of comparison between the extinct types of past geological ages and the animals now living upon earth.

"It is a matter of course, that a work like this, illustrated by a large number of plates cannot be published without a liberal and extensive patronage. As it has been prepared solely with the view of throwing additional light upon the wonderful diversity of the animal creation of this continent, its structure, and its general relation to that of the other parts of the world, without the slightest hope of compensation for myself, I trust I may meet with the approbation of those conversant with the importance of the subject, and receive sufficient encouragement from the enlightened part of the community to enable me to bring to a successful close an undertaking upon which I enter now, and in this form, for no other purpose than to contribute my share towards increasing the love of nature among us.

"As the printing of this work cannot begin until a sufficient guarantee is secured for the publication of the whole, I take the liberty of making an appeal to the lovers of science to send to the publishers their own subscriptions, and such others as they may procure, as soon as convenient, and, if possible, before the first of August next, that I may be able to proceed at once with a work which, relating to animals peculiar to America, I wish to make, in every respect, an American contribution to science, fostered and supported by the patronage of the community at large.

"To render this work more generally accessible, it is intended to publish at the rate of about one volume a year. Such an arrangement will bring the whole within reach of every student of Natural History, and of every friend of the progress of science in the country. The periods of publication, however, cannot be more definitely fixed, because the required uniformity of execution of the plates, to which particular attention will be paid, will demand that they be all intrusted to the same artist who has drawn on stone most of the plates of my former works."—Cambridge, *May*, 1855.

THE YELLOW FEVER OF NEW ORLEANS IN 1855.

The Yellow Fever of 1853-4-5, a triune or triennial epidemic, though temporarily suspended during the winter season, rages still in New Orleans. The illusory hopes and flattering prognostications which many persons indulged, that the unparalleled epidemic of 1853 had exhausted itself or rather the food on which it fed, have ended in disappointment. Several cases of the fever occurred in the spring; the number slowly augmented, while cholera, then prevalent, rapidly declined at the approach of the summer solstice. The reported weekly mortality from yellow fever for eight weeks, commencing with June 23, and ending the third week of August, is respectively as follows: 17, 32, 44, 119, 173, 222, 291, 394. Total for this period 1292—anterior to which the deaths from Yellow Fever were very few—since which they have progressively increased, and will be summed up hereafter.

After the most searching investigation, there appears to be an entire unanimity of opinion, both among contagionists and non-contagionists, that the yellow fever of 1855 originated in New Orleans, and that all the earlier as well as the later cases occurred among persons who had not been in any manner exposed to the fever in foreign ports or to imported contagion.

The weather-wise expounders of the cause of yellow fever, have not as yet accounted for its origin nor foreseen its approach any more than the contagionists; the strong current of events has successively swept away the sandy foundations upon which their speculations have been erected. They can no longer believe, nor expect others to believe their predictions, their irrelevant data, their fruitless methods of exploration, their special pleadings and inconsequential reasonings. The austro-boreal axis of yellow fever in America from Rio Janeiro to Norfolk, in Virginia, is now little short of 60 degrees of latitude. Within these parallels around the globe may be found every variety of hot, humid, parched, sandy, inundated, swampy, treeless, jungly, wooded, alluvial, mountainous soils; the swamps of New Orleans are rivalled by those of Southern India—its heats surpassed by those of Central Africa and Asia—its filth by that of the African, the Hottentot, the Hindoo, and the Chinese cities; and yet these regions containing the hive of humanity do not suffer from yellow fever epidemics, how high so ever the thermometer may range—how much so ever the rain may fall—how unfavorable so ever may be the meteorological conditions of these climates among all the races, Caucasian, Maylayan, Mongolian, Ethiopian.

Meteorological tables have been consulted with a view of laying before the reader the temperature, rain, &c., for the current year; but the remaining restricted space of this Journal, not to name the little faith which can reasonably be entertained in meteorology as a reliable expositor of the efficient cause of epidemics, will justify the omission of sterile tables of figures and fractions, which have long been used by medical dullness as platforms for platitudes, contradictions, and incoherent theories of the origin of epidemics, foreign to the jurisdiction of the beautiful science of meteorology. As a physical science, it is available for useful ends, particularly in agriculture, and may eventuate in the solution of many ætiological questions of high import to the physician—"a consummation devoutly to be wished." The influence of the weather, particularly its sudden change, is manifest for good or evil in both the sick and well, as all know, without consulting tables and decimal fractions.

Dr. J. J. Chisholm, in his able sketch of the Yellow Fever of 1854, in Charleston, reported in the Medical Journal of that city, for July, says:—"No particular meteorological conditions have been observed to favor the occurrence of yellow fever."

It appears from the public journals, that Dr. Posey's daily meteorological observations, made for the Smithsonian Institution, for the year ending May 1st, 1855, show that only 37.796 inches of rain fell at Savannah, whereas the average for the ten preceding years is 50.249 inches, or about one-fourth more; and yet, during the dry year aforesaid Savannah suffered from an epidemic yellow fever scarcely ever paralleled in severity.

Men who never give up their ill-founded theories until they give up the ghost, will find some difficulty in accounting for the origin of yellow fever on the wet weather basis, in 1855, seeing that before the rains in June, this disease showed itself, as did the Cholera, during one of the driest seasons ever witnessed in New Orleans.

The type of the prevailing yellow fever is that of yellow fever, and has not changed because opinions and modes of practice—good, bad, indifferent and expectant—have changed, or are changing at the present transitional epoch. The most remarkable peculiarity developed by recent epidemics is, that of a greatly increased ratio of recoveries after the occurrence of black vomit. The assumption that the disease is, at present, more or less inflammatory than usual, is probably an afterthought, by which opposite modes of treatment are to be reconciled without impeaching the consistency of Æculapians.

The physician called in at the beginning of the disease finds the system responsive to treatment, whole families recovering in due time; whereupon, he might, from a limited view, very naturally think that the type is very mild. Another physician called to see only advanced cases, badly nursed, loses nearly all; whereupon the type is viewed as a very malignant one, drugs being regarded as nearly useless.

The tendency of the New Orleans medical mind is rapidly concentrating towards the belief, that this formidable disease does not necessarily require formidable doses of powerful drugs for its most successful treatment. There is even danger that the rebound from the heroic treatment will end in non-medication—operations offensive and defensive, in an armed neutrality. Veterans who have grown gray in epidemic warfare, fear to hit the disease, unless at its onset, lest they should hit the patient, feeling very much like William Tell when he was compelled to shoot the apple upon the head of his son.—Editor.

NECROLOGY.

Died, June 29th, 1855, at Apalachicola, Florida, John Gorrie, M.D., aged 51, a distinguished physician and contributor to this Journal.—With Dr. Gorrie, the Editor regrets that he was not personally acquainted; nor has he the data from which to give a suitable necrological notice of one whose death has been much deplored and whose character—moral and scientific—has been highly eulogized in the public journals of the South. His essays on the electricity of the blood and on malaria, are known to the readers of this Journal; these essays, together with one on the artificial production of ice in hot climates, show that Dr. Gorrie was an acute thinker and a classical writer. His works will be his best monument, more honorable than the most splendid mausoleum which pride can erect. Eulogy in marble having no better a foundation than a monumental inscription dictated by egotism and vanity, has been well delineated by a poet:—

"Here lies the great.
False marble! where?
Nothing but sordid dust lies here.
How loved, how valued once, avails thee not;
To whom related, or by whom begot,—
A heap of dust alone remains of thee,
'Tis all thou art—'tis all the proud shall be!"

Dr. Gorrie had passed the meridian of life, though his years came far from reaching the "three score and ten."

The longest life, however, has been justly summed up by an anonymous poet, who placed upon a tombstone the following touching and simple inscription, imbued with melancholy, but not devoid of truth:—

"I came in the morning—it was spring—
And I smiled:
I walked out at noon—it was summer—
And I was glad:
I sat me down at even—it was autumn—
And I was sad;
I laid me down at night—it was winter—
And I slept."

Dr. Gorrie was buried, says one of his friends, agreeably to his expressed wishes, upon the beach of the beautiful bay of Apalachicola, "whose waves, breaking in gentle cadences on the shore, will sing the sweetest dirges; or, in their wilder moods, when tossed by the storm, will raise the loftiest anthems of Nature around the tomb of one in whose ear their music was sweeter than the applauses of the world."—Editor.

THE NEW ORLEANS

MEDICAL AND SURGICAL JOURNAL

FOR NOVEMBER, 1855.

ORIGINAL COMMUNICATIONS.

ART. I.—*Experimental Researches into Animal Heat, in the Living and in the Dead Body:* by BENNET DOWLER, M.D.

(*Continued from page* 211.)

THE periodical plan of publishing these researches forbids systematic arrangement, permitting but short excursions upon only a few of the numerous paths to be explored. Hence the necessity of frequently falling back upon the original point of departure, in order to rest a little and prepare for reëxaminations of the various routes.

It is hoped, that these fragmentary papers will not be judged definitively, except as a whole. The more experimental portions of these researches will, probably, appear in future numbers of this Journal, unless contributions from other hands shall be received in sufficient number to occupy its original department.

It is not intended on this occasion to propound a general theory of fever. Since the comparatively modern theories of Cullen, Brown and Broussais have fallen into oblivion, medicine has abdicated general theory as insufficient to account for the multiform phenomenal manifestations of life, health, disease, and therapy. Observation, experimental investigation and deductive reasoning tend more and more to eliminate scientific principles, none of which, however, possess complete universality explanatory of all the complex phenomena of the science. It can

never happen, indeed, that an experimental science like medicine can arrive at a single truth which is at once necessary and universal, such as the infinity of duration or the boundlessness of space is.

Indeed, medicine seldom can say of its observations, experiments and conclusions, even this, namely: so far there is no exception.

While, as before stated, no absolute theory of fever will be proposed at present in connection with these researches, yet it may be proper to remark, that the popular opinion in all nations, languages and times has recognized fever as a morbid heat (internal or external); indeed, the most learned physicians coincide with this simple and literal interpretation.

The distinguished pathologist, Hufeland, says that "every fever is indispensably accompanied with an increased generation of *heat*." This rule may hold good even in congestive and algid fevers, if it be admitted that heat is unequally distributed, so that the centres may be hot while the circumference is cold, which, independently of its subjective affirmation by the patient is not without proof.

All attempts to define fever by acceleration of the pulse, irritation, debility, or the like, without including increased heat as the fundamental characteristic, have failed to disturb or alter this universal belief of mankind, namely, that fever is an unnatural heat.

If fever can be characterized by a single symptom, preternatural heat must take the precedence, being paramount. It was so regarded by Hippocrates, Galen and others among the patriarchs of ancient medicine. Galen considered that the preternatural heat of fever originates in the heart, whence it is diffused throughout the whole system: *calor quidam præter naturum in corde generatus.*

Of the importance of heat or calorie, Hippocrates expresses the most exalted, not to say exaggerated opinion: *Quod calidum vocamus id mihi et immortale esse videtur, et cuncta intelligere, et videre, et audire, et scire, omnia, tum præsentia tum futura.* (*Lib. de carn. c. i.*) He describes fever as a fire: "Hippocrates febrem appellat ignem."

Although Celsus, the Roman Hippocrates, the greatest medical classic of the Augustan age, regards fever as a heating of the body, he cautions the practitioner not to be deceived by the temporary increments of heat occasioned by exposure to the sun, labor, &c.: *Altera res est, cui credimus, calor æque fallax; nam hic quoque excitatur æstu, labore, &c.*— He affirms that heat causes hæmorrhages, inflammations, syncope, &c.: *Denique omnis calor et jecur et lienem inflammat, mentem hebetat, ut anima*

deficiat, ut sanguis prorumpat, efficit. (*l. ii., c. i.*) In his lucid definition of inflammation, heat is a fundamental element: *Notæ vero inflammationis sunt quatuor, rubor, et tumor, cum calor, et dolere.* (l. iii, c. xi.)

This same Aurelius Cornelius Celsus, nearly twenty centuries ago denounced the atrocious practice, now too prevalent, of suffocating the patient affected with ardent fever, by piles of bed-clothes upon his body already too much heated, and at the same time excluding free currents of pure air from the sick chamber: *eo conclavi tenendus, quo multum et purum aërem trahere possit; neque multis vestimentis strangulandus, sed admodum levibus tantum velandus est.* (l. iii, c. vii). Of this strangulating practice and its false philosophy, an analysis may be expected hereafter.

Febrile uneasiness, malaise, irritation, vertigo, acceleration of the pulse, hurried respiration, &c., are doubtlessly due to morbid heat, local or general, internal or external, acting on the solids, liquids and gases of the body, as the nerves, muscles, blood, &c. Headache augments with the heat. Exposure to the sun or fire often excites headache in persons otherwise healthy. Febrile uneasiness, dizziness, loss of appetite, debility, thirst, and sleeplessness during hot sultry weather, will often affect an entire population. Sunstrokes, the most acute and dangerous of all maladies are examples of the deleterious effects of solar heat. Many types of a similar character might be enumerated.

External heat is probably one of the essential conditions, if not the cause of yellow fever; at least, this disease does not appear in the winter seasons in the temperate zones, nor does it appear in all parts of the torrid zone, even the hottest. It is probable that heat may undergo alterations from local causes deleterious to man, though these may not be indicated by the risings or fallings of the quicksilver. In persons from northern latitudes, there is, in hot climates, probably, not only an unaccustomed absorption of free caloric, but an increased amount rendered latent, which predisposes to yellow fever, even though no modification of this agent be the *vera causa* of this disease.

Preternatural heat is directly deleterious, whether in the form of a fever, a phlegmon, an inflammation, or a burn. It is a positive, a known agent, and not an imaginary constitution of the air, a gas, or contagion, with which many ætiologists would explain the phenomena of disease. It accumulates often injuriously in one organ, while it becomes unnaturally depressed in another; and is, perhaps, normal in no disease whatever. In an extensive burn, not immediately fatal, a subjective sensation of cold, a violent shivering, and rigors take place, fol-

lowed by reäction; congestions and effusions occur in the brain and in the mucous membrane of the intestines, all tending to complete the general analogy between a burn and fever—between external and internal heat in certain developmental limits.

The principal elements which enter into the organization of the living being are of the most combustible character, as oxygen, carbon, hydrogen, sulphur, phosphorus, &c. These elements and their manifold combinations, it may reasonably be supposed, would be altered, if not destroyed and devitalized by an unnatural though very limited augmentation of heat. It has been found by many direct experiments that animals placed in a high temperature, 140° and upwards, die as soon as their bodies become heated about 9° beyond their normal temperature. In sunstroke of the first degree, always fatal, I have found in man a higher temperature than this in both the living and recently dead body, as will be shown elsewhere.

If life were the result or the condition of matter having a certain definite arrangement, like that of a crystaline body whose ultimate molecules are endowed with an inherent property, causing them to assume the form of a cube, pentagon, hexagon, or other symmetrical figure, it may be readily conceived that morbid heat would modify, alter or derange these special vital arrangements and essential conditions, the sum of which is denominated life, health, animal well-being and vital unity. If life be derived only from life, and be transmitted only from parent to child, still its continuance is compatible with but a limited range of temperature, beyond which physical and chemical relations become paramount.

If heat be not the cause, it is the essential condition of organic life, either directly or indirectly. Its inherent mechanical power is limitless. Its power of transformation is almost omnipotent. Its diminution converts water into a rock-like solid, its increase into explosive steam. New chemical affinities, combinations and decompositions, solid, fluid, gaseous and volatile, result from its slightest changes.

The influence of Internal and External Heat upon the Digestive Process.—About ten years ago, the medical journals reported from the *Comptes Rendus* and other French publications, M. Blondlot's numerous experiments, showing that the digestive property of the gastric juice does not depend upon its chemical constitution, but upon a peculiar organic principle, which is totally destroyed by a temperature of 104°

(Fah.) and upwards. The experiments were made upon a dog in which a fistulous opening in the stomach was made and kept open for two years. MM. Bernard and Barreswill subsequently investigated this subject, and arrived at the same conclusion in regard to the influence of temperature in destroying the digestive power of the gastric fluid.

"During the febrile diathesis," says the late Dr. Beaumont, "very little or no gastric juice is secreted. Hence the importance of withholding food from the stomach in febrile complaints. It can afford no nourishment, but is actually a source of irritation to that organ; and, consequently, to the whole system." In another part of this paper it will be seen, what, indeed, everyone already knows, that this gentleman's opportunity of testing this and many kindred questions, in the person of Alexis St. Martin, has never been equalled, although some of the mighty men of medicine are now proclaiming the dogma, "Feed a fever!" A wonderful leap from the extreme starvation of Broussais and his co-adjutors of the gastro-enteric theory of fever.

Celsus maintains that even external heat not only causes relaxation, debility, sleeplessness, dissolving sweats and predisposition to pestilential diseases, but it arrests the digestive function: *Calor concoctionem prohibet, somnum aufert, sudore digerit, obnoxium morbis pestilentibus corpus efficit.* (l. i, c. ix.)

The rule which Celsus lays down, namely, not to give the patient food during violent pain, nor during the increment of disease, nor until there is a tendency to convalescence, is, for most of acute Southern diseases, salutary: *Neque inter magnos dolores; neque increscente morbo, tutum est, ægrum cibo impleri; sed ubi inclinata jam in melius valetudo est.* (l. iii, c. vi).

Additional Physical and Physiological illustrations of Animal Heat.—M. Magendie admits, that in respiration the air expired passes from the lungs at the same temperature with the body. (Physiol.) This whole subject, says Mr. Paget, in his report about ten years ago, on the progress of medical science, has been very carefully examined by Valentin and Brunner, who operated on large quantities of quietly respired air. Their results are as follows: 1. The expired air has always been (even in widely varying external temperatures) of a temperature of from 97.25° to 99.5° F.; most frequently the latter. 2. It is always saturated with watery vapor. 3. The chemical changes are due to the simple diffusion of the gases taking place between those of the atmosphere and those of the blood.

The facts here related are important, whatever may be thought of the theory assumed in order to explain them. Here, the air receives rather than originates heat in the lungs. In the Polar regions, with a temperature of 200° below that of the body, the air returned from the lungs acquires heat to that amount. How the respired air at more than 100° below zero, should give out caloric for the whole body and yet receive such a vast amount for itself, is puzzling. It would be more satisfactory to assume that the nutritive, capillary, or some other process peculiar to vitality, generates the heat which the lungs impart to the inspired air; the assumed furnace, the fuel, the combustion, and the formulæ of the chemists to the contrary notwithstanding.

The air, *as air*, on entering the lungs might, by great compression or condensation, which, however, has no existence, yield heat as a wet compressed sponge yields water; but in that case the air discharged would be condensed and would have its temperature correspondingly low, instead of passing out greatly heated and expanded. The refrigeration of the air expired would be in an inverse ratio to the disengagement and absorption of the heat from the air inspired. Those who cannot but admit this physical view of compensations, fall back upon the chemical respiratory theory which has been already mentioned.

Blushing and Blisters.—Blushing which originates in psychical emotion manifests itself in increased heat, redness and capillary distention. Whether the psychical force is transmitted from the heart or acts directly on the blood and capillaries of the face is not certain. The latter is the most probable reference. Dr. Carpenter attributes blushing to the nerves (Phys. § 603), and yet, in § 604, his admissions, that the capillary circulation, nutrition, secretion, &c., are essentially independent of the nervous agency, go to show his assumption that blushing and pallor are nervous actions must be gratuitous as well as contradictory—contradictory for blushing, he says, "consists in a sudden enlargement of the capillaries and small vessels of the surface," phenomena belonging to the circulation itself, which circulation, among other functions, as he asserts in the same page, is essentially independent of the cerebro-spinal nerves. If these numerous and more complex functions can be accomplished without any nervous agency, why may not the simpler and more transient ones be equally independent? There is no proof that blushing is in the nerves; there is proof that it is in the capillaries. In neither case can we explain the psychical *modus operandi*. We cannot prove by consciousness, or sensuously, that the nerves are the agents in this case.

No one has ever supposed that blushing originated in "the furnace of the lungs," though "sighing like a furnace" has. It is utterly inconceivable how blushing could have a respiratory origin in an increased respiratory oxydation, and the more so because the development of blushing takes place instantaneously, while respiration, oxydation and circulation would require an appreciable time, and would heat and redden other tissues traversed nigher the furnace before reaching the face.

A blister, and still more speedily a sinapism, though cold, will, when applied to the skin, cause a considerable development of heat. The erectile tissue, simultaneously with a sudden influx of blood has an exaltation of temperature. Will any one pretend in this case, that the animal heat evolved originated in the lungs by increased respirations and charcoal fires?

The increased friction of the muscles and of the blood may possibly serve, in some degree, to explain the increased temperature which takes place during active exercise; yet, in the dead body, wherein the temperature is the highest known, this cannot apply any more than the respiratory theory.

Surgical Illustrations and Experiments.—Speculative physiologists maintain that, when an artery which supplies a part with blood is tied, "heat is no longer disengaged from it." The pain and other modifying circumstances do sometimes produce temporarily such a result.

A young man received a slight stab with a pen-knife in the arm-pit, which, having punctured the axillary artery, caused a small elongated aneurism, for which, some weeks afterward, Dr. Mercier, of New Orleans, tied the subclavian on the second day of November, 1843. The arterial pulsations immediately ceased in the arm. During the next day I found the temperature of both arms precisely the same, that is 102°. The nutrition of the aneurismal arm constantly declined, having become greatly withered, and was much smaller than the other at the time of the patient's death, sixteen days after the operation.

In the surgical papers of the late Sir Astley Cooper, the following experiments made by him are recorded, being not the less valuable because they oppose his theory (the usual one) of the origin of animal heat.

Sir A. Cooper ligated the pneumono-gastric nerves, "in six cases, in rabbits, for the purpose of showing the gradual decrease of animal heat." This decrease, he confesses, "does not invariably occur." In two out of the six experiments the contrary happened; "in the last, the temperature increased until the last moment:—

Exp. fourth—Respirations per minute before the operation, 128; heat, 104°. After, 52; heat, 102½°. Two hours after, 48; heat, 101½°. Four hours after, 52; heat, 102½°. Six hours after, 60; heat, 104½°. Eight hours after, 60; heat, 95°. Eight hours and three-quarters after, ceased: heat, 90°.

Exp. sixth—Respiration per minute before the operation, 96; heat, 104°. After, 56; heat, 102½°. Two hours after, 68; heat, 102½°. Four hours after, 52; heat, 102½°. Six hours after, 72; heat, 104°. Eight hours after, 52; heat, 105½°. Ten hours after, 48; heat, 102°. Ten hours and three-quarters after, ceased; heat, 98°.

It will be seen here that there is no correspondence between the number of respirations and the heat: thus, in the experiments, the decline of the former was followed by the increase of the latter.

In one case, the respirations had declined more than half, while the heat rose ½°; in the other case, at the end of the eighth hour, the heat had increased 1½°, while the respirations had declined nearly half. These experiments or vivisections, made upon the great central nerves, specially distributed to the lungs, stomach, &c., bear equally against the neurological theory of animal heat.

Spontaneous Human Combustion and the Emission of Light from the living body.—How far light and heat may be identical—whether caloric be "the active principle in light"—whether they be material or immaterial, emanative or undulatory, are questions foreign to the purpose of these researches; but, inasmuch as they stand nearly related,* and exercise a vast influence upon life, health, disease and decay, it may be proper to allude to some of their phenomenal manifestations which the reader will explain, if he can do so. May Virgil's benediction be his! *Felix qui potuit rerum cognoscere causas.*

From the most authentic accounts, it appears spontaneous human combustion happens oftenest to female drunkards, advanced in life, and that it proceeds with great rapidity, destroying the trunk usually, and differs from ordinary combustion, inasmuch as it takes place without the usual development of heat, seldom igniting the combustible materials in contact with the body consumed.

Phosphorescent luminosity, emitted from decaying timber and many bodies organic and inorganic bodies, has sometimes occurred in the hu-

* Dr. Whewell says, recent researches tend to produce a strong disposition to believe that light and heat are so closely connected that they can hardly be separated, having so many various properties in common, are propogated by the same machinery, &c. (Hist. Induc. Sci. ii, 601, new edit.)

man body, chiefly at the approach of death and mostly among drunkards. Sir Henry Marsh, M.D., of Dublin, who has reported several cases of the evolution of light in the living human subject, advances the following explanatory opinion concerning this phenomenon, namely:—"That all disease is incipient death, wherein the laws of vitality are gradually succumbing to the laws of chemical affinity and general attraction; during which struggle it is possible that the progress of chemical changes in vitalized structure may develop adventitious properties as light, &c."

"The Liverpool Pathological Society report, that a patient in the poorhouse, aged 47, formerly a drunkard, though he had drank no spirits for six weeks before death, was observed, on the night of the 16th of Nov., 1844, to emit a luminous breath during twenty minutes before death. This red-hot or red-coal like appearance was witnessed by two persons. The man had been suffering from intestinal hæmorrhage, anasarca, cough and expectoration. There was no *post-mortem* examination."

"A large cancerous sore of the breast emitted light enough to enable the hands of a watch-dial to be distinctly seen, when it was held within a few inches of the ulcer." (Carpenter).

Wm. Huggins, M.D., of Trinidad, July 10th, 1845, communicated to the London Lancet, "the case of H. McCullom, carpenter, habitual drunkard, who died the preceding August, emitting a bright red spark of fire from his mouth. A *post-mortem* examination showed disease of the stomach, enlarged nutmeg-liver, and the lungs affected."

Physiological Illustrations of Animal Heat.—The following experiments upon one middle-aged individual, in good health, were made with all possible accuracy. Omitting tabulated details, results only will now be given :—

Temperature of the hand for ten consecutive days, ending with the 16th of Jan., 1844, together with the temperatures of the room and the open air, were noted from 7 to 10, A.M.; also, at noon, and at 3 and 9, P.M. The weather was generally cloudy, the rains frequent and copious, the winds variable, with occasional thunder; fogs prevailed to an extraordinary degree; the minimum temperature of the air, 39½°; the maximum, 79½°; the lowest temperature of the room at 7 to 9, A.M, 61°; highest, 73½°; at noon, 68° to 74½°; at 3, P.M., 67° to 75½; at 9, P.M., 70° to 77°.

Each experiment on the hand lasted fifteen minutes. The whole series gave the following average results:—6, A.M., in bed (room without fire), 98.45°; 7 to 10, A.M., parlor, 90.15°; noon, 97.71°; 3, P.M., 97.15°; 9, P.M., 98.45°.

The following experimental history extends to nine days, commencing at the close of the former experiments, amounting to eighteen consecutive days, ending Jan. 24th, 1844.

I may here remark, that while sitting in a room artificially warmed, the hand holding the instrument was always turned from the fire, and rested upon a table covered with a woollen cloth. During the experiments the hand was never opened. The temperature was usually noted every minute, or every five minutes, though not always so mentioned in this paper, from a wish to be brief in details.

Jan. 16th, 7, A.M.—Room, $65\frac{3}{4}°$; experiments one hour in bed; perineum, 100°; pressing the sole of the foot against the internal malleolus, $97\frac{1}{4}°$; axilla, 100°; bend of the elbow, 98°; left hand, 98°. Left the bed, dressed, put on no coat, in 30*m.* the hand gave only $90\frac{1}{4}°$.

$3\frac{1}{4}$, P.M.—Room, 68°; dressed; the left hand, after a trial of 35*m.*, 98°; water at $61\frac{1}{2}°$ was applied repeatedly to the forehead for 37*m.*; during this time the heat of the hand fell 8°; the person well clothed. Was the whole system cooled 8° ? The face became pale, afterwards flushed.

Jan. 17th, $6\frac{1}{4}$, A.M.—Bed-room, 46°; left-hand not covered by the bed-clothes, in 23*m.* gave 92°; after leaving the bed 8*m.*, without dressing, it fell to 85°; partly dressed, 20*m.*, 80°. In a room with a fire, air at 59°; in 15*m.*, hand, 75°. Here a slight exposure to a moderate cold caused a fall of 17°. Went into the open air at 46°; water at 38° was applied to the face and both arms at intervals for 11*m.*; the hand fell to 72°; breakfasted 15*m.*, repeating the cold occasionally, 70°; went into the room where the fire was, as above, in 15*m.* declined to 67° ! At 10, A.M., the left hand was 96°; clothed; room, 66°; good fire. Rolled up the cuff, applied water at about 44° to the wrist with a sponge, &c., at intervals; in 40*m.* the heat fell to 80°; in 15*m.*, to $74\frac{1}{2}°$; cold now applied to the forehead only, 10*m.*, $70\frac{1}{2}°$; cold now withdrawn; sat by the fire 15*m.*; hand, 68°; 15*m.*, 69°; 10*m.*, 81°; 15*m.*, 93°; 30*m.*, 98; 10*m.*, 99°.

The refrigeration progressed as long as the experiments lasted: in the first case depressing the temperature, in 1*h.* 24*m.*, from 92° to 67°, a difference of 25°; in the last case, occupying nearly the same length of

time, the fall was 28°; in 15*m.* after the withdrawal of the cold, aided by a comfortable fire, the hand was still 3° below the point of departure, but in 40*m.* more rose 3° above it.

Jan. 18th, noon.—Room, 65¾°; coat off, the left hand, 97¼°; about 12 lbs. of water at 50° used for a foot bath; 5*m.* while undressing, the hand fell to 95°; 5*m.* while using the foot bath, to 90½°; 15*m.* while exposed to the air, to 89°; 5*m.* without coat, to 88°.

Jan. 19th, 6, A.M.—Room, 54½°; the left hand in bed, 100°; arose, dressed partially, in 25*m.*, 90½°; applied water at 53° to the forehead, face, and opposite hand at intervals, sitting in a room at 62¼°, the back towards the fire, in 48*m.* the heat fell to 83°, and remained stationary 10*m.*, as long as the experiment lasted. No cold was applied to the left arm, which was clothed as usual, except the coat. The refrigeration was through the right hand and forehead, the instrument in the left hand, as in all the other experiments, was not changed after leaving bed.

9, P.M.—Room 70°; the left hand 99°; removed coat, vest, cravat, opened shirt collar, and in 15*m.* the heat fell to 94°.

Jan. 20th, 6, A.M.—Bed-room 63¼°; in bed, left hand uncovered 15*m.*, 99°; axilla, 10*m.*, 99½°; femoral region, 10*m.*, 98½°; perineum, 5*m.*, 101°; popliteal region, 5*m.*, nearly 99°. Dressed, except coat and vest, 10*m.*, 92°; about 4 lbs. water at 63½° applied at intervals with the right hand to the forehead and face; in 40*m.* the left hand declined to 83¾°, and was still falling when the experiment ended.

12, M.—The left-hand being at 99°, the clothes on, sitting by a good fire, the room 68°, the right hand and wrist were immersed in one gal. of water at 63½°; in 25*m.* the left hand fell to 97°; in 15*m.*, to 93°; (cold being also applied to the forehead several times). The right hand now wiped dry received the thermometer at 93°; in 10*m.* the mercury stood at 73°; in 5*m.* rose to 74°.

Jan. 21st, 5, A.M.—Room 68°; in bed, hand exposed, 10*m.* and 5*m.*, each observation gave 98½°; popliteal region 8*m.*, 100°; perineum 5*m.*, 101°; elbow, at the fold, 5*m.*, 99°; left hand 5*m.*, 100°; instep and sole, 99°; by increasing the bed-clothes the left hand gave in 8*m.*, 101°. Left the bed and sponged at intervals with water at 65¾°; in 15*m.* the hand was 97°; friction with a towel 5*m.*, 95°; 5*m.* while dressing, 94½°; 5*m.* 93°; 10*m.* stationary and then began to rise; in 15*m.* the axilla was 99°.

Jan. 22d, 6, A.M.—Room 68°; perineum, groin, popliteal and hand,

each 100°; femoral, instep and sole, 99°; while dressing, and after, the left hand fell in 15*m.* to 97½°; in 27*m.* (occasionally applying water at 68° to the forehead) it gave 92°.

10, A.M.—Air 68°; sat in the open air of a porch after walking several squares, the weather growing warmer 1° per hour; in 65*m.* the hand fell to 78°, and was still declining, being then 22° less than when in bed 5*h.* before.

It will be seen by some of the preceding experiments, that cold air and cold water, even partially applied, in rooms with and without fire, cause a reduction of the temperature sometimes 33° or 34° below the natural heat; this depressed temperature so far from disappearing in a few minutes continues for an indefinite period, probably involving the whole system as well as the accessible points upon the surface, as appears, perhaps, analogically during refrigeration from applying cold to the forehead, opposite arm, and to the feet, while the rest of the body may be clothed comfortably. No injurious effects resulted from these refrigerations, except, perhaps, a boil just above the knee.

Jan. 23d, 6½, A.M.—Room 74°; in bed—hand, instep, sole, ankle, axillary, inguinal, perineal and popliteal regions, each 100°; at 9½, A.M. room 71°; hand in 20*m.* gave 88½°; at 11, A.M., room 72°; hand in 21*m.* gave 95°; at 9, P.M., room 75°, the hand in 15*m.* gave 99°; the perineum and axilla the same.

Jan. 24th, 7, A.M.—Room 72°; in bed, hand and axilla, 100°; groin, instep, femoral, elbow, and tongue, 98° each. At 9, A.M., room 74°; hand in 15*m.*, 96°.

The maximum of the room in which the experiments took place was 77°; the minimum, 46°; the average, about 65°.

Experiments on the temperature of the hand, in the winter, for ten consecutive days, at 7 to 10, A.M., at noon, at 3 and 9, P.M.; the minimum of the room, 39½°; maximum, 79½°; average, 68°; each experiment having lasted 15*m.*, the whole affording the following results; the averages only will be given:—Average, 6, A.M., hand in bed, 98.45°; average, 7 to 10, A.M., 90.15°; average, noon, 97.71°; average, 3, P.M., 97.15°; average, 9, P.M., 99°.

The hand is in many respects an inconvenient place for taking the temperature. If both hands be used, the palms compressing the instrument between them, the services of a second person will be required, in order to note the experiments.

There can be no doubt whatever that even a moderate application

of cold, if persisted in, will produce a great and prolonged reduction of animal heat, extending apparently to the whole system—a fact of great pathological significance and therapeutic value in calorific excitements, irritations, inflammations, and fevers, of which more hereafter.

The following experiments on the temperature of the hand, at 9, P.M., were continued nine days longer (in a room where fires were kept); each observation lasted 15*m*. The lowest temperature of the room was 65¾°; the highest, 75½°; two days clear; two days thin clouds; one day rainy and foggy; one day foggy and cloudy; two days cloudy; mosquitoes prevailed four days. Temperature of the hand, for nine days, at 9, P.M., 98½°, 97½°, 98½°, 98°, 100°, 99°, 99°, 96½°,—averaging 98.37°.

It will be seen that the average temperature of the hand, at 9, P.M., in a room with a fire, agrees with that of the hand in bed at 6, A.M. In a few hours after leaving bed the temperature declined nearly 8°, but rose by noon 7° to 8°, remained nearly stationary to 3, P.M., and reached its average maximum of 99° at 9, P.M.

Diffusion of Physiological Heat.—Authors who copy from one another assert, that the temperature of the body diminishes in proportion to the distance from the heart. This is unquestionably a mistake in the recently dead body, in many instances at least, and will hardly hold good in its application to the living, as the following summary of several hundred observations made on one healthy person, before rising from bed, during eleven consecutive days, will perhaps show. These experiments, made towards the end of April and the beginning of May, 1844, were carried out daily under similar circumstances, between the hours of 4 to 6, A.M. The mean or average results alone will be stated:—Mean of the room, 74°; of the hand, 98.25°; of the tongue, 98.33°; of the axilla, 98.4°; of the perinæum, 98.3°; of the popliteal, 97.8°; of the sole and inner ankle, 98.47°.

The following averages from tables carefully prepared during sixteen consecutive days of June, 1844, will serve to illustrate the comparative temperatures of the hand and of the urine, noted simultaneously, in the hot season of the year,—from which it will appear, that the difference between the pelvic centre and the hand is not very great.

The average external temperature of the mornings and evenings, at the time of the observations, was 83.2°; average of the hand, 99.5°; of urine, 98.37°; whence then it appears that the hand averaged 1.13° more than the urine. But it is probable that the oscillations and depressions of temperature during exposures to cold, are much greater

upon the surface and extremities, than in the centres. The high equable external temperature during these latter experiments tended, no doubt, to equalize results. There is, however, a source error in these observations, which perhaps might be avoided; that is, the receiving glass (in this case a quinine bottle) might be first heated to the ordinary temperature of the body, before using it, so as to prevent or lessen the absorption of caloric by the vessel itself. This, though not wholly neglected, was not strictly carried into effect.

The following table, made in the manner above mentioned, in the same hot month, during seven days, is subjoined as a further illustration:

	A.M.			P.M.			
	Hour.	Air.	Hand.	Urine.	Hour.	Air.	Hand.	Urine.
	8½	83¾°	98¾°	98¾°	4½	85°	100°	99°
	10	89	99	98	8	79	100	97
	5	76	98	97	4½	84	100	100
	11	86	99	98½	8½	82	100	98
	5	82	98	98	2½	88	98	100
	9	84	98	98	5½	86	100	98
	11	88	100	100	8½	82	98	97
	6	78	99	99	6½	86	100	98
	6	76	98	99	1	90	100	98
	5	76	98	98	3	79	98	98
	6	67	98	98	6½	84	100	99
	10	86	99	98	8	80	100	98
MEAN,		83.39	99.45	98.5		83.75	99.5	98.37

Dr. Double, of France, and some others, say that the animal heat is depressed below the ordinary standard during sleep and in the morning. This latter, so far as I have experimented, is not accurate, unless by morning we understand the next hour after rising from bed. *A priori* it might be expected that caloric would accumulate in the body while lying enveloped in non-conductors, as blankets, and the motionless air, almost hermetically sealed by the bed-clothes during a winter's night. And such appears to be the fact.

Experiments, each lasting quarter of an hour, made in bed, on eleven consecutive days in the winter season, afforded the following results: hand, minimum, 92°; the maximum, 100°; the average about 98½°, very

nearly the same as the elbow, ankle, sole, instep, and femorals; the axilla being about 1° higher; the perineal, scrotal, inguinal, and popliteal regions, from 99° to 101°, averaging 100½°.

The stomach, one great centre, is doubtlessly freer from diurnal oscillations, occasioned by external temperature, than the limbs and other circumferential parts.

In the most reliable experiments ever made upon the temperature of the stomach of man, are those by the late Dr. Beaumont, of the American army. These experiments, made in all seasons of the years 1829, '30, '31, '32, '33, in different latitudes from 38° to 44° 40′ N. upon Alexis St. Martin, a healthy young man, who had an external fistulous opening into his stomach, from a gun-shot wound in 1822. This opening not only permitted Dr. Beaumont for many years to make ocular examinations of the interior of the stomach in health and in sickness, in temperate and intemperate eating and drinking; but allowed him to introduce the thermometer and all varieties of diet, *ad infinitum.*

In this unparalleled case, Dr. B. could distinctly see the drinks and diets swallowed by St. Martin, pass through the cardiac orifice into the stomach.

The highest temperature of the stomach during health and repose, when empty, was 100¾°; the lowest, 98°; the mean, 100⅓°; during digestion, when full, highest, 102°; lowest, 99°; mean, 100½°; highest during or just after exercise, 103°; lowest, 100½°; mean, 101½°.—Once, and only once, did the temperature rise to 103°, which occurred after "unusually increased exercise," the natural temperature of the stomach being 100° F., according to Dr. Beaumont.

In one of Dr. Beaumont's experiments, the injection of a gill of water at 50° depressed the temperature of the stomach 30°; the natural temperature did not return until more than half an hour afterwards.

The slight *sensibility* of the stomach to the extremes of cold and heat is surprising, ranging from 32°, the freezing point or that of melting ice, to 145°. The temperature at which coffee is drunk is, as I have often found by experiment, as high as this latter figure. Fluids at 32° or at 145°, if applied to the skin extensively would produce a violent shock, if not a speedy death.

In his late work on the skin and hair, Mr. Wilson sums up the heat of the various baths thus: temperate, 75° to 85°; tepid, 85° to 95°; warm, 95° to 98°; hot, 98° to 105°. M. Velpeau says, "the ordinary

temperature of a bath is from 26° to 29° R. (90° to 98° F.) In general, a bath becomes exciting and even rubefacient beyond 30° R. (100° F.)" (Oper. Surg. i, 228.)

Ratio of Refrigeration in Normal Urine.—During six days in June, the air having averaged at the times of the experiments (fifteen in number), 83.2°; the urine, 98.6°. The average fall or refrigeration, every five minutes, was 95.15°, 92.32°, 90.5°, 88.15°, 87.5°, 86.72°, 85.57°, the point of departure having been, as we stated above, 98.6°.

An important sequel to these experiments would be, the comparison between the ratio of refrigeration of urine of the natural temperature, heated by animal caloric, morbid and normal, and the ratio of refrigeration of the same when re-heated by physical caloric, taking in each case similar points of departure. Experimental evidence upon the difference between animal and physical caloric, in this point of view, has been obtained by the writer from other experiments, some part of which will be subjoined after offering a few clinical remarks on animal heat.

Calor mordicans or *calor mordax*, communicating a peculiar pungent, tingling and disagreeable sensation to those touching febrile patients, of which the ancients have written much and the moderns not a little, is thus summed up by Galen:—

Febrium, quæ a putredine oriuntur, maximum indicium est mordacitas et acrimonia caloris; quæ perinde ac fumus nares et oculos, sic ipsa erodere tactum videtur. Non statim ea qualitas, admota manu, discernitur, at per moram prædicta caliditatis species effertur ex penitioribus partibus.

Sir John Pringle says, "on feeling the pulse for some time (in jail-fever), I have been sensible of an uncommon ardor, leaving an unpleasant sensation on my fingers for a few minutes after. The first time I observed this, I referred it to the force of imagination; but I was assured of the reality by repeated experiments, and by the testimony of others, who, without knowing of my observation, had made the same remark." (Dis. Amy. 259.)

It is believed that the thermometer, still more than the touch, is a criterion adapted to determine whether there be any difference between febrile and physical heat, and their ratios of refrigeration, &c., &c.

Ratios of Refrigeration in Bodies heated by Animal and Physical Caloric.—These observations were made on nine consecutive days, ending April 23d. The weather was clear, and gave an average temperature of 70.55° at 8, A.M.; of 81.44° at 2, P.M.; of 71.5° at

8, P.M. The instrument was heated perhaps not always to the maximum of the hand, and gave 96° nearly, as its average point of departure; the mean fall of the quicksilver at the end of every five minutes was as follows:—83.94°, 79.12°, 78.22°, 77.57°, 77.25°.

In a case of subacute pneumonia, the patient was bled one pound in an open gallery, the air of which was 83°; the blood falling on the thermometer raised the mercury to 94°, but it began to fall as soon as the blood ceased to flow; in 12*m.* it fell to 92°; in 10*m.* to 90°; in 15*m.* to 87°; in 25*m.* to 83°; in 30*m.* to 81°; in 15*m.* to 79°. The bowl of blood re-heated artificially to 95°, being placed in the same situation, the air being the same, the mercury fell in 12*m.* to 86°; in 12*m.* to 83½°; in 15*m.* to 81°; in 15*m.* to 79°, the stationary point, which was reached in about *one-half the time required to dissipate the animal caloric.* Next, a similar quantity of rain-water was treated as in the last experiment, and gave within one degree the same ratio of cooling as the latter.

In acute syphilis, a pound of blood just drawn gave 92°; in 12*m.* after, 84°; in one hour, 67°, the air being 62°. In a case of yellow fever, the blood raised the mercury in two minutes to 98°, at which it remained stationary two minutes, and then began to fall; in another case the temperature of the blood was 100° as long as it was observed, that is, for ten minutes. These facts, though few, and perhaps inconclusive of themselves, assume a more important character when connected with many more decisive experiments, indicating *that morbid caloric differs, in some respects, from other kinds of caloric of the same temperature.*

Remittent, ending in Intermittent Fever.—1845: Aug. 2nd; air at 6½, A.M., 71°; 8, A.M., 75°; 4, P.M., 88°; room, during the experiments which follow, 80° at 10¾, A.M., to 85° at 2½, P.M. R. M., aged 19, resident in Mobile five years; in New Orleans two months. At the close of the experiments mentioned below, the hand gave a temperature of 101°; the axilla 103½°; the bend of the arm, 102°. Recovery in two weeks.

The patient was bled from the arm 16*oz.*; the blood falling on the bulb of the thermometer, in a basin, caused the mercury to oscillate from 94° to 95½°; in three minutes after the blood ceased to flow, it coagulated throughout, enclosing the bulb, the mercury standing at 94°; in 15*m.* it fell to 93½°; afterwards its declination was as follows, at the end of every five minutes precisely:—92½°, 91°, 90°, 89°, 88°, 87°, 86°, 85°, 84°, 83°, 82°, 81½°, 81°, 80½°, 80°, 80°; stationary. The

basin containing the blood with the thermometer *in situ*, was placed for ten minutes in the sunshine, and then for ten minutes in and over warm water, which gave to the contained blood 96° at the bottom and 94° in the centre. In twenty minutes the centre reached 96°, the bowl having been wiped dry. The air of the room, as well as the external air, had in the meantime become warmer. The basin was placed in the same situation as during the preceding experiment, and as soon as the mercury fell to the former point of departure, that is 94°, the ratio of decline was noted at the end of every five minutes exactly, as follows:—94°, 92°, 90°, 88¼°, 87½°, 86¼°, 85¼°, 84½°, 84°, 83½°, 83°, 83°; stationary.

The intelligent reader will perceive, that in the first experiment the large cold bowl must have absorbed much of the heat of the blood.—Hence, judging *à priori*, it might be expected that the heat of the blood would have fallen rapidly, until the equilibrium had been attained. In the second experiment, the bowl and its contents, heated in the sun and in warm water very gradually, were pervaded with an equalized heat, and might be expected to refrigerate far more slowly; yet, the contrary result took place. The blood heated by animal caloric required one hour and a-half to reach the stationary point, while the blood re-heated by physical caloric reached the stationary point in fifty-five minutes. In the first condition the blood, though in a cold bowl, fell only half a degree in fifteen minutes; in the last case, in fifteen minutes the decline was nearly six degrees.

In view of the experiments to be presented hereafter, as well as those already submitted to the reader, it should be borne in mind that the main purpose of the writer, for the present, does not comprehend the explanation, deduction, and theory of the phenomena which have been, or may be related. Casual remarks, suggestions, and reasonings, will, as heretofore, be noted as they arise, without systematic arrangement.

In Western Journal of Medicine, more than eleven years ago, I gave an experimental exposition of the fundamental facts, then not few, since vastly augmented, concerning my researches into animal heat sufficiently broad to secure by documents and dates, my claim to priority of discovery in this behalf, as will more fully appear. I have taken some facts which I published in that journal, for this paper, as well as the following speculation:

If we suppose the central, the great vital organs to be as hot during life as they are found to be soon after death, the only wonder is that

vitality should maintain its seat for a week or more under the positive changes that ought, by every law of caloric, to take place in the molecular arangement of the tissues. Let us suppose the brain in life to be as hot as the thigh is found to be after death, that is 14° or 15° above health; the cerebral mass would necessarily expand, the fluids would dilate, and perhaps transude; compression would be the consequence, attended with convulsions, coma, and other effects incompatible with life. Suppose any other organ should become such a focus of morbid caloric only for a moment, would not each vessel from dilatation lose its healthy elasticity and cohesion, and thus pave the way to sanguineous congestion, admitting the blood to the part as effectually as the cupping glass does, when the pressure of the atmosphere is removed. In some local diseases, the lesions will afford an average alteration as great as fatal gun-shot wounds; as, for example, dysentery, consumption, and cancer. But in fever how much is unexplained! Is not morbid caloric the agent that eludes the knife of the anatomist? To say nothing of its directly deleterious, let us consider its mechanical effects, as above mentioned, upon the brain. After dilating its delicate vessels, and establishing a sanguineous congestion, death perhaps follows. The brain, as we have shown, falls sooner than other parts under the law of refrigeration; the cranium contracts; this tremendous force drives the blood down from the brain towards the warmer and more yielding centres of the trunk; perhaps a real meningeal apoplexy, without rupture, has disappeared. The febrile subject offers many instances of great vascularity of the vessels of the pia mater, without turgescency; the veins especially, are found full but flattened as if by pressure. There can be no doubt that in the living, as well as in the dead body, foci of caloricity establish themselves in particular parts, sending off, not always in right lines, but in deflected currents, morbid heat to certain organs, passing by others. Thus the epigastrium and axilla may stand charged with a positive caloricity of 109°, while the organs of that part of the chest lying between these points shall be in a negative, or much lower state of temperature. I could muster serried columns of facts illustrative of some other points but I must omit them altogether.

So far as morbid caloricity can be identified as a cause of disease, we deal with a positive, not an imaginary agent, where the ground is not eternally slipping from beneath our feet. Albumen, which abounds in the brain and fluids, coagulates at 160°; hematosine, the coloring matter of the blood, at 119°; and moderate increase of heat vastly aug-

ments the solvent powers of the serum over gelatine, so abundant in the body. The phosphorus in the body, were it uncombined, would burn in a heat less than 113°.

Admitting that the whole body be permeated with 10° or 15° of heat, and that it cannot render this heat latent, I ask again, is it wonderful that death should ensue? Which atom has not undergone a deleterious modification, or a new arrangement in its chemical, mechanical, and vital laws and relations? "Delaroche and Berger prove that animals, in chambers heated to 120° or 130° Fah., have their temperature raised 11° to 16° and die speedily." If, as some maintain, all lesions may be reduced to those of nutrition, calorie is an agent well adapted to play an important and fundamental part, not only diminishing the elementary cohesion of the tissues, but in debilitating all the organs, thereby favoring intertextural depositions, hypertrophies, softenings, hæmorrhagic and serous effusions, morbid secretions, engorgements, and other alterations, solid liquid and gaseous.

Since the above was in type, the writer was present at one of the most formidable of all surgical operations, namely the resection of the inferior jaw, performed by that distinguished surgeon, Dr. Mercier, Sept. 12, 1855. Before the operation and at the commencement of the preparatory inhalation of chloroform, the patient's palm, which was somewhat cool to the touch, gave 96°; the bend of the arm, $100\frac{1}{2}$°; the pulse having been 84. Immediately after the removal of the morbid mass and before the sutures had been placed, (the pulse being 100) the temperature of the bend of the arm was still $100\frac{1}{2}$°, although the patient's breathing had been irregular and impeded, owing to the blood, saliva, chloroform, and the mechanical obstructions in the mouth incidental to the operation. The pain of the operation and the movements of the patient were only partially controlled by the chloroform; the shock of the nervous and respiratory systems did not in the least impair the heat-producing process.

This note is subjoined as illustrative of the contingent question alluded to, page 295, whether the pain of surgical operation may possibly modify the evolution of animal heat.

(To be Continued.)

Art. II.—*Case of Hydrophobia ; Treatment ; Death :* by A. Donnaud, M. D.

On Monday, 6th August, 1855, at about 3 o'clock, P. M., I was called on by a lady residing on Phillippa-street, to see her son Joseph Graham, who she said had the Lockjaw. At 3½ o'clock of that afternoon, I saw patient for first time ; a youth aged about 14 years ; slight delicate frame ; nervous temperament ; found him sitting up in a chair, perfectly rational ; pulse 85 ; no injection of the eye ; tongue clean and moist, respiration free, his body, hands and forehead covered with cold clammy sweat ; sighed deeply at intervals looked anxious, and was somewhat restless, going to and fro from his chair to the bed. Complained bitterly of pain extending up his right arm from his hand to his shoulder. His mother, meanwhile, hearing it mentioned that he had great aversion to drinking any fluid, I took her aside, and upon questioning her she informed me "That during the second week in June he had been bitten on the hand by a dog, belonging to a neighbor, that a white boy about 4 years old, and a negress belonging to Mr. H. L. K——, had also been bitten by the same dog the next day ; she did not think the dog was rabid.

The wound which was very deep and severe, had healed readily in about twelve days, no preventive application had been made to it, but simply dressing with Venice turpentine which she had procured from a druggist. The boy had not complained before that morning, (Monday,) when, about 10 o'clock, he tried to drink some lemonade, but upon carrying the glass to his mouth, felt a choking sensation in the throat, and could not swallow any : had tried several times since but without succeeding."

Upon examining the patient's right arm, I found it to all appearances entirely paralyzed ; he could not move it in the least, without raising it with the left hand ; and on his right hand I perceived two scars ; one on the palm of the hand near the thumb, and another on the back of the hand near the wrist. The hand was not swollen nor was there any inflammation, redness, or lividness around the cicatrices. Fearful of alarming patient, who was a remarkably intelligent lad, I inquired in a careless manner what had caused them, he said he had been bitten there by a dog some weeks previous, and that he had poisoned the dog the next day; was perfectly well 'till the evening previous, (Sunday,) when, while playing with some comrades, he had felt a numbness and shooting pains in his arm, and next day could not use it at all. Wishing to see the effect water produced on him, I handed him some in a cup, but he

repulsed it suddenly, saying he did not feel thirsty. Upon asking him if he would take some medicine, he said no ; could only take something solid; told him I would give him pills, which he said he would try to take.

Prescribed a purgative enema to be given immediately, and the following pills, and liniment. Room to be kept quiet, and patient not to be annoyed: *Ext. Opii*, gr. ij; *Ext. Valerianæ*, gr. xvj: *Costoreum* gr. x. *Div. in pil.* No. viij. One every hour until I called again. ℞. *Ol. Terebinth.* ℥ss. *Tinct. Camph.*, ℥vj. *Chloroform*, ℥ij. *Mix* : apply by friction to arm.

7 o'clock, P. M. saw patient; bowels had been evacuated; had taken three pills; felt a little easier; pulse 110 ; had managed with great difficulty to swallow a table-spoonful of water. A short time before I came, he had requested his mother to let him go in the yard to the hydrant, and try to drink, he reached the hydrant, made several attempts to catch some water in his hand, but fruitlessly, his dread of touching it being too great; complained of thirst, prescribed small pieces of ice ; after much persuasion I got him to put a piece in his month ; made several convulsive efforts to swallow it, but could not, took it into his hand and held it there for some time.

Pills to be continued, and following enema : ℞. *Tinct. Assafœtidæ*, ℥ij, *Opii*, ℥j. *Mix : one third to be given in two ounces of mucilage every two hours during the night.*

Tuesday morning, 7 o'clock. Patient had slept some during the night; pulse 96 ; perfectly lucid ; two injections; assafœtida and opium had been given and retained ; struggled very much and would not take the third; very restless; complained when the wind blew on him, which caused slight spasms; startled at any sudden noise; would often catch his breath with a long quivering sob, but had apparently no difficulty in breathing; paralysis and pain in the arm entirely gone; could raise and use it with perfect ease ; complained of thirst, but could not drink; spit frequently a white frothy spittle ; said he was "foaming at the mouth." Wishing to see the effect caused by the external contact of of water, I proposed to wash his face and hands, on mentioning it he became irritated, and would not allow it ; finally, he permitted his mother to wipe his hands with a wet towel but would not let her touch his face, saying it smothered him; said he wanted some tea; told us not to look at him, carried it suddenly to his mouth, but withdrew it instantly, at the same time turning his head hastily from it. Examined his mouth carefully, but could perceive no pustules beneath the tongue or

elsewhere ; (which examination I repeated at every subsequent visit, with the same result.) I wished to have a strong purgative enema given but he would not permit it, saying "it pumped wind into him."

Prescribed : ℞. *Ext. Opii,* gr. vj. *Ext. Belladonnæ,* gr. iij. *Pulv. Camph.* gr. xx. *Div. in pil.* No. xii : one every hour. Cease taking first pills. Blister, 9 × 4 on back of neck, extending down the spine. To be dressed with following ointment : ℞. *Sulph. Morph.* gr. iv. *Ext. Belladonnæ,* ℥i. *Cerat. Semplex,* ℥vj. *Mix.*

Informed Mrs. G. that it was a case of Hydrophobia, giving her the necessary precautions to be taken in those cases. Promised to call at nine o'clock, with the intention of administering chloroform.

Previous to seeing me on Monday, Mrs. G. had called on Dr. McFarlane, who was absent at the time ; having called at the house in the evening, he expressed a wish to meet me next morning at nine o'clock; met him at that hour ; patient a little easier ; pulse 90 ; had tried to swallow a piece of ice, but without effect. Dr. McF. also examined his mouth but could discover no pustules ; he unhesitatingly pronounced the case to be Hydrophobia.

The patient having such strong objections to an enema, Dr. McF. proposed a drastic purge, composed of *Calomel, Croton Oil, and Gamboge,* which was accordingly given, to be followed, after operating, *by a tobacco enema ;* tobacco two drachms, infused in ten ounces of boiling water ; a two ounce syringefull to be given at intervals, according to its effect.

1½ o'clock.—Patient had taken three of the purgative pills ; had two copious evacuations, managed to swallow two small pieces of ice, and had eat a slice of dry bread ; complained greatly of thirst, and of the accumulation of sputæ in his mouth ; repeated often "that it was not the dog that done it ;" conjunctiva very white and glistening ; desired much to sleep. Having brought some chloroform with me, I tried to put him under its influence, but without effect ; he struggled violently against it ; even the odor at a distance seemed to make him perfectly frantic. I still persevered, thinking to overcome him, but could not ; it brought on such violent choking and sobbing attacks, that I felt confident, if continued, he would go into convulsions. Pills to be continued, and an enema of two ounces of infusion of tobacco every hour. Dressed blistered surface with ointment of belladonna and morphine.

6½ o'clock.—Saw patient in connection with Dr. McF.; three enemata of tobacco had been given and retained ; complained of slight nausea ;

pulse feeble ; had drank a few spoonsful of water, held a tumbler of water in his hand, looking intently at it; but would not raise it to his mouth ; complained of being cold and wanted to go near the fire ; looked suspiciously at us, and tried to hide behind the bed or door, but when spoken to, would answer rationally, said he would take his pills without enveloping them in jelly, it made him thirsty ; kept continually spitting.

9 o'clock.—Patient became quite noisy ; I had left word to be sent for if he got worse ; was called for at 10 o'clock, but was professionally engaged elsewhere. I am informed by an intelligent person who was present, that at 10 o'clock, he became perfectly furious, accused his mother and others surrounding him, of wanting to poison him, wanted a knife to kill them ; kept repeating "I am mad, I am raving mad," some person, having no doubt spoken of his malady in his hearing. His mouth was filled with thick stringy saliva ; said he was smothering, and wanted air ; begged to be allowed to sit at the door, reached the door and tried to run in the street ; was put in bed, but threw himself suddenly from it on the floor, struggled very much, requiring two persons to hold him, gradually became quiet.

The boy no doubt was much annoyed and irritated during the evening by many persons who wishing to satisfy a morbid curiosity, forced themselves into the room, preventing the mother from keeping him as quiet as possible, according to directions.

A wet towel was applied to his lips, from which he now sucked the moisture with avidity. At about 11½ no pulse could be felt ; finally he expired at 12½ o'clock, 38 hours after well marked symptoms had appeared, and about 56 hours from the time he first felt tingling and numbness in his arm.

Chloroform was again applied during night, but with the same result as previously.

In reporting this case, it is simply to give a correct history of the time when the boy was bitten, whether the dog was rabid or not, length of time of incubation, date of first appearance of specific symptoms, duration of illness, symptoms during treatment, and time of death.

As I previously mentioned from the time the boy was taken until his death, I could find no irritation or redness surrounding cicatrices, not any pustules beneath the tongue or elsewhere in the mouth.

Cases of hydrophobia, fortunately, are rare among us; and generally from ignorance or forgetfulness on the part of patients and their friends, it is difficult to get correct information from them as to the exact date of the bite, whether the dog was really rabid or not, if any application had been made to wound, if so, of what nature and in what manner, on what part of the body bite had been inflicted, &c. It is only by carefully collecting and noting these facts in many genuine cases, and comparing them, that we may finally arrive at a correct conclusion, as to the length of time which elapses after the bite, before the appearance of this terrible malady, or that a person can consider himself safe; and if, as it has been affirmed, hydrophobia can arise from the bite of a dog that is not rabid, &c. That in this case, the boy died of hydrophobia, I am convinced, and that the dog was rabid, I am now positive. But, if I had believed the mother of the boy and neighbors, I could not speak so assuredly of the latter, for they affirmed that the dog was *not* rabid. The owner most certainly did not believe it, for she would not allow him to be killed at the request of Mrs. G., nor even take the precaution to chain him, letting him run about the premises that afternoon, night, and next day, when, no doubt, if he had not been poisoned he would have bitten many others; but by dilligent inquiries since, I have discovered that the dog had acted in a strange manner for two days previous, biting and snapping at pieces of wood, straws, &c., about the yard and sidewalk, showing in fact, to those acquainted with this malady, positive symptoms of hydrophobia.

Is it not in this manner that we see cases reported of death from hydrophobia from the bite of a dog, which we are assured in good faith by many eye witnesses, was perfectly healthy, which, on the contrary, was rabid? The bad plan of immediately killing a dog after he has bitten a person, instead of carefully chaining him, not only increases the difficulty of finding out if he was rabid, but also if rabies can be given by the bite of a healthy dog.

I mentioned that the boy had poisoned the dog; he purchased 5 cents worth of strychnine, mixed it with meat, and gave it to the dog, who eat it; some two hours after, finding it had no effect, he purchased 5 cents worth more, mixed it in the same manner, threw it on the sidewalk, but it was eaten by another dog, who died shortly after, while the rabid dog did not die before late that night. Whether the second quantity was larger, or that the hydrophobic poison retarded the speedy effects of the strychnine, I cannot say.

To show what singular opinions the public generally have regarding this disease, and how popular errors are tenacious, I will mention here, that the boy had been advised by many to apply some of "the hair of the dog" to his wound, and the mother informs me that although she did not believe the dog was rabid, still she was not assured that her son was out of danger till the dog was poisoned, when she was perfectly satisfied that no bad result could ensue.

While speaking to the boy a few hours previous to his death, some of the saliva he was continually spitting, entered her mouth. She simply gargled it with water. I was not informed of this for several days after, or I would have advised a more active application.

The gentleman whose child was bitten, left the city a month ago with his family. I do not know in this case, if any preventive medicines have been taken. He will return again in a short time.

Mr. H. L. K.'s negress was bitten on the leg. He informs me the wound was very slight, in fact only an abrasion of the skin, drawing no blood. In all probability the dog's teeth were wiped as she was bitten through her clothes. Aqua Ammoniæ was immediately applied, which caused it to bleed; much inflammation ensued, no doubt from the application, and it was about seven weeks before it healed. Mrs. G. could not give me the exact date that her son was bitten, but as Mr. H. L. K. is positive that his negress was bitten on the 15th of June, and as the boy was bitten the day previously, exactly one month and 22 days expired before the first symptoms appeared.

Regarding the action of chloroform, in this particular case, I could obtain no beneficial results form its use.

ART. III.—*Topical use of Calomel in Fistula in Ano. Cure:* by J. J. WILLIAMS, M. D., of Sommerville, Tenn.

This case is reported for the (supposed) novelty of the treatment, as being a very suggestive one, and for the purpose of attracting the attention of medical men to a very simple, and in my hands in this case, a very efficient remedy for a disease troublesome to the practitioner, and very noisome and painful to the patient.

About the middle of June last, I was sent for, to see a Mr. L., who had long resided upon the Mississippi river, and had recently left that point.

While resident there, his health had gradually been giving way under the insalubrity of the climate for a year or two past. And in addition to the well developed effects of miasmatic poison upon the health, in almost every form, I found my patient to be a man of some 52 or 53 years of age, suffering very greatly even to the partial dementia of incipient *mania a potu* from the excessive and long continued use of spiritous liquors. Taking him all in all, he was assuredly a very ugly case to undertake. And to my horror after seeing all these palpable symptoms of a very violent shock to his constitution, he informed me that he was suffering from a severe case of gonorrhœa, and some violently painful affection of the rectum in addition to the severe hæmorrhoids with which he had long suffered. Upon examination I found a *complete* fistula opening into the bowel about 2 inches from the anus.

I at once determined to put him upon the use of Lugol's Solution of Iodine very strong at the suggestion of my friend Dr. J. Higgason whom I had invited with me to see the case that morning.

I directed that the fistulous opening should be washed out clean twice a day with castile soap and water, and afterwards the solution of iodine to be injected. This course in the space of ten days had produced a very decided improvement; the canal having closed up by granulation to quite half its depth, and been converted into a blind external fistula. Such success in the outset, and in such an unfavorable diathesis excited sanguine hopes of a very early relief from this item of his ailments. But these hopes were doomed to disappointment, as in a few days the suppuration ceased entirely, and of course the filling up of the opening was stopped. Having persevered, however for some time in the use of this remedy, I determined to change my course, and resorted to nitrate of silver in saturated solution, and in substance; to sulph. of copper, sulph. of zinc, &c., &c., occasionally returning to the Lugol's Solution. All this was tried with little or no effect for months. In the meantime the health of my patient and his habits were considerably amended, though he was yet far from being a stoic and from sound health.

In this state of things he had pretty well consented to the use of the actual cautery or the knife, when I thought of the frequent beneficial effects of calomel upon the surface of indolent ulcers, and suggested that I would try it, as he seemed to fear the knife or hot iron very much.

Once a day the calomel was pressed by means of a small mop to the bottom of the opening, and to my great gratification, in about two

weeks I saw the healthy granulations from the bottom of the fistula come within sight. And very soon it was entirely well, and a dense cicatrix formed at its former opening.

Mode of Application.—This is very simple, nothing being needed but a small tube and a mop or piston to fit. The calomel being placed in one end of the tube, is carried in the tube to the bottom of the opening and pressed out by the piston. It was my habit in this case to fill the fistula full.

It may be that this treatment has been tried before, but if so, it has not fallen within the observation of the writer. If experience has not demonstrated its insufficiency as a general practice, I think this case should challenge the observation and experiment of the medical faculty generally. Its simplicity, facility of application, and entire painlessness should induce for it a fair trial.

ART. IV.—*An Examination of M. Dechambre's Opinions* Concerning the Alcoholic Tinctures of Phosphorus:* by J.

M. DECHAMBRE says: "Dr. Boling's paper is important, because it establishes experimentally, what chemistry enables us to affirm *à priori*. The alcoholic tincture of phosphorus is a very bad preparation, being still less charged with the active principle of that substance than Dr. Boling himself has allowed. It is known that phosphorus plunged in water, is oxidized by the air contained in the water, and communicates to that liquid a phophorus acid odor." It is probable that in alcohol it is the same, and that after a contact of fourteen days, especially if the bottle be not full, the phosphorus becomes oxidated, and takes the form of vapor. The oxidation becomes still more complete when the tincture is poured into water, augmenting daily with the exposure of the tincture to the influence of the air."

It is a little surprising that M. Dechambre, whose opinion on most medical subjects is of such unquestionable authority, should have fallen into the error of attributing to phosphorus, properties the very reverse of those it really posesses. He assumes that, "It is known that phos-

* Published in the New Orleans Medical and Surgical Journal for January, 1855; from *Gaz. Hebdom. de Méd. et Chirurg. &c.*

phorus plunged in water, is oxidized by the air contained in the water, and communicates to that liquid a phosphorus acid odor." Now the assumption of such knowledge is entirely gratuitous for the oxide of phosphorus is not formed when that substance is plunged in water. The coating it receives is formed altogether by a different process, thus:—When phosphorus is exposed in water, it becomes gradually covered with a white powder; which is composed of phosphorus and *water*—not *oxygen*. At the same time, by the action of *light*, the surface of the phosphorus is slowly converted into a reddish substance, which was formerly supposed to be an oxide, but which is in reality an isomeric modification of phosphorus itself. Light has the same effect upon phosphorus of reddening it, whether it be exposed in a vacuum or in gases which have no action on the phosphorus. So far from phosphorus being readily converted into its oxide by *plunging* in water, as assumed by M. Dechambre, it is necessary to its oxidation *in water*, that it be placed under *hot water*, and a stream of *oxygen gas* be directed upon it. A brilliant combustion under water is the result, with the production of phosphoric acid, and of a red powder which is the substance in question, having for its formula $P_3 O$.

M. Dechambre then goes on to say, that "it is probable that in alchohol it is the same, and that after a contact of fourteen days, especially if the bottle be not full, the phosphorus becomes oxidated, and takes the form of vapor." If this be true where does the phosphorus obtain the oxygen necessary for oxidation? Not from the air contained in the bottle above the alcohol, the bottle not being full—for if the alcohol abstract oxygen from the air, it does not impart it to the phosphorus, but absorbs the oxygen itself, and by its action is decomposed into aldehyd and acetic acid. A further proof, that the phosphorus is not oxidized in the alcohol, is its non-precipitation. The oxide of phosphorus being insoluble in both alcohol and water, should be precipitated as fast as formed, but no precipitate is thrown down from a saturated tincture at a temperature as low as 55° F.; below this degree a sediment forms, which is uncombined phosphorus, and which is redissolved as the temperature of the alcohol is raised. Is it not more probable that the change in the phosphorus, if there really be any, is merely a tithonic one such as occurs when it is exposed to light in any other medium?

"The oxidation becomes still more complete, when the tincture is poured into water, augmenting daily with the exposure of the tincture to the influence of the air." When the anhydrous alcoholic tincture of

phosphorus is poured into water, a different action from oxidation is set up, a genuine decomposition ensues. The alcohol having a stronger affinity for water than for the phosphorus, instantly combines with it, setting a portion of the phosphorus free. A part of this liberated phosphorus combines with a portion of water forming a *phosphuret of water*, while the remainder being in contact with the *air at the surface of the water*, by a process of combustion, with the evolution of light and smoke, is converted into *phosphorous acid*, which is dissolved by the water, and to which it imports an acid reäction. The larger part however of the phosphorus originally held in solution by the alcohol, is mechanically suspended in the water, rendering it turbid.

In conclusion it may be added, that from this property of phosphorus of being so readily suspended in water from its alcoholic solution, it would seem that alcohol is not so bad a vehicle, after all, for the exhibition of this substance, as M. Dechambre would have it appear; but that on the contrary it is by far the best in which it can be administered. A serious objection to the ethereal solution is, that the menstruum evaporates so readily, that the phosphorus is liable to be set free, and inflame in the stomach. Although so serious an objection cannot be urged against the oily substance, yet the tincture is preferable to it, on account of taste, facility of mixing for administration, and the liability of the oil to become rancid from age.

ART. V.—*Chloroform in Puerperal and Infantile Convulsions:* by R. B. HARPER, M. D., of Montongo, Ark.

CASE 1.—Mrs. McC., aged about 20 years, had been under the care of my brother J. F. H., and Dr. D. for twelve hours or over. I was called in consultation, when I arrived I learned from the attending physicians, that the patient had been in labor at least 12 hours, accompanied with convulsions which were very severe; at present the patient was quite insensible to all surrounding objects, having a severe convulsion every 20 or 30 minutes. The attending physicians informed me the labor had not advanced any for some hours, and the patient was evidently sinking.—They were dropping a little chloroform on the scalp which seemed to

have a slight effect. I proposed putting her under the full influence of the agent by inhalation, which was done in a few seconds by Dr. D.; the convulsions ceased. I made an examination immediately, and to our great astonishment and gratification, the fœtus was discharged. It was dead, and had been so for some hours. The placenta came away without difficulty; after this, one of the physicians sat by and watched the symptoms of the approach of the convulsions and immediately would administer the chloroform, and continued until morning, the child having been born about dark; the intervals between the symptoms of convulsions lengthened by degrees, until by morning the danger was over, the usual caution was observed and she recovered speedily.

Case 2.—Son of H. L., aged about three years. Taken with infantile remittent, after a few paroxysms, he was taken with convulsions, I was called to see him in the fall of '53 and found that he had been in a convulsion about four hours; vessels of the head quite turgid and I immediately bled him, and used all the common remedies; but with no effect upon the spasms. After failing, I reflected upon the case of Mrs. McC. above, and came to the conclusion that I would try the chloroform, I wet my handkerchief and applied it, and in a few seconds, to the entire satisfaction of all present, all was calm; the pulse came down; the turgescence was relieved; the fever cooled off; and I gave remedies as usual, and left some chloroform with the nurse (an intelligent lady) to give if need required. The case went on favorably.

Art. VI.—*Scirrhus of the Lachrymal Gland; Extirpation; Cure:* by James Cowling, M.D.

To the Editor of the New Orleans Med. and Surg. Journal.

Dear Sir:—I send for your inspection the following case, to be disposed of according to your pleasure. The accidental meeting of the subject of this notice, some two weeks since, in robust health, is my reason for so doing. I forward it without comment, confining myself to the mere facts of the case.—N. O., July 31, 1855.

In December, 1849, Mr. J. W. called on me to inquire if I could relieve him from a severe pain, which he had been suffering from for many months past. The statement was, that about April last he began to suffer from a slight pain about the left eye; that it had been constantly progressing, and for the last four months had been so severe as almost to deprive him of rest night and day. His appetite and spirits

were gone, and, to use his own words, he was miserable, and certainly his general appearance seemed to sustain the statement, for he looked very miserable. The pain he described as being constant, of a burning lancinating character. He further stated that he had taken a large quantity of medicine, was leeched, had a blister to the back of the neck, and for three months had worn a seton, and all this without benefit. On examining the left eye it appeared somewhat hazy; pupil sluggish; lachrymation. There was also some imperfection of vision, which I presume was caused by the constant irritation to which the eye was subjected. Over the region of the lachrymal gland there was a firm hard tumor; to this the patient ascribed all his sufferings.—Pressing on the parts gave little or no pain.

After well considering the case, with the history, I concluded it to be one of very unusual occurrence, that of scirrhus of the lachrymal gland, and the only prospect of relief, its removal. To my suggestion to that effect, the patient readily consented. After a few days of attention to the general health, I removed the gland, with the surrounding parts, to as great an extent as prudence allowed. The indurated mass was but of small size, being about that of a common horse-bean. Its general appearance showed a kind of fibrous interlacement, with but few cells; there was a crispness under the knife when slicing the mass.

The patient recovered without a bad symptom, and in three weeks the wound had closed.

The patient left for Arkansas a very happy man.

Drs. Johnson and Fydinger examined the gland, and had no doubt of its being a case of scirrhus.

About two weeks since I met my former patient, and he stated that he had been in the enjoyment of good health ever since the operation; that there was no return of pain; that the sight of the left eye is now as good as the right. Thus, after a lapse of nearly five years, there is no return of disease, and in consequence I consider I am justified in calling it a cure.

Now the question presents itself, and a very interesting one it is, was it a pure case of scirrhus or not? Three medical men examined it, and had no doubt about it. Viewing it as such, it derives interest from the very few authenticated cases found in medical literature. For my part, I have seen a very extensive class of eye diseases, but only three of scirrhus: one in an opthalmic hospital in London; one in an Arab, on the East coast of Africa; the third, now reported.

ART. VII.—*Yellow Fever Epidemics of Norfolk and New Orleans in* 1855*; with General Remarks and Reflections :* by BENNET DOWLER, M.D.

IMPROBABLE as it may seem, it is nevertheless true, that the existing epidemic in Norfolk has produced in New Orleans a sympathy rivalling that which is felt for its own citizens, now suffering from a similar calamity. These two cities, 1,300 miles assunder, partake in mutual regrets, hopes and fears as if they had been near neighbors. While thousands upon the shores of the Mississippi glide down the river of death to the ocean of eternity, an equal number, perhaps, will have disappeared from the shores of the Chesapeake like writings in the sand, which the next surging wave obliterates forever.

But a truce to unavailing regrets and unphilosophical lamentations. Instead of following rumbling coffins and the march of death, it may be more profitable (for "sweet are the uses of adversity,") to survey the field of action, note its significant teachings, illustrative of the present—prelusive of the future. For, although the eventful drama has not yet closed, its melancholy *dénoûements* are no longer doubtful. It is not, however, intended in this paper to give the statistics of the sick, nor decimal fractions of the mortality; the "anatomy of melancholy," nor the physiology of sighs; the natural history of bereavement, nor the psychology of despair, nor the desolation of orphanage and widowhood.

The word Epidemic defined.—The definition of the word epidemic, as used sometimes in common parlance and by the non-medical press in New Orleans, if not elsewhere, has given rise to no little controversy, some contending that yellow fever, cholera, scarlatina, small-pox, measles, and the like, ought not to be denominated epidemic, except the malady so characterized causes a greater number of deaths than all other existing diseases combined. The Greek *epi*, upon, and *demos*, the people; *epidemicus*, or *epidemia*, epidemic, implies the existence of a disease which spreads temporarily, extensively and simultaneously among the people, and after a period more or less prolonged, disappears. The more permanent local maladies of a place and of a people are endemics, having neither the sudden extension nor the erratic periodicity characteristic of epidemics proper. In an incipient or a declining epidemic, or when the feature of universality no longer exists, the sickness being restricted to a few isolated cases, it is termed *sporadic*. The epidemic returns at eccentric periods. Neither etymology

nor usage, reason nor convenience, will justify the definition of an epidemic by making its mortality the standard. Some of the most sudden and universal epidemics, so far from producing a greater mortality than the sum of all other cotemporaneous diseases, produce scarcely any whatever, as for example, Dengue. Influenza often prevails extensively as an epidemic with but little mortality.

Cause of Epidemics.—Much odium has been cast upon the medical faculty for not discovering the cause of yellow fever. Such animadversion originates in sciolism; for, if the faculty are at all to blame, it is for attempting to assign the causes of things beyond the reach of the profoundest philosophy. It would be better for ætiological pathologists to restrict their mission as physicists do theirs in their researches into natural philosophy. A physicist investigates the laws, not the *causes* of attraction, repulsion, and gravitation—dynamics, not the cause of dynamics—caloric, light, magnetism and electricity, not their causes—air, gases, metals, planets, animals, and other forms of matter, not their causes. How duration or space is infinite—how a planet originated, and began to spin round its central sun—how life began, and why it ceases; and how an epidemic begins, increases, declines and disappers, and an infinity of similar phenomena, transcend the narrow limits of the human understanding.

If the causes or efficient properties of certain conditions or combinations of objective nature were known, so that epidemics could be perceived as their necessary effect, with all the certainty of a physical law, it by no means follows that these causes and conditions could be altered or removed, so as to prevent epidemics altogether. To know the phenomenal laws of epidemics and how to cure the sick, are more within the reach of man than the prevention of epidemics.

Although much has been written explanatory of the cause of epidemics, no epidemic, from the dawn of history to the present day, has been explained by appreciable and satisfactory causes, except in cases of contagious diseases, and in these not always. What has been called the epidemic constitution is an assumption, good only as a cloak to ignorance, and might as well be called an epidemic deception.

The following paragraph from M. Ozanam's History of Epidemics (4 vols. Paris, 1835), contains a summary of the ætiological platitudes which modern writers, down to 1835, have sent forth to a world still more credulous and superstitious than themselves:—

The causes of epidemics: *volcanoes* (Portius); *earthquakes* (Massaria); *comets, with poisonous exhalation from the opening of caverns* (Zacchias); *mineral exhalations* (Arbnthnot); *cold* (Riverius); *heat* (Pringle and Hoffman); *drought* (Diemerbroëck); *rain* (Degorter); *cold and wet summer* (Hessi); *hot and dry summer* (Pringle); *sudden changes of the season* (Sauvages); *stillness of the air* (Gastaldi); *dew* (Pujati); *fog* (Portius); *conflagrations* (Targioni Tozetti); *animal putrefaction* (Angelneci); *the maceration of flax and hemp* (Alessandri); *caterpillars and grasshoppers* (*Idem*).—Ozanam, i, 25-6.

Among the learned but hypothetical expositors of the ætiology of epidemics, the late Dr. Noah Webster is remarkable for inconclusiveness, as his two octavos, replete with irrelevant facts, prove. Almost every phenomenon "in the heavens above, on the earth below, and in the waters under the earth," is pressed into his exposition, whether it be hot or cold, wet or dry, earthquakes or insects, comets or storm, meteors or marshes, electricity or filth, skyey commotion or terrene upheaving. It is easy to assert that the red vomiting of Etna, and the black vomiting of New Orleans, explain each other.

During the last twenty years, the expounders of the cause of epidemics have been no more successful than their predecessors. It was reported, during the recent epidemics of New Orleans, that a public lecturer maintained epidemic yellow fever in the South was caused by eating the opossum.

Among the various unsuccessful attempts to explain the cause of the great epidemics of influenza, hooping-cough, typhus, cholera, dysentery, dengue, scarlatina, plague, sweating sickness, black death, dancing mania, and many others which have swept over the earth, none appeared more satisfactory than that which originated in this Republic, which will be adduced after a few preliminary remarks.

At the beginning of the present century and for some years after, the yellow fever element was so mingled with the great concerns of humanity, that it excited the public mind to an unexampled degree; in the cabinet and in the field, in the legislative halls and in the medical schools, both at home and abroad, and in the colonial governments. It had long been the conqueror of armies and navies, and now threatened to desolate the peninsula of Europe. Its was a leading topic on which reports, pamphlets and books went forth raging like the epidemic itself. Neutrality was scarcely possible in a matter so deeply involving the interests, passions and transactions of humanity. Opinions founded on mere hy-

potheses concerning the cause of this malady were not for that reason less, but even more positive and dogmatic. Affidavits and affronts, certificates and satires, logic and duels, personal contagion and personal invective, bad air and worse legislation, divided the professional and non-professional public on this question.

The National and State Legislatures were impelled by the outside pressure to do *something* for the *protection* of the people. Then, as later, sanitary legislation wholly failed to control yellow fever.

At this period a star of the first magnitude culminated in the medical heavens at New-York. The new light glimmered suddenly over Christendom. The mysterious cause of yellow fever was revealed. The late Dr. Mitchell, of New-York, proclaimed that *acidity* in the air, the earth and the water, caused all epidemics, particularly those of yellow fever. This principle he called in prose and execrable verse, "GRIM SEPTON," which, as he affirmed, could only be deposed by the allied army of alkalies, as lime, soap, &c. This eminent physician, though guilty of politics and going to congress, lived to see his theory inaugurated, deposed, buried and forgotten in both Europe and America.

The cause thus discovered, Anno 1802, Dr. Mitchell moved in Congress the appointment of a committee with the view of reporting on the purification of ships by alkalies, in order to destroy this pestilential septon. The Secretary of the Navy adopted the theory, or at least the practice, which latter he ordered to be carried into effect. Books, pamphlets and letters soon appeared against septon, and for the alkalies. The next year an article appeared in the Medical Repository, having the title following: "Dr. Chalmer's on the acidity of the atmosphere of South Carolina."! The fading of goods, the rusting of metals, and other effects of atmospheric acidity were gravely announced as indubitable proofs of this theory.

The public desires and receives with alacrity facts and arguments explanatory of the causes of yellow fever, and hence almost every writer on this malady, whether born to solve this problem or not, thinks it his bounden duty to satisfy the public, and to glorify science and himself, by conceiving clearly and revealing fully what no one thoroughly acquainted with both the amount of our positive knowledge and deplorable ignorance of these essential antecedents or causes can pronounce upon with certainty. A humiliating but true confession this is. Heat, rain, moisture, swamps, vegeto-animal decomposition, contagion and nu-

merous other alleged causes are unsatisfactory and inadequate, as might be shown by travelling over hundreds of inconclusive and contradictory volumes, filled with special pleadings, diluted logic, theoretical biases, self-conceit, and irrelevant facts. The mere authority of great names in science satisfies many—names which serve to guide the multitude, as the bell wether guides his willing faithful sheep, all of which will jump just as high as he jumps, even after he has knocked the fence flat on the ground.

It is most certainly the duty of every writer on yellow fever to explain the cause of it if he can, but it is equally his duty not to sin against the decalogue of logic, any more than against the decalogue of Moses. Fortunately the *conditions*, if not the *causes* of yellow fever are to a considerable extent known. For example, it is a fundamental error to require a writer to explain the *ens epidemicum*, or to receive the alleged doctrine of contagion, or some other dogma, as the only alternative, when he cannot show what the cause *is*. Do not, say the sciolists, overthrow, unless you can build up.

It is better to acknowledge ignorance than to advocate an error.—It is better to keep a question of this sort open than dogmatically to close it against investigation. In the former case, the truth may be discovered; in the latter, never. To know ignorance is preferable to ignorance of ignorance. To know that as yet we do not know, is the first step to be taken.

Although the cause of yellow fever should never be discovered, any more than the cause that produces on the same soil a poisonous and nutritive plant, yet the lessons of philosophy teach that yellow fever *has* a cause or combination of causes, without which it cannot appear—with which, it cannot fail to appear, being not the less certain because unknown in the present state of science.

The pretentious discoverers of the cause of yellow fever, who have but re-asserted old and oft-refuted theories upon this subject, should cease reproaching others for not propounding *something* how absurd soever it may be.

Topography, Climate, Salubrity and Population of Norfolk, in Virginia.—It may not be improper to give a few extracts from Mr. Forrest's new work, a heavy octavo, published in 1853, namely, "Historical and Descriptive Sketches of Norfolk, during 200 years." An elaborately written account of Norfolk but a few months before the invasion of the most terrible epidemic that ever appeared on the North

American continent, must at least interest the advocates of the dirt-theory of yellow fever. It will not be necessary to repeat what Mr. F. says about Norfolk editors, authors, negroes, politicians, daguereotypists, poets of both genders; "the most attractive of all earthly objects, the *ladies in particular*, the superior morals of Norfolk, happy girls, chaste churches, towering cupolas, green foliage, beautiful villas, picturesque sites and farms, gilded visions; Marine Hospital tidy, airy, half hid by trees, evergreens and shrubbery; the Naval hospital, elegant, beautiful, splendid, massive, standing in its pride; the mound of Blackbeard and his pirates; surges which roll and lash the sandy shore, the city fanned by the breezes of the briny wave of the deep blue sea, sunrise, sunset and midnight being cheering and delightful," &c., &c., &c.

Mr. Forrest's account of the topography and climate of Norfolk will be subjoined: "Norfolk, the principal seaport town of Virginia, is situated on the north side of Elizabeth River, at the mouth of its eastern branch, and immediately opposite Portsmouth and the confluence of the southern branch, on a small, level peninsula or neck of land of about 800 acres, with the wide, blue river on the South and the South-west, in latitude 36° 50′ 50″; longitude, East from Washington 42′ 43″, about 200 miles from the Blue Ridge." "The situation of Norfolk is pleasant, including an agreeable, delightful, invigorating and healthful climate, being almost open to the boundless ocean." "The atmosphere is very generally clear and transparent, the heavenly bodies peculiarly brilliant, of unobstructed lustre." "The basin, including the Chesapeake, is large enough for all the fleets in the world."

Mr. F. denies as malicious that the situation of Norfolk is like that of New Orleans and other low damp situations, unfavorable for the storage of tobacco, the climate being admirably adapted," &c. 312-13. The climate is very favorable for the storage of flour, wheat, corn, bacon, &c. 314.

"The cheerful countenances, the ruddy cheeks, healthy active forms, the bright eyes of the citizens that throng, &c., give pleasing evidence of the general healthiness of the place." 335.

"Our bills of mortality compare favorably with those of the cities of Europe, as well as of our own country." 337.

Mr. Forrest, an admirer of the late Mr. Wirt, says, nevertheless, that "his account in 'The British Spy' concerning the annual visits of the yellow fever to Norfolk," is not only false, but "an undeserved injury and deleterious." 334.

"The city has the appearance of neatness, cleanliness,—the fragrance of the air," &c. 322.

The sanitarian philosophers, accessories after the fact, believers in the dirt-platform of yellow fever, may originate a sanitary commission damaging to Mr. Forrest's Elysium.

> "Yes, for his sake, I'll go a living shade,
> And wait his coming in the Elysium fields,
> And there inquire of each descending shade."—EURIPIDES.

Keeping in view the maxim of Sidney Smith that, "the Scotch are not to be believed on their oath, when the climate of Scotland is concerned," Mr. Forrest's statements which not only ignore but positively deny that yellow fever ever existed in Norfolk, will be examined, not with the view of correcting Mr. F.'s errors, but for purposes of high import, which the sequel will suggest.

Mr. Forrest only mentions that in 1821, and in 1826, "there was considerable malignant sickness in one part of the town;" 159; also, several fatal cases resembling yellow fever in the fall of 1852." 334.

"The facts adduced afford, it is believed, sufficiently decisive proof of the salubrity, of the location, including Portsmouth and the adjacent county. 338.

Many other persons have asserted, that both Norfolk and Portsmouth, anterior to Anno 1855, had been entire strangers to yellow fever. The truth or the falsehood of these statements acquire inexpressible interest from the present disturbed aspect of the sanitary heavens along the Atlantic coast of the Republic, where the tempest-bearing cloud has suddenly blasted several cities.

In noting the epochs of epidemic yellow fever at Norfolk, and at a few among many other places as having been cotemporaneously visited, authorities will seldom be given, in order to be brief; nor will the epidemics which preceded and followed those of Norfolk be enumerated for the same reason, although such historical or analogical evidence, in the present state of our knowledge, or rather ignorance, would be the best which the case admits of, as indicants of the future progress of this malady, the random prognostications of ætiologists, meteorologists and the like to the contrary notwithstanding. This historical or rather chronological enumeration, necessarily defective owing to scanty data, will not be continued later than Anno 1801, when the yellow fever of the North temperate zone reached its culminating point in both Peninsular Europe and North America.

Anno 1741: Yellow Fever at Norfolk, Philadelphia, Malaga; in the latter 2,640 died. Dr. John Mitchell wrote an account of the yellow fever in Virginia.

Anno 1747: Norfolk; Philadelphia.

Anno 1793: Norfolk; Philadelphia, 4,044 died; West Indies. In this year and in 1797, one-sixth of the people of Norfolk died from yellow fever, according to Valentin and others.

Anno 1795: Norfolk; Charleston; New York, 532 died; West Indies.

Anno 1797: Norfolk; Providence, R.I.; Huntington, Pa.; Baltimore; Charleston; Philadelphia; in the latter 1,000 died, the next year 5,000; Bristol; Boston; New Design, Mo.

Anno 1798; Portsmouth; New York; Philadelphia; Wilmington, New London; Chester; Huntington; Boston; Petersburg; Alexandria.

Anno 1800: Norfolk; Baltimore, 1,197 died; Providence; Philadelphia; New York; Boston; Charleston; Havana, 9,977 died; Cadiz, population 57,500, attacks 48,688, deaths 16,000; Seville, 80,560 souls, attacks 61,718; deaths 30,000; Xeres, 30,000 souls, deaths 12,000.—Of nine cities in Andalousia, Spain, containing 279,560 souls, 79,500 died of yellow fever. (Ozanam, iii, 236.)

Anno 1801: Norfolk; Philadelphia; New York; Charleston; New Orleans; Vera Cruz; Havana; West Indies; Spain; Leghorn, Italy; Savannah; Norwich; New Bedford.

Population of Norfolk, &c.—Anno 1830, total 9,815; Anno 1840, total 10,920; Anno 1850, totals, at Norfolk 14,326, at Gosport 504, at Portsmouth 8,122; of the whole, about one-third are blacks.

At the close of August, it appears from various accounts by telegraph and letters, that the white population of Norfolk had been reduced, by death and flight, from 10,000 to 2,000. At the present time (Sept. 17, 1855,) it is reported that the deaths in that city amount to 2,000 or 2,500, including blacks.

In New Orleans, in 1853, probably one-fourth of the limited class liable to take the yellow fever, that is, the unacclimated, perished from the epidemic of that year. It is probable that in Norfolk, where none are protected, the mortality will be equally great among those remaining in the city. The momentous import of these facts will be alluded to subsequently.

Causerie; African Plague; la Peste; Negroes.—Letter writers from Norfolk and the neighboring cities, represent the medical gentlemen of

New Orleans as testifying that the epidemic at Norfolk is the African plague, *la peste*, similar to that which raged in New Orleans in 1853, and that it is worse than the yellow fever! &c. The respectability and intelligence of the New Orleans faculty, now at Norfolk, are guarantees that such statements are unfounded. However, it may be proper to remark in this connection, that statements concerning the yellow fever of New Orleans, of 1853, were at that time freely circulated as coming from some of the faculty of this city! The epidemic of that year came very near getting the permanent name of "the African yellow fever! —the African Plague!" Small is the glory of such neologisms—worse still, when they have no foundation in truth. Yellow fever is not an African disease. Of all races, the African is by far the most exempt from this disease in countries where it prevails, particularly in the South.

Small is the glory of baptizing the epidemic, at the crowded corners of the streets, as not the yellow fever, but "the African plague," "*la peste*," while the same "medicine-men"—if such there be—daily give *mortuary certificates* that the defunct "died of yellow fever." Which is true—the story in the street or the writing in presence of the grim corpse? There is not a certificate of death from "the African plague" during the aforesaid "African plague," which desolated New Orleans in 1853! If "*la peste*," (the old name of yellow fever,)—if "the African pestilence" be not the yellow fever, but something far worse, let not the doctors of Norfolk write false certificates. It is not meet that the physician's last act towards the defunct should be a deliberate forgery uttered in the presence of the destroying Angel! Let not charlatanism invade the realms of death! The street story is for effect—the certificate for the fact. It is believed that the epidemic at Norfolk will not leave behind it a single certificate that any one died of "African plague," nor of "*la peste*," nor of "something worse than yellow fever."

It has been already indicated that "African Plague" is a misnomer. The negro, especially in low latitudes, suffers incomparably less than any other race. Although non-creolized negroes are not wholly exempt from yellow fever, yet they suffer little from it, and very rarely die. On the other hand they are the most liable to suffer from cholera. As an example of the susceptibility of this race, take the year 1841: among 1,800 deaths from yellow fever, there were but three deaths among the blacks, two having been children, or one in 600, or one in 14,000 of the whole black population.

Nearly the same immunity from death in this disease is enjoyed throughout the yellow fever zone by the black race: for example, in the epidemic in Charleston in 1838, the official report shows that among 538 interments of yellow fever subjects, only seven were blacks, or about one in fifty, and these were, probably, as usual, not city creoles. This is, however, an extraordinary mortality compared with the same class in New Orleans.

According to the unofficial reports of the Norfolk epidemic now prevalent, negroes suffer nearly as much as the whites! Should the present invasion of yellow fever extend, and ravage the Atlantic cities and many small interior towns from Maine to Florida, as it did during the eighteenth and the first quarter of the nineteenth century, it would seem that the African race in those latitudes will be very great sufferers, provided the Norfolk type be a true index or precursor of the future.

In the interior towns of Louisiana and Mississippi where the yellow fever prevailed in 1853 and is now (1855) prevailing to an alarming extent, the negroes suffer incomparably more than even the unacclimated negroes of New Orleans.

Nothwithstanding the recent cataract of declamation against New Orleans as if she were the *maelstrom* of the filth of the entire world, it is more than probable that if the populations, white and black, of several towns in Mississippi and Louisiana had removed to New Orleans to avoid *the risk of yellow fever in* 1855, there would have been among them fewer attacks and a smaller mortality that what will have occurred from yellow fever, in some places before the close of autumn. Already it has been announced, by telegraph, to-day, (Sept. 18th) that in the town of Clinton, (Miss.) among 388 souls remaining in the village, 107 had been attacked and 29 had died of yellow fever, all of which may be regarded as merely the *inception* of the epidemic.

An analysis of the deaths in New Orleans in 1854, and in the current epidemic of 1855, has not yet been fully made with regard to races, nativities, &c.; when the whole shall be summed up, the results will doubtlessly agree with those deduced from the history of yellow fever in New Orleans from the first appearance of that disease in 1796, down to the present year.

One of these results, as inexplicable as certain, is the almost complete exemption of the black race from death by yellow fever in the city of New Orleans, and in intertropical cities of North America. This exemption is not confined to the native negroes of New Orleans, but

comprehends new comers, as those from Virginia, Missouri, and, indeed the whole northern belt of the slaveholding states, notwithstanding the fact that these unacclimated negroes very often suffer attacks of the fever in epidemic years.

Dr. Penell, of Rio de Janeiro, in his testimony before the sanitary commission of New Orleans, concerning the epidemic of yellow fever of the former city, visited for the first time in 1849-50, says that the population consists of more than 100,000 whites and 200,000 blacks and mulattoes, and that the latter classes (200,000) "escaped with very few deaths," and that he "attended in private practice upwards of 100 blacks, without losing one." 154. "Nearly all the blacks in Rio de Janeiro had the disease. If we estimate the deaths (including old and new comers) at two per cent., it would be higher than the reality." 158. Further evidence on this point will not now be offered, though it is of high import to a race numbering nearly 4,000,000 souls in the United States.

Dr. P. estimates the total deaths at Rio at 13,000 from yellow fever. "Brazilians and *acclimated* foreigners, who were nearly on a par with them, suffered but little ; with whites and new comers, it proved fatal to thirty per cent. of the attacked." 158.

The Doctrine of Acclimation.—Cities north of Charleston, in the Atlantic States, and in the Peninsula of Europe, do not appear to acquire nor inherit any immunity from yellow fever by nativity, nor by a prolonged residence, while, along the Gulf of Mexico and throughout the West Indies, both of these classes are completely exempt. Dr. Rush says of the yellow fever of Philadelphia, "*that it spared no rank of citizens.*" (iii. 94.)

The same is true both of Spain, in which yellow fever has been the most fatal, and in the northern cities of this Republic. This fact is one of transcendant importance, and will be so regarded, whenever yellow fever reaches northern cities, where neither nativity nor the longest residence can afford protection against danger.

The native of New Orleans is exempt from yellow fever in this and in other yellow fever cities within and near the tropics. The same exemption is enjoyed in Vera Cruz, Havana, Mobile, Charleston, &c.—There have been, doubtlessly, some exceptions particularly in Charleston, and chiefly among young children. The mortality from these exceptional cases, extremely rare in that city, is in New Orleans a phenomenon, and in the intertropical cities unknown.

Many persons not born in New Orleans live in the city, nevertheless, from youth to old age, and die without ever having had the yellow fever.

A few have had the yellow fever more than once, as in the case of small pox a second time, but the proportion is so small as to be insignificant, the deaths being rather casualities than ordinary occurrences. Indeed, the susceptibility to second attacks is altogether denied by a great majority of experienced physicians. Dr. James Scott, for thirty years a practitioner in the principal West Indian Islands, who has just arrived at New Orleans, informs the writer, that he has never met with a second attack even among those who have returned from Europe after many years absence. Dr. Scott says that from his long residence in Jamaica, Cuba, and other West Indian Islands he can say confidently that the natives of the rural districts never take the yellow fever, being equally exempt as the natives of the cities. If this be correct, it affords a strong contrast to the ready susceptibility of the country population of Louisiana to contract the disease when in the city of New Orleans.

Although New Orleans approximates intertropical cities, it perhaps does not equal them fully in this respect, yet it surpasses all other cities of the continent, not excepting Charleston, in the efficacy of its acclimatement.

Dr. J. J. Chisolm, in his account of the yellow fever of Charleston of 1854, in a recent number of the Charleston Medical Journal, says:—

"The native inhabitants of New Orleans might visit Charleston with impunity, whilst the inhabitants of the intervening country would be material for the yellow fever. The same for any city which is often visited by yellow fever. Native citizens lose the immunity from disease which acclimation affords by spending the summer months from the city. Natives, after an absence of three years, have been severely attacked with yellow fever upon their return."

Whether this protection is ever lost by living for one or more winters in cold climates, is a question not fully settled for the latitude of New Orleans.

Dr. Ramsay in his account of the yellow fever of Charleston, in 1800, says, "134 died, including two children born in the city; the residue strangers exclusively. Some instances have been observed of our youth, who have returned from a more northern latitude, after an absence of three, four and five years, and in one instance of twelve years, without contracting this inhospitable disease. The only exceptions to this remark are two; the one after an absense of five and the other of nine years."

[Probably the two creole children were born of unacclimated parents.]

The Baron Adolfo Hegewisch, M. D., Inspector General of Hospitals in Mexico, late from Vera Cruz, now in New Orleans, informs the writer, that nativity in Vera Cruz is absolute protection. Hence, as he affirms, ladies from the highlands of Mexico come to Vera Cruz at the lying-in time, in order that their children may be protected against the risk of incurring yellow fever forever.

A few physicians and others, mostly advocates for the contagiousness of yellow fever, maintain that all the creoles of New Orleans, not less than strangers, have this disease once during life, for the most part during childhood, and that it proves fatal to many of them. It must be confessed that as yellow fever, with rare exceptions, attacks an individual but once, it approximates in this particular, the law of contagions proper. This sweeping statement, however, is, with few exceptions, erroneous, as may be proved by authentic documents concerning all of the epidemics witnessed by the writer for eighteen years, not excepting the extraordinary one of 1853 itself.

It will have been remarked, by careful observers, that many families have been settled in New Orleans for half a life-time without ever having had yellow fever. Indeed, it has been thought by many physicians previous to 1853, that at least one-third of all strangers settling permanently in New Orleans, escaped yellow fever altogether—a ratio, however, which is too high for the year 1853, (it may be safely affirmed) although many strangers, including entire families, escaped the extraordinary epidemic of 1853.

The simple fact of being born in New Orleans is not, in itself, protective; thousands are thus born of uncreolized parents who pass through the city, as immigrants, or who reside in the city in the winter only. Their return to the city might, in this way, swell the number of the so called creoles to hundreds every epidemic.

If it be conceded that no creolized person of New Orleans ever dies of yellow fever, it will still be difficult to account for the extreme rarity of deaths from yellow fever among individuals who ought to have been born in the city, upon the doctrine of chance or probability. Hence a greater number of victims among natives might be anticipated for these reasons.

The exemption of the creolized of the city is a fact which every epidemic has confirmed; for example—take that of 1841, in which 1,800 died; five of whom only were natives of the city; one aged three

weeks; three two years, doubtlessly born of non-creolized parents; except one, a doubtful case, in Lafayette.

In 1843, among six hundred and ninety-two deaths from yellow fever but two are certified as having been born in New Orleans, and these two were proclaimed in a public journal to be errors, by the compiler of the dead list for that year.

City creolization, native or acquired, has hitherto carried with it protection against epidemic fevers of almost every kind, as typhus, congestive, or cold plague, bilious remittent, and even intermittent; the latter, however, is more or less prevalent in the rear of the city, where the cypress swamp and the population meet face to face, contending for possession. Be the cause what it may, hitherto almost complete immunity, a few sporadic cases of these fevers excepted, has been common to all not new-comers. As this immunity is uniformly indicated by the earlier writers upon Louisiana, before the invasion of yellow fever, the exclusion of the latter, if a possibility, would not in all probability be replaced by the former; indeed, immigrants before 1796, were only subject in a few cases to a slight fever, never mortal, as I have more than once proved by French writers of undoubted credibility. These authorities have not failed to mention infantile lock-jaw, and a few other diseases of the city and country, which, as they affirm, formed the only exceptions to the extraordinary salubrity in former times.

City creolism is here used as a more precise and restricted term than acclimation, and denotes that immunity from yellow fever, whether transmitted from parents born and resident in the city, or that immunity acquired by long residence, with or without having suffered an attack of the disease; in any case it is for most part hereditary—the exception consisting of a susceptibility to a slight fever as proved in 1853.

City creolization is not peculiar to New Orleans, Mobile, Charleston, Havana, or Vera Cruz; but there are many new southern towns, or rather new aggregations of new-comers, where its influence is less obvious, certain, and uniform, or places where it may fail altogether.

Congenital city creolism, that is, the constitutional modification incidental to the being born of creole or thoroughly creolized parents, with continuity of city residence, exempts the individual from yellow fever with nearly the same uniformity that vaccination prevents the small pox or the varioloid. The varioloid is, as all know, modified small pox, happening to one who has undergone vaccination, or the small pox previously, the frequency of which is probably as great as the frequency of

yellow fever among city creoles who have never absented themselves for one or more winters in northern climates.

Country creoles: All born beyond the limits of the city are susceptible to yellow fever on coming into the city or into a village when yellow fever prevails. In 1853, yellow fever for the first time, perhaps, prevailed to some extent in the rural districts, remote from towns, among isolated persons who had not visited them. But in almost all of these instances the disease prevailed in aggregations of people which are virtually towns, as the plantations where the population is concentrated at one centre, often forming a village of from 100 to 500 or more persons. But in the present state of our knowledge of the prevalence of yellow fever in the rural districts in isolated families, scarcely anything can be pronounced positively as to the extent or frequency of attacks among such as had no connection with towns as visitors. Whether, on the other hand, city creoles who have removed to the country who have never resided one or more winters in northern latitudes, have in any instance suffered an attack in the country, or on returning to New Orleans, is unknown. Second attacks are rare.

Acclimation in the city, with or without having had yellow fever, is equal as a protection against yellow fever to congenital or native creolism. This immunity is usually acquired in less than ten years, often in five, but to this rule very many exceptions occurred in the extraordinary or exceptional epidemic of 1853.

City immunity, native or acquired, in similar cities as New Orleans, Charleston, Mobile, Pensacola, Havana, Vera Cruz and other places in the present limited yellow fever zone, is probably identical and mutually protective in all such places, while nativity in cities once in the yellow fever zone in which yellow fever has not been prevalent for many years, as in Baltimore, Philadelphia, New-York, Boston, Cadiz, Seville and other places, affords no protection.

City creolism, both native and acquired, is to a great degree, as before remarked, hereditary or transmissible from parents to children. At least the exceptions to this law are few, and fatal results almost unknown, as may be proved by the bills of mortality, though this is like many other indubitable truths boldly denied, particularly since the decline of the epidemic of 1853— the most mortal, erratic, and extraordinary ever seen in New Orleans. It will have been seen what warrant the terrorists have for denying creolization.

Setting aside the epidemic (of 1853) and reasoning from what is

fully proved by the past—the best expositor of the future—it will be seen what little foundation there is for the utter rejection of creolism and acclimatization, which in former years was rung and is still ringing in the public ear.

The word creole is generally used in a sense too latitudinarian for precise statistical investigation. It is the resident city creole, not the country creole—not the creole who migrates every summer to New-York, London, or Paris, that may hope for as good health as is possible to humanity, while two or three hundred others daily fall victims around him; a definition which excludes a great many called creoles, and one often forgotten, in writing on the subject of yellow fever. Hence arises many apparent contradictions among authors who use the word in different senses.

In former, still more than in recent times, has this fundamental distinction been overlooked. In a great majority of the works on yellowfever in the West Indies, and even in Louisiana, where creoles are said to suffer from this disease, the true explanation is, that these persons are *creoles of the country, not of the city;* or at most, they reside in the latter occasionally, chiefly in the winter, and are, therefore, liable to the disease, though they usually have it in a milder form than strangers, and very rarely die.

Therapeutical Gossip, Persiflage, and Non-committalism.—Many causes combine at the present time to give great interest to the New Orleans doctrines and therapeutics in yellow fever. From 1796 to 1855 epidemics have prevailed at short intervals, having sometimes had no other hiatus than that of the winter season, as in 1841, '42, '43, 1853, '54, '55. Had the disease been continued from year to year the opportunities for its investigation could scarcely have been better. The probable extension of this fever to high northern latitudes, wherein it raged for more than a century, having completed its cycle only about thirty years ago, tends to give paramount importance to the almost continuous New Orleans experiences, and at the same time demands a reliable therapeutic-historian whose impartiality, understanding, judgment, analysis and deductions would be equal to the occasion. The realization—the desideratum—may be retarded, perhaps wholly prevented, not only by the inherent difficulties of the subject, but by others of equal potency. If the therapeutic historian could by any possibility divest himself of bias in favor of his own method of cure; if he were to give a correct

appreciation and estimate of the curative methods of all others, he will have rolled the stone of sisyphus—or rather he will have rolled the stone of controversy upon the corns of his dear neighbors; he will have gained the criticism, the contradiction, the statistics, if not the personal ill-will of those whose methods of cure he may condemn. Even figures will fight in cases where each doctor is his own statistician. Should one prove that he has cured a great many, another would prove that he has cured nearly all, while the charlatan would claim as many cures as cases, as it is self-evident that he must be the best doctor who cures the greatest proportion of patients similarly affected. It is here that *ex parte* evidence is potent.

Other difficulties lie in the way of the impartial therapeutist. If he shall prove that bleeding to fainting repeatedly—morning, noon, night, or oftener, should the fever persist; if he prove that sixty-grain doses of quinine, or large potations of porter, or pills of strychnine, or non-medication, is not the best method of treating the fever, he may expect to be answered by grim figures; perhaps, he will hear that yellow fever has changed, not that the objector has changed; or, that he has renounced a treatment which has, nevertheless, proved successful in thousands of cases, because it failed in three or four! This reasoning would seem to dull minds inconclusive—a mere pretext to justify the cruel abandonment of an old for a new favorite.

A true therapeutic history of yellow fever in New Orleans, by "the representative man," free from one-sidedness, with names, dates, documents, particulars and special individuation, would be not *less* curious than instructive—curious for its temporary ultraisms—instructive for its exhibitions of the opinions and clinical practice of an able faculty familiar with yellow fever all their lives. It is problematical whether this history will be written or remain private, traditional, the *lex non scripta.*

Prognostications.—More than 8,200 died of yellow fever in the first of the three years' epidemic still prevalent in New Orleans, a number which comprised, as it is supposed, nearly one-fourth of the unacclimated or susceptible subjects in the city; many of this class have since died of yellow fever in the epidemics of 1854 and 1855. In unprotected New-York, if the deaths were as great proportionally as in the class liable to it in New Orleans, the mortality would in a few weeks reach 130,000! That this estimate is not too high, the present (to the North, perhaps the precursory) epidemic at Norfolk would probably prove—nay, has already

proved. At the moment of writing this the following extract of a letter from a citizen of New Orleans, dated at Norfolk, Sept. 12th, 1855, appears in the Picayune :

"I cannot describe the scene of desolation, distress and misery the pestilence has caused here. It exceeds anything I had ever witnessed before in any quarter of the world. It has changed the whole order and system of things in general. Wealth is a beggar, and the truth is at last acknowledged that poverty is no crime. My party and self are doing all the good we can. All the doctors and nurses from the North are down sick—all from the South are well and at work."

From the Richmond Dispatch, it appears that up to the 13th of Sept., eight physicians of Norfolk had already died of yellow fever: namely, Drs. Higgins, Sylvester, Sr., and Jr., Constable, Halson, Hash, Balfour, and Briggs.

At no time has the yellow fever been so fatal in New Orleans, by one-fourth as it was several times in Philadelphia, as in 1793, '98, etc.

A Boston newspaper (The Traveller) of recent date, alluding to the yellow fever epidemic of that city in 1798, states, that business ceased and the town was almost depopulated, at that time owing to the panic and the disease.

"One old resident, then a clerk, says, that at the time he lived on Beacon Hill, with two other clerks, no business was doing, and from fear of the epidemic, they kept close to the house. Once each day they would cast lots to see who should go down town to get provisions and smoking tobacco, and on the excursion hardly a soul was met in the streets. But few countrymen entered the city, and their enlarged stories spread the panic far and wide, one of them asserting that so infected was the air that a piece of beef exposed for a few moments turned putrid.

"The first case of the fever occurred on the 21st of June, in Fore-street, near the Market-place. Here Mr. Stoddard, his wife and daughter died of the disorder. After this, no case was reported until the 21st of July, when it appeared on Codman's wharf, an appendage of the Market-place, several adults dying. It then spread upon Fort Hill, and continued to prevail with more or less violence until the middle of October, when it was completely checked by a north-east storm of three days' continuance. Of the number that perished, nothing certain is known. The pamphlet in question gives the names of three hundred adults deceased, but adds that the children are not included, and the list is by no means complete.

"So violent was it in the early stages, that *not one of twenty who took the disease was saved.* Scarcely a family escaped it. In one family

five out of six perished. One house in Purchase-street, from the mortality which occurred there, was denominated the coffin. A sexton visiting it found the last tenant, a woman of some wealth and station in the community, dying alone, her relatives and friends having all abandoned her."

Although doctors have hitherto, as a class, been the least reliable prophets in regard to the coming of yellow fever epidemics, the history of the past suggests the probability that, upon the shores of the Mississippi, rather than upon those of the Chesapeake, Delaware, Hudson or Guadalquiver, there will be found the most secure asylum, should the scenes of the last century be reënacted.

ART. VIII.—*Resection of the Inferior Maxillary:* by STANFORD CHAILLE, M. D., of Circus-street Hospital.

THE excision of different portions and of the entire lower jaw for malignant diseases is one of the triumphs of modern surgery. The successful performance of so serious an operation must always possess some degree of interest to the members of our profession, and the details of such cases deserve to be recorded in our medical periodicals.

On Sept. 9th, George, aged about fifty, a slave of Mr. Beatty of Thibodeaux was admitted into the Circus-street Hospital—some twenty years since he suffered much from a carious tooth which caused inflammation of the periosteum and bone, subsequently degenerating into osteosarcoma. The tumor as large as a turkey's egg was situated in the body of the inferior maxillary on the left side. Dr. A. Mercier, surgeon of the Hospital, concluded that extirpation of the diseased bone was the only resource which promised relief. A laxative was administered on the 11th, and, on the 12th, Dr. Mercier performed the operation assisted by Drs. Martin, Weatherly, Copes and myself, in the presence of Drs. Bennet and M. M. Dowler, Drs. Sunderland, Bertrand, Taxil, Dr. Hegewisch, of Mexico, and Messrs. Thomas, Horsey, and Cap de Ville. The patient was pretty thoroughly subjected to the influence of chloroform, when the second incisor was extracted. A sharp pointed bistoury was then thrust between the lip and bone in the median line through the frænum, and out at the inferior portion of the chin which with the

lip was completely divided from within outwards. The parts an inch to the left side were closely dissected from the bone. A matress maker's long straight needle was now passed from below upwards, through the mouth to the left of the median line, avoiding the insertions of the genio-hyo-glossus and genio-hyoideus.

The needle to which a chain saw was attached was then drawn through the mouth, and the bone sawed through the cavity of the extracted tooth. A curvilinear incision was now rapidly made from four lines above the lobe of the ear along the inferior border of the ramus and body of the bone, somewhat below their edge, uniting at the symphysis with the first incision. The entire cheek was dissected from the jaw, the flap held over the brow, and the muscles attached to the internal surface of the inferior maxillary (mylo-hyoïdeus, superior constrictor, external and int. pterygoid) separated from the bone as high as its neck. The same needle was passed between the last molar and condyle and thrust through the mouth obliquely from within outwards, forward, backwards, bearing with it the chain saw with which the bone was divided directly across the dental foramen. The interrupted suture was employed to unite the flap, the most pendent portion being left rather open to allow the exit of pus, blood, &c. The facial artery having been obliterated by pressure of the tumor required no ligature, nor did any other vessel, and but little blood was lost during the operation. No medicine has been administered to the patient, but he has been nourished with beef tea by the mouth and by injections. He has not had the least traumatic fever, the skin having continued moist and cool, and the pulse perfectly natural since the day of the operation. About an inch only of the central portion of the wound is now open, (Sept. 22d,) the rest having healed by the first intention. The boy will probably be returned to his master in fifteen or twenty days after the operation.

Dr. Mercier has twice before performed this operation. About ten years since he disarticulated the bone of the left side, at the same time extirpating the parotid. This operation was for a malignant disease which had involved both the bone and the gland in one common mass. A ligature was passed around the internal carotid preparatory to the operation, but it was not tied until its deligation was imperatively demanded during the course of the operation. This case terminated fatally on the fifth day, the autopsy revealed enlargement and ramollissement of the left side of the brain, *i. e.* the hemisphere corresponding to the artery deligated.

Again, in 1847, Dr. M. disarticulated the bone a second time, and succeeded in effecting this without severing the facial nerve. This result had not been contemplated when the operation was begun. But favorable circumstances having developed themselves during the course of the operation to leave the nerve intact, Dr. M. availed himself of the opportunity. This patient is still living.

Resection of the inferior maxillary for caries and necrosis dates many years back; but for exostosis, cancerous and fungoid degeneration, osteo-sarcoma, spina-ventosa, and non-union of fractures of this bone it is of modern date. There have been many claimants for priority and originality in performing this operation. It would seem that Dr. Deadrick, of Tenn., performed it in 1810 for exotosis. He did not however publish his operation until 1823. Dupuytren, without any knowledge of Deadrick's success, excised the lower jaw in 1812 for cancerous degeneration.

M. Palmi, in 1820, was "the first individual (says Velpeau) who first disarticulated the lower jaw," but by another authority it is claimed that Dr. Fischer, in 1795, disarticulated this bone. Dr. V. Mott, of New-York, claims originality both for "the exsection for osteo-sarcoma, as well as for the simple curvilinear incision below the base of the jaw." The following extract from a letter of Dr. Mott (dated April 20th, 1855,) to Dr. Mercier, may not prove uninteresting.

"My operation on the lower jaw (1821) for osteo-sarcoma, as I stated in my letter to Liston, was original, and I shall ever contend so for it, as I knew nothing of Dupuytren's case, nor of Dr. Deadrick's.—This latter did not appear in print until several years after mine was given to the public.

"I know he antedates me, and the world gives him priority. This does not in the least impair my claim to originality.

"I have now performed a great number of these operations upon the lower jaw, in various proportions, and several at the temporo-maxillary articulation.

"In these latter I have always divided the portio dura, and never saw any lasting inconvenience from it, the functions of the muscles of the face being generally restored after a little time.

"Will you be so kind as to inform me, how *conveniently* the jaw can be removed at the joint without cutting the nerve?"

Dr. Mercier had supposed that he, in 1847, was the first to disarticulate the bone without lesion of the facial nerve, but I find in Miller's

Practice of Surgery, (Am. ed. 1853, p. 210,) as well as in the "History of the Am. Med. Assoc., 1855," that Dr. Mussey, of Cinn., succeeded in effecting this in 1845. Dr. Mercier can justly claim originality, but not priority.

Velpeau's statistical account of this operation, which, though very imperfect, is still more complete than any other I have found, gives a mortality of one in four; one in thirteen of the deaths reported was caused by asphyxia. This result is produced by contraction of the pharyngeal muscles, by which the tongue is retracted within the fauces, when the maxillary attachments of the genio-hyo-glossus, genio-hyoideus, and mylo-hyoideus are separated from the bone. In one case, Lallemand saved his patient's life by tracheotomy.

The dangers to be apprehended during this operation are retraction of the tongue and excessive hæmorrhage, especially in disarticulating the jaw. In this latter case the facial, internal maxillary, dental, transverse facial, masseters, deep and superficial temporal arteries, are all in danger, and this danger is so imminent that many surgeons have been induced to tie the carotid as a precautionary measure. There is reason to suppose that this very precaution has more than once cost the patient his life. Vidal de Cassis, Velpeau, and all the best surgical authorities of the present day discountenance this measure, except in a very few cases where it is absolutely unavoidable.

In no operation are the reparative powers of nature more forcibly displayed than in this. In cases where the entire lower jaw has been extirpated, there has been in the course of time a fibrous, cartilaginous or osseous formation deposited, which has not only served to conceal the extensive mutilation which had been practised, but has also answered most useful purposes, being so strong as to enable the patient to crack nuts, &c. In every case there is formed a more or less perfect substitute for the excised bone.

ART. IX.—*Turning by Taxis:* by J. C. SMITH, M.D., of Fanning Co., Texas.

(*To the Editor of the New Orleans Med. and Surg. Journal.*)

DEAR SIR:—Little did I expect on sending you my communication, *on Turning by Taxis*, that it would have met with such *a caustic* reception. My object was to call your attention to a subject that I had never noticed in any of the medical journals of the day; and thus induce "others

better qualified than the writer to give their scientific views" as to the practicability of the same. This is a topic, I think, worthy the consideration of the profession, and at the same time practicable under certain circumstances; that is, when the uterus is distended with a considerable quantity of *liquor amnii*, and where the pains are feeble and ineffectual.

No practitioner, I presume, has any doubt as to the occurrence, occasionally, of spontaneous evolution. Such, however, is extremely rare, "so much so that no one would be justified in waiting for it to take place." "This chance for the preservation of the child is of extremely rare occurrence; for, in by far the greater number of instances, the child has been expelled dead. Indeed the delivery of the woman by this change of position of the child, is in itself very rare." Such is a brief history of spontaneous evolution.

"The presentation in this case when the examination took place per vaginam, was not discovered, because as yet none existed." I would ask the simple question, what position could the fœtus occupy when there was no part presenting to the *os tincæ*? Some part must certainly have been nearer the os than the rest of the body. Suppose the fœtus to be occupying the position that it really did, at the time the examination took place, and had then been impacted into the superior strait until the parts could have been distinguished. The presentation then would have been established, because we would then have been able to distinguish the parts. In the other case, you remark there is *no presentation*, because the parts are not distinguishable. Or, suppose that my finger had been long enough to have detected the presenting parts without the fœtus being thus impacted into the superior straight; the feature of the case then would have been greatly modified, because I would then have known beyond a doubt the parts that were actually or likely to present in the case. But finding no hard and round tumor occupying the brim of the pelvis, as is usual in head presentation, I was induced to find it elsewhere, which I evidently did, if my sense of touch deceived me not.

Your allusion to "fœtal gambols and recreations that are often taking place towards the close of gestation," would, to my view, have a tendency to establish the fact, that turning by taxis may be performed: from the fact, that if the fœtus can move with so much freedom of its own accord, it would certainly yield that much more readily to external manipulation.

My observation has led me to form a different conclusion from that you seem to represent in reference to the free motions of the child *in utero*. The almost universal occurrence of head presentations in the inferior animals as well as in the human species, has led me to the belief that nature must have, as a general rule, a position for the fœtus to occupy *in utero* to correspond with that of parturition. I have had occasion at different times to institute examinations *per vaginam*, within the last six weeks of utero gestation, and in every instance when the head presented at parturition, was I able to distinguish the head of the fœtus resting on the anterior margin of the pelvis in the first instance.—The fœtus may, and no doubt does occupy different positions *in utero*, but I am inclined to think that its position is more of a permanent character towards the conclusion of gestation. There are several reasons that would go to establish this fact. First, the size of the child, which as it approaches maturity gradually fills up the space that is allotted to it; consequently its motion becomes more and more embarrassed, and its body compressed. Next, the relative decreasing quantity of liquor amnii offers another impediment to its freedom of motion.

If nature is so great in childbirth, and at the same time able to effect such wonderful changes under such unfavorable circumstances as you maintain, can it be absurd to hold out the idea that it can effect an evolution, by external manipulation, under such favorable circumstances. In the case that I met with the process was slow, but without difficulty. In that case the abdomen was large, and proved to contain a considerable quantity of liquor amnii; more than is usual by a good deal. In cases like this such an operation may be performed ; and under similar circumstances are we more likely to meet with such a presentation or recreation. Should you ever meet with just such a case, you will, no doubt, find it "easy to understand how lateral pressure on the abdomen can effectuate the turning, in an intelligible manner," by pressing with the ends of the fingers on the abdomen, immediately by the side of the head of the fœtus; and then, by using moderate pressure to the right or left as the case may be, between pains, until you are certain whether the head will yield or not ; and if so, continue the pressure or taxis, until you think your object has been accomplished.

"The turning here attributed to taxis may have been due solely to the natural mechanism of labor." Do you mean, by this, to say that I would misrepresent the case through selfish motives? or, do you wish to impress the idea that I, being present, could not discriminate between the

efforts of nature and that of art? Far be it from me to claim any thing more than is my due. If you think the idea is impracticable, why not say so? It would certainly be an extraordinary coincidence to think that nature should have commenced her operations precisely at the same time that I did with my feeble efforts, and that hers should have ceased when mine did, and commenced again, &c., between pains; and that our efforts have thus coöperated nearly through a half circle, that is from a little to the right, at the fundus uteri of the mother, to the brim of the pelvis on her left. Nature then completed the process. Another point here worthy of remark is, that when the fœtus had been changed in position so that the head could assume a lower position in the brim of the pelvis, the pains immediately grew strong and powerful; which fact was no doubt owing to the head descending in the pelvic cavity, thereby affording the uterus a great contractile power over the fœtus. As to the "fœtus swimming in the liquor amnii," I regard that as an ambiguous expression, particularly in the last months of pregnancy. From the fact there is not generally enough of this fluid for the fœtus to swim in. I have attended cases when only four ounces would be discharged, and in others barely enough to distend the membranes during a pain. In some cases it amounts to pints and quarts. Its relative quantity generally diminishes as pregnancy advances.

In regard to the special cause which directs the head to engage in the pelvis, I can not account for it, unless it is owing to a principle of this kind—after the fœtus has advanced considerably to maturity, the head being more compact and massive, and consequently of a greater specific gravity than the other extremity, has a natural tendency to assume or occupy the lowest portion of the abdominal cavity that the surrounding walls of the uterus will admit of. The head being thus situated may at times become disengaged or changed in position. The same law may operate to return it to the same position. Whilst the circular walls of the abdomen, the concavity of the uterus, and the relative decreasing quantity of liquor amnii may coöperate in retaining the *fœtus in situ*. It is entirely natural too that the greatest diameter of the fœtus should correspond with that of the uterus and that with the abdomen. The most familiar presentation and the one most favorable for parturition is one we most often meet with, and so on. Now why does such a general law exist; or, how can the head almost invariably present unless the fœtus has a corresponding position in nature? Were it otherwise, do you suppose that a spontaneous evolution would invaria-

bly take place, and relieve nature of her perplexity? I presume not. According to our best authors on this subject, spontaneous evolution does not take place often enough to be of much service to nature or the rest of mankind. Then why do you so readily attribute this ease of mine to an effort of that character.

I am, very respectfully, yours &c.,

J. C. SMITH.

ART. X.—*Reply of* P. H. CABELL, M.D., *to the Review by* J. HALE, M.D., *in the New Orleans Medical and Surgical Journal for September.*

SELMA, ALA., *Sept. 18th*, 1855.

DR. BENNET DOWLER:

DEAR SIR,—In the last number of the New Orleans Journal I find several criticisms, and a review of a report upon the Medical Botany of Dallas Co. Of the criticisms I have little to say, for I think them just; as the faults of spelling are numerous, and of such a kind as frequently to obscure or destroy the meaning of the sentence; but so many of them are obviously typographical, common charity should induce the belief of the others also being the fault of the printer.

You ask one question in your critique, which I will answer as well as I can. You wish to know what I meant by "steaming fresh leaves in lard." The meaning of this sentence I do not know; but I do know you cannot find any such expression in my report, and I am only willing to be held responsible for what I did say.

I beg that you will, in justice to me, publish what I have written below in reply to the review of Dr. J. Hale.

Respectfully, P. H. CABELL, M.D.

On the Review of the Report of the Medical Botany of Dallas Co., Ala.—In the last number of the New Orleans Journal I find a review of part of the transactions of the Alabama Medical Association, by J. Hale, M.D., which I cannot pass over in silence; while much of the criticism is just, still, in duty to myself, I must be permitted to take

exception to some parts of it. The Report upon the Medical Botany of Dallas County, which was intrusted to me, has, I think, been reviewed in rather a carping manner; and I feel called on to give some of the reasons which induced me to arrange the report as I did, and so briefly to allude to some of the species, and entirely to omit others of value. The singling out the words *Tinea Capitis*, which were mis-spelt in the report, and many errors in spelling, which are obviously typographical, should have induced any one whose object was not solely to find fault to pass them over, especially as the reviewer has himself been guilty, in a report on the Medical Botany of Louisiana, of mis-spelling a much simpler word. On the very first page of the concluded report, I find sour-wood spelled *sower*-wood, and this is not the only error of a similar kind, by a good many: these we would, in charity, attribute to the printer; but as the reviewer seems to hold me responsible for all errors, he cannot object to my doing the same.

The absence of the common names and general descriptions, I think still the proper method in a report; any detailed account—such as the reviewer seems to desire—of the appearance, habits, &c., of plants, would swell the report to an unreasonable length, and even then would not be sufficiently exact to point out the plant to one not familiar with it; even the technical descriptions which are found so condensed in the Botanies, would take up too much room. The common names are applied too loosely—the same one often to several plants—to be productive of anything but error and confusion; whereas the names given in the Botanies are applied only to a single species, and by these names it is always easy to find the plant described.

The reviewer objects, that I repeat the words *order* and *genus* too often; but I find that he is obnoxious to the same charge: for he has, in his report, repeated the word *order* with as much monotony; and if this repetition is correct for the *order*, it certainly is for the *genus*.

As to the *genus Clematis*, your reviewer objects that I have mentioned only a single species, and that one an exotic, "whereas there are about half-a-dozen indigenous to the Southern States." I was appointed to report on the Medical Botany of Dallas County, and not on the botany of the Southern States, and have carefully avoided taking anything for granted in my report; and although I have little doubt that there are many valuable plants which I have failed to mention, still I felt justified only in alluding to those which I had seen growing in the county, and which I had carefully analyzed and preserved.

There are only two species of Clematis that I have met with in this county, and as neither of them are positively known to possess medical properties, they were of course not mentioned at all. The officinal *Clematis Erecta* was only alluded to as probably being the type of the other species, and was not mentioned as growing here, but was brought in as an example in the midst of the generic description. The *Clematis Virginiana* (virgin's bower), which the reviewer seems to think I should have described, I have never seen growing in this county, and consequently did not allude to. As to the *genus Anemone*, I have only to say that three species have been found growing here, neither of them possessed of any well ascertained medical properties; therefore, what little was said of them came properly under the head of the genus. But as the reviewer seems to desire information on this subject, I beg leave to inform him that the only ones I have met with are the *Anemone Caroliniana*, *A. Nemorosa*, *A. Virginiana*.

As to the *genus Ranunculus*, he objects that I only mention the "*R. Bulbosus*, which is an exotic." This I did as it was officinal, and whatever properties the others may possess I am ignorant of. The *R. Bulbosus*, though not native, has become naturalized, and the reviewer will find it classified in "Torey and Gray's Flora of North America."

But I have said enough, I hope, to justify myself, and to show that the strictures of the reviewer are, probably, more for the purpose of finding fault and making a display of his own botanical information, than prompted by a desire to reform and correct errors; and may say truly, "if there are bad writers, there are worse critics."

P.S.—*To the Medical Profession of the Southern States.*—Having at the last meeting of the American Medical Association been appointed to report upon "The native substitutes for Cinchona indigenous to the Southern States," and as a report of this kind, to be useful, must include the experience of a number of observers, I take this method of seeking from physicians residing in the South any original facts which will aid me in my investigations. I wish to obtain the names, both common and botanical, of any native plants which are positively known to have the power of arresting diseases characterized by periodicity; what parts of such plant are most available; the mode of preparation, and the doses, together with any observations they may be willing to place at my disposal.

As this is a subject of great and increasing importance to all physicians residing in the Southern States, I trust that any information they may possess relative to it will be readily communicated, and with as little delay as possible, in order that sufficient time may be given me to avail myself of it before the next Annual Meeting of the Association.

ART. XI.—*Chloroform in Convulsions :* by A. V. ROBERTS, M.D., of Mansfield, La.

DR. BENNET DOWLER :

DEAR SIR,—It is with some diffidence that I appear before the readers of the journal of which you are editor: but, feeling it to be the duty of every member of the profession to do what he can in aid of the cause, I submit a few remarks on the use of chloroform in convulsions, with two cases appended that have occurred in my practice.

These cases are not submitted for their novelty, but because they are very common, occurring constantly in the practice of every physician.

The first case is that of a negro woman aged about 23 years, the property of Mr. Johnston, of this parish. She was taken in labor on the morning of the 5th of last February. I was sent for about 3 o'clock in the evening—found her in the following condition: violent bearing down pains every 5 minutes or less. Os uteri fully dilated; the head of the child presenting in the eighth position of Ramsbotham (that is, the os frontis pressing against the pubis) and so firmly pressed down by the violent and continued contraction of the uterus, that I found it utterly impossible to move it in any direction. The waters had been evacuated some five or six hours.

About 5 o'clock she was seized with the first convulsion which lasted some ten minutes. Although I opened a large orifice in a vein from which the blood flowed freely—applied cold clothes to her head, and used ether by inhalation.

During the next hour she had several returns of the convulsions, and even during the intervals was entirely unconscious of every thing.

Seeing that the woman could be delivered only by reduction of the head of the child, I sent to town for instruments, and requested the attendance of two of my medical friends, Drs. Fair and Gibbs.

One of the gentlemen brought with him a vial of chloroform, with which we were enabled to control the spasms entirely until the labor was terminated. Afterwards she only had one or two slight convulsive twinges which were easily relieved by the chloroform. The woman recovered without any other unfavorable circumstance, except perhaps some more soreness and inflammation than usual, owing to the long continued pressure of the head on the soft parts within the pelvis.

CASE 2.—This was a negro child, aged about 15 months, the property of Hinton Smith, esq., of our town. On Sunday, August the 5th.—The child was taken with fever, no chill noticeable. About 3 o'clock in the afternoon it had the first convulsion which lasted ten or fifteen minutes. It had others at intervals of twenty or thirty minutes during the remainder of the evening and night until the fever began to cool. I was sent for that evening but did not see the child until nine o'clock next morning, at which time it had high fever, it having returned about 6 o'clock that morning.

Whilst I was examining the child, it was seized with a very violent convulsion, (the second that morning.) It was relieved by the warm bath, rubbing the extremities, &c. It was evident from the condition of the child, (it having been sickly from birth,) that it could not survive many such spasms as I had witnessed.

Under the circumstances I gave it four drops of chloroform in a teaspoonful of water. The dose was repeated two or three times during the next hour, after which there was no sign of a return of the spasms that day. It also took grain doses of quinine every hour during the day, with the effect of ameliorating all the symptoms, and at my next visit (nine o'clock next day,) I found my patient almost entirely clear of fever, and no disposition to spasm.

I do not in the present paper intend to enter into the pathology of that class of diseases of which the preceeding cases are examples, for two reasons: first, it is unnecessary in an article like this; and secondly, it would extend it to an unnecessary length.

I did not set out to discuss problems, but to state facts, such as I have seen; hoping thereby to induce others to use more freely a remedy of certainly very great virtue and very small risk.

It may be said by some, that in the two cases above detailed, the convulsions were sympathetic, and that the delivery of the woman in the one, or the subsidence of the fever in the other, would have relieved them. I grant it. But how many cases do we meet with, in which the

patient would not live through a few spasms, and if we have a remedy that will so surely relieve the system, (if we so term it,) and be of no disadvantage in the after treatment of the case, why, let us use it.

We are not prevented from the use of any other medicine after the use of this remedy. It does not narcotize the system, and any other remedy is as efficient after as before the use of chloroform.

Where organic diseases of the brain exist, I should expect little or no relief from chloroform. But in the disease above mentioned, where convulsions occur in the course of any other disease, I believe this to be a safe, innocent, and very valuable remedy. I am not only satisfied that this remedy is useful in such cases as I have said may be sympathetic, or secondary, which is the case with by far the majority of cases of convulsions we see, but in convulsions that might be termed idiopathic, or not dependent on any other disease. I am sure it would be of use; for let us term it sedative, nervous stimulant, antispasmodic or whatever else we please, we all know it posesses the power of quieting the nerves, and relieving pain, that is not approached by any other remedy we have.

In looking over the July number of your journal, I noticed an article of Dr. W. D. Anderson, of Waterproof, on the use of this remedy in infantile coma, in which he says it was entirely successful. I mention this case because it is another instance of the benefit to be derived from this remedy, which may induce physicians to use it more freely, and if they do but give it a fair trial, my word for it they will be pleased.

Sept. 11, 1855.

ART. XII.—*Neuralgia.* (Consultation Letter.)

MONTICELLO, ARK., *July 13th*, 1855.

B. DOWLER, M.D.:

DEAR SIR,—Knowing you only from character, through the New Orleans Medical Journal, I take the liberty of communicating to you a case of Neuralgia of the Brain, asking of you some or any information that you may see fit to give me, for I have exhausted all the skill and information that I have.

This case is that of a young man about twenty-five years old. He was taken about the 1st of February last with a very violent cold, which

lasted about ten days, disappearing and leaving a violent pain behind. The pain did not seat itself at one place, but changed from the forehead to the left side of his neck, back and forth. There was some pain all the time, but more at some times than others (intermitting). These pains continued to increase in violence for about a month, when he sent for a reformed doctor living in our town. He treated the case with drastic cathartics and quinine for some time, without any relief; he continued to get worse. He next sent for a mineral doctor; he treated for some time with a solution of arsenic internally, and an ointment of iodide of mercury rubbed on the frontis. By this time the pain left the side of his neck, and nearly located through the temporal portion of the cranium, changing sometimes to the top of his head, not leaving entirely its former location. The last treatment was continued for some time without any permanent relief. The last doctor gave him morphine, which produced momentary relief and constipated the bowels, which were very hard to operate on.

May 12th, I was called in, after both of the other doctors had quit the case. I found him suffering the most excruciating pain through the temporal portion of the cranium, and vomiting very frequently. There had been some derangement of the stomach for some time, which was increasing very rapidly; he vomited every time he took much water.

I gave one drachm of chloroform and fifteen grains of calomel at the same time. In a short time he fell asleep; had slept but little for some time; ordered him to take half a drachm of chloroform every two hours if he did not sleep; but if asleep, not to disturb him to give him anything. But the chloroform made him vomit worse. It was discontinued. Next day, (13th,) put a blister upon the epigastric region, and gave five grains of calomel three times a day; also, shaved his head from the frontis to the transverse suture, and put a large blister on it extending from the eyebrows to the transverse suture. The blister drew well. He had very bilious evacuations for several days by a continuance of the calomel, which gave him great relief; his stomach was quiet; he only complained of a slight dull pain in his head; renewed the blisters every third day; continued them and the mercury for about ten days, when there was some ptyalism, when I discontinued the calomel. Then I gave him salts to keep his bowels open; commenced with ten grains of quinine three times a day, but found quinine aggravated the pain and disordered the stomach. Both had to be discontinued. Then I commenced with Lugol's concentrated solution of iodine; continued that for several

days, when it disagreed with his stomach, and was discontinued; kept up the blisters; commenced with a mixture, one-third of carb. of soda, one-third chalk, one-third magnesia, believing this good to correct the acids of the stomach, of which there seemed to be a great deal. I gave him a spoonful three times a day. Discontinued the usual dressing for his blisters, and substituted an ointment of ext. belladonna, at the same time giving him a pill of common size every night, which seemed to give him great relief, producing sleep nearly all the time. Continued the above for several days, when they all seemed to lose their virtue, having no effect in any proportion that I could risk, the pain returning as bad as ever. I then tried ext. hyoscyamus in the place of the belladonna; made an ointment and applied it three times a day to his head; at the same time gave a large pill three times a day.

His stomach seemed to be doing well, only had the most ravenous appetite in the world. Combined three grains quinine, three of gum camphor, three of ground ginger; gave him five doses a day, which produced a slight roaring in his head. Continued the above twelve or fifteen days, when his system became impervious to the medicines. Discontinued these, and gave him five grains iodide of potassa five times a day.

He is now having slight spasms lasting for a minute or two; some rigidity of the muscles; his eyes turned up and back. These occurred once before, when I first commenced to attend him, but then there was no contraction or jerking of the muscles whatever. This seems to be produced from any excitement or fatigue.

I am now using iodide of potassa, five grains five times a day; also I am trying an electro-magnetic machine, which, he says, eases his head for a short time. His permanent pain is in the top of his head; but frequently he will have violent pain in the back of his neck and between his shoulders, and in his extremities.

He has had valerian to settle the nerves to no effect; the iron treatment, &c., and many other less prominent things too tedious to mention.

His present treatment is, as already mentioned, five grains iodide of potassa five times a day; Epsom salts to keep the bowels open; ointment composed of hyoscyamus one-quarter ounce, half a drachm croton oil, twenty grains tartar emetic, one ounce simple cerate, mixed and rubbed all over the scalp three times a day, and on the back of his neck; at the same time a warm poultice to be applied, and the electro-magnetic machine three or four times a day. I shall continue the latter until I get its specific effects.

The above is the general outline of the case and treatment.

I have been practising medicine seven years, and have treated several cases of neuralgia; cured two cases since I have been attending the above case.

I am willing to believe that there is some tubercular deposit on the brain. There is not, as in many cases, disease of the spine; in this patient there is none that can be found.

Any information you may give me on this case, will be thankfully received. Yours truly,

J. N. SLEMONS, M. D.

ART. XIII.—*Letter from* DR. HENRY BACKUS, *Explanatory of his Views of the Unity of Disease.*

SELMA, ALA. *July 27th*, 1855.

BENNET DOWLER, M. D.,

DEAR SIR,—In the last number (July, 1855,) of the New Orleans Medical and Surgical Journal, I see a notice by yourself of my Essay on the Unity of Disease; in which is stated the main doctrines advocated, and which doctrines you declined to adopt or criticise on the occasion. From my knowledge of your scientific attainments as attained through your writings, I am greatly encouraged by the fact that while you deemed the essay worthy of notice, you did not feel called upon to reject at once its conclusions, and I trust you will excuse the liberty I take in addressing you in reference to it, as I have thought that I might perhaps present the subject in a clearer light before your mind. Upon a subject so complex and difficult as that which I have undertaken, one may well crave encouragement and coöperation, and while I should rejoice at your coöperation, I neither expect nor wish it, only *in so far* as in your judgment my arguments are valid, and tend to the advancement of science. I am free to acknowledge that as yet I have received but little encouragement, owing, as I believe, to the following reasons: 1st, the bad style and obscurity of language, especially in the two first attempts. This may be, and probably is the greatest reason. 2d, The low estimate and consequent neglect of the science of investigation. 3d, The influence of habits of thought, association of ideas, and names. Being accustomed from our earliest teaching to hear pathological phenomena

spoken of as having distinct specific causes, and never inquiring into the truth of the original premises, or questioning the validity of the inferences, "those inferences become consecrated, and, as it were, hardened into maxims: and the mind cleaves to them from habit, after it has outgrown any liability to be misled by similar fallacies, if they were now for the first time presented." Hence it is that a generation must usually pass away, and the argument be presented to minds not habituated to such associations, before any considerable advance in science will be generally admitted.

It is admitted that medicine is an inductive science, that it is founded upon observation and experiment, and inferences therefrom; but it is denied by many that it is in its nature a deductive science—pathological phenomena, say, they being produced by distinct specific causes, are not therefore capable of generalization.

It should be remembered, however, that the same objections, and in the same words were once used against Astronomy. Astronomical phenomena were once thought to be produced by distinct specific causes, and therefore not capable of connection. But what settles this question in my estimation is, that induction and deduction are the same processes, that the inductive and deductive methods do not differ, *in kind*, (Mill's Logic, 2d book) and that therefore any inductive science is in its nature deductive—capable in itself of generalization.

Assuming, then, that medicine is amenable to the deductive method, the question arises—does the argument of the essay fulfil the requirements of that method, viz:—Induction or individual facts as the basis, ratiocination and verification by experiment? Now, although the argument does not take this exact form, yet, if the major premiss of the syllogism is proven, it amounts to the same—is a complete induction. That pressure will produce pain, convulsion, coma, &c., has often been proven by direct experiments; that congestion, which term is a mark of pressure, will produce flux, dropsy, &c., has also been proven by experiment. (See Williams' Principles of Med. 3d Amer. edit. p. 182.) This is a sufficient inductive step, though it was not thought necessary to throw the argument into this form. Apart from what might be considered the real deductive process involved in the argument, much additional light is thrown upon the whole subject from analogy, the operation of exciting causes, the real significance of names, and from treatment.—Viewed as a whole, the argument stands thus,—1st. From the analogy furnished by astronomy, there is nothing in the diversity of pathological

phenomena which forbids the conclusion that all are produced by a common cause. 2nd. Exciting causes, directly or indirectly, produce a common state, marked by the terms debility, dilatation, congestion and obstruction. 3rd. The definition of these terms, showing that they are marks of each other, and marks of pressure. 4th. The names of special diseases refer to organs, localities and symptoms, but do not imply conditions or causes, and therefore do not obstruct the conclusion that all are produced by a common cause. 5th. Induction, or individual facts. 6th. Ratiocination, connecting dilatation and hypertrophy, with congestion and inflammation, with debility and fever, &c. 7th. Verification by experiment, as in producing general congestion by obstructing the heart, and thereby producing all pathological phenomena. 8th. Elimination of the cause through treatment, which is another experiment.

If A, B and C, are said to be the cause of a given effect, we put the matter to the test of experiment by eliminating C, and then if the effect continues we say that, C was not essential, was not the cause or a condition of the effect; and so of B or A. In the same way, treatment eliminates the cause or a condition of the disease. Now, if all pathological phenomena are produced by congestion, pressure—it follows that the treatment for congestion should illustrate the treatment in kind, for all special diseases, whether called "common or specific," and by reference to the treatment laid down by Dr. Williams (Principles of Med.) for congestion, this will seem to be true. If this be so, it is in direct confirmation of the argument of the essay, and is of additional value from the fact that Dr. Williams was not attempting to sustain any general theory. Will you please look into this matter, and anything which you may have to offer in the way of encouragement, suggestion, advice, or objection, will be thankfully received.

Very respectfully,

HENRY BACKUS.

ART. XIV.—*Traumatic Paralysis of Motion and Sensation of the Arms.* (Consultation Letter.)

BENNET DOWLER, M.D., New Orleans, La.:

SIR,—Being a subscriber to the New Orleans Med. and Surg. Journal, I venture to ask your opinion in relation to a case I have on hand. A negro woman, aged about twenty-two years, in vigorous health, the mother of three children, youngest now about seven months, ran away

about two months ago; was out some four days; no bad weather at the time; was caught and sent home by a negro man, her arms tightly pinioned at the elbow behind her. She was immediately taken, her hands crossed behind her, and tied to a beam overhead, so as rather to incline the body forward. In this situation she remained some five or six hours, and upon being untied, her arms fell to her side, and although strong liniments, electricity in the absence of a galvanic battery, and other remedies have been used, yet there is scarcely any perceptible improvement. One arm has improved, but the other scarcely at all. To-day, upon sticking a needle in the muscles, no sensation was discoverable below the deltoid. I should have said that the nitro-muriatic bath has been used.

Now, sir, if any light can be shed on this subject, by yourself or any of your city medical cotemporaries, it will be gratefully received by a fellow-laborer in the cause of medical science. May I not hope to hear from you at an early day? Hoping I shall, &c. Respectfully.

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REMARKS BY THE EDITOR.

The local palsy in this case is almost beyond doubt traumatic, having been occasioned by physical lesions in both the nervous and muscular tissues. The unnatural position, undue muscular tension, and the weight of the body, produced, in all probability, either an actual or a virtual rupture of one or both of these structures or at least a violent straining of their fibrous bundles, by which the tone or elasticity of the former has been destroyed, and, perhaps, the continuity of the latter. If this be so, it is probable that neither internal nor external medication will avail much in removing the double palsy of sensation and motion, although nature may do both, especially in a good constitution, and the more readily in a young person such as this patient is.

My experiments upon the post-mortem contractility of the human muscles, partially published twelve years ago, and my still more recent experimental researches, show how easily, without great violence, the muscular tissue may be injured, or, at least, its contractile force be impaired or totally destroyed by percussion or blows. For hours, this force in the flexors of the arm, if properly economized is, in many dead bodies, sufficient to raise from the floor to the breast, not only the forearm, but weights also, placed in the palm. Heavy weights, or numerous contractions exhaust, in a corresponding degree, the contractile power, which always requires intervals of repose for its reproduction after these

temporary exhaustions. But a single blow, if violent, will extinguish or rather kill the contractility altogether, and this, too, sometimes without any marked visible alteration of the muscles. The removal, or the crushing of the nerves, does not impair post-mortem contractility, while a bruise or contusion of the muscular tissue alone destroys it altogether.

Violence done to the muscles after death, as before indicated, is followed by paralysis of motion, which, however, is strictly local being confined to the muscles injured, not in the least impairing the contractile power of those in the vicinity. That a crushing or bruising of the muscles destroys its power of contraction, is easily demonstrated, being obvious to the sight; but injuries which the eye cannot detect, may be inferred analogically with certainty, nevertheless, from the nature of the case. Post-mortem palsy, thus divested of sensation and volition, is susceptible of proof, and is, to a certain degree illustrative of the morbid state.

The manner in which the girl above mentioned was bound was virtually a contusion. She was "sent home with her arms tightly pinioned behind her." The distance and the length of time are not mentioned. If the return occupied as much time as the flight, the muscles, nerves, and bloodvessels must have been in a constrained and obstructed condition for four days, not to name the "five or six hours she was tied to the beam overhead." If the negro who caught and tied her "tightly," was inclined to be severe, as too many free negroes are towards their own slaves, the first "pinioning" would account for the palsy. But the last act in this tragedy indicated ignorance or cruelty, perhaps both; for, on tying the crossed hands behind the body, and then "tying these to a beam overhead, inclining the body forward," it is evident to the grand jury, as well as the doctors, that the two arms being long levers would, in this position, exercise an enormous force upon the shoulder-joints, and indeed upon almost all of their soft tissues.

At the moment of writing these lines, the "Clinical Lectures on Paralysis, by Robt. B. Todd, M.D., F.R.S.," 1855, came to this office; from this work I have transcribed the following passage, as more satisfactory than any information that I could communicate upon the case above stated:—

"The next case, gentlemen, is one of paralysis of the arm produced by a bandage improperly applied to a man who had suffered fracture of the clavicle; and, I hope that from it you will not only learn an important lesson in pathology,—namely, that pressure on a nerve is capable

of producing paralysis of the parts supplied by it, and likewise the particular treatment which paralysis so produced requires; but I hope that you will also deduce a moral from it,—that a surgeon cannot be too careful in watching cases that are under his care, and in noticing every symptom which may indicate that his patient is not progressing favorably —for had that been done in the present instance, this man would not have come to our hospital with paralysis of his arm. I am happy to say that the bandage was not applied at King's College Hospital, and indeed, from the character of the gentlemen who have filled the office of house-surgeon here, I believe such an accident is not likely to have happened here.

"The patient, who is the subject of this case, has been in the hospital before under my care, for some pectoral complaint, when a full report of his history—his former health and habits, were taken; the notes made at his admission for his present illness are therefore brief, although sufficient for the purpose. I will read them to you:

"Timothy Sullivan, admitted into Rose-ward, November 18th. This patient is twenty-three years of age; has lived in London for about a year; by occupation a laborer. Last June he was admitted into this hospital suffering from pain in the side and cough; both these symptoms were relieved, and he went out. Shortly after leaving the house, his right clavicle was broken by an old wall falling upon him. He went to an hospital, and the ordinary figure-of-eight bandage was applied. After a time, the patient found his right hand and arm were numb; and soon after this, he noticed a great loss of power of the extensors of the hand. Notwithstanding these symptoms, the bandage was allowed to remain, and both the paralysis of sensation and muscular motion have continued up to the present time.

"Nov. 19th.—At present there are numbness of the hand and arm, and entire loss of power in the extensors of the hand, which is completely flexed when the arm is raised. All the muscles of the arm have less power than natural.

"This case was treated with galvanism, and the patient left the hospital better, having gained some power of the extensors, and that of the flexors being nearly restored to their healthy state. It was some time, however, before the improvement became manifest. In the reports of the 22d and 26th of November, it is stated that no change had taken place; he first began to mend on the 28th.

"Paralysis produced by pressure on the axillary plexus of nerves is not of uncommon occurrence; I have seen some cases in which it was produced in the following way:—A man gets intoxicated, and falls asleep with his arm over the back of a chair; his sleep under the influence of his potations is so heavy, that he is not roused by any feelings of pain or uneasiness; and when at length he awakes, perhaps at the expiration of some hours, he finds the arm benumbed and paralyzed. It generally happens that the sensibility is restored after a short time, but the palsy of motion continues. Cases of this kind sometimes derive

benefit from galvanism, but if the pressure, which caused the paralysis had been very long continued, they seldom come to a favorable termination. Nerve-tissue is one which never regenerates quickly and seldom completely, so that any great or long continued lesion of its structure is not likely to be removed."

ART. XV.—*Medico-Legal Remarks on Punishment:* by BENNET DOWLER, M.D.

THE infliction of pain as a mere satisfaction for crime is vengeance—the *lex talionis;* but as a means of preventing crime, it is just, necessary, and even benevolent, deterring evil-doers from acts detrimental to the well-being of society. The flogging of a child, a servant, or a soldier, for obstinate disobedience, or faults persisted in; and the infliction of capital punishment itself upon convicted criminals dangerous to society, may, and indeed ought to be founded upon the principle of kindness, not that of vindictiveness, being not less praiseworthy than palpable acts of charity. To be sure, it is essential to chastisement that it shall be painful; but at the same time, pain should be economized and proceed no farther than what may be necessary for submission and amendment. With respect to capital punishment, the ends of good government do not require any torture beyond what is essential to the easiest and most speedy death of an offender, whom it would be cruel and unjust to society to turn loose in its midst. The executioner, like the surgeon, cuts off the diseased member with the least possible pain. The rope, the garrote, or guillotine dispatches the criminal without preliminary tortures, which, a little more than half a century ago, were practised to the disgrace of humanity.

The executioner deserves well of his country. There is no reason in the world why he should be hated, and even stoned, as upon a late occasion in New Orleans, any more than the judge and jury who tried and condemned the criminal to death.

In this case a negro boy was hung for an atrocious murder and robbery of his master. Why the hang-man was stoned on this occasion, it is difficult to divine, and the more so because the same multitude, 3,000 strong, but a few months ago witnessed with satisfaction the hanging of two white men, Jean Adam and Antonio Delisle, natives of Louisiana,

for the murder of a slave girl. These executions were the most bungling and horrible, and calculated to excite sympathy, as the following account from the N. O. Delta will show:—

All the while a black cloud hung in the northwest, ominous, terrible, dark. It moved slowly onwards, and moved in the direction of the scaffold. At length its edge rested over the drop, just as the doomed ones stood upon it, as it frowned for a minute as if impatient of delay, and then scattered in a blaze of lightning, accompanied by a roll of thunder which shook the city. Read the omen as you will, it touched not the hearts of the spectators with fear. They stood their ground, and even the heavy rain, which descended in torrents, did not cause them to leave the scene of such intense excitement.

In the thick of the storm the bolt was drawn, and the two miserable creatures descended at a bound. And all was over? No, impatient reader! the noose was not-fixed skilfully, and it slipped, so that the two men were not killed but only dashed to the earth, bruised, senseless and bleeding! If you read the fact with as much disgust as we write it, we do not envy your sensations.

What next?

The people rushed forward, not to rescue the doomed, but to see what the accident was. The police charged on them with their glittering crescents and formidable batons, and all was quiet again.

The prisoners were carried back to the prison, and restored to animation by various means. Again they were brought out, after a lapse of a few minutes, and mounted the scaffold as before.

Delisle walked as fearlessly as ever. The former noticing the blood on the shirt of the latter, calmly turned to him and asked—"How come the blood there?" Adam answered not; and they stood upon the trap again.

A pause—a push—a struggle, and at last they were in eternity!

In order that pain may be economized, it should be certain, so that the smallest amount of punishment, consistent with the ends of good government, may be inflicted. The severest penalties, where the chances of escaping them are great, owing to to the inefficiency of the government, will deter offenders less than the mildest ones strictly enforced.

Judicial torture, with a view to forcing the accused or a witness to make confessions and discoveries, as evidence against himself or others, was, in ancient times, practised among the slaves in Athens and Rome, but subsequently it prevailed extensively, having only fallen into disuse within a century. In France the *question préparatoire* was not abolished until 1780, nor in Russia until 1801. In what manner pullies, wedges,

screws, fire, racks, wheels, and heavy weights applied to the body, can, upon any physiological, physical, or legal principle, prove the guilt or innocence of a party "must give us pause."

Without enlarging further upon this subject, it is intended to submit a case illustrative of the criminal code of France not a century ago, which will also interest the physiologist as as an experiment showing what an infinity of suffering man can endure.

Robert François Damiens was born in the village of Artois, in 1715. Under the influence of religious fanaticism, he entertained the insane idea of glorifying God by killing a licentious king, Louis XV., whom he slightly wounded on the 5th Jan., 1757. For this attempt he was subjected, in civilized France, to the unparalleled punishment of which the following is an outline:—

"Whoever wishes a detail of the affair, will find it in a work of 4 vols., printed in Paris in the same year :—An Epitome of which may be found in the Monthly Review, vol. 17th, p. 57, from which our extracts are taken.

"The prisoner was accordingly, Jan. 17, 1757, removed under a strong guard, from Versailles to the *Conciergerie*, where he arrived at two o'clock in the morning of the 18th.

"The interesting charge of keeping this prisoner safe for judgement, made every possible human precaution to be taken against his escape, by strengthening the prison, by posting centinels, guards, &c. who patrolled constantly the night-rounds. On the inside of the *Conciergerie*, there were centinels placed from the entry to the court in which stands the tower of Montmorency. At the bottom of this tower was placed a small corps-de-guard of twelve soldiers, who served to relieve the sentinels within. All along the stairs of the said tower, there were also posted sentinels at proper distances. In the first story was the room in which Damiens was confined. This room is round, and may be about twelve feet broad, every way ; receiving no light but through two casements, or false windows, from eight to nine inches in breadth, by three feet in height. These openings are secured with double bars, and defended from the weather only by movable frames with oil-paper. There was in this room neither chimney nor fire, but it was sufficiently warmed by a stove placed in the guard room beneath it, and by the candles continually burning in the room. At first, they used tallow-candles, but afterwards, by the advice of the physicians, for the preserving the wholesomeness of the air, they burnt none but wax.

"The bed of the prisoner was disposed of as follows: the head of the bed fronted the door exactly, at the distance of three feet from the wall. The bed was placed on a bed-stead raised about six inches from the ground, and mattresses round, so as to project six inches beyond the bed-

stead. The bed's head was in the whole breadth raised three feet above the bolster, and was likewise mattressed; being so contrived, with springs, to raise or lower, according as the convenience of the prisoner should require it. In this bed he was fastened by an assemblage of strong leather straps, two inches and a-half broad. These straps kept his shoulders confined, and were on each side of the bed made fast to two rings stapled to the floor. Two other straps formed a ligature for each of his arms, and were connected by another placed on the breast bone; and these two branches formed a sort of hand-cuff, that left the hand and arm no liberty, but as directed to the mouth. These straps were likewise tied at their ends, to two rings secured as the first. Two straps of the same form also confined his thighs, and were tied in like manner; so that from each side of the bed came three branches of straps. Besides these, that which was placed on the breast, descending to the feet, formed a sort of surcingle, and was tied at the foot of the bed to a ring in the middle of the floor; the strap to which his shoulders was fastened in like manner over the bed's head, to a ring stapled in the floor like the rest. Under the arms and hands of the prisoner was spread a large carpet of hide, that he might not contract any inflammatory heat, or excoriation.

"Monday, March 28. At seven o'clock in the morning, the criminal was carried up to the torture-room. From that moment he ceased to be under custody of the French guards, and, according to custom, it was the Lieutenant of the Short-robe of the Chatelet who had charge of him.

"The Recorder read the sentence to the criminal, who heard it through with attention and intrepidity, and, on raising himself said, 'that the day would be a sharp one.'

"A little before eight o'clock, six of the commissaries being assembled in the torture-room, the criminal was placed on the stool, and underwent his last interrogatory, which lasted near an hour and a half: Damiens all the time preserving his usual firmness. That over, the executioners of justice began to put the legs of the criminal into the boot, and the ropes were tightened with more rigor than had ever been practised; and perhaps this is the most exquisitely painful moment of the whole process of that torture. Damiens began to send forth the most piercing cries, and seemed even to faint away; but the physicians and surgeons, who are always present at the torture, on examination, knew that the swooning was not real. Damiens asked to drink; they gave him water, but he insisted on having some wine in it, saying, 'now or never strength is necessary.' It was not till half an hour afterwards that the first wedge was applied. They had let this interval elapse, in order to have the numbness got over, which commonly follows the violent compression of the ligature, and that the sensibilty might be at its height; and, indeed, at the application of the first wedge, Damiens made dreadful outcries, but without passion, or any indecent word. During the same, the First President renewed his interrogatories, and principally

with respect to accomplices; and having asked who induced him to commit the crime, he cried out. 'It is Gautier.' (This was the first moment of his ever mentioning him.) Being asked who Gautier was, he told; as also where he lived; and charged him with having used very criminal expressions, in presence of Mons. le Maitre de Ferrieres, whose affairs this man managed, and lodged at his house. Upon this declaration, the commissaries gave orders to the lieutenant of the Short-robe to bring away directly before them in that room, the said De Ferrieres and Gautier. Whilst they were gone for them, the torture continued with intervals of a quarter of an hour between the driving each wedge, at every one of which Damiens renewed his shrieks and outcries.* The most home and pressing interrogations imaginable were all the while put to him; and after having remained *two hours and a half* under the torture, the physician and surgeon advised not to keep him longer in it, as it could not be done without danger of his life. Consequently he was untied, and placed upon the mattress, where having heard the verbal process, and his answers, he persisted therein.

"The commissaries seeing there was nothing more to be expected from the criminal's declarations, ordered him to be led back to the grève. He waited there some considerable time, because the executioner had not been careful enough to have everything ready; for which he was afterwards punished by commitment for several days to the dungeon.

"When Damiens was stripped, it was observed, that he surveyed and considered all his body and limbs with attention, and that he looked round with firmness on the vast concourse of spectators.

"Towards five o'clock he was placed on the scaffold which had been erected in the middle of the enclosed area, and was raised about three feet and a half from the ground; the length from eight to nine feet, and of about the same breadth. The criminal was instantly tied, and afterwards fastened by iron gyves, which confined him under the arms, and above the thighs. The first torment he underwent, was that of having his hand burnt in the flame of brimstone; the pain of which made him send forth such a terrible cry as might be heard a great way off. A moment afterwards he raised his head, and looked for some time earnestly at his hand, without renewing his cries, and without expressing any passion, or breaking out into any imprecation. To this first torment succeeded that of pinching him with red hot pincers in the arms, thighs, and breasts. At each pinch he was heard to shriek in the same manner as when his hand was burnt. He looked and gazed at each wound, and his cries ceased as soon as the pinching was over. They afterwards poured boiling oil, and melted lead and rosin into every wound except those of the breast, which produced, in all those circumstances, the same effect as the two first tortures. The tenor of his articulated exclamations, at times, was as follows: 'Strengthen me, Lord God; strengthen

* At the eighth and last wedge he cried out, 'Why had I so weak a head, the King being so mild and good a Prince?'

me!—Lord God, have pity on me!—O Lord, my God, what do I not suffer!—Lord God give me patience!'

"At length they proceeded to the ligatures of his arms, legs, and thighs, in order to dismember him. This preparation was very long and painful, the cords straightly tied, bearing grievously upon the fresh wounds. This drew new cries from the sufferer; but did not hinder him from viewing and considering himself with a strange and singular curiosity.

"The horses having been put to the draught, the pulls were repeated for a long time, with frightful cries on the part of the sufferer; the extension of the whole members was incredible, and yet, nothing gave signs of dismemberment taking place.

"In spite of the straining efforts of the horses, which were young and vigorous, and, perhaps, too much so, being the more restive and unmanageable for drawing in concert, this last torment had now lasted for more than an hour, without any prospect of its ending. The physician and surgeon certified to the commissaries that it was almost impossible to accomplish the dismemberment, if the action of the horses was not aided by cutting the principal sinews, which might, indeed, suffer a length of extension, but not be separated without an amputation. Upon this attestation the commissaries sent an order to the executioner, to make such an amputation, with regard especially to the night coming on, as it seemed to them fitting that the execution should be over before the close of the day.

"In consequence of the order, the sinews of the sufferer were cut at the joints of the arms and thighs. The horses then drew afresh, and after several pulls, a thigh and an arm were seen to sunder from the body. Damiens still looked at this painful separation, and seemed to preserve some sense and knowledge after both thighs, and one arm, were thus severed from his body: nor was it till the other arm went away that he expired. As soon as it was certain that their was no life left, the body and scattered limbs were thrown into a fire prepared for that purpose near the scaffold, where they were all reduced to ashes."—*Æsculap. Reg.*

The law, which has been flatteringly defined as being "the perfection of human reason," is deeply indebted to medical science, particularly in reference to criminal Jurisprudence. Anatomy, physiology, surgery and chemistry have created Legal-Medicine, and have revealed the truth, and have contributed to the ends of justice, in numerous instances wherein other testimony was weak, wanting, conflicting, or false. A knowledge of the medical sciences is of great use to the lawyer. A knowledge of law is not essential to the physician's success in practice. In the great issues of life and death brought before crimininal courts, the lawyer is almost merged into the medical man, in regard to simulated, disqualifying and mental diseases, in impotency, rape, pregnancy, delivery, infanticide, drowning, wounding and poisoning.

PROGRESS OF MEDICINE.

ART. I.—*On the Effects of Opium in arresting the Phlegmasiæ in their forming stage, and in combatting those which have resisted Antiphlogistic, Revulsive, Derivative, Evacuant, and Alterative Treatment, &c.:* translated from the French of M. DEBREYNE; *Revue de Thérapeutique Médico-Chirurgicale*, of June 15, 1855: by M. MORTON DOWLER, M. D., of New Orleans.

IT is well known that the Phlegmasiæ are almost always preceeded by pain to a greater or less degree, and which is of great variability. This preceding condition is the cause of the results that follow. The pain or exaltation of sensibility is the exciting cause of the phlegmasiæ. Put an end to this pain, then, and the phlegmasiæ becomes impossible for want of nervous stimulation. Thus, in bringing back the exalted sensibility to its physiological standard and normal measure, we prevent the sanguineous afflux which is the necessary result of nervous excitation. In a word, we present phlogosis, verifying the famous maxim, "*ubi stimulus ibi fluxis*"; that is to say, "*ubi stimulus deletur, ibi fluxus non nascitur.*"

But by what means are we able thus to arrest and throw off the phlegmasia? Why, by a celebrated therapeutic agent well known; and, nevertheless, very rarely employed under these circumstances as a directly curative agent. This heroic agent, this divine gift, as it is called by Hufeland, without the aid of which Galen, Sydenham, Hoffman, Werlhof, could not conceive that any man could be a physician; this mysterious, powerful and highly therapeutical agent is opium—opium administered both internally and externally, at the same time, according to the therapeutic exigencies and circumstances of the case.

This unusual, abortive, and preventive mode of treatment is applicable in all the acute phlegmasiæ, even when external; but particularly in inflammatory epidemics, in which the invasion makes its appearance in an invariable and uniform manner. It is thus that Sarcône treated

an epidemic bilious pleurisy, in which the pain at the onset was excessively severe, and in which inflammation did not develop itself till the end of three days after the attack. How did this great practitioner treat these cases? Why, he combatted the pain with opium, which threw off, at once, a disease which otherwise had been almost always mortal. After the third day, however, when the inflammation was well developed, and the pain was but a symptom of actual phlogosis, the disease no longer yielded to opium, it being then not only useless but injurious. (See the introduction to our work, entitled, "*An Essay, Analytical and Synthetical, on the Doctrine of Morbid Elements,—considered in their application to Therapeutics.*")

We may further recall the terrible epidemic of cerebral disease which broke out in 1840 and 1841, at Avignon and at Strasbourg, though at its first appearance it was not treated with opium. This singular cerebral phlegmasiæ, called at Avignon, *cerebro-spinitis*, and at Strasbourg, *encephalo-rachidian meningitis*, resisted the whole circle of remedies, excepting opium. Copious blood-letting, emetics, purgatives, derivatives, revulsives, &c., all failed to arrest this formidable disease. Opium, administered in large doses, promptly and completely succeeded. Before the employment of opium in this disease, at Avignon, out of thirty cases twenty-nine died in spite of repeated and abundant blood-letting. Either this disease was a phlegmasiæ of the brain and its membranes, confirming the principle, that opium cures sometimes what are, to all appearance, inflammations; or, it was a nervous fever, and then, by a parity of reasoning, opium equally sometimes cures the nervous pyrexiæ. We shall see, elsewhere, that in either case opium is not wanting in curative power.

Professor Cayol, speaking to his pupil one day in relation to a cerebral case of a very grave character, said: "You see here a cerebral affection of the most intense character arrested in its progress by the most energetic treatment, and which would appear to you extremely hazardous. You have seen the patient during three days, plunged into a profoundly comatose state, deprived completely of sight, of speech, and of all his intellectual faculties, and who has not awakened from this frightful lethargy till after having taken enormous doses, forty centigrammes (6 + grains) of opium, daily. You have seen under the influence of this agent, which has been continued during six days, the disease rapidly and without impediment terminate in the most favorable manner." (*Clinique Médicale.*)

It is proper to observe here, that we not unfrequently see in cerebral affections that a nervous element supervenes or succeeds the phlegmasial symptoms. It is in such cases as these that the administration of opium is followed by complete success. We see sometimes in pneumonias a delirium purely nervous, that is properly combated by opium, musk, &c. Long since Hufeland pointed out this peculiarity in cerebral affections. This most eminent practitioner thus expresses himself on the subject of the encephalic phlegmasiæ. In speaking of the croup he says: "The inflammatory period may often give place, and frequently with great promptitude, to the spasmodic or nervous state, which is well defined; and then nothing but powerful antispasmodics can be resorted to in order to save the patient." He further adds: "Encephalitis ought to be treated on analogous principles. Opium in this disease has a two-fold power, acting in a specific manner on the sensibility; when after blood-letting, the application of cold, the use of antiphlogistic purgatives, the stupor and the delirium does not yield, and when depletion can be carried no further; and, also, acting in like manner when the inflammation has given place to the nervous state of the brain, or even when an effusion of serosity has taken place, opium alone being very often capable of completely removing the disease, though in addition to this, we may prescribe calomel with good effect, with a view of favoring resorption. For a long period the efficacy of opium has been known and appreciated by the ablest practitioners in cerebral affections of the nervous kind, and which have assumed the nervous character after the subsidence of the inflammation." (*Manual of Practical Medicine*, p. 726.)

Hufeland has generalized this high practical principle, and applied it to all the local inflammations, as he calls them. It often happens that, after all the resources have been exhausted in the way of antiphlogistics, general and local blood-letting, revulsives, derivatives, epispastics, &c., the local symptoms do not yield; or, after having become mitigated, they return with a redoubled intensity, which takes place especially in phlegmasiæ of the chest, in respect to the pleurodynia, cough and dyspnœa; the pulse remains frequent and febrile, but no loss of blood, either general or local, is longer admissible. The nervous and spasmodic element is here all that announces the indications. Opium, then, here, is the only certain remedy. In such conditions, says Hufeland, *opium is the only remedy—a divine remedy: twenty-four hours suffice for it to remove all that remains of the inflammation, as by enchantment.* In another place he reports the same thing: "*A grain of opium taken at night*

produces the most marvellous effects. It removes all that remains of the inflammation in a single night. The following is his formula:—℞. *Hyd. Submur.* gr. vj; *Opii*, gr. ij; *Sacch. Albi.* 3ij; *m. ft. pulv. in chart.* vj divid.; *S.* One every three hours.

The older practitioners of eminence understand well the force of these principles, and appreciate their practical value and truth; and the junior ones, if they knew how to avail themselves of our most valuable resources, will learn the same in the exercise of their profession, with many other things also, which they have not been able to learn in the schools nor in the classic authors of our day.

MM. Trousseau and Pidoux tell us that they have often combated pleurodynia in pleurisy, by the local application of morphine on the denuded dermis.

When Huxham gave opium in pneumonia and pleurisy, it was always after preparatory blood-letting, and when there was presented a nervous or spasmodic element. It is with this view, after the method of M. Récamier, we generally employ musk against the nervous delirium which sometimes attends the progress of pneumonia.

The following case is one of simple, pure, and legitimate pleurisy, as the ancients say, that was treated by opium alone, with the exception of a preparatory blood letting, under the influence of which latter the piercing pain in the side was augmented. A woman, aged 28, had had frequent expectoration of blood, for which she had been subjected to a great number of blood-lettings, both general and local. She had never had rheumatic pains. Eight days before her admission into the hospital, after violent exercise, which had thrown her into a free perspiration, she experienced a chilliness, which was followed by febrile shivering; there speedily followed a constricted state of respiration, and a severe pain in the left side of the chest.

On the day of her admission the following symptoms were observed:—anxiety, agitation; discoloration of the face strongly marked; impeded respiration; dry cough, with piercing pain in the side of the chest towards the præcordial region; skin hot; pulse small, frequent, and difficult to compress.

The exploration of the chest by percussion and auscultation gave only negative results, respiratory murmur existing at all points:—*Rice-water, Gum-potion, three cups (palettes) of blood drawn; diet.*

The following day (Dec. 4th,) no improvement whatever in the condition of the patient; on the contrary, the pain in the side is more

severe:—*Hydrogala; Gum-potion, with two grains of Extract of Opium, to be taken by spoonfuls.*

At eight o'clock in the evening the patient had taken the entire potion, and had passed a comfortable day, but in the night was agitated.

On the 5th, but little change in the symptoms. Potion continued, with two grains of opium. Towards the end of the day the pain in the side and the impeded respiration greatly changed for the better; was perfectly calm during the night.

On the 6th, neither cough nor impeded respiration; pain in the side almost disappeared. A blister was ordered on the arm, and some diet allowed.

On the 7th, cure complete. The opium continued, however, during some days, leaving it off only when it brought about a slight constipation.

This case is detailed in the *Clinique Médicale* of M. Cayol, p. 61, under the denomination of *Nervous Fever, with Pleurodynia.* Whatever may be the name we may give to this disease; whether it was cured by opium or by spontaneous resolution, the analytic spirit by which it has been appreciated does not the less spread the perfume of the vitality of ancient medicine, that we always respire with pleasure.

If Graves, of Dublin, has obtained the happiest effects from opium in large doses, in the treatment of peritonitis, it is very probably because he has been able to diagnosticate the nervous element.

M. Cayol has reported in his *Clinique Médicale* the case of a *metro-peritonitis,* that he calls *nervous fever, with metro-peritonitis,* and that he treated with local and general blood-letting at first, and afterwards by three or four grains of opium daily. The patient was cured in a very short space of time of an extremely grave malady. The same views are illustrated in this case, in relation to the nervous or pain-creating element.

Every one knows that opium is a heroic remedy in certain kinds of non-febrile and slightly inflammatory dysenteries, being, as the ancients say, catarrhal, rheumatismal, or bilious, &c.: in this latter kind, after the necessary evacuations by catharsis and emesis; in cases in which the inflammation has been sufficiently combated; and in cases in which the initial period can be laid hold of, in order to remove the disease before the development of inflammation. This illustrates our principle of treatment. How many sporadic cases of dysentery have we not cured in one, two or three days with opium alone, in connection with rice-

water and broth for nourishment! As to epidemic dysenteries the treatment, as we all know, is extremely variable. We shall not here discuss the subject. We shall not speak further of opium in dysentery, and its value in diarrhœa. Its virtues are too well known in these diseases to render this necessary, and anything further on the subject would lead us out of the limits we have prescribed for this paper. Let us pass to ophthalmic affections. In relation to these diseases we may remark, that Demangéon employed opium, with complete success, in the form of collyrium, in all cases of painful chronic ophthalmias. For ourselves, we prefer our own collyrium of the extract of belladonna, composed of two grammes (30+ grains) of the extract to 125 grammes (3xxx) of rosewater. At the time of writing these lines, we are employing this collyrium in an opthalmia accompanied with severe pain, moderate redness of eye, and headache. The patient washed the eye three times a day with a fine compress, saturated with this collyrium; great relief is experienced after each application. Two days later the other eye became equally affected. He applied the same lotion, and both eyes were cured at the end of five days, after having at the same time experienced two paroxysms of pain and of swelling of the eyelids, from having imprudently exposed himself to a cold wind. As our community is at present laboring under a rheumatismal and catarrhal influence, we shall, after the manner of the ancients, call this ophthalmia rheumatismo-catarrhal. Blood-letting, general or local, is therefore here altogether useless, unless under particular circumstances. At the present time many other cases of ophthalmia are making their appearance, invested with the same character.

Who can say that opium and belladonna, administered both internally and externally, immediately after the operation of cataract, might not be the best means of preventing those terrible inflammations which so often cause us to lose the whole fruits of the operation? If in plethoric subjects we should have cause to fear that the use of opium might be attended with danger of congestion, we might resort exclusively to belladonna, a hyposthenic agent, which acts admirably when antiphlogistics are indicated, as we have already shown.

The following is an extract from what we have already put forth on the treatment of ophthalmic affections in our book, "*On the Therapeutic Virtues of Belladonna,*" a work honored in Belgium with the golden medal:—

"When the eyes are but slightly red, and the pains are nevertheless

very severe, we may at once conclude that the disease is much more nervous than inflammatory; and consequently we are authorized at once to resort with confidence to the preparations of belladonna. This is what we ordinarily do, even associating with it sometimes a little opium, (*ext. aq. theb.* in a collyrium made of extract of belladonna.) Lisfranc, in such cases, employed the extract of this plant as a friction around the base of the orbit. It is thus that he cured, in one, two or three days, ophthalmias which had resisted antiphlogistics and other usual modes of treatment. This means had been carried into effect by Dupuytren, before it had been practised by Lisfranc, or at least the former employed belladonna with eminent success in severe diseases of the humors of the eye.

"Further, according to Dr. Rognetta, the action of belladonna is hyposthenizing. It is not proper, he adds, in diseases in which antiphlogistics are useful. According to this physician, certain serious inflammatory diseases in the clinics of Italy, are treated by belladonna alone in lage doses. In the internal ophthalmiæ, belladonna, according to M. Rognetta, is, after blood-letting, the most prompt and salutary remedy. It is equally appropriate in external ophthalmiæ; but it takes less hold on the simple inflammations of the white tissues, (keratitis and sclerotitis). When there is the least manifestation of photophobia, we ought to resort to it, and particularly in scrofulous ophthalmiæ, where, as is well known, photophobia is so common, so troublesome and so difficult to conquer, even with belladonna itself. Then there is another remedy, that of the cauterization of blepharitis, or palpebral granulations by means of a crystal of the sulphate of copper, followed by a collyrium of the same salt." (See our work on belladonna, in which will be found more ample details on the diseases of the eye, where we have treated of the employment of the celebrated solanum.) But, to return to opium.

MM. Malgaigne and Padioleau give opium in large doses after surgical operations, whilst they have any reason to fear the appearance of untoward inflammation. They affirm that by this means they avoid traumatic erysipelas and diffused inflammation of the cellular tissue. It is by irrigations strongly charged with laudanum, that M. Pasquier produces the resolution of paronychia and incipient phlegmons. We ourselves have often obtained the same result with opium associated with belladonna, in the form of an ointment. Thus, then, we may have recourse to opium in all the uncomplicated pains, (that of gout excepted,)

that is to say, pains without acute phlegmasia or acute fever, without any great sanguineous plethora, and especially that of the cerebral kind. In this manner, we may perhaps prevent a certain portion of acute phlegmasiæ, and consequently rescue the patients from great danger. If there exists at the same time any convulsive spasmodic movements, we may combine opium with extract of belladonna.

Let it be remembered, however, that opium cannot extinguish pains which are other than purely *vital*, that is to say, pains which are *initial*, and antecedent to the phlegmasia; or the *final* pains, which survive or succeed the phlegmasia. It is no longer admissible in the true phlegmasial pain, which is none other than of a mechanical character, and has its origin in the compression which the blood exercises on the nervous filaments of the inflamed part. This pain, in a word, is nothing else than a symptom of the phlegmasia, and which I here repeat, opium cannot remove.

And here we proceed to add a few words on the employment of opium in fevers, a class of maladies which sustain a close relation to the phlegmasiæ.

Nervous Fevers, &c.—Typhus.—We meet sometimes amongst subjects who are very nervous and irritable, certain fevers without any very determined character. These are fevers which proceed from venereal, onanic, or alcoholic excesses (*delirium tremens febrile*), or from fatigues, from watchings, or from study, &c. In this state of nervous erethism, we employ with great advantage some light opiate preparation, with a demulcent restorative, and lightly analeptic regimen. In this manner we remove the febrile erethism, by removing the over excited nervous system. The slow, hectic *essential* fever, (Broussais himself has proven its *essentiality*,) may be treated in the same manner. In relation to the fever of convalescents, if there be appetite, the best remedy is a light restorative and alimentary regimen, studiously adapted to the condition of the digestive organs, and not the useless, not to say suicidal, excess in diet. One thing is certain, convalescents do not disembarrass themselves of their fever, without moderation in eating, as we have often observed.

In relation to typhus, though from the period of its invasion in Paris we have observed a great number of cases, we ought to here state that we have never seen opium exhibited in this terrible disease. For this reason, in order to fill this hiatus, we shall here cite a remarkable passage from Hufeland. This illustrious practitioner holds the following

language in relation to the treatment of typhus: "Opium," says he, "is salutary when after having sufficiently practised blood letting, cold applications, and evacuants, the signs of congestion disappear, though the delirium persists or should it even run into furor. The condition then is purely nervous, and in numerous cases we obtain the entire favorable effect of opium though it is better to combine it with calomel. I shall never forget the joy it brought me in the case of one of my cherished colleagues. The patient was in the seventh day of a most intense typhus, pulse small and so frequent that it could scarcely be counted, accompanied with coma, delirium and subsulsus tendinum. Blood-letting, cold purgatives, calomel, all had been largely employed. I gave him the powders of calomel and opium, before mentioned, and at the sixth dose the pulse became stronger and slower, the spasms had ceased, the head was clearer, and a crisis immediately appeared. The amelioration began from this time, and went forward regularly. How many other cases I might here cite of an analogous character!

"Opium is further salutary when the typhus is accompanied from the beginning by diarrhœa, or dysentery, or cholera, acting as a powerful derivative in relation to the brain, but with danger of total exhaustion of its forces and of death from inanition. Opium is our only means of arresting these profluviæ, of calming this super-excitation of the intestinal canal, and of saving the life of the patient. We must, however, take care that the *primæ viæ* be first freely cleared. Opium was the only agent that proved efficient in the typhus which ravaged Prussia in 1806–7, of which diarrhœa was the essential accompaniment." (*Manual of Practical Medicine, p.* 727.) For contagious typhus, see Pringle, who has accurately described it, and especially consult the excellent work of Hildebrand, on Typhus, in which will be found excellent rules for the employment of calmatives in the nervous period of the disease.

With these general considerations which we submit to the consideration of the profession, we take leave of the subject. We have not brought into view either the phlegmasiæ, or all the other diseases in which opium may be happily applied. This would require a volume, and we have no inclination to produce a complete *opiology*.

We conclude here by reproducing what we have said on the subject of opium in our *Thérapeutique Appliquée*, 4th edit. "We are convinced that without opium there would literally be no therapeutic means in relation to painful chronic disease. Were we deprived of this magic remedy, of this soothing and beneficient agent, we should consider ourselves without

resouree, and would at onee renounee the praetiee of medieine. Sydenham gave thanks to God for having bestowed opium on man to eure the innumerable diseases which weigh him down and take away his life."

Meanwhile, it is with opium as with all our heroie remedies; it is a two-edged sword, and ean do mueh good and mueh evil, aeeordingly as it is well or ill applied.

Sacra vitæ anchora, circumspecte agentibus
Est opium, cymba Charontis in manu imperiti.—WEDEL.

ART. II.—*Opium in Constipation.*

IN the Glasgow Medieal Soeiety (Feb. 20, '55,) the following cases were reported illustrative of the use of opium in eonstipation of the bowels:—

Dr. Cowan mentioned the ease of a man whom, after laboring for five days from obstinate eonstipation, resisting the strongest purgatives, he had been ealled to see. The patient was weak, complained of intense pain in the abdomen, and was in a very short time attacked with stercoraeeous vomiting. He was seen by Dr. Lawrie when the pulse was extremely feeble. Brandy and opium were, at his suggestion, administered in large quantities. In the course of three days the patient had a natural evaeuation, and soon beeame eonvaleseent.

Dr. Adams had a ease somewhat similar under his eare. A man of an habitually eonstipated tendeney took some opening medieine which failed to operate. He was attaeked in a day or two after by a hieeough, which had eontinued resisting every remedy, and he was now in an almost hopeless state.

Mr. Lyon had recently seen a ease in whieh, after a fair trial of purgative enemata, which failed to produce an evaeuation, he gave large doses of opium combined with ealomel, and opiate injections. After the lapse of five or six days free evaeuations eame away, but the patient sunk and died. He alluded to the operation of gastrotomy, in whieh he apprehended the chief diffieulty would lie in diseovering the obstructed part. Notwithstanding this, however, if every other means of relief failed, he would eonsider it justifiable under favorable eireumstanees to operate.

Dr. Wilson had seen a case lately of obstruction, of seven days standing, in a child. There was very great exhaustion, but no pain. Purgatives failed. A blister was applied, without relief; but after a dose of opium, followed by castor oil, a motion was obtained. In another case, purgatives and opium failing, air was injected with the most satisfactory results. In these cases he thought spasm the probable cause of the symptoms.

Dr. Bell had seen opium fail. He thought it was difficult to explain how it acted, and he could not believe that, in cases where there was no spasm or pain, it could do good. It probably acted by allaying irritation. He thought invagination more an effect than a cause of the disease, as the tube remained pervious, only narrowed in calibre.—(*Glasgow Med. Jour., April*, 1855.)

ART. III.—*Medical Algeria; the Topography, Climatology, Pothogeny, Pathology, Prophylaxis, Hygiène, Acclimation, Colonization:* by Dr. A. ARMAND. Médecin Militaire, Lauréat de la Faculté de Médecine. In one vol. 8vo. Victor Masson, Paris.

The Medicine and Hygiene of the Arabs. Inquiry into the Practice of Medicine and Surgery amongst the Mussulmans of Algeria, their Knowledge in Anatomy, Natural History, Pharmacy, Legal Medicine, etc., their General Climacteric Conditions, their Hygienic Practice, both Public and Private, their Diseases, and most usual Treatment, preceded by Considerations on the General State of Medicine amongst the principal Mohemmedan Nations: by Dr. E. L. BERTHERAND, Professor, &c. 1 vol. 8vo. Pp. 600. Baillière. Translated from the *Revue Thérapeutique Médico-Chirurgicale*. By M. MORTON DOWLER, M.D., of New Orleans.

MEDICAL teaching comprehends but little else than the history of diseases actually submitted to our observation. Our masters can teach us only what they know themselves, and they know better what they have seen

themselves than what they have learned from books. The medical topography of distant climates constitute extremely valuable supplements to our medical instruction; without this resource, the physician, arriving in a foreign country is with regard to its diseases on the same footing as the student who has just left school. His previous practice, if he has had any, has not taught him the whole, or has taught him that which it behooves him to unlearn. According to the counsel of Hippocrates, he must in the new countries he visits first study the *waters*, the *air*, and the *places*. It is agreeable therefore to find this study accomplished by Dr. Armand, in the book which he has published, after a residence of ten years in our African colony.

We will at once remark, that this work has not been conceived under the influence of pessimist ideas, which have prevailed to an exaggerated degree, no doubt, for a long time, and which represents Africa as the tomb of the present and future generations of Europeans inhabiting its inhospitable shores. It was, under the Roman domination, the granary of Italy. It is evident that it was populous; and if it was populous, it was from the fact that it was inhabitable. Why should it not be so at present? Or, why should it not again become so, now that barbarism has given place to civilization in this ancient land, the Tellus of the Romans, that is to say the *tillable land*, the land which has, *par excellence*, retained this ancient denomination, in the modern name of Tell!

M. Armand arranges his work in two grand divisions. The first is devoted to topography, climatology, and to pathogeny, each of which is the subject of a distinct chapter.

His topography comprises a geographical description of the two great sections of the ancient sovereignty of Algiers, which constitutes our conquest; the one which is Algeria proper, a zone of 250 leagues in length, and of a depth varying from 25 to 40 leagues, the ancient Tellus, a part eminently habitable and colonizable; the other, which is almost equal in extent, but consisting of uncultivated and uninhabited plains, and which has, for that reason, received the name of the Algerian Sahara, or Little Desert. But if, for the colonist, these two sections afford very unequal attractions, it is not altogether thus in regard to colonization, considered in a higher point of view. We were never really masters of the populous portion of Algeria, till after our soldiers marched freely over the part called uninhabitable, and occupied many points that go under the name of the desert,—a name in some respects improper, since the Arabs know very well how to occupy it, and from thence make those

incursions, the incessant danger of which has for so long a time trammelled every serious effort in the cultivation of the fertile portion of the country. This word, *desert*, must not be too literally taken.

The Algerian Sahara besides containing a great number of cultivated spots or oases, consists in the remainder of its extent, not entirely of plains of pure sand, as is presented to the imagination, but in parched and poor lands, covered with a sterile vegetation, so that this pretended *manna of the desert*, which is neither more nor less than a bitter lichen without any alimentary property, and has nothing in common with that of the desert inhabited for forty years by the children of Israel, save its white color and the illusive name that has been bestowed on it.

In the chapter devoted to meteorology, M. Aramand tells us that in Algeria there is, properly speaking, but two seasons, the winter or rainy season, which occupies the months of November, December, January, February, March, and April, the other six months being proper to the summer season. The winter at Algiers is very mild. Many years elapse without the thermometer descending below Zero, even a single degree, but this does not apply to the mountainous parts of the little Atlas, nor to the elevated plains of the Province of Constantine. In the summer we observe in Algeria as great a heat as in the intertropical countries, or, indeed the temperature is more elevated, especially during the reign of the siroeco, or wind of the desert.

In the chapter on pathogeny, the author considers the influences of the climate. These confer on the newly arrived an over activity of the functions of the body. Appetite and the digestive powers are augmented, from whence it results that from the beginning, there is a very manifest plethora, but this sthenic disposition is very soon counterbalanced by a loss to the individual by the debility resulting from excessive sweats, and by insomnia, which arise from the warmth of the climate, to which he is not habituated. Moreover, individuals who do not rapidly surmount these difficulties in acclimation, very soon contract a yellowish pale color, showing a well marked aptitude to contract the great endemic of these climates, which is intermittent fever.

But it is not to paludal miasm that M. Armand attributes intermittent fever. He attributes it to pertubation of the nervous system, and of hæmatosis brought about by the intemperature of the air. The doctrine of paludal miasmatic poisons is untenable according to him. It is quite certain that intermittent fever can develop itself with great facility, quite without the influence of paludal miasms, a fact of daily observance. But

all that is thereby proven is, that fevers arise from various causes. It so must be admitted that they are at once more frequent, more obstinate, and more grave in localities which are exposed to the influence of these miasms than in other places, and this fact suffices to secure to these places a reputation unfortunately too incontestible in the doctrine of fevers. But it is possible, that in these, Algerian miasms may play a less important part than has been assigned to them. So much the better then, for it will doubtless be more easy to avoid them.

However this may be, the author shows in his book that, the development of endemo-epidemic fever follows the development of heat; that the fevers rage at all barometric heights; that the heat-element takes the lead of that of humidity; that we must avoid the dangers of insolation, and avoid sleeping in humid and damp places; and in all things beyond this, he arrays himself against the idea of malarial poisoning, but what difference is it, if the theory be doubtful, provided the advice be good, especially so far as the patients themselves are concerned.

All that the author has said in relation to internal pathology bears only on the subject of fevers. This section contains the history of fevers in their various forms of diarrhœa, of dysentery, of hepatitis, of affections which coincide with the various pathological conditions of the liver. Touching the influence of the climate on the cure of wounds and on their complications, it seems to favour rapid cicatrization. But when the heat is excessive, or a cold humidity comes in to complicate an already depressed mental condition, there are seen to supervene disasters which are unknown in the temperate Zones.

The succeeding sections are devoted to prophylaxis, to hygiene, and acclimation considered principally in their relations to the soldier. The work closes with observations on the history of the indigenous races, on the types of the ancient Algerians, and the future of our African colony.

If, from the work of Dr. Armand we pass to that of Dr. Bertherand, it is not to draw a parallel between them, much less a rivalry. The only resemblance existing between them is, that they treat of questions which relate to the same country; but of this country the work of Dr. Armand speaks of things, whilst that of Dr. Bertherand speaks of men. After having read one of them, we may take up the other without apprehension of reading the same thing over again under a new form; or that the interest will lag for a single instant, on perusing the other volume. One would almost be led to believe that the two authors had entered into a previous arrangement to keep clear of each others' path.

Each work is complete on the points which it has treated; and the two works put forth for the reader a satisfactory knowledge of the questions pertaining to Algeria; the one treating of its climate and diseases, particularly amongst Europeans; the other treating on what we may call the Arab question,—a question of extreme importance, one that no other writer up to the present time has so far elucidated.

A really curious study is the study of the Arab—that child of the Koran, who, faithful to the fundamental dogmas of the religion of his fathers, at the same time as much as possible eludes its most restrictive articles, and who accommodates himself willingly to the luxuries of our civilization.

We figure to ourselves the Arab as most frugal, subsisting on dates and milk. This is quite true; but it is to necessity, and not to the Arab, that we must render the homage for all this; for our author shows up the Arab as a glutton to the point of indigestion, when he finds himself facing a table abundantly furnished with viands.

The natural connecting link between the savage or pagan, and the European, is the Christian priest; but with the Mussulman it is no longer the priest, for the Mohammedan loses sight of him in the general contempt and horror he has for all religions other than his own. But, by way of making amends, he holds the physician in the highest estimation, from necessity, no doubt, as the injunction of scripture, and because the necessities of man call for his aid. In relation to this, he is impressed with a sense of his own inferiority and that of his *toubibes*. The science of these physicians, it must be admitted, is an extremely small affair. No one, at least, can believe that there remains to them, at present, in medicine, an Avicenna, an Averrhoes, or a Rhazes. The fact even of their existence is ignored, and how indeed can the most ardent bibliophilists amongst them know the fact, since manuscripts form no part of their resources, and printing is proscribed in the Mohammedan States? They have a vague knowledge that there existed an Abonkerat and a Djalenous—the Arabacized names for Hippocrates and Galen; but that is all they know about them. The diagnosis of diseases amongst the Arabs is quite embarrassing to the European physicians, owing to the difficulties of examination and vagueness of expression; but the *toubibe* always comes out triumphantly. If he knows not what ails his patient, he simply says to him, *God knows it*, and the patient is well satisfied. Amulets play an important *rôle* in the therapeutics of the Arabs. These are little squares of paper, on which are

written sentences from the Koran, and praises of God and His Prophet. The patient is notified that these will cure, *if it please God*, and that is also satisfactory.

The venereal disease is, according to the Arabs, owing to an evil genius. It is by conjuration they believe it can be prevented. It is very common amongst the Arab women, but we must conclude that it has not, in these warm climates, the same gravity which characterizes it in our cold latitudes. M. Bertherand appears to believe that it is not as easily communicable as with us. The reason of the difference in this respect is owing, perhaps, to the fact that the Arab obeys rather the mere animal impulse, than the inspirations of a sentimental voluptuousness. Sodomy is common with them, but less, as it appears, from a special depravity of inclination, than from the absence of women. The author represents onanism as rare among the Arabs. He attributes it, however, to causes which argue nothing in honor of their morality, either public or private. It is owing, he says, to the promiscuity of the sexes at an early age, to the habitual state of almost complete nudity of children, to the mutual complaisance between them, and to the precocious nubility of girls—a precocity which goes beyond the Koran, which proclaims the aptitude for marriage at nine years. It is not astonishing under these circumstances, that at the age of twenty-five they should be old and withered; and that impotence should be so common amongst the men. But the frequency of this latter affection is not clearly referable to the frequency of coition, and especially when we consider the character for morality, which the author allows to the Arab.

Though the Arabian *toubibe* have the important resources of amulets, and *the science of the will of God* to supply every thing in which he may unfortunately be found deficient, he by no means, in consequence, neglects his limited therapeutic means. According to M. Bertherand, there is little in this worth borrowing, and less still in the department of surgery. Some superficial observers have eulogized the wisdom of the Arabian surgery, which repudiates amputation. The great reason of this is, that the Arabs have the greatest horror of mutilations; and resolutely prefer death to the loss of a member. But if the Arabian surgeons have but little to do with the knife, they make amends for this in their use of fire, which they largely use and abuse.

M. Bertherand gives some interesting details on circumcision, which is ordinarily practised on children of five or six years. They tie the prepuce strongly with a thread, and drawing downwards they cut across

the end of the prepuce by means of a pair of scissors, or a sharp blade, and then plunge the penis into a fresh egg.

The author then proceeds to some considerations on this religious rite, which leaves us to conclude that he does not duly appreciate its character. He condemns it in a hygienic point of view as useless; and in a religious point of view as spoken of both in the Bible and in the Koran, as altering the work of the Creator, which is always done for the best. M. Bertherand will allow us to recall to his mind that it was Moses who instituted circumcision. This sacred and inspired writer teaches us that circumcision was prescribed to Abraham, as the sign of the alliance between his race and God. The fathers of the church have recognized in it a servitude imposed by ancient law, of which the new is happily disembarrassed; and this servitude continues as a punishment to those who, in the present ages, impose it on themselves without reason. This operation, furthermore, it appears, is not absolutely essential to one's becoming a mussulman; though it is rigorously practised on children. The author reports on the subject the following anecdote, which is little known. During the French expedition to Egypt, the Imans of Cairo proposed to Gen. Bonaparte to cause all the French army to be *mussulmanized*. There was the great difficulty at the threshold, that of circumcision. The recollection of what happened to the inhabitants of Sichem, after they were made to undergo circumcision by the sons of Jacob, in order to obtain Dinah, the sister of Simeon and Levi, for their king, was sufficient to suggest that it was hardly prudent to allow the rite to be performed on a whole army in the country of an enemy. But the Imans cut the gordian knot by saying that circumcision was not rigorously necessary to make a mussulman. The general did not fall in with the project. He doubtless fully comprehended the ridicule that must follow, and the unheard of scandal which would be committed to history.

We could thus continue, without fatigue as without *ennui*, to reproduce the greater part of the work of Mr. Bertherand, without making any other choice from its pages than that which first meets the eye on opening the book. But from this agreeable task we must desist and leave the work to the reader. What we have said must suffice to abundantly show, that it unites in a high degree the agreeable to the useful, a conclusion which, at the present day, is rigorously exacted in order to secure readers.

Art. IV.—*Extracts from a brief Sketch of the Epidemic of Yellow Fever of* 1854, *in Charleston*: by J. J. Chisolm, M.D.

Charleston, lat. 32° 45′ is considered within the yellow fever zone, forming the extreme northern boundary of the region in which the disease might be termed endemic. This city is not annually visited by this plague, nor does it make its appearance with any regularity. Intervals varying from forty-four years have elapsed, during which its inhabitants are lulled into a fancied security, and its population is increased from abroad, when suddenly, without any obvious cause, the fever makes its appearance, exciting terror among the foreign inhabitants, and overshadowing the city with gloomy forebodings. The limits of the zone do not appear fixed, for yellow fever formerly devastated northern cities which are now exempt from its ravages. They might have then been considered within the endemic circle, which by a gradual contraction has now excluded them to such an extent, as to lead us to hope, that time will place Charleston beyond its limits, and she also will enjoy the immunity which northern cities nowpossess. The season of its visitation is singularly constant in Charleston; the period fixed by observation being the second or third week in Aug., seldom appearing before, and rarely after. No particular meteorological conditions have been observed to favor its occurrence; heat and moisture, by promoting decomposition, might abet its appearance.

The fever differed but little in its symptoms from that of other epidemics. After more or less malaise, lassitude, and sensation of fatigue, the disease made its appearance with a chill, amounting in a few cases to rigor; in many it was so slight as to be scarcely perceptible; in others it was totaly absent. This transient condition, always of short duration, was followed by a state of excitement, accompanied by constant headache, pain in the back, thighs, and calves of the legs; the pain predominating in one of these localities. Generally, the head was most complained of; sometimes, pains in the back, or about the knees were most distressing; in a few cases the pains were general. The indescribable sensation of fatigue was the most uneasy and annoying symptom; no position gave relief; some cases were accompanied by great restlessness, jactitation, anxiety and sighing. The skin was generally hot and dry—often moist, even reeking with perspiration. In a few, the heat of the skin was very pungent; the bulb of thermometer buried in the axilla would mount several degrees above the normal standard; in two cases to 107° and 108°. The skin, particularly about the face, would be flushed, with a tendency in bad cases to general capillary stagnation. After pressure several moments would elapse before the color was restored, indicating a very sluggish circulation. The eyes were red, watery, suffused, and sometimes highly congested, without any interference of function, and but little uneasiness when exposed to a strong light. These organs were often the seat of dull heavy pains. The pulse was seldom found to be much increased in frequency, and

rarely full, strong and bounding; it was always compressible, without much resistance or impulse. Its average frequency would not much exceed ninety, although it was sometimes observed at one hundred and fifty. For this, there was no fixed data. In cases having a strong similarity, the pulse would be found to vary greatly.

Epistaxis was a common symptom in the early stage of the disease; it was often profuse, and was supposed to act beneficially in relieving the brain, and preventing cerebral accidents. Patients complained of a bad taste in the mouth, the tongue being more or less furred, with natural, or red tip and edges; generally it was moist, often dry, sometimes swollen, pale and tremulous. The fur was as often brown or dirty white. There was loss of appetite, constant and insatiable thirst, nausea, and very often vomiting, etc., pain in the epigastric region; bowels generally costive; urine small in quantity, always acid, and highly colored. The first stage or period of excitement lasted from 60 to 80 hours—sometimes from 7 or 8 hours to 5 days. This was followed by the second stage, or one of calm, in which there was a mitigation of all the symptoms. In many cases the skin would resume its normal temperature, &c., &c. The third stage was characterized by hemorrhagic symptoms.

The skin and eyes would take on their characteristic yellow, deepening to orange or copper color. This change would be first seen on the face, which, in many, would assume a dusky hue. The surface cool in some, bedewed with a cold clammy sweat, with cold extremities; in others of natural temperature. The pulse would be weak and not very frequent, becoming very feeble and irregular. The tongue was as often moist as dry, from the surface of which blood was constantly oozing, the gums were also the seat of hemorrhage, clotted blood would form a dirty offensive sordes around the teeth. Epistaxis would break out so profusely as to require plugging for its arrest. Constant thirst, accompanied by vomiting, often without nausea or retching, characterized this stage. Fluid, in large quantity, would be forcibly expelled from the stomach without any effort on the part of the patient. This fluid would be, at first colorless, containing a few brown flakes floating in it. These coffee ground particles would increase at each successive discharge, till the fluid became thick, grumous and black, when it was known as black vomit. The amount of this stuff thrown off, in many cases, was surprising, often a quart or more would be ejected at one effort, and this repeated every one or two hours, often at shorter intervals. Diarrhœa frequently intervened, the stools, at first, were composed of fecal matter, more or less mingled with coffee ground particles, which would increase rapidly till the discharges were identical in appearance with the fluid vomited. Blood, in a pure state, escaped in some cases per anum, in others from the ears, or from blistered surfaces. Slight bruises would take on a hemorrhagic condition, any cuts about the surface would bleed profusely; hemorrhage from the uterus was frequent. The urinary secretion was often suspended, or if any was passed it was more or less tinged

with blood and strongly acid, throwing down a copious white deposit on the addition of a solution of nitrate of silver; the hiccough was sometimes added to these distressing symptoms.

After some hours' stupor, deepening into coma, and insensibility would supervene. Retching, vomiting, and hiccough would continue. The stools would be passed involuntarily. Purplish discolorations would make their appearance on the most dependent portions of the body. Cadaverous, offensive emanations would be given off from the patient, and putrefaction would even commence before the pulsations of the heart ceased.

The state of stupor varied, averaging from 8 to 10 hours. In many patients, this comatose state was not present, a few retained a clearness and calmness of mind within a few moments of death, others would be convulsed with violent paroxysms of delirium, screaming until exhausted, and death put an end to their intense sufferings. Some evinced great anxiety towards the end of the disease, the majority in the third stage showed utter indifference and apathy as to results. Many would toss about to such an extent as to require restraint, to prevent them from falling out of bed.

In the greater number of fatal cases, vomiting was suspended for some hours before death; in such the peculiar black fluid would be found in large quantity by autopsy. The black vomit was not confined to the third stage.

In a few of the most malignant, death occurred on the fourth day; by far the majority occurred on the sixth day from the commencement of the attack. When life was prolonged beyond the eighth or ninth day, hopes were entertained of recovery.

The diagnosis of the disease was easy, as the symptoms appeared with great regularity, but few of them being absent. After a variable period of incubation, which was restricted in two or three cases, to a few hours, (as the fever appeared in such within twenty-four hours after their arrival from healthy foreign ports,) and in others existed for several days — consisting in loss of sleep, restlessness, lassitude, sensation of fatigue, &c. The disease would commence with a chill; or excitement would at once supervene with quick pulse, hot skin, flushed face, suffused eye, nausea and vomiting, with pain in the head, back, loins and calves. All cases, whether mild or severe, commenced in the same way.

In some cases death was attributed to profuse hemorrhage, with rapid exhaustion, which accident was supposed to be influenced by the treatment. Where much mercury was administered, hemorrhage was most prone to occur.

Many cases were accompanied, at their decline, with an eruption which assumed no distinct character; most frequently it would be a scarlet rash, which would cover the surface; in some it would assume a tubercular, papular, vesicular, pustular, or petechial character. Boils were not common sequelæ of this fever. If any attempt was made to puncture them, the hemorrhage could be with difficulty controlled.

Secondary diseases were rare in convalescence, they complicated the most malignant cases. Pneumonia was most frequently observed, hepatitis, gastritis and dysentery occurred in others; the latter affection was sometimes associated with the acute symptoms of yellow fever. In one case, which I saw, in which death was attributed to acute dysentery, black vomit was found in the stomach; death took place very unexpectedly three days after the first appearance of febrile symptoms.

If an average be taken from the various epidemics as they have occurred in America, and in Europe, and of which, any reliable information can be obtained, amounting to nearly two hundred epidemics, in various portions of the world, it is found that the mortality would be 1 in 2.32, or 43 per cent., which would classify yellow fever among the most malignant of diseases. In private practice, we find a striking difference in the mortality; its average was very little over 4 per cent. In the practice of many physicians, it did not exceed 2 or 3 per cent.

In hospitals, many cases were received in a moribund condition, for whom no treatment could be instituted; these increased the mortuary bills. The class of cases entering a hospital, were of the worst description, occurring in foreigners, who had but recently arrived in Charleston, and who, from a mistaken notion, often partook freely of alcoholic stimuli, as a preventive of fever. Many of these exposed themselves unnecessarily in burying their friends, walking three miles in the heat of the day to the cemetry, with a baking sun pouring down upon them. The moral effect of crowding so many sick into the wards, where they were constantly reminded of their doom by the cries of the dying, or the sight of the dead, was particularly depressing.

The mortality from the yellow fever of 1854, did not differ very materially from that of preceding epidemics, either here or elsewhere.—There was, however, a striking difference between hospital and private practice. The average mortality for the three hospitals was nearly one in two and a half, or thirty-nine per cent.

As in all other epidemics, the mortality was greatest among the Irish and German population, they being more numerous than any other class of foreigners.

The different treatment pursued by various physicians, appeared to have but little effect in controlling the disease. The profession, with but few exceptions, were unanimous against the use of mercury—pushed to ptyalism—as fraught with danger—salivation is no longer looked upon as the great desideratum in yellow fever.

Quinine was used freely in the early portion of the epidemic, with little or no effect. Some physicians attribute beneficial results to scruple doses of quinine, given early to jugulate the disease; in the practice of most, when used for this object, it was an inert drug. Blood-letting had been so frequently tried in former epidemics, without benefit, that it was proscribed. I have not heard of a single case in which the remedy was used.

The treatment adopted by most physicians, towards the end of the

epidemic, consisted of a mild purge in the beginning of the attack. Calomel and rhubarb were often used for this purpose, and mustard poultices were applied to the stomach, to control nausea and vomiting. This was followed by some alkaline diaphoretic mixture, to promote the secretions. If the nausea continued, with epigastric tenderness, increased by pressure, a large blister was applied. This remedy was used by many in the commencement of the disease: its good effects were more apparent later in the febrile stage; others used it as a dernier resort, as the raw surfaces left by it were very intractible. I saw some in a raw state two months after their application. The assiduous application of strong mustard poultices would, in nearly all cases, obviate the necessity of blistering. When the patient was restless and wakeful, morphine or Dover's powder was given to promote sleep. If the pulse was weak, without tension, tonics and stimuli were administered early, even from the commencement of the disease. Stimulating frictions and sinapisms, were freely used to the extremities, with benefit, as revulsives, particularly in children, where they became important ingredients in treatment. When high fever was not moderated by the mercurial purge, some physicians administered grain doses of calomel, sometimes combined with morphine or Dover's powder, in order to reduce the action of the heart and arteries. Five or six doses were given at intervals of three or four hours, never with the object of touching the gums, which were sometimes unintentionally affected. A physician, who tried packing with wet sheets, in two or three severe cases, with intensely hot dry skin, informed me that a decided mitigation of the symptoms was at once obtained, and a greater amount of relief afforded than by any other mode of treatment.

As soon as the first or febrile stage had subsided, tonics were given. Quinine, dissolved in a diluted solution of aromatic sulphuric acid, or, when required, in brandy, was a very favorite prescription, under which, with nourishment, and often porter, convalescence progressed very rapidly. Twenty *gtts.* of mur. tinct. iron every three or four hours, largely diluted, were often substituted for the above. If gastric irritability continued, it was best relieved by warm mustard poultices, with the internal administration of alkalies, they also alleviating that burning sensation in the epigastrium. Some preferred the super. carb. of soda, others preparations of potash. In the third stage several remedies were tried to control vomiting—no specific was found. Turpentine, creasote, and chloride of zinc, were most confided in. Total abstinence from food was enjoined by many. The internal administration of chloroform, 3 ss doses, every hour, stopped the ejection of black vomit in some desperate cases, without, however, having the slightest effect in controlling the march of the disease. Lime water and milk succeeded in quieting gastric irritability, when more powerful remedies had failed. As there was extreme prostration in some cases, and as the pulse was strong, and bounding in few, most patients required stimulants; some as early as the first day of sickness, in all after the febrile stage. Porter agreed well with most

patients. In hemorrhage from the gums and mouth, washes were used. In some cases, epistaxis was so profuse in the last stage, as to yield only by plugging. In many cases, the entire treatment consisted of a mild purgative with tonics. Many were led to the conclusion that medicine availed little in controlling the disease. That it was a fever which would run a particular course in spite of remedies, and that the chief duty of the physician was to support the system. If the strength could be sustained by tonics, stimnli and nutritious fluids, nature could cope successfully with the disease. All active medicines, by their debilitating effects, opposed the vis medicatrix naturæ and increased the virulent effects of the poison. Those who commenced with heroic remedies, were compelled, by sad experience, to relinquish their treatment. Rigid diet was enforced by few ; many gave nourishment with benefit, whenever a disposition to take food existed. In some cases brandy and arrow root was made the basis of treatment.

Some interesting circumstances were obtained, as regards the incubation of yellow fever—the length of time which it might remain latent. Early in the summer, a case of yellow fever occurred to a steerage passenger, bronght by the Isabel, from Key West. As ten days had elapsed from leaving port, before the disease appeared, we might safely conclude that the period of incubation was at least ten days—Charleston being perfectly healthy at that time, and yellow fever was raging at Key West.

Great prostration was not a marked accompaniment of yellow fever. Many could raise themselves in bed and get up to stool, until they became comatose; very few required manual support or aid during the stages.

The disease was evidently a continued fever of a single paroxysm, in which remissions were seldom perceived; a sympathetic fever, in many cases occurred late in the disease, from internal inflammatory complications.

Suppression of urine in the last stage, was always a fatal symptom; and free secretion from this organ augured a favorable termination. In very severe cases, the suppression continued three or four days before the patient was carried off. Black vomit was not necessarily a fatal symptom; its prognostic value depended very much upon the period of its appearance. It might occur in any of the stages; most commonly in the third, often in the second, and rarely in the first stage. In cases in which it occurred on the first or second day, all were swept off—none recovered. When it occurred after the sixth or seventh day, it was not regarded with such horror. In a case which came under my observation —the most malignant that I saw during the epidemic—black vomit appeared within twenty-four hours from the commencement of the attack; during the first stage of intense febrile excitement, when the skin was red with pungent heat, the bulb of a thermometer on the cheek indicating one hundred and five, in the armpit one hundred and seven—perspiration was profuse; pulse one hundred and four, with a clean, dry, hard

red tongue. She complained of little pain. The respiration was hurried, frequently broken by sighs and moans. There was a tendency to stupor, accompanied with prostration. She died after four days' illness; during the last three, black vomit was thrown off in large quantity, very thick and grumous.

Recoveries after black vomit were much more common in children than in adults. In a few fatal cases constant retching was the most distressing symptom, unaccompanied by vomiting.

An interesting case was reported to me of a woman in whom the febrile paroxysm lasted five days, black vomit appeared on the seventh, and continued for three weeks, attended with more or less nausea. On the twenty-eighth day, convalescence was perceived, and she was ultimately restored to health. This woman refused all treatment, took no medicine, and exhibited the natural course of the disease uninfluenced by remedies.

A singular case in an elderly English woman came under my observation, whose only symptom was black vomit, she attributed a chill which she had with headache to exposure to the sun. When seen, she had no fever, no congestion of the skin, no suffused eye. The skin was of normal temperature and pulse natural. Forty-eight hours from the chill she threw up black vomit, and died on the following day.

Jaundice did not exist in every case. In many mild cases, no discoloration of the skin could be seen. It first showed itself in the conjunctiva, then the face, and finally the body and extremities became yellow. In some it lasted for weeks after the attack passed, generally wearing off slowly.—*Charleston Med. Jour. July*, 1855.

ART. V.—*Rademacher, the Empirical Reformer in Germany; his Doctrine and Therapeutics:* translated from the "*Revue de Thérapeutique Médico-Chirurgicales*," of July and Aug., 1855: by M. MORTON DOWLER, M.D., New Orleans.

WE do not deem it at all necessary to offer any explanation of our object in laying before the readers of this Journal the following translation. The introductory remarks of the French editor, embrace all that could, in any view of the case, be demanded in the way of apology. The motives which induced him to lay before his *confrères* a French translation of the doctrines and therapeutics of Rademacher, apply with equal force in behalf of the action we have taken. The object avowed by the editor, and his views expressed in his introductory remarks on the system of the German empiric, are such as must meet the approval

of all true cultivators of legitimate medicine. The great aim and end of the medical philosopher is to arrive at truth, and the study and appreciation of empirical systems, with all their follies, extravagancies, and absurdities, have rarely failed to make some addition to real science. The most notable example of total failure in this respect is the scheme of Hahnemann, which is elaborately built on nothing, and *ex nihilo nihil fit* is all that suggests itself to the true medical inquirer who looks into the works of the inventor of globules and his disciples. With Rademacher, however, it is different. Passing over, as unworthy of notice, the stupendous absurdity of his fundamental doctrines; his diagnosis by the administration of drugs; his three general diseases, and their relation and amenability to nitre, iron and copper; his classification of diseases, on the basis of their remedies, into general and local; his substitution of a vague symptomatology and fanciful drug-conditions for a comprehensive and enlightened pathology; and looking only to the noble array of potent and active remedies which he has evidently submitted to the the test of empirical trial—looking to the simple facts which must necessarily suggest themselves in the premises, the therapeutics of Rademacher becomes a subject of great interest. In this respect no empirical system, perhaps, which has ever appeared will bear a comparison with it in the available materials which it may afford to legitimate medicine.

It must be quite obvious that this latter-day disciple of Paracelsus has drawn on his master for little else than his phantasms, while nearly all that is truly valuable in the system of the disciple is of modern origin. To the truly solid and sane ideas of Paracelsus—that extraordinary charlatan who has been called "the zenith and rising sun of all the alchemists," the catalogue of whose mystic works, it is said, would fill several pages—a small space only must ever be assigned. Dr. Bostock very justly sums up the merits of the "chemical sect," including Paracelsus himself, by remarking that the only obligation we owe to the chemical physicians is the introduction of certain substances, chiefly metallic preparations, which, in the hands of more enlightened practitioners of modern times, have proven very valuable additions to the materia medica."* The applause bestowed on Paracelsus, at the outset of his career, goes to show that he was, to a great extent, the personification of the times in which he lived, and reflects no great honor on that age. Mummery, fanaticism, grim mysticism, and incomprehensibility obtained ready admittance into philosophical systems. He held the chair of pro-

* History of Medicine, cap. vii.

fessor of physics and natural philosophy in the university of Basle, surrounded by crowds of students when he publicly burnt the works of Avicenna and Galen, declaring them quacks and imposters, and proclaiming before the crowd at the bonfire, that there was more wisdom in his shoe-strings than in all the writings of these physicians—that all the universities in the world were full of ignorant quacks, while he himself was overflowing with wisdom, in exclaiming with furious gesticulations —"You will all follow my new system! Avicenna, Galen, Rhazes, Montagnana, Memé—you will follow me, professors of Paris, Montpellier, Gemany, Cologne, and Vienna! and all ye that dwell upon the Rhine and the Danube—ye that inhabit the isles of the sea, and ye also, Italians, Dalmatians, Athenians, Arabians, Jews,—ye will all follow my doctrines, for I am the monarch of medicine!" This large toleration was only abated when, to the offence of drunkenness, he laid claim to the character of sorcerer—to having a legion of demons at his command —to having in his possession a jewel in which he held imprisoned a spirit called "Azoth," which was the creature of his power—and to having a spirit residing in the hilt of his sword, that had the custody of the elixir of life, which was capable of bestowing an antedeluvian longevity.* The professor, the university, the students, and the people picture to the mind the midnight of science; and, under circumstances such as these, present a most humiliating tableau—one for which all the therapeutic feats performed by Paracelsus, and all his really lasting contributions to medicine make but a slender apology. "The following is a summary of his doctrine founded on the supposed existence of the philosopher's stone, which is worth preserving from its very obscurity, and altogether unparalleled in the history of philosophy:—First of all he maintained that the perfection of the Deity sufficed to procure all wisdom and all knowledge; that the Bible was the key to the theory of all diseases, and that it was necessary to search into the Apocalypse to know the signification of magic medicine. The man who blindly obeyed the will of God and who succeeded in identifying himself with the celestial intelligences, possessed the philosopher's stone—he could cure all diseases and prolong life to as many centuries as he pleased, it being the very same means by which Adam and the antedeluvians prolonged theirs. Life was an emanation from the stars—the sun governed the heart, and the moon the brain; Jupiter governed the liver, Saturn the gall, Mercury the lungs, Mars the bile, and Venus the loins. In the stomach of every

* Vide Popular Delusions, by Charles Mackay.

human being there dwelt a demon or intelligence, that was a sort of alchemist in his way, and mixed in their due proportions in his crucible the various aliments that were sent into that grand laboratory, the belly."*

In the meantime, while we laugh at the vagaries of Paracelsus, he affords us some reasons to blush for the age in which we live. The extravagancies and blasphemies of the "Spiritual Philosophy," which now claim to open a communication between the living and the dead, to cure disease, and to reveal the grand arcana of the visible and the invisible worlds, originated in no less a place than the brain of this weird charlatan. He, too, was a powerful "medium," for "he boasted that he kept up a regular correspondence with Galen in Hell! and that he often summoned Avicenna, from the same regions, to dispute with him on the false notions he had promulgated respecting the potable elixir of life."† There be lawyers, judges, preachers and senators who now lay claim to equal, nay greater power.

The school of Rademacher, numbering as it does eight thousand practitioners in Germany, must soon begin to send forth its missionaries over the United States, and hence the necessity that the "Therapeutic sect" should, in advance, be known and appreciated. This sect, (like the school of Hahnemann,) will only begin to flourish abroad when its fanciful doctrines shall have become a *caput mortuum* at home. We shall soon, therefore, hear that Mr. A. is copper-sick, and that Mr. B. supposed to be similarly affected at the time, was found, by the copper and nitre-diagnoses, to be iron-sick, and that Mrs. C.'s baby was found, by diagnosing its case with iron, copper and nitre, to have no general disease, and at last it was discovered to be chelidonium-sick, and that a fatal zinc affection supervened. Let Hahnemannism fold its arms and prepare to die decently, for its end draweth nigh. The disciple of Paracelsus cometh, even the son of Aureolus Theophrastus Bombastes Paracelsus Von Hohenheim!

Without further comment, we proceed to the translation before us.‡

TRANSLATOR.

THERE is no physician who has not heard of the famous Philippus Aureolus Bombastes Von Hohenheim, better known under the cognomen of Paracelsus—an uncultivated genius who has pointed out to medicine

* Mackay on Popular Delusions. See also "Biographie Universelle," art. Paracelsus.

† Op. citat.

‡ The length of this article prevents its insertion entire in the present number of this Journal.—ED.

a host of heroic remedies. But what is less spoken of is, that a man, not long since died in Germany, who proclaimed himself the disciple of Paracelsus—an admirer and a perpetuator of his doctrines. This man is Rademacher, whose name is hardly known in France, but who is indemnified by being well known in Germany. We do not render the latter country, in return, the honor she does us in studying our works; otherwise, a book which is received as authority by more than eight thousand physicians on the other side of the Rhine, would at least have undergone the verdict of the profession here. So far, however, from this being the case, the doctrine of Rademacher is here unknown.—Meanwhile it will repay the trouble of examination, if it be true, as M. Andral has so often proclaimed from his chair of general pathology, that there is no system of medicine which does not present something from which good may be extracted, if it be even after the manner that Virgil has drawn on Ennius, and which he has set forth—in the following line:

"*Aurum Virgilius de stercore colligit Enni.*"

It is perhaps an ungracious task, and one but little remunerative in thanks, which we here undertake, in making known the school of Rademacher. Nevertheless it seems to us that our subject is not destitute of interest, since, under a philosophical appearance, it relates to a doctrine essentially empirical, and it is consequently susceptible of becoming a subject of clinical experimentation.

The medical system of Rademacher is set forth in a book entitled—*A Defence of the true experimental Doctrines of the Ancient Alchemic physicians, misunderstood by the Savants of the present day.* This title announces the controversial, and the controversial pervades the work.

But few physicians in France would extend their condescension so far as even to open a book bearing so eccentric a title. To exhume alchemy would be deemed a mere mockery, and be very truly deemed so if we were to exhume the mere theories of the alchemists. But God alone knows how far our descendants may qualify our modern physiological anatomical doctrines, and this should induce us to some degree of indulgence. Furthermore, though the doctrines pass away, the facts remain.

Rademacher was as yet but an obscure practitioner in Prussia, when the works of Paracelsus fell into his hands. The new light which he believed himself enabled to discover, through the medium of these works, aroused his enthusiasm; and after twenty years devoted to their study

and application at the bedside of the patient, he thought himself entitled to bring forth his master in a new dress, both in relation to his character and doctrine.

The book of Rademacher sets out with an apology for Paracelsus. It renders him his true noble name, which he has been accused of falsely assuming; and endeavors to do away with the triple accusation brought against him by Erastus—of drunkenness, ignorance, and impudence. With Rademacher, Paracelsus is a true reforming genius, misunderstood and persecuted. The persecution has ceased; but the erroneous judgment which lowered him to the level of the vile charlatan still remains. We shall not concern ourselves about the question of morality, which we deem irrelevant on the present occasion. We shall merely speak of the influence which this genius, so little known, has exercised.

However we may be prepossessed against Paracelsus, we cannot withhold from him the justice of admitting that he was a potent manipulator of remedies.

And if we take note of what is passing in our own day, we shall see that such men who are rare in every epoch, render important services. To cite an example taken among cotemporary masters, we may name Récamier, not that we would assimilate him in every respect to Paracelsus, especially in a moral point of view, but because he has had the reputation of having resources when the whole faculty had exhausted theirs. Marjolin also possessed and immense variety of recipes. What physician has not found himself almost daily embarrassed, when facing certain diseases, and certain patients on whom he has exhausted all the resources of classical therapeutics. Happy the physician who is rich in the materia medica!—happy he who knows how to inspire confidence on the part of the patient; but to these ends it is necessary that the physician himself should have confidence in his own resources. We cannot know whether or not Paracelsus had confidence in his, as we have known in respect of Récamier; but in regard to the former, in whatever light we may view this man, on whom grave minds cannot venture to bestow a great name, it is impossible to deny him the possession of a vast fund of positive therapeutic knowledge.

During the numerous voyages made, as was then the custom, with a view to instruction, Paracelsus profited not only by the light which he derived from the physicians of the various countries he visited, but he engaged in the labors of the miners, the gold-makers, the alchemists.

He was initiated into the mysteries of the oriental adepts, and he gathered the knowledge, or rather the recipes and arcana of all the old-women, gipsies, and magicians. Once in possession of all these documents, Paracelsus considered himself at the head of a school, and enabled by the noise of his renown, to efface the whole of medicine which had preceded him.

He borrowed from all the philosophical systems of the alchemists, theosophers, cabalists, mystics; from all the extravagancies of the fanatics of antiquity, conjoined them into a single body of doctrine, and applied them to the various branches of medicine, and particularly to therapeutics. Touching the latter science, he maintained that there was a concealed harmony between all things visible and things invisible; between the human body which he called the microcosm, and the universe that he called macrocosm; between the stars and the terrestrial bodies, particularly the plants and minerals. To each disease of the human body, in general, and to each disease of its organs in particular, there corresponds, according to him, a substance which is appropriate to it, whether mineral or vegetable, experience teaches, or at least enables us to discover. These agents, which correspond also to the stars, sometimes have their action modified by the latter. In spite of the numerous and violent antagonists who arrayed themselves against the system of Paracelsus, the principles of this extraordinary man, or rather the practical truths contained in his works, procured for him at all times numerous adherents and disciples. It is amongst these that we must place Rademacher, who adopted for the most part, the theory that we here detail.

All that is peculiar to the system of Rademacher is comprised in his therapeutic system; and this system is based on the following law:

"Each remedy which is found in nature is characterized by its own proper effect, and special efficacy on an organ, or particular system of organs of the human body."

Rademacher recognizes two species of remedies:

1. The remedies which address themselves to particular morbid conditions or diseases of organs, which are denominated local remedies:

2. Remedies which address themselves to a morbid condition of the whole organism, which are denominated universal remedies.

The remedies appropriate to particular organs, are numerous, and their number may be still augmented. The universal remedies amount to only three in number, namely, the nitrate of soda, iron, and copper.

According to Rademacher, besides particular maladies, that is to say the diseases of the organs, the organism has three modes of being diseased.

One of these three general morbid conditions can exist alone, or in a state of complication with others. Thus chlorosis can be either simple or become complicated with a particular malady, such as amenorrhœa or uterine hæmorrhage. But this morbid condition ought not the less to be treated by the universal remedy, which, in this case is iron; and at the same time we ought to employ the special remedy for the organ, that is to say the remedy for amenorrhœa or uterine hæmorrhage.

The diseases of the organs are for the most part imperfectly characterized by Rademacher, and do not respond completely to our nosological boundaries. These diseases constitute particular pathological conditions, which sometimes comprise several of our diseases, and which sometimes also represent but a symptom of disease. Thus we see amongst the abdomen-remedies the carduus marianus addressed to the liver, spleen, and at the same time to hæmoptysis and epistaxis occurring sympathetically from diseases of these organs. We see quassia addressed to chronic affections of the liver which readily occasion ascitis (this morbid condition seems to us to be cirrhosis;) chelidonium addressed also to the liver, and at the same time to sympathetic diarrhœa; nux vomica, as a liver-remedy is equally applied when there is increased tonicity as when there is increased debility of the biliary conduits; saffron, as a remedy in hepatic dysentery.

The diseases of the whole organism depart still further from the diseases which we recognize, or rather they are diseases which are not characterized. They are merely particular states of the organism which according to Rademacher, cannot be better defined than by giving them the name of the agents which are appropriate to their cure. Hence he informs us that there are nitre-diseases, iron-diseases, and copper-diseases.

The symptoms by the aid of which we can recognize one of these three categories, are very uncertain, and very often it is by experience or trial alone, with one of these agents, that he arrives at, and fixes his diagnosis. If we succeed with iron, the disease is an iron-disease; if with copper, a copper disease, etc.

Meanwhile Rademacher presents two methods of arriving at this diagnosis; on the one hand he points out certain symptoms, vague though they be, but proper to one of these three affections; and on the other hand he enumerates the various particular maladies which may come in to complicate one of these general morbid conditions.

This is the most complicated part of the system of Rademacher. As to the first, we may characterize this special therapeutism by the word empiricism.

It is, in fact, but an array of individual recipes or simple agents, the good effect of which has been proven by experience, and which render excellent service in the hands of every practitioner.

Modern science will come forth to avail itself of the experience of the empiric, or as would have been formerly said, the German Alchemist.

A young critic, when seeking to ridicule and overthow this late disciple of Paracelsus, reports in relation to him quite appositely the following anecdote.

There lived, says he, in the middle of the seventeenth century, an adventurer named Talbot, who after having amassed a fortune in England passed over to the continent, astonished the court and the city by his numerous cures, and ended by selling his cure to Louis XIV, in the year 1676. The remedy of Talbot, which was brought from the New World, was cinchona. Now while he was in the exercise of the healing art, it happened one day that he was called in consultation by the physicians of the day. The latter resolved before proceeding to the case, in order to support their dignity, to submit him to a kind of ordeal. One of them arose, and abruptly addressed him this question: "What is fever?" "Fever," replied Talbot, without being the least disconcerted, "is a disease of which I know nothing, excepting that I know how to cure it. You who explain it—can you do the same?" This reply of Talbot is an epitome of the doctrine of Rademacher, and he could not himself better characterize it.

And now that we have shown what the doctrine of Rademacher is, we shall proceed to an abridged summary of his materia medica which presents itself to us as a simple empiricism. It will be for the reader to make whatever application of it he deems proper. The application cannot fail to suggest itself. It remains to be seen if the effect fulfils the promise of the disciple of Paracelsus; but it seems to us impossible that it can result otherwise than that some good may be extracted. It is with this idea that we exhibit here a work which we have with difficulty been able to obtain, and for which we are indebted to our friend, Dr. Smith, of Warsaw.

GENERAL REMEDIES FOR THE ABDOMEN.

Seeds of the Carduus Marianus. (*Chardon-Marie, Ladies' Thistle.*) —The seeds act efficaciously on the liver and on the spleen at the same

time. No agent is comparable to this in calming the sufferings which attend biliary calculi, and the sympathetic pains of the belly which attend affections of the liver and spleen. They act in a specially favorable manner in sympathetic hæmoptysis, in acute hepatic fevers, accompanied with pleurodynia, with cough and sanguinolent expectoration; in uterine hæmorrhages and sympathetic epistaxis.

The active principle of this medicine resides in the envelopes of the seeds. To be administered:—

In powder.—Take a tea-spoonful four or five times a day. (The envelopes must be contained in the dose.)

In decoction.—Take of seeds of the card. marian. from one to two ounces, water sixteen ounces, reduced to one-half by boiling; take every hour a table-spoonful.

In tincture.—To be given in doses of from fifteen to twenty drops, four or five times a day, in a cup of water or milk. If there be sympathetic diarrhœa, give from one to four drops four or five times a day. This tincture is prepared by macerating, for eight days, thirty-two ounces of these seeds, with their envelopes, in thirty-two ounces of alcohol, diluted with a like quantity of water; strain without compression, and filter.

Mixture of Oil of Turpentine and Sulphuric Ether.—This remedy, which is that of Durand, is employed: 1. In biliary calculi; 2. In obstruction of the liver. No other remedy acts so efficaciously in the diseases of the liver and spleen.

Doses.—The best combination is composed of sixteen parts of Hoffmann's anodyne, and one part of the oil of turpentine.

Begin cautiously with ten drops—with children five drops—in half a cup of water, three times a day. If there be pain in the liver, or if the urine becomes of a very deep color, administer, instead of this remedy, the seeds of the card. marian. until the oppression of the epigastrium shall have disappeared and the urine shall have become more clear.

SPECIAL HEPATIC REMEDIES.

Quassia and Quassia Water.—There is a pathological condition of the liver which speedily demands the employment of quassia. This shows itself frequently as a chronic affection of that organ, and very readily produces ascitis, in which diuretics produce but little effect or only temporary relief. The employment of drastics leads to chronic diarrhœa, which cannot always be conquered at will; and even without

the employment of purgatives chronic diarrhœa often comes on. This pathological condition of the liver, against which the quassia water is a certain curative agent, shows itself only by certain signs.*

Doses.—We ought not to administer a large quantity of this water. A half-a-spoonful of quassia water, given three times a day, is sufficient.

Preparation of Quassia Water.—Take thirty-two ounces of good quassia wood and eight ounces of quassia bark; introduce them into a distilling apparatus, add a sufficient quantity of water, and nine and a half ounces of alcohol; leave them to macerate for forty-eight hours, and distil over seventy-seven ounces of liquid.

Celandine, Chéliodine. (*Chelidonium majus.*)—Chelidonium, or Celandine is employed in the following conditions:—*A.* In lymphatic affections of the breast; *B.* In sympathetic diarrhœa; *C.* and especially in chronic affections of the liver.

Doses.—*A.* In cases in which there is no diarrhœa, give the tincture under the following form:—℞ *Tinct. Chelidon,* ʒj; *Acaciæ Gummi,* ʒss; *Aquæ,* ʒix. A table-spoonful every hour.

B. If there be diarrhœa, we prescribe the medicine according to the following formula:—℞ *Tinct. Chelidon, M.* xv ; *Olei Papaveris. Alb., Acaciæ Gummi,* ʒj, āā; *Aquæ,* ʒix. This potion often calms and arrests diarrhœa.

Mode of preparing the Tincture.—Equal parts of the fresh juice of the chelidonium at the time of flowering, and alcohol at 33°, are mixed, and left in contact for eight hours, are frequently to be stirred during this digestion, and then filtered.

Mixture of the Muriate of Lime with Tincture of Chelidonium.—This mixture is employed in affections of the liver, acute and chronic, where the diagnostic signs are attended with but little certainty.

℞. *Liquoris Calcis Muriat.* 3xvij. *Tinct. Chelidon,* 3j. *M.* Take 15 drops in half a cupful of water five times a day.

Nux Vomica.—Nux vomica is employed as a hepatic remedy in order to bring the biliary canals back into their normal state.

A. In cases in which the escape of bile into the duodenum meets an obstacle.

B. When there is an excess of bile poured out into the intestinal canal.

* It will readily be realized, that since Rademacher cannot here give a clearer explanation we cannot supply it. We are here dealing with the vague. In France we are in no want of names, but perhaps, in reality, we are none the wiser for that.

Thus, in jaundice, or in,—1, bilious fever; 2, colic; 3, vomiting; 4, diarrhœa, etc.

It is necessary before giving this medicine in the first stage of bilious fever, to prescribe soda to neutralize the existing acids. This salt also produces a good effect on the biliary canal.

If there be a bitter taste in the mouth, a full stomach, and uneasiness, this is a proof that the obstructed bile is effused anew in the stomach, and that we must prescribe alkaline salts anew. When the above mentioned symptoms have disappeared, we discontinue the administration of the salt of soda, to proceed to the use of the nux vomica.

℞. *Tincturæ Strych. Nucis Vomicæ*, ʒss. Take 15 drops five times a day. (The tincture of the nux vomica is preferable to the extract.)

If there be a sympathetic cough, the nux vomica water ought not to be given in larger doses than 15 drops in a half a cupful of water, five times a day.

Mode of preparing.—Nux vomica water is prepared by macerating this substance for 24 hours with alcohol and water, the three in equal parts, and afterwards filtering.

The liquor of soda, that ought to be previously given according to the indications, is prepared as follows:

℞. *Sodæ Bicarbonatis*, ʒss. *Gummi Adragant*, gr. xv. *Aquæ*, ʒix. To be taken in 24 hours.

Where there is constipation rather than diarrhœa, magnesia is employed under the following form.

℞. *Magnes. Calcinatæ.* ʒss. *Aquæ*, ʒviij.

In sympathetic diarrhœa (dependent on affection of the liver,) all of these remedies ought to be administered in small doses.

Saffron. (*Crocus.*)—It is employed in hepatic dysentery, (which proceeds from a primary disease of the liver, and which cannot be cured by anything but saffron.)

Doses.—Small doses only admissible.

SPLENIC REMEDIES.

The sympathetic phenomena which make their appearance from diseases of the spleen, are the following—frequent pains in the stomach, more frequently cough, sometimes pain in the lower belly, chronic diarrhœa, sometimes constipation, rarely asthma, derangements of the renal functions, and dropsy which originates in these derangements; in women sometimes retention of the menses, sometimes metrorrhagy, sometimes leucorrhœa.

Charcoal (*Carbo.*)—In cases in which the affection of the spleen is more or less manifest in sympathetic diseases of the chest, we administer charcoal, and we often cure by this means, not only the slight coughs, but also the most violent ones. Nevertheless the asthma, which comes on from splenic affections, do not yield to charcoal. In such case we must resort to other splenic remedies.

Dose.—℞. *Charcoal of Tilia wood half an ounce.* Take a teaspoonful 2 or 3 times a day.

Squill. (*Scilla Maritima.*)—The squill is an excellent splenic. It is truly efficacious in painful affections of the spleen.

Dose.—The tincture given in doses of from 15 to 30 drops, 5 times a day, produces very excellent effect.

Acorn Water.—Especially efficacious in dropsy proceeding from diseases of the spleen. There occurs in ancient obstructions of the spleen, a diarrhœa which very rarely continues longer than a day. In these cases we ought neither to suspend the acorn water, nor diminish the dose. Acute splenic fever occurring during the prevalence of hepatic-fevers, yields readily to the employment of acorn water. Generally we give acorns in the greater part of the splenic affections, which supervene during the treatment of other diseases.

Doses.—Alcoholic acorn water is given by the half-table-spoonful 4 times a day mixed with ordinary water.

Acorn water ought to be prepared in the following manner: 16 ounces of acorns, peeled and bruised, ought to yield 16 ounces of distilled acorn water.

Genièvre, Juniper. (*Juniperus.*)—This is an admirable remedy in diseases of the spleen. The berries act very probably as a splenic agent, not by the essential oil which they contain, but by an immediate non-volatile principle found in them.

Preparation.—We infuse a handful of bruised juniper berries in four cupfuls of boiling water.

Pyro-succinic Oil. (*Cleum succini rectificatum.*)—Efficacious in painful affections of the spleen, accompanied with spasmodic symptoms, as in cases of hypochondriacal and hysterical patients. It ought to be administered in small doses, in acorn water.

℞. *Pyro-succinic Oil, from eight to fifteen minims; Acorn Water, six ounces.* A table-spoonful every three hours.

Grande Ciguë, Cicuta. (*Conium Maculatum.*—It produces an instaneous effect in sympathetic cough having its origin in a morbid condition of the spleen. It is to be administered in the sugar of milk, with liquorice, or in the preparation of acorns.

Tartrate of Magnesia. (*Magnesia Tartarica.*)—There is a pathological condition of the spleen which demands energy in the employment of this remedy, in order to bring about a cure. The medium dose of this medicine is fifteen grains, four or five times a day. This dose produces no laxative effect. If there is irritation of the intestines, we ought to diminish the dose. (The curative effect of this agent does not depend on its laxative quality.)

Petite Ciguë, (*Cicuta Aquatica. Cicuta Virosa.*)—It is employed in painful chronic affections of the spleen. It is an external splenic medicine. The extract of this substance is mixed with the ordinary gum-ammonia plaster.

Acide Pyroligneux, Pyroligneous Acid. (*Acidum Pyrolignosum.*)—In chronic and desperate cases of affections of the spleen. Let the left hypochondrium be rubbed for half an hour with this substance two or three times daily.

PANCREATIC REMEDIES.

Iodine.—Iodine is found to be indicated in chronic morbid conditions of the pancreas in which unfortunately we are at a loss as to the means of certain diagnosis. We should not rely on iodine alone as an agent capable of making known the disease of the pancreas. The disease of the pancreas shows itself under two different forms, sometimes under the form of an acute fever, sometimes as a chronic affection. In some persons attacked with pancreatic fever, the kidneys are sympathetically affected; and this is recognized in the urine, which becomes brown, and does not lose its color, notwithstanding there may be amelioration of the disease. An infusion of golden-rod, (solidago virgaurea,) nevertheless combats this irregularity in the space of a day. This means may be employed with success in chronic cough, if it depends on the affection of the pancreas.

Doses.—℞. *Tinct. Iodin.*, gtt. xxx; *Aquæ Destillat.*, ℥ix; *Gummi Trag.*, gr. xv. Take a table-spoonful every hour.

REMEDIES FOR THE AFFECTIONS OF THE CŒLIAC PLEXUS.

Bitter Almond Water.—In the morbid state of the cœliac plexus, if the liver, the spleen, or the kidneys are sympathetically affected, we

must mix bitter almond water with the particular remedy corresponding to the organ consecutively attacked.

Doses.—℞ *Aquæ Amygdal. Amar.*, ℥j; *Aquæ Destil.*, ℥vij. Take a table-spoonful every hour.

STOMACHIC REMEDIES.

Sub-Nitrate of Bismuth, (*Bismuthum Nitricum;*) *Acetate of Potash,* (*Kali Aceticum;*) *Acetate of Soda,* (*Natrum Aceticum;*) *Carbonate of Ammonia,* (*Ammonium Carbonicum.*)—These are four excellent stomachic remedies, especially in vomitings, which yield readily to these agents. If the vomitings are excited by an acrid matter, acid contained in the stomach (for everything which enters into the stomach becomes acid,) nothing is more efficacious than the carbonate of ammonia in giving relief.

℞. *Ammoniæ Carbonatis*, ℥ij. *Gummi Tragacanth.*, gr. xv. *Aquæ* ℥ix. A table-spoonful every hour. If the first spoonful is vomited, let the dose be repeated.

Iodine.—This is one of the best remedies to arrest vomiting. Iodine especially arrests pains of the stomach.

℞. *Tinct. Iodine*, gtt. xxx. *Gummi Tragacanth.* gr. xv. *Aquæ*, ℥ix. Every hour a table-spoonful.

Chloride of Lime. (*Calcaria Muriatica.*)—When vomiting is arrested this remedy acts more efficaciously than all the others.

It counteracts a pathological condition of the stomach, which does not manifest itself always by vomiting, but by other symptoms, as pain, distension of the stomach after eating, belching, &c., symptoms which do notyield either to the acetate of potash, nor to other stomachic medicines.

Dose.—One part of the chloride of lime is to be dissolved in two parts of water, and 15 drops of this liquor is to be given every hour in half a cup of water.

INTESTINAL REMEDIES.

It is only in a small number of cases, that the disease of the intestinal canal is a primary affection. The remedies comprised in this group do not act efficaciously in any other way than in removing the primitive affection of the intestinal canal.

Mixture of the Oil of Poppy, Gum Arabic, and Water.—This is an excellent remedy in diarrhœa, even when it is painful in its character. It is invaluable in the diarrhœa of infants. This remedy acts well, not only on the intestines, but also on the biliary canals.

Doses.—℞. *Olei Papaveris*, ʒiij; *Gummi Arabici*, ʒj; *Aquæ*, ʒvj. ss. Every hour a spoonful. In painful affections of the intestines, with constipation, the oil alone may be taken.

Iodine.—Iodine is an intestinal medicine which acts rapidly in abdominal pains, which do not depend on the presence of acrid matters, nor on accumulation of fæces.

Doses.—℞. *Tinct. Iodine*, gtt. xl; *Gummi Tragacanth.* gr. xv; *Aquæ*, ʒix. Every hour or every half-hour a table-spoonful.

Mixture of the Tincture of Nux Vomica and Assafœtida. This mixture possesses an efficacy which is incontestible. It is employed in almost all pains of the lower belly. There are few cases in which this mixture does not give satisfactory results. It is also efficacious in liver diseases.

Doses.—℞. *Assafœtidæ*, ʒij; *Vitel. Ovi*, q. s.; *Tinct. Nux Vomicæ*, ʒiij; *Aquæ*, ʒvj ss. In urgent cases take a table-spoonful every half-hour; in less urgent cases, every hour.

We may employ opodeldoc in the form of frictions, or the spirit of caustic ammonia. The pains will disappear in half an hour. These frictions should not be employed except in cases of necessity.

Acetate of Zinc. (*Zincum Aceticum.*)*—The acetate of Zinc is in reality a mineral opium. We easily arrest diarrhœa by this agent.

Doses.—℞. *Zinci acetatis* ʒij. *Gummi Arabici* ʒj. *Aquæ* ʒvj ss. Every hour a table-spoonful. We ought to commence with only half a table-spoonful during the four first hours, because it easily excites attempts at vomiting, and even vomiting itself.

Mixture of the Hydrochlorate of Ammonia.—This mixture is the best means which is known to medicine, to arrest diarrhœa which proceeds from a veritable primary affection of the intestines.

Doses.—℞. *Ext. Acaciæ Catechu.* ʒj. *Ammon. Hydrochlor.* ʒ ss. *Gummi Arabici* ʒj. *Aquæ* ʒvj ss. Given by table-spoonfuls every hour, or every two hours.

Aromatics—Nutmeg—Flowers of Nutmeg—Cloves.—These substances are efficacious, as well in painful affections of the intestines, as in diarrhœa. Nevertheless they do not possess any specific virtue.

(*To be continued.*)

* Rademacher prepares the acetate of zinc in the following manner: Take equal parts of the pure crystalized sulphate of zinc, and of acetate of lead; dissolve each salt separately in ten parts of boiling distilled water; then mix the two liquids with continued agitation. After settling, let the liquor be filtered, and let there be passed through it a current of sulphuric gas, as long as it forms a black precipitate of the sulphuret of lead. This liquid filtered anew produces crystals of the acetate of zinc.—[*Note of the (French) translator.*]

REVIEWS.

Rev. I.—*A Practical Treatise on the Diseases of the Eye:* by William McKenzie, M.D., Surgeon Oculist in Scotland in Ordinary to her Majesty; Lecturer on the Eye in the University of Glasgow, and one of the Surgeons to the Glasgow Infirmary. To which is prefixed, *An Anatomical Introduction Explanatory of a Horizontal Section of the Human Eye-Ball:* by Thomas Wharton Jones, F.R.S., Professor of Ophthalmic Surgery in University College, London, and Ophthalmic Surgeon to the Hospital. With one hundred and seventy-five Illustrations. From the Fourth revised and enlarged London Edition, with Notes and Additions by Addinell Hewson A.M., M. D., one of the Surgeons to Will's Hospital for Diseases of the Eye; Lecturer on Surgery in the Philadelphia Association for Medical Instruction, etc., etc. Philadelphia: Blanchard & Lea, 1855. Pp. 1027.

The number of meritorious and original works, the authors of which are never honored with a call for a second edition; or that become books of daily reference, only to be totally laid aside and superseded in less than half a score of years; or, that embody the most important facts and discoveries only to be either wholly neglected, or devoured by compilers, knights of the scissors, and book-makers in search of an idea, is all calculated to cast the dark shadow over the path of genuine medical authorship. Generally speaking—neither books nor men have any reliable guaranty of appreciation on the basis of real merit. Both have just and grievous cause of complaint, not unfrequently. An author whose book was so fortunate as to be a standard authority twenty years ago, and who finds that book at the very head of its class at the present day, has most abundant and special cause for self-gratulation. Where, now, are the masterly text-books and monographs of our student-days? Where are our Good's Study, our Bell's Anatomy, our Dorsey's Surgery, our Burn's Midwifery, our Eberle's Materia Medica and Therapeutics? They

rise up before us for a moment like sheeted skeletons and vanish! "They come like shadows—so depart." Where is our Bell—our own John Bell, in 3 volumes? We loved him sincerely,—we fear we shall never truly love another anatomist. From him we took our first book-lesson on the dry bones, in his quaint, chaste, and lucid English. But twenty-five years lead us back into the midst of modern antiquity, and our book-sellers salute us with a stare of incredulity, when our filial regard prompts us to enquire for our ancient "guide, philosopher and friend." We "seek him sorrowing" amongst the vendors of black-letter volumes.

"Blow; blow, thou winter wind,
Thou art not so unkind
As man's ingratitude.
* * * * * * *
Thou dost not bite so nigh
As benefits forgot.
* * * * * * *
Thy sting is not so sharp
As a friend remembered not."

Seeking some source of consolation in the midst of our profound melancholy, thus superinduced, we reach out our two hands, and lift from our table this ponderous volume of more than one thousand pages. We read, and lo! we are comforted! We find the past and the present, in full fruition here blended harmoniously together. The book of twenty years ago, is the book of to-day. At that period Dr. McKenzie's Practical Treatise on Diseases of the Eye, had no rival in the English language, and in the constantly increasing and accumulating richness of its materials, it bears the same relation to the present that it has done to the past. The work is emphatically the embodiment of everything which is likely to be sought for on the subject on which it treats, and the amount of learning and research and completeness of detail therein displayed is truly wonderful.

Anything like an extended review of this work would be wholly out of place; as it has been too often noticed by the medical journals, and it is too well known to the profession to require a word of comment in relation to its merits. We may, however, remark with respect to the present edition, that its typographical and pictorial execution is delightful to look upon; and that its British editor, Mr. Thomas Wharton Jones, and its American editor Dr. Addinell Hewson, the former by his beautifully illustrated "Anatomical Introduction," and the latter

by his "Notes and Additions," embracing a "Short Account of the Opthalmoscope," have each fairly earned the place for their names in the title-page of which they have taken possession.

Voluminous monographs, such as this, teach a solemn lesson to the student and practitioner, and afford him some idea of the extent of medical science, and the vast field which duty and conscience prompts him to explore and cultivate. He here realizes at once how little real knowledge can be obtained from those meagre compounds and abridgments which array the whole of medicine and surgery, in a couple of volumes, and how superficial and incompetent must every physician be who does not resort for information and study to a large number of extensive special treatises on the multifarious branches of our science. If one thousand pages may be thus appropriately devoted to the diseases of the eye, what shall we say of the number of pages which are justly due to the consideration of the whole circle of diseases to which the human organism is liable? "Compendious treatises" may serve as a reliable help-meet to the student in his passage over the *pons asinorum;* but when he enters the ranks of the profession, he must resort to other and higher aids. He must master the great library of monographs, or remain a smatterer and a sciolist. Medicine and surgery as taught in works of two volumes each, amount to but little that can truly be called medicine and surgery. Let the intelligent young physician ponder well upon this subject, and resort to the only perfect sources of knowledge—such extended works as the one which forms the subject of this notice—works which, while they embody fully their own speciality, embody also a great general principle.

M. Morton Dowler, M.D.

Rev. II.—*A Manual of Clinical Medicine and Physical Diagnosis:* by T. H. Tanner, M.D. To which is added, *The Code of Ethics of the Am. Med. Asso.* Philadelphia: Blanchard & Lea. 1855. Pp. 252. 12mo.

This is a convenient pocket companion, a useful remembrancer—brief, yet clear and suggestive, being adapted to its purpose as avowed by its author, namely, "to remove some of the difficulties which the student always, and the practitioner frequently, must encounter, while studying

disease in its protean forms at the bed-side." Although the title—"a *Manual* of Clinical Medicine and Physical Diagnosis" may seem pretentious for so small a work, yet its intrinsic merits more fully entitle it to that appellation than some more ponderous volumes termed "Manuals." Its facts and teachings reach down to anno 1855.

Medical science is the offspring of observation and experiment, including, of course a correct perception, interpretation, and appreciation of the subjective and objective elements of nature, in so far as they are essentially related to this department of human knowledge. But without some such plan or programme as that of Dr. Tanner, the most competent observer will but too often omit or forget to note things and ideas essential to accurate clinical history, physical diagnosis, post-mortem examination, and a valid judgment, both at the bed-side and in the dead house. *Ars longa, vita brevis,* memory treacherous, empty pockets useless, therefore, take Dr. Tanner to the hospital, to the life assurance office, the mad-house, the inquest, and to the log-cabin of the sick in the country.—EDITOR.

REV. III.—*The Mineral and Thermal Springs of the United States and Canada:* by JOHN BELL, M.D., author of "*Baths and Mineral Waters;*" "*Baths and the Watery Regimen;*" *Lectures on the Practice of Physic;* "*Regimen and Longevity;*" "*Dictionary of Materia Medica,*" *etc., etc., etc.* 12mo. Pp. 394. Philadelphia: Parry & McMillan, successors to A. Hart, late Carey & Hart. 1855.

DR. BELL must receive the thanks and gratitude of the profession and the public, for the useful and interesting volume which he has here produced. It is such a work as was most imperatively demanded by all, containing as it does, information of the greatest importance, which is not to be found in any other book. In the "parlor window," on board the steamboat, in the railroad-car, and in the physician's library it will be equally in place. All the more noted mineral and thermal springs in the United States and Canada, are treated of chemically and therapeutically. The wonderful springs of the Gold State, and the "Adul-

terate Territory" are treated of for the first time and add to the interest of the work. Dr. Bell's subject of course admits little room for originality, but his book is not a mere dry compilation of chemical analyses and authorities, the author having made the work largely his own by his own excellent remarks and reflections.

M. Morton Dowler, M. D.

Rev. IV.—*The Diseases of the Heart and Aorta:* by William Stokes, Regius Professor of Physic in the University of Dublin; Author of "*The Treatment and Diagnosis of the Diseases of the Chest,*" *etc.* Philadelphia: Lindsay & Blakiston. 1855. 8vo. Pp. 710.

This work consists of twelve chapters:—on inflammation of the heart and its membranes—diseases of the valves, and of the muscular structures of the heart—on its deficient muscular power—on its fatty degeneration—on the treatment of its organic diseases—on its condition in typhus—on its displacement—on its rupture, and its deranged action—on aneurism of the thoracic and abdominal aorta, with a table of cases, and an index—the paper and typography being satisfactory.

In this work professor Stokes gives the results, rather than the whole store of the special facts upon which he has occupied his thoughts, and his observations almost constantly for a quarter of a century, being an epitome of his mental *status* or subjective knowledge, together with a sufficient number of details and special clinical histories to elucidate his doctrinal views. Avoiding on the one hand barren generalizations, and on the other the tedious minutiæ of the case-book, his work has the advantages incidental to continuity, individuation, and unity, giving 700 pages of his thoughts and conclusions, the results of a long, extensive and well-reasoned experience.

An insufficient experience, though carefully analized, does not afford data for safe generalization. On the other hand, the most ample experience of an incompetent observer, and a bad reasoner, is apt to mislead himself and his reader too.

No man's mere impressions, opinions and conclusions, unaccompanied by accurate, pertinent, and comprehensive histories of morbid phenomena, are destined immortality, except the data upon which they are founded, shall be clearly and fully exposed. The individual dies, but a true history of facts, together with their antecedents, effects, and invariable relations, must stand the scrutiny of the future and defy the lapse of ages.

To record a case of disease devoid of all extraneous, irrelevant phenomena, and yet complete in all its significant facts, so that its internal properties, external relations, and scientific import can be fully appreciated, is one of the most difficult achievements of the human intellect, and withal the most useful.

At the present time scientific medicine displaces systems, by monographs enriched by facts—theories, by general principles—dogmas, by numerical analyses and conclusions.

Dr. Stokes' work though restricted to only a portion of cardiac and arterial diseases is nevertheless a large, but not a tedious volume, full, but not exhaustive of his important subject.

Although Prof. Stokes is by no means inclined to undervalue physical diagnosis, difficult and dubious as it sometimes is, yet he attaches very great value to the vital signs of disease.

Professor Stokes' method of treating the few but significant topics of his treatise is elaborate, being a combination of precepts with illustrative examples, closing each subject with a recapitulation, of which the following are two examples; the first relating to aneurisms of the thoracic aorta:

Recapitulation.—1. That there are no peculiar or constant signs belonging to aneurism; by which the sounds produced in the tumor can be distiuguished from those of the heart.

2. That, as a general rule, the sounds of an aneurism are more and more similar to those of the heart according as the seat of diseases approaches the origin of the aorta.

3. That the statement of Laennec, as to the singleness of the aneurismal sound, and that of Hope, who maintains the existence of unequivocal criteria, distinguishing the aneurismal from the cardiac sounds, cannot be admitted.

4. That murmur is frequently absent in aneurisms of the arch of the aorta and the innominata.

5. That the discovery of two centres of pulsation within the thorax, as indicated by impulse and by a single or by double sounds, is the simplest expression of the physical diagnosis.

6. That an extremely weak, almost imperceptible impulse may attend even a large aneurism of the aorta.

7. That the disease cannot always be detected by percussion.

8. That the double sounds are met with in the true as well as the false aneurisms of the aorta.

9. That the first aneurismal sound is not necessarily, as Hope teaches, a murmur.

10. That we cannot yet explain the presence or absence of murmur in many cases of aneurism.

11. That in certain cases the diagnosis of a communicating aneurism may be ventured on, especially where the signs as indicated by Mr. Thurnam have occurred within a short space of time; and with still more certainty if they have supervened upon some violent effort.

12. That the signs from compression of surrounding parts may be arranged according to their importance, as follows :

a. Pressure on the trachea and bronchial tubes.
b. Compression and sometimes obliteration of blood-vessels :
c. Pressure on the œsophagus.
d. Pressure on the nerves.

13. That the amount of pressure varies within short periods of time.

14. That in consequence of a change in the direction of pressure, parts whose functions had been interrupted or injured may be perfectly relieved.

15. That these circumstances may assist in the diagnosis between cancerous and aneurismal tumours.

16. That in certain cases of aneurismal pressure, the effect on the parts engaged has probably a double origin; on the one hand resulting from mechanical, and on the other from vital causes.

17. That aneurismal may often be distinguished from laryngeal stridor by observing the source and direction of the sound.

18. That a small aneurism, causing lateral compression of the trachea, will sooner produce stridor than a larger tumour, the pressure of which is more directly from before backwards.

19. That a considerable narrowing of the tube has been produced, yet without stridor.

20. That a degree of the stridor from below may exist, even though the trachea be not compressed, if the tumor engages one of the primary divisions of the tube.

21. That in many cases inequality of vesicular murmur, unattended by signs or symptoms of pulmonary disease, is produced by the compression of one of the bronchial tubes.

22. That this diminution of the vesicular murmur is generally equable over the affected side, but may be confined to the upper portion of the lung.

23. That in certain cases absence of murmur during the first half of the respiratory effort may be observed.

24. That in addition we may enumerate, among the consequences of this pressure on one bronchial tube, the unequal expansion of the sides during respiration; the want of vocal vibration to the hand; and lastly, as Dr. Mayne has observed, the actual contraction of one side, similar to that produced after the absorption of an empyema.

25. That in these cases we may have stridor combined with alteration or loss of voice; lesion of voice without stridor; and, lastly, stridor without any change of voice.

26. That aphonia, strictly speaking, is rarely observed in aneurism; the voice may be variously altered [metaphonia,] but is seldom wholly extinct.

27. That variation of the voice, within short periods of time, is often characteristic of aneurismal pressure.

28. That in the course of the disease, the signs of pressure on the arteries may disappear, and the pulse at the distal side of the tumor be fully restored.

29. That in certain cases permanent obliteration of arterial canals is produced, and in this way important organs, such as the brain and lungs, may suffer from the want of arterial supply.

30. That aneurismal dysphagia may occur without stridor or signs of compression of the arteries or veins.

31. That it may exist to a great degree, and yet the passage of a probang be effected without difficulty.

32. That it may be referred to different portions of the tube within short spaces of time.

33. That in a case where there was evidence of the retreat of the aneurismal tumour from the front of the throax, and in which great destruction of several vertebræ had taken place, the signs of compression were observed to re-appear on the removal of mechanical support to the shoulders.

34. That the force of the aneurismal diastole cannot be taken as a measure of that of the heart.

35. That in certain cases in which two centres of pulsation are discoverable, the feebleness of the cardiac, as compared with the aneurismal impulse, greatly facilitates the diagnosis.

36. That the existence even of a large aneurism of the thoracic aorta seems to have little if any influence in producing hypertrophy of the heart.

37. That atrophy of the heart may co-exist with a large aneurism; and that the frequent absence of cardiac diseases in aneurism facilitates the diagnosis of the latter disease, more especially where the pulsation of the aneurism are attended with murmur.

38. That of general morbid conditions which accompany aneurism, tubercular phthisis is the most common.

39. That perforation of hollow organs may take place without the patient dying of hemorrhage.

40. That even in cases of external opening there may be many successive hemorrhages, or the blood may ooze out, or be discharged in a small continuous stream.

41. That when the aneurism opens into a free serous cavity, the first gush of blood is not necessarily fatal, nor even the second.

42. That where it opens into a serous cavity in which partial adhesions exist, death may be gradual.

43. That sudden death may occur in aneurism without any rupture of the sac.

44. That when the communication is formed between the sac and the vena cava, or the right auricle, the symptoms of venous congestion are produced.

Prof. Stokes' conclusions concerning aneurism of the abdominal aorta are as follows:—

Recapitulation.—1. That aneurism of the abdominal aorta, especially when it arrives high up in the course of the vessel, may be attended with severe and peculiar neuralgic pains.

2. That in certain cases these pains are so characteristic as to enable us to diagnosticate the disease with probable accuracy.

3. That they may exist for a long period without any symptom of constitutional ailment.

4. That they cannot be attributed solely to erosion of the vertebræ.

5. That aneurism in the abdomen is less often connected with extensive arterial lesion than when it occurs in the thorax.

6. That the want of proportion between the intensity of the sufferings and the amount of constitutional disturbance is often an important source of diagnosis.

7. That although the occurrence of constitutional suffering is generally seen when the aneurism becomes diffused, yet that in some cases it seems to attend the earlier stages of the disease.

8. That fever is absent in the earlier stages.

9. That fever is rarely met with in any stage of abdominal aneurism. It is absent in the first stages before the aneurism becomes diffused; and when appearing after that change, it is of a low irritative type.

10. That the pulsations in the disease are generally single, and that they are more certainly attended with bellows murmur than those which accompany thoracic aneurism.

11. That displacement of important organs may long precede the fatal rupture or the diffusion of the aneurism.

12. That the pulsations of the tumour are in most cases single, but that in a case where the aneurism was seated high up, a double pulsation has been observed.

13. That abdominal aneurism may cause displacement of the heart to the right side.

14. That the murmur has been known to disappear in the erect position.

15. That true aneurism of the abdominal aorta is rarely met with.

16. That death may occur from the rupture of the original sac into the peritoneal or pleural cavity; by the aneurism becoming diffused (secondary false aneurism,) or by simple exhaustion of the patient, without rupture of the sac.

17. That the patient often obtains relief by lying on his face; in one case all signs of the tumor disappeared on turning to the left side.

18. That sudden and fatal hemorrhage may proceed from the opening of the diffused aneurism into a serous sac.

19. That the diffusion of the aneurism is often indicated, not only by a remarkable change in the constitutional state, but by alterations of the physical phenomena of the sac and of the heart.

20. That great tenderness of the belly may be thus produced, and yet no peritoneal inflammation exist.

21. That local suffering may attend the occurrence of the effusion.

22. That the new deposits of blood may present a feeble diastolic pulsation and a soft and diffused bellows murmur; in some cases, however, they appear as non-pulsating masses, or receive a communicated stroke from the subjacent or contiguous artery.

23. That, as a general rule, we find the force of the heart, and that of the throbbings in the orriginal sac, diminish when the aneurism becomes diffussed. In one case, however, excitement, both of the heart and aneurism, preceded the accident.

24. That in cases where much blood has been effused, the sounds of the heart may become single, the original tumor less distinct, and the bellows murmur diminished.

25. That in these instances it appears probable that it is the systolic sound of the heart that is wanting.

26. That in a case where a copious effusion had occurred between the folds of the mesentery, two murmurs, differing in seat, tone, and quality, were observed.

27. That all the solid viscera of the abdomen are liable to be displaced in the course of the disease.

28. That the violent neuralgic pains are not necessarily connected with absorption of the vertebræ; and that this lesion may be found without even paroxysmal or constant pain.

29. That two forms of pain are often met with—one, violent, neuralgic, and paroxysmal; the other, more dull, deap-seated, and boring.

30. That the tumor formed by a non-diffused aneurism is immovable.

31. That the first development of a murmur low down in the abdomen should incline us against the diagnosis of aneurism.

32. That the abdominal tumours which most simulate aneurism are those whose consistence is semi-fluid.

33. That when these tumours are movable, the pulsation, and even the murmur can be made to appear and disappear.

34. That while the progress of an aneurismal tumor is generally from above downwards, that of the solid tmours is more often from below upwards.

35. That the first appearance of pulsation, at some point low down in the belly, indicates that it is communicated to, rather than inherent in, the tumor.

36. That there are three important conditions occasionally attendant upon solid tumors of the belly which we have never observed in aneurism.

These are:—

a. Collateral venous circulation as shown by the enlargement of the epigastric veins.
b. The existence of ascites.
c. The occurrence of friction sound and vibration over the tumor.

37. That in cases of permanent patency of the aortic valves, a temporary increase of the pulsations of the abdominal aorta, probably induced by sympathetic irritation, has led to the erroneous diagnosis of abdominal aneurism.

38. That a tumor with fluid contents, such as an hepatic abscess, may have a completely diastolic pulsation. Here the diagnosis will depend on the preceding and accompanying circumstances of the case.

The enviable reputation of Professor Stokes as an observer, pathologist, thinker, and writer is a sufficient guarantee that this work will be received by the medical profession in America with alacrity, while its intrinsic merits still more than the prestige of the author's name will secure for it a place in the library of such physicians as may desire a guide and an adviser in a class of diseases equally difficult to diagnose and cure—a class, however, in which a correct diagnosis is fundamental, for without this, treatment can only be blindly empirical, positively hurtful, or accidentally successful.—Editor.

REV. V.—*A Practical Treatise on Foreign Bodies in the Air-Passages:* by S. D. GROSS, M. D., Professor of Surgery in the University of Louisville; Member of the Philosophical Society; Author of Elements of Pathological Anatomy; A Treatise on the Urinary Organs, etc., etc.; with Illustrations. Philadelphia: Blanchard & Lea. 1854. Pp. 468. 8vo.

A Practical Treatise on the Diseases, Injuries, and Malformations of the Urinary Bladder, the Prostate Gland and the Urethra: by S. D. GROSS, M. D., Professor of Surgery in the University of Louisville, etc., etc., etc.; Second edition, Revised and much Enlarged, with 184 Illustrations. Philadelphia: Blanchard & Lea. 1855. Pp. 925. 8vo.

AMONG gigantic intellects it is rare to find one possessed with Dr. Gross' energy of character. As a private practitioner, a public teacher, translator annotator, contributor to the medical journals, and withal as a voluminous systematic writer, he has in these varied fields won for himself a solid reputation. Judging from his writings, it would seem that his great aim is to excel in the useful, and to aid his medical compatriots in the critical moment, when each asks himself, what shall I do to save my patient? Fine words, subtle reasonings, and brilliant theories, cannot solve the solemn question at the bed-side,—what shall I do? It is the thing and not the word, the concrete and not the abstract, the physical and not the metaphysical, demanded by the occasion.

In order to solve such practical questions of high import, involving the immediacy of action, Prof. Gross does not rely on his own ample experiences; indeed, in his treatise "on Foreign Bodies in the Air-passages," he has taken for his motto the maxim, that "in an inquiry of this kind, individual experience amounts to nothing; collective experience is everything." In his work on "Foreign Bodies in the Air-passages," he has drawn his analytic conclusions, not solely from his own stores of experience, but from several hundred histories of individual cases found floating upon the broad stream of medical literature.

Commencing with general remarks upon the nature, varieties, modes of entrance, situation, and subsequent alterations of foreign bodies in the air-passages, he investigates the immediate and remote effects, the diagnosis, and the occasional spontaneous expulsion of these substances, the medical and positional treatment indicated, especially the surgical treatment which such cases require.

Of the diagnosis of foreign bodies in the air-passages he says:—

"Although the symptoms which denote the intromission and presence of a foreign body in the air-tubes are, in general, sufficiently well-marked to enable us to arrive at a satisfactory conclusion regarding the true nature of the accident; yet, occasionally, the most thorough examination of the patient, and the most minute inquiry into the history of the case, fail to afford the requisite light for the formation of a correct opinion. Such a state of uncertainty is always to be deeply lamented, for it is not only a source of great and painful embarrassment to the practitioner, but it may be, and indeed often is, followed by the worst consequences to the poor sufferer, inasmuch as it prevents the prompt employment of such means as are necessary for his safety and relief. It is for this reason that every case, involving the question of the presence of a foreign body in the air passages, should be most carefully investigated at the earliest possible moment, in order that no time may be lost in applying the proper treatment, and thus obviating the risk of suffocation from the long and mischievous sojurn of the obnoxious substance in structures so essential to the well-being and the life of the individual. The rule is, in all cases of this kind, to act in the most prompt and efficient manner, on the well-known principle that, although the foreign body may not immediately prove fatal, yet the longer it is retained in the parts, the greater will be the probability that it will ultimately destroy the patient, by keeping up an amount of irritation, the effects of which the respiratory apparatus and the system at large cannot permanently resist. I have repeatedly experienced this state of uncertainty, and have no doubt it has often been felt by others,"

The solution of the curative question is the knife! Prof. Gross says:—

"A careful examination of the facts which are comprised in this treatise, will, I think, serve to satisfy any one, however prejudiced or sceptical, that the only real safety of a person, laboring under a foreign body in the air-passages, consists in bronchotomy. We have seen, it is true, that various substances, entrapped in these passages, may be ejected, either spontaneously, or through the intervention of art, as the use of emetics and sternutatories, or even by simple inversion and succussion of the body; but no one, surely, acquainted with the subject, would adduce such cases for the purpose of establishing a rule of practice. They are the exceptions, not the rule, and, as such, they are valuable and worthy of consideration. As long as the extraneous substance remains in the windpipe, the patient, as has been already repeatedly stated, is in constant danger of being suffocated; or, if he escape so horrible a death, of perishing from inflammation and its consequences. The proper practice, therefore is, in all cases, without exception, to perform bronchotomy as soon as possible after the occurrence of the accident. The artificial aperture effectually prevents spasm of the muscles of the larynx, and thus enables the patient to breathe with greater freedom, at the same time that it permits the foreign body, if it do not escape entirely, to play up and down the air-

tubes with perfect impunity. In many cases, however, the foreign substance is expelled as soon as the windpipe has been properly opened, being often projected to a considerable distance from the patient's body. In general, it escapes at the artificial orifice, but sometimes it passes through the glottis, and is either expelled by the mouth, or it descends into the stomach. The ejection is occasionally delayed for several days, weeks, and even months after the operation, and even after the closure of the wound. Under such circumstances, a second and even a third operation may become necessary, as in several of the cases mentioned in this treatise."

The chief interest of this work is not found in mere discussion, novelty, or criticism, but in its vast array of cases which are arranged so as to suggest and solve practical questions. The style is simple and clear; the descriptions graphic. It is surprising that so big a book on so limited a subject should be withal so little tiresome. So many exciting narratives of instant strangulation occasioned by grains, seeds, fruit-stones, fragments of nuts, coins, pins, shot, crumbs of food, and a thousand other substances which have "gone the wrong way," are calculated to make a deep impression on the reader's memory, and the more so because his turn may come at the next meal, even while uttering "*funny* jokes," (see page 43—a pleonasm by the way.) Such accidents are sufficiently terrible, even though a Dr. Gross be at hand and ready to cut one's throat *secundum artem*.

Although this notice was commenced principally with the view of making some remarks upon the second work named at the head of this article, namely, Dr. Gross' magnificent monograph upon the urinary organs, the limited space of this journal will not permit, at present, further examination; nor is there any necessity to enlarge upon the great merits of this standard—a work of nearly a thousand large octavo pages, which has reached a second edition, and which has received, already, general commendation. The new edition being greatly enlarged, revised, improved, and abundantly illustrated, must be still more acceptable to the profession than the former.—EDITOR.

REV. VI.—*Clinical Lectures on Paralysis, Disease of the Brain, and other Affections of the Nervous System:* by ROBERT BENTLEY TODD, M.D., F.R.S., Physician to King's College Hospital. Philadelphia: Lindsay & Blakiston. 1855. 8vo. Pp. 311.

ANY new work bearing the name of this eminent writer and professor, is calculated to excite attention and expectation, and in this spirit we opened the volume before us. In his "advertisement," the author,

speaking of the "fitness of these lectures for publication," modestly says, that "he is not without his misgivings on this point." Our perusal, however, leaves no concurrent doubts on our mind. The seventy-seven cases here reported, and the pathological, physiological, and therapeutical deductions which are interwoven with their histories, render this collection of clinical lectures, twenty in number, a series of very great value. The diseases of the brain and nervous system are, far more than any other class, involved in doubt, obscurity and difficulty; and the only trust-worthy foundation for a correct theory and appreciation of these diseases, must rest on a correspondingly extensive clinical observation. Dr. Todd's lucid clinical histories here given, constitute a valuable contribution in this behalf, and will receive a hearty welcome by the profession. His book is, as nearly as a book can be, an hospital in which is found 77 patients affected with the protean forms of nervous diseases, as paralysis, local and general, chorea, catalepsy, hysteria, epilepsy, &c., curable and incurable; and you are accompanied at the same time through the wards by an able and lucid teacher. The author promises to continue his clinical contributions, when his "misgivings" shall have been completely removed. On this score we think he need not delay publication.

M. M. Dowler, M.D.

Rev. VII.—*Elements of Medicine; a Comprehensive View of Pathology and Therapeutics; or the History and Treatment of Diseases:* by Samuel Henry Dickson, M. D., LL.D., Professor of the Institutes and Practice of Physic in the Medical College of the State of South Carolina. Pp. 752. 8vo. Philadelphia: Blanchard & Lea. 1855.

The first part of this valuable work is devoted to general pathology; ætiology; the nature, seats, phenomena, and tendency of disease. The second part treats of the pathology and therapeutics of the circulatory, digestive, respiratory, sensorial, motory, and excernent systems.

The first part occupies 166 pages, which are devoted to general pathology,—only about one page of which relates to the all-important subject of pathological anatomy, and even this does not indicate a single criterion of size, form, cohesion, color, or other fundamental morbid alteration in general pathological anatomy. Meagre, altogether, meagre this is.

Although Professor Dickson commends pathological anatomy with astonishing brevity, his little page is almost entirely devoted to quota-

tions, tending to weaken or ignore its claims. "There are, however," says he, "many exceptions to the availability of this post-mortem method of diagnosis." "Even where we discover the cause of death, we are often foiled in the inquiry whether the lesson [lesion] is essential or accidental." "We see effects only, effects of diseased action, all commingled together, incidental and accidental," &c. In the "table of contents," Prof. D. refers to this page thus: "general diagnosis—greatly dependent on, and promoted by, pathological anatomy, the true value of which, and its applications, are briefly stated."

Prof. Dickson seems to have faith enough as soon as he enters the tenebrious realm of the nervous system where pathological anatomy is a veiled oracle, sometimes mute, and often as ambignous as that of Delphi. Imbued with the incomprehensibilities of the reflex system, he says of the pathology of paraplegia, that "it arises in the loss of motor conduction of the fibres of the anterior columns of the spinal cord!"

He gives the pathological anatomy of the disease in a very laconic sentence, namely, "*Autopsy usually exhibits some spinal lesion.*" This he qualifies by admitting that "there are instances in which no palpable change of the medulla spinalis has taken place." This exposition is defective, 1st, because there are no such special motory fibres known; and, 2nd, because, that which has no existence, can present no lesion. The four sets of nerves—the sensori-volitional, and the excito-motory, not being anatomically true, no amount of faith and affirmation can make them true. Nor is there one of the teachers of anatomy who would venture to swear to their reality in a court of justice, either as it regards normal or pathological anatomy. The Pathologist can show neither lesions of the motor fibres as the cause of paralysis of motion—nor lesions of the sensory fibres as the cause of paralysis of sensation; both of which maladies are of daily occurrence. Students beware!

Ask your teachers, some fine day, when they are in a good humor, to show you these four kind of nerves concerning which they write and lecture *ad infinitum*, in physiology, pathology, therapeutics, and morbid anatomy.

Sidney Smith gave a breakfast party, in which it was agreed that nothing should be taken for granted. Lecturers on the four-fold anatomy of the nerves might profit by the example.

Professor Dickson's protestations in favor of pathological anatomy are virtually weakened, if not nullified by indirectly invalidating its paramount claims, and by an almost complete exclusion of it from the department of general pathology. To ætiology, which, for the most part is uncertain, he has devoted nearly 100 pages. A concentrated exposition of the fundamental principles, tests, and grand results of general pathological anatomy, would have enhanced the value of this work

much more than discussions on the vexed questions of malaria, contagion, infection, and other imaginable causes of endemic and epidemic diseases.

In part second, special pathology and therapeutics, containing 600 pages, special pathological anatomy, and physical diagnosis are not wholly ignored, but they occupy but an insignificant role, while many less important subjects take very prominent parts in "the elements of Medicine."

The work is sufficiently bulky for a hand-book; but space might be economized by a rigid retrenchment in articles of minor importance; so that, without increasing the size of the volume, due prominence could be given not only to the fundamental principles of general and special pathological anatomy, and physical diagnosis, but, likewise, to those of microscopy *and* organic and pathological chemistry, including a free use of the results of numerical medicine and physiology, the whole to form an accurate, if not an exhaustive analysis of the multitudinous analyses, of the existing state of the science.

Professor Dickson's work supplies, to a great extent, a desideratum long felt in American medicine, and will probably soon reach a second edition, when, it is hoped that it will be improved so as to be commensurate with the entire exigencies of the case, and the wants of the American student, who should seek i[illegible]ion at home where he expects to practise his profession. With regard to the American climate, diseases, and therapeutics, Prof. Dickson's work stands at the head of its class.

The elementary character of these "Elements," renders it difficult to give an analysis of them, seeing that they are themselves brief analyses of the fundamental principles, intended in the modest language of the author, "as an aid to young men who have engaged in the study of medicine, to physicians who have recently assumed the responsibilities of practice; and to my fellow professors of the institutes of medicine, and private instructors, who have felt the difficulty of communicating to the first two classes the knowledge which they are earnestly seeking to acquire,"—a noble aim—and, taken as a whole, well executed, as might be expected from Professor Dickson's acknowledged ability, elegant scholarship, and long experience as a teacher.

Of the literary merits of this work there can be no necessity of saying more than that it is equal to Professor Dickson's former works, clear, accurate, and adapted to his subject.—Editor.

Rev. VIII.—*Manual of Human Microscopical Anatomy:* by A. Kölliker, Professor of Anatomy and Physiology in Würzeburg; translated by George Busk, F.R.S., and Thomas Huxley, F.R.S.; edited, with Notes and Additions, by J. Da Costa, M.D.: Illustrated by 313 Engravings. Philadelphia: Lippincott, Grambo & Co. 1854. 8vo. Pp. 802.

Microscopic Anatomy of the Human Body, in Health and Disease: Illustrated with numerous drawings in color: by ARTHUR HILL HASSALL, M.D., author of a "*History of the British fresh water Algæ*," *&c., &c., &c.* With additions to the text and plates, and an introduction containing instructions in Microscopic Manipulation: by HENRY VANARSDALE, M.D. In 2 vols. 8vo. I. Pp. 560. II. Pp. 168. Letter press. Colored plates lxxix; numerous figures. New-York: Samuel S. & William Wood. 1855.

A Manual of Pathological Anatomy: by CARL ROKITANSKY, M.D., Curator of the Imperial Pathological Museum, and Professor at the University at Vienna, &c., &c. Translated from the German by W. E. SWAINE, M.D.; E. SIEVEKING, M.D.; C. H. MOORE, Surgeon, Lecturer, &c.: and G. E. DAY, M.D. &c. 4 vols. 8vo. Bound in 2 vols. I. Pp. 306. II. Pp. 267. III. Pp. 349. IV. Pp. 320. Philadelphia: Blanchard & Lea. 1855.

VENERABLE compatriots in medicine! "most potent, grave and reverend signiors" whose diplomas bear date in the first quarter of the current century, read these books, and others of a kindred character lately issued from the medical press, illustrative of general microscopic, comparative, developmental, normal, physiological, and pathological anatomy, and then ask yourselves if Young Physic has no claims upon the light of your countenance and favor in your eyes?

The dry descriptive anatomy of the past, is no longer the anatomy of the present. The latter microscopizes fluids and solids, unravels tissues, analizes normal and abnormal structures histologically and chemically, invoking the aid of the science of teleology or final causes. For example, perhaps no science has advanced more rapidly by the difficult route of final causes, the adaptations of means to ends, than physiological anatomy.

The present is an anatomical epoch. And, although, therapeutical science has not kept pace with anatomical progress, yet the latter always was, is now, and ever will be the surest precursor to the advancement of the former and the best pilot upon the dubious coasts of clinical medicine.

The works named above, including many others which have of late emanated from the great publishing houses in this republic, afford very satisfactory evidence of the onward march of medical science which aims at something more than what is found in the mere text-books of the schools; for, it can hardly be supposed that publishers upon the commercial principle would venture to publish or re-publish profound treatises elaborately illustrated, while superficial works were in greater repute, and commanded a greater profit.

Among all the pseudo-reformers, and sectarian sciolists of the day

under the various names of eclectics, botanics, steamers, hydropathists, homœopathists and the like, with their chartered colleges, retainers, aiders and abettors, not a single valuable discovery has been made, nor a treatise written at once reliable, profound, instructive, and equal to those above mentioned—not one destined to immortality. Oblivion awaits all those spurious systems founded on deception, selfishness, avarice, and ignorance, as all history proves, while the mighty monument of ligitimate medicine stands and will ever stand, immovably towering above the temporary and miserable wigwams which encumber the ground.

The reform, so much desiderated in medicine, is just the reverse of that which now rages like an epidemic, and which is self-styled, *the reformation*. True reformation must consist in a more profound study of the sciences—in a more complete interpretation of nature's laws throughout the domains of physics, anatomy, physiology, pathology, therapeutics, etc.

In Prof. Kölliker's 800 densely printed pages are concentrated an amount of microscopic research, illustrative of general and special histology—elementary structures—tissues, organs, and systems which is truly marvellous, which may, perhaps, be paralleled by other micographers in, though scarcely outside of Germany. The land of Goethe and of Kant produces in modern times the most profound scholars and patient investigators. The many-sidedness of the German mind, seems equally adapted to microscopic and periscopic examination. To translate their great thoughts and profound specialities, from their almost impracticable language, has occupied many eminent English scholars outside as well as inside of the medical profession.

The translators of Prof. Kölliker's Microscopic Anatomy, Messrs. Busk & Huxley, Fellows of the Royal Society, have rendered the medical profession a great service by their labors and explanatory notes, while Dr. Da Costa has ably edited and annotated the American edition, and is entitled, likewise to commendation.

Without pretending to criticize or analize this work, which is not, from its nature, a reviewable one, it may not be amiss to say that the engravings, 313 in number, are so intercalated into the text as greatly to economize space, while, at the same time, they are much more convenient for reference, than they could possibly be in a separate atlas, being very distinct, well arranged, and artistically executed. Even the inexperienced micographer will perceive, at first sight, well defined individuality, specific differentiations, and typical resemblances, which carry with them internal evidences of reality, more or less convincing. The ghost of the slain Patroclus resembled his body notwithstanding its differentiæ:

> "Ev'n now familiar as in life he came,
> Alas! how different! yet how like the same!"

Whether all of these pictorial representations are true to nature, professional micographers must judge. The affirmative presumption in their favor is at least strong.

The principal subjects of research in this work are :—The lymph and chyle, the blood, mucus, pus, milk, semen, saliva, bile, sweat, urine, fat, epithelium, epidermis, the nails, pigment cells, hair, cartilages, bone, teeth, fibrous tissues, muscles, nerves, organs of respiration, glands, organs of the senses, etc.

Dr. Hassall's work on "the Microscopic Anatomy of the Human Body in Health and Disease," which first appeared in England in 1849, represents the state of this science in the United Kingdom at that period, and embodies in a systematic form, not only his own histological labors, but those of his compatriots—whose able though detached contributions to general anatomy, he found, not as waifs, but as scattered materials drifting upon the stream of microscopic literature; these and similar materials derived from continental micographers enhance the value of his excellent volumes.

This work, without being superficial, is easier reading, less elaborate, less crowded with details, and will probably prove more attractive to beginners than Kölliker's work above mentioned.

Dr. Henry Vanarsdale's introduction to Dr. Hassall's work, containing practical instructions in microscopic manipulations, the comparative prices, qualities, and varieties of microscopes, together with the necessary apparatus, the manner of preparing and preserving microscopic objects, cannot fail to aid students in their early efforts to acquire the fundamental principles of micography.

Dr. Vanarsdale's annotations are numerous, instructive, and practical, both as it regards the text and the plates.

The typography of the text, vol. I, consisting of 560 pages, together with the paper, is very good.

The IId volume consists of 168 pages of letter press and 79 plates, comprising several hundred figures. Many of the plates are drawn in color. Ten plates, mostly original and colored, have been added to the work by Dr. Vanarsdale. This volume of plates is unrivalled for accuracy and beauty. The possessors of Dr. Hassall's Microscopic Anatomy, will not fail to see that this commendatory notice is but "faint praise."

There is no room in the present number of this journal to give an extended notice of Professor Rokitansky's Manual of Pathological Anatomy, the translation of which has been made under the auspices of the Sydenham society, by four gentlemen of acknowledged competency. In the original, this great work "passed, *unaltered* through three reimpressions."

Carl Rokitansky, born in Bohemia, graduated in Vienna, 1828, is now the first name among the first medical men of that renowned capital.

This manual, from its length, breadth, and depth, must be frightful to sciolists, but delightful to the scientific student of pathological anatomy. Without this profound work, his library must be incomplete. These masterly volumes are not to be reviewed but purchased, read, and "inwardly digested."—EDITOR.

On the Yellow Fever of Norfolk and Portsmouth, Va.: by E. D. Fenner, M.D.

Some of your readers may be at a loss to discover an object sufficient to induce a practising physician of New Orleans to leave his own city, in the midst of an epidemic, and go abroad in search of a disease which for some years past has committed such dreadful havoc among the people of his immediate vicinity; and the same in respect to others, both acclimated and unacclimated, who, on hearing the cry of alarm and distress that went forth from Norfolk and Portsmouth, went not only from places where yellow fever is a common disease, but from many others, where it is either unknown or has not prevailed in their day. I will endeavor to satisfy these searchers into human motives, for I deem the inquiry a very natural one.

I will say, then, that some were employed for the purpose and liberally compensated by their benevolent fellow-citizens at home. These were selected for their capacity and experience. Others, likewise experienced and acclimated, hastened to the scene of distress and cheerfully volunteered their services to the sufferers of every class. Whilst others, of bolder daring still, who had never either seen or suffered the disease, rushed into the midst of the pestilence, and, reckless of personal danger, begged the privilege of doing whatever they could to relieve their dying fellow-beings. How this latter class sacrificed themselves in the cause of suffering humanity, and how the others performed the duties assigned or assumed by them, is not for me, but for the surviving citizens of Norfolk and Portsmouth to say. Such, at least, were the leading motives, as far as I could judge, of the physicians from abroad who visited these places in the late epidemic. For myself, besides a desire to do some good, if it were in my power, I wished to see yellow fever at a different place from New Orleans, where I had observed it closely for the last fourteen summers, and as I remained at home until our epidemic had reached its maximum, I knew that my services could well be spared for the rest of the season.

It is not my purpose on the present occasion to attempt to furnish you a full account of this epidemic, but only to make a few remarks upon some of its more prominent features and incidents.

Long before reaching Portsmouth and Norfolk, we met the most frightful rumors of their sufferings, and when we arrived, there appeared to be but little exaggeration in these flying reports. The stores were all closed, all the workshops were silenced, and the only appearance of activity visible was in the hurried movement of physician's vehicles, and of persons in pursuit of medical aid and comforts for the sick. It was thought that more than half of the inhabitants of both places had fled from the impending danger, and I was truly glad to hear it, for I am well convinced that in occasional outbreaks of yellow fever, the greatest safety will be found in flying from the infected district. In this

instance nearly all that remained were in continued apprehension of attack, for there were probably not a dozen persons in both places who were secure by having had the disease previously. Many had occasion to regret that they did not make an early retreat, and some went too late; they were attacked in other places, and almost without an exception fell victims.

When Dr. Beard and I arrived at Norfolk, we found the epidemic raging with terrific violence, and increasing from day to day. Some of the resident physicians were already down with the fever, two or three had died, and the rest were doing more labor than human nature could stand for any great length of time. Not a single one of them was acclimated, and therefore they all expected to be attacked sooner or later. Yet they stood their ground like true heroes, resolved to stand or fall at the post of duty. What rendered the case of these gentlemen worthy of more special sympathy and admiration was the fact, that their devoted wives could not be persuaded to leave them, but determined to remain and share their danger.

How great these dangers were may be learned from the fact that more than two-thirds of the resident physicians have fallen victims, and the others have narrowly escaped with their lives.

At the time of our arrival it was impossible for the medical force in attendance to do justice to the sick, and the disease was spreading so rapidly that the heart sickens at the contemplation of the state of things that must have come about, but for the valuable aid of various kinds that came pouring in from almost every section of the Union.—But for these immense contributions in the way of money, provisions, physicians, nurses, medicines, coffins, &c., the citizens would soon have been unable to attend their sick and bury their dead, and all who were able would have been compelled to fly away and leave their city in sole possession of putrefying corpses. Even with the assistance that came, it was found difficult at one time to get the dead buried, and a few corpses remained out of the ground as long as thirty-six or forty-eight hours.

When we got there we found one New Orleans physician, Dr. Penniston, already on the ground and doing immense labor. Dr. Stone had been there, but was only able to remain a few days. In a short time we had an ample medical corps, consisting of physicians from New Orleans, Mobile, Charleston, Savannah, Philadelphia, Baltimore, Richmond and sundry other places, who, in connection with the resident physicians still moving, were able to visit the sick as often as necessary. Nurses, too, came from all the places first mentioned, and others, some of whom unfortunately were but illy prepared to meet the danger they voluntarily encountered. Like the unacclimated physicians, many of them suffered severely from the epidemic and some fell victims. At one time New Orleans had 50 nurses in Norfolk and Portsmouth, employed at the rate of sixty dollars a month, and Charleston sent forty, at forty dollars a month.

My own observations were confined to the city of Norfolk, with the exception of a single visit to the U. S. Naval Hospital at Portsmouth, a magnificent establishment in charge of Surgeon Minor, which, by order of Government, was opened for the general admission of yellow fever patients. There I saw some forty or fifty patients in different stages of the disease. A temporary hospital had been established some three or four miles from Norfolk, but it was found to be too inconvenient of access. The new Howard Infirmary, established in the heart of the city after our arrival, was found to be very serviceable.

The impression made on my mind by the first cases I saw of this epidemic, was that it was of a mild type, and ought not to prove very fatal if properly managed. Indeed, the first seven or eight cases I took charge of, yielded very readily to a mild course of treatment; but it was not long before I discovered that the tendency to death in apparently mild cases or those marked by no violent symptoms whatever, was much stronger than I had supposed. In some of the cases the approach of the disease was very gentle, there being nothing observable but a sense of fatigue, little headache and slight feverishness. Indeed, the person would be in doubt whether he had the disease or not, and perhaps send for a physician to decide the question for him. A few hours would be sufficient to settle it, and he would then go on with symptoms somewhat better marked, but still not at all distressing. If asked how he felt, he generally replied "*pretty well*"—or "*very well.*" The system appeared to respond readily to moderate doses of medicine, every function seemed to be going on well, and the prognosis would be thought favorable until the approach of the critical period, the end of the third day. Then if the case were going to terminate badly, there would appear eructations and acidity of the stomach, suppression of the urine, slight delirium and restlessness, and the patient would go into fatal black vomit and coma, in spite of anything that could be done for him. This unfavorable change would often take place most unexpectedly, and without the commission of any imprudence whatever. Such were the cases of Mr. Cunningham, editor of the Norfolk Beacon, and Mr. W. D. Roberts, a member elect of the Virginia Legislature. Each of them had mild attacks, and went on as quietly as possible for yellow fever patients till the close of the third day, when suppression of urine, and other fatal symptoms appeared, and they sunk unconscious and almost without a struggle. Mr. R. threw up black vomit copiously. They were each about fifty years of age, and it was a remarkable fact that but few persons of this age or beyond recovered from this epidemic.

In many of these mild attacks, the skin acted finely till the third day, when it would become dry, and very soon be followed by restlessness and other bad symptoms; in others it was difficult to keep up a steady perspiration. The skin would not be very hot, nor was it difficult to start a perspiration, but it would soon cease and there was a constant tendency to dryness. This symptom was generally unfavorable, but when accompanied by a loose state of the bowels, I regarded as very much so.

I have mentioned particularly these gentle attacks and apparently mild cases with the view to show the strong tendency to death that often existed when there were no urgent or distressing symptoms to give warning, thus too often blasting the fond hope and anticipation of physicians and friends; but it is not to be denied, that in the majority of cases, the attack was open and bold enough, yet not sufficiently so to demand the use of cups or the lancet as often as we see in New Orleans.

The disease appeared to become more malignant as the season advanced, as was shown by the greater number of deaths in proportion to attacks, and this was observed up to about the 27th of September, when the epidemic rather suddenly declined, without the appearance of frost or storm or any extraordinary change in the weather. Such, you know, was the case in our great epidemic of 1853

I have often been asked the question whether the Norfolk epidemic was not more malignant and in other respects different from any that has prevailed in New Orleans. In reply I could not say that it was. I saw no peculiar symptom or variety of the disease that I had not often witnessed in New Orleans, yet there may have been a difference in the relative frequency or combination of certain symptoms which would characterize this epidemic as being somewhat different from all others, inasmuch as we never see two epidemics precisely alike, even in the same locality. The malignancy of an epidemic is generally estimated by the mortality it causes; and in this respect a search into the records of yellow fever will show that the late mortality at Norfolk and Portsmouth, although very great, does not stand unrivalled. An estimate of this, however, can only be formed after we obtain a report of the number of persons exposed to the disease, the number attacked, and the total deaths, for which we will have to look to the physicians and authorities of Norfolk and Portsmouth.

Let us now take a glance at some of the more prominent features of this memorable epidemic.

It is well known that suppression of urine is a symptom of not unfrequent occurrence in yellow fever, and is generally considered a very bad symptom. I think it was more common in this epidemic than any I have ever witnessed, and was always of very serious import. In some few instances the secretion of urine was restored after being reduced to an exceedingly small quantity for twenty-four hours or longer, but where there was a *total suppression* for this length of time, I believe it was as rare to witness recovery as from the worst form of black vomit. Nor am I aware of anything that can be confidently relied on to restore this function when completely suspended. I have known the flow of urine to be increased after having been reduced very low, and always viewed it as a favorable omen, but am by no means sure that the beneficial change was justly due to the use of turpentine, nitre, gin or any other diuretic. I am not inclined to believe that the suppression arises from any material change in the substance of the kidneys; none at least has been as yet satisfactorily demonstrated by post mortem ex-

aminations. It seems to me that it must depend upon the morbid condition of the blood and the nervous system. Be it as it may, this symptom was certainly much more common at Norfolk than in the great epidemic of 1853 at New Orleans.

In respect to *hæmorrhages*, the grand characteristic feature of yellow fever, almost every variety was witnessed at Norfolk, such as from the nose, mouth, stomach, bowels, uterus, serotum, blistered surfaces, &c. In accordance with my observation at New Orleans, these hæmorrhages were of different import, according to their seat. When hæmorrhage began at the nose, gums, or uterus, it appeared to be a *critical* discharge and was most generally followed by a salutary change in the condition of the patient; but when it began at the stomach, it made what is generally known as *black vomit*, a symptom that still holds its long established position as one of the most dangerous that attends this terrible disease. Black vomit was exceedingly common in this epidemic, and what is worthy of remark, there were numerous recoveries from it. I hardly conversed with a single physician who did not tell me of having seen one or more recoveries from this usually fatal symptom. The day I left Norfolk and was coming up James river, I had the pleasure of falling in with an interesting young lady, about thirteen years of age, the daughter of Capt. Whittle, of the Navy, whom I had treated in the epidemic. She had thrown up black vomit for forty-eight hours, but recovered from it and then stood before me in perfect health.

Recovery from black vomit was most common to the youthful, but several instances were seen amongst persons of more advanced age.

In some cases the attack was ushered in with bilious vomitings; otherwise the symptoms throughout were not of a violent character, yet the case was very apt to terminate fatally. Some writers contend, as you are aware, that bilious vomitings are never met with at the onset of yellow fever; but my observation teaches me differently.

Some of the most obstinate cases of this epidemic were marked by an almost perfectly *natural* tongue.

I met with several cases in which severe hunger was a prominent symptom. They were very apt to terminate fatally.

The negroes of Norfolk suffered severely from this epidemic, though not so much as the whites. The disease seemed to affect them pretty much as it does in Louisiana, and wherever there was any mixture of white blood amongst them its effects were more severe. The bright mulatto will have yellow fever almost as severely as the pure white. From what I could learn there were more deaths among the blacks of Norfolk than have ever occurred in an epidemic at New Orleans.

Relapses were not unfrequent, and were generally dangerous.

I knew several instances of second attack in persons who had had the disease previously at other places, but generally after intervals of ten or fifteen years, in which there had been no exposure to the disease. Nothing short of thorough acclimation afforded protection against this epidemic.

In respect to *treatment*, I believe I have nothing new to offer, or anything that is worth inserting in your journal. Amongst so many physicians collected together from different places, and having views and opinions derived from such different sources, of course, you would expect to find quite a variety of treatment. Such was the case at Norfolk. Of one thing I am pretty certain, the mortality was large under any treatment I saw pursued. Either the disease was *unusually malignant*, or the constitutions of the people had *less capacity for resisting its assaults.* They seemed to sink more readily under its deleterious effects —to die with milder and less formidable looking symptoms than I ever witnessed before. Some how or other the people of New Orleans make a better fight against yellow fever, than did the citizens of Norfolk. It has been observed, however, that whenever yellow fever epidemics prevail in more northern latitudes the mortality is very great. For myself, I recommended and used a mild course of treatment at Norfolk. I did not try to cut short and *cure* the disease, but rather to guide the patient through its natural stages. I thought I saw injurious effects from *over-medication*, but it was notorious that the opposite or *do-nothing* system of the homœopaths was signally unsuccessful. The survivors appeared to feel that their friends had been lost without a fair struggle against the destroying enemy.

A remark or two about the mortality and supposed origin of this terrible epidemic must close this communication.

Dr. N. C. Whitehead, the acting Mayor of Norfolk, in a letter to the visiting physicians when they were about to depart to their respective homes, at the close of the epidemic, estimates the average population of the place during the pestilence at about 6,000, and the number of deaths at 2,000. I think these estimates will prove to be somewhat erroneous, and that the number of deaths most probably did not exceed 1600.

A complete census of the 3d Ward was taken by the Relief Committee which furnished the following statistics :—

Population—Whites, 638; colored, 558; total, 1,196.

Fever cases—Whites, 579; colored, 213; total 792, or two-thirds of the inhabitants.

Deaths—Whites, 159; colored, 13; total, 172, or 21-70 per cent. of the attacked.

This is one of the largest wards in the city. The mortality at the new Howard Infirmary, and also at the U. S. Naval Hospital, was about 35 per cent., or 1 in 2-80 of the admissions.

About 70 physicians and second course medical students went to the assistance of Norfolk and Portsmouth, of whom 21 died.

I am not prepared to admit that this epidemic was at all more malignant than that of New Orleans in 1853, though the mortality may have been somewhat greater, in proportion to the attacks, from the depressing influence of panic and the want of proper nursing, which was severely felt at the beginning.

As for the *origin* of the epidemic, it must remain shrouded in doubt until all the facts and circumstances attending its commencement are fully reported. But two sources are looked to by common consent—it must have originated either from a local cause in connection with a peculiar constitution of the atmosphere around, or from a morbific germ imported by the steamship Ben Franklin. That it may have originated from the former would appear probable, from the fact that three cases of yellow fever occurred last year in Norfolk, and at the very spot where the epidemic of that city commenced this year. This was the celebrated Barry's Row which was burned down this year. These cases occurred late in the season and were not traceable to any foreign connection. In 1852 there were also several well marked cases of yellow fever in Norfolk, likewise apparently of local origin. I was also informed that some cases very much like yellow fever, though perhaps not unquestionable, were observed this year simultaneously with the first cases on board the Ben Franklin. But, on the other hand, it is certainly true that the epidemic appeared to commence at the spot where the Ben Franklin laid, which was at Gosport, and from there spread progressively over Portsmouth and Norfolk.

Now, let us look to the behavior of the ship Ben Franklin, she arrived on the 6th of June from the Island of St. Thomas, was examined by the Health officer, Dr. Gordon, on the 7th, and although she was found to be perfectly clean and free from disease, she was ordered to undergo quarantine, because she had come from a *suspected* port. During her late voyage two deaths had occurred on board, one a fireman who died of disease of the heart, and the other a sailor who was put in his place, and sunk from exhaustion, being unaccustomed to the employment. On the 19th of June the vessel was released from quarantine at the instance of the Board of Health of Norfolk, no case of sickness having occurred during her detention, notwithstanding the employment of a *new crew* on the day after her arrival. The vessel was then taken up to Gosport for repairs and remained there until July 8th, eighteen days after she had been released from quarantine, when the authorities of Portsmouth ordered her off on account of the occurrence of a case of yellow fever that was thought to be traceable to the vessel. She again returned to quarantine ground. On the 12th, she was examined by Dr. Schoolfield on behalf of the Portsmouth Common Council and was found to be perfectly clean and healthy. On the 13th, these parties addressed a note to the health officer stating these facts and consenting to release the vessel from quarantine again. On this day Dr. Gordon visited her and found a suspicious case of fever on board which caused him to detain her till the morrow. He then visited her again and found two more cases which he pronounced to be yellow fever. From that time and place the disease continued to spread till it resulted in the terrific epidemic that has caused such desolation in both cities. Such is a brief summary of the facts relative to the ship Ben Franklin, obtained from authentic documents and published by a correspondent of

the Richmond Whig. Now, if three cases of yellow fever originated from local causes at Norfolk in 1854, and a greater number of cases in like manner in 1852, and furthermore, if one or more cases were seen about Norfolk and Gosport at the time or previous to the first case that occurred on the Ben Franklin and having no connection with that vessel, as I heard reported, there is certainly much room to doubt whether this epidemic arose from an imported infection.

It is hoped that all the facts attending the origin of this memorable epidemic will be authentically reported at an early day.

There is one important point on which I believe there is a general concurrence of testimony, which is, that this disease was neither contagious nor infectious, beyond the limits of Norfolk and Portsmouth. Numerous cases were carried to Baltimore, Richmond, Petersburg and various places, and in not a single instance was it communicated to persons coming in contact.

The City of New Orleans, October 15th, 1855.

ONCE more the pestilential storm has swept through the City of New Orleans. But the *dies iræ* are past. *Laus Deo!* The autumnal winds which chant the *requiem æternum* to 2,574 victims of yellow fever during the present year, (up to October 14,) "bring healing on their wings." The beleagured city, after a three years' pestilential siege, stands forth like a scarred veteran, yet strong, hopeful, undismayed, unconquered and ready to meet the inexorable decrees of fate quietly and without retreating. Although many citizens of New Orleans leave it in the summer, fear of an epidemic is seldom the cause of their flight; at that season the crops are immature, and the rivers low, and consequently commerce is nearly suspended.

So far as the yellow fever is concerned, the future prospects of New Orleans are cheering. The natives of the city and others long resident, being exempt from yellow fever, together with those who have already had it, constitute, with few exceptions, the present population of the city—being, by the way, sufficiently numerous to conduct all its business. A great influx of poor strangers in New Orleans, where manufactories scarcely exist, and where employment is precarious, augments pauperism and extends and perpetuates yellow fever. The numerical test is a fallacious one, as it regards the prosperity of a city. A redundant population, without employment, tends to increase crime, sickness and misery.

The weekly mortality from yellow fever, for sixteen weeks, commencing with June 23, and ending with October 14, is thus:—17, 32, 44, 119, 173, 222, 291, 394, 351, 301, 255, 150, 89, 70, 46, 24; total, 2,574. The increment and decrement, each occupying eight weeks, proceeded with great regularity, uninfluenced by great and sudden changes of weather.—EDITOR.

Editor's Office.—Notices.

NOVEMBER 1855.

COMMUNICATIONS RECEIVED.

C. C. HOWARD, M.D., Lowndsboro, Ala.
W. TAYLOR, M.D., of Ala.
R. H. CHINN, M.D., Texas.

NEW JOURNAL.—*Atlanta Medical and Surgical Journal:* JOSEPH P. LOGAN, M.D., and W. F. WESTMORELAND, M.D., Editors, Atlanta, Ga. Monthly.

Dr. MERCIER'S article on Ovariotomy, and Drs. J. R. DOWLER and J. B. COTTMAN'S articles on Chloroform have been translated from this journal, into the French; also Dr. COTTMAN'S "Case of Tetanus from Vaccination, cured by large doses of Opium."—*See Gaz. Heb. de Méd. et Chirurg.*, official journal, Paris.

Dr. BROOKS' cases of Congestion of the Brain are translated and reviewed at length in the same excellent journal, Sept. 21st, 1855.

BOOKS AND PAMPHLETS RECEIVED.

The Mineral and Thermal Springs of the United States and Canada. By JOHN BELL, M.D., author of Baths and Mineral Waters; Baths and the Watery Regimen; Lectures on the Practice of Physic; Regimen and Longevity; Dictionary of Materia Medica, etc., etc. Philadelphia: Parry and McMillan, successors to A. Hart, late Carey and Hart. 1855. Pp. 394, 12mo. From Mr. T. L. White, bookseller, 105 Canal-street, New Orleans. The same work from Mr. J. B. Steel, bookseller, 60 Camp-street, N. O.

Clinical Lectures on Paralysis, Disease of the Brain, and other Affections of the Nervous System. By ROBERT BENTLEY TODD, M.D., F.R.S., Physician to King's College Hospital. Philadelphia: Lindsay and Blakiston. 1855. Pp. 311, 8vo. From Mr. T. L. White, bookseller, 105 Canal-street, N. O.

A Manual of Pathological Anatomy. By CARL ROKITANSKY, M.D., Curator of the Imperial Pathological Museum, and Professor at the University of Vienna, &c. Translated from the German: Vol. I—*Manual of General Pathological Anatomy.* Translated by W. E. SWAINE, M.D. Pp. 306, 8vo. Vol. II—*Pathological Anatomy of the Abdominal Viscera.* Translated by EDWARD SIEVEKING, M.D. 8vo, pp. 267. Vol. III—*Pathological Anatomy of the Bones, Cartilages, Muscles, and Skin; Cellular and Fibrous Tissue; Serous and Mucous Membranes, and Nervous System.* Translated by C. H. MOORE. 8vo, pp. 249. Vol. IV—*Pathological Anatomy of the Organs of Respiration and Circulation.* Translated by G. E. DAY, M.D. Pp. 320, 8vo. The whole bound in two volumes. Philadelphia: Blanchard and Lea. 1855. From Mr. T. L. White, bookseller, 105 Canal-street, N. O.

The Diseases of the Heart and the Aorta. By William Stokes, Regius Professor of Physic in the University of Dublin; author of the Treatment and Diagnosis of the Diseases of the Chest, &c., &c. A new edition. In one volume, octavo, pp. 710. Philadelphia: Lindsay and Blakiston. 1855. From Mr. T. L. White, bookseller, 105 Canal-street, N. O.

Elements of Medicine: a compendious View of Pathology and Therapeutics; or, the History and Treatment of Diseases. By Samuel Henry Dickson, M.D., LL.D., Professor of Institutes and Practice of Medicine in the Medical College of South Carolina. 8vo, pp. 752. Philadelphia: Blanchard and Lea. 1855. From Mr. T. L. White, bookseller, 105 Canal-street, N. O.

A Practical Treatise on Diseases of the Eye. By William Mackenzie, M.D., Surgeon Oculist in Scotland in ordinary to her Majesty; Lecturer on the Eye in the University of Glasgow, and one of the Surgeons to the Glasgow Infirmary. To which is prefixed an *Anatomical Introduction explanatory of a Horizontal Section of the Human Eyeball*, by Thomas Wharton Jones, F.R.S. From the Fourth revised and enlarged London edition. With Notes and Additions by Addinell Hewson, A.M., M.D., Surgeon to Will's Hospital, &c., &c. In one very large and handsome 8vo. volume; with 175 Illustrations; pp. xxxviii, 1,027. Philadelphia: Blanchard and Lea. 1855. From Mr. J. C. Morgan, bookseller, Exchange-place, N. O.

Yellow Fever, considered in its Historical, Pathological, Etiological, and Therapeutical Relations. Including a Sketch of the Disease as it has occurred in Philadelphia from 1699 to 1854, with an examination of the connections between it and the fevers known under the same name in other parts of temperate as well as in tropical regions. In two large and handsome octavo volumes. By R. La Roche, M.D., Member of the American Philosophical Society; of the Am. Med. Assoc.; Fellow of the College of Physicians of Philadelphia; Corresponding Member of the Imperial Academy of Medicine, and Foreign Associate of the Medical Society of Emulation, of Paris; of the Academies of Sciences of Turin, Copenhagen, Stockholm, Nancy, and New Orleans; of the Medical Societies of Naples, Marseilles, Lyons, &c. Pp. lxi, 615; viii, 813. Philadelphia: Blanchard and Lea. 1855. From Mr. J. B. Steel, bookseller, 60 Camp-st., N. O.

Epidemic Cholera, embracing its Causes, History, Local Preferences, Non-Contagiousness, Symptomatology and Pathology, with complete Dissections and Vivisections. Also, Observations showing a Choleraic Constitution of the Atmosphere, Views of its Treatment, &c., &c. By Horatio G. Jameson, M.D., &c., of Baltimore; Member of the Medical and Chirurgical Faculty of Maryland; Professor of Surgery; Member of the Philosophical Societies of Berlin and Moscow, etc. Philadelphia: Lindsay and Blakiston. 1855. 8vo, pp. 286. From Mr. J. C. Morgan, bookseller, Exchange-place, N. O.

The Cause and Prevention of Yellow Fever, contained in the Report of the Sanitary Commission of New Orleans. By E. H. Barton, A.M.,

M.D., Chairman of the Sanitary Commission, &c., &c. Philadelphia: Lindsay and Blakiston. 1855. 8vo, pp. xviii, 282. From Mr. J. C. Morgan, bookseller, Exchange-place, N. O.

[This book, which has been announced as a new edition, with a new name, title, and Philadelphia imprint, was in truth printed at the *Picayune* office, in New Orleans, and was reviewed in the New Orleans Med. and Surg. Journal, in the January No., under the title of "Report upon the Sanitary Condition of New Orleans."]

History of the American Medical Association, from its Organization up to January, 1855. By N. S. Davis, M.D., Professor of Principles and Practice of Medicine and Clinical Medicine in Rush Medical College; Member of the American Medical Association; Physician to the Mercy Hospital, Chicago; Permanent Member of the Medical Society of the State of New York; Fellow of the College of Surgeons and Physicians of New York; Corresponding Member of the New York Medical Association; Member of the Illinois State Med. Society, &c., &c. To which is added, *Biographical Notices*, with Portraits of the Presidents of the Association and of the Author: edited by S. W. Butler, M.D. Philadelphia: Lippincott, Grambo and Co. 1855. 8vo, pp. 191. From the Publishers.

A Manual of Clinical Medicine, and Physical Diagnosis. By T. H. Tanner, M.D., Licentiate of the Royal College of Physicians; Physician to the Hospital for Women, etc. To which is added, *The Code of Ethics of the American Med. Association.* 12mo, pp. 252. Philadelphia: Blanchard and Lea. 1855. From Mr. J. C. Morgan, bookseller, Exchange-place, N. O.

An Address delivered at the Laying of the Corner Stone of the Atlanta Medical College, July 21, 1855. By Henry D. Beman, Esq., Atlanta, Ga. 1855. Pp. 22.

Hooping Cough, its History, Nature, and Successful Treatment. By Laurence Turnbull, M.D., Physician to St. Luke's Church Home; Member of the Pennsylvania State Medical Society and American Medical Association. Philadelphia: Lindsay and Blakiston. 1855. Pp. 18.

The Physician's Pocket Visiting-List, Diary, and Memoranda, for 1856. Containing a Visiting-List for every day in the year, Memoranda-page for each month, pages for Obstetric engagements, for Vaccination engagements, and for Accounts asked for and delivered. Philadelphia: Lindsay and Blakiston. From Mr. T. L. White, bookseller, 105 Canal-street, N. O.

A Disquisition on the Ancient History of Medicine. Comprising Critical Notices of the Origin of Medical Science, its Vicissitudes in the Remotest Times, and of its Reconstruction and Final Establishment by the Greeks. By Thomas L. Wright, M.D. Cincinnati. 1855. Pp. 84, 12mo.

Principles of Human Physiology; with their chief applications to Psychology, Pathology, Therapeutics, Hygiene, and Forensic Medicine. By William B. Carpenter, M.D., F.R.S., F.G.S.; Examiner in Physiology and Comparative Anatomy in the University of London;

Professor of Medical Jurisprudence in University College; President of the Microscopical Society of London, &c., &c. Fifth American from the fourth and enlarged London edition. With 261 Illustrations. Edited, with additions, by Francis Gurney Smith, M.D., Professor of the Institutes of Medicine in the Pennsylvania Medical College, &c. Pp. 902, 8vo. Philadelphia: Blanchard and Lea. 1855. From Mr. J. B. Steel, bookseller, 60 Camp-street, N. O.

A Dictionary of the Terms used in Medicine and the Collateral Sciences. By Richard D. Hoblyn, A.M., Oxon. A new American edition, revised, with numerous additions, by Isaac Hays, M.D., &c., Editor of the American Journal of the Medical Sciences. Royal 12mo., pp. 522. Philadelphia: Blanchard and Lea. 1855. From Mr. J. B. Steel, bookseller, 60 Camp-street, N. O.

Discovery of the Cause, Nature, Cure and Prevention of Epidemic Cholera. By M. L. Knapp, M.D., late Professor of Materia Medica and President of the College of Physicians and Surgeons of the University of Iowa; late Professor of Obstetrics and Diseases of Women and Children in Rush Medical College; author of Lectures on the Science of Life Insurance, &c., &c. Reprinted from the New-York Journal of Medicine for January, 1855, with an Appendix of new matter. Pp. 48. Cincinnati: H. W. Derby. 1855.

On the Resolution of Numerical Equations. By A. Vallas, of New Orleans, Art. and Philos. Doctor; late Professor of Mathematics at the Royal University, and Member of the National Academy at Pesth; author of several treatises on various branches of Mathematical Science. 8vo, Pp. 40. New-York: 1855.

A History of Greece, from the Earliest Times to the Roman Conquest. With Supplementary Chapters on the History of Literature and Art. By William Smith, LL.D.; Editor of "Greek and Roman Antiquities," "Biography and Mythology," and "Geography."—With Notes and a Continuation to the Present Time: by C. C. Felton, LL.D., Eliot Professor of Greek Literature in Harvard University. Boston: Hickling, Swan and Brown. 1855. 8vo, pp. 670. Through Mr. William Flemming, bookseller and stationer, Magazine-street, corner of St. Andrew, Fourth District, N.O.

The Transactions of the Belmont Medical Society for 1854-5. Bridgeport, O. Pp. 172. J. G. Affleck: 1855.

FOREIGN EXCHANGES.

Gazette Hebdomadaire de Médecine et de Chirurgie.
Bulletin Général de Thérapeutique.
Journal de Pharmacie et de Chimie.
Revue Médicale Française et Étrangère.
Gazette Médicale de Paris.
Archives Générales de Médecine.
Gazette Médicale de Lyon.
Gazette Médicale de Strasbourg.
Journal de Médecine de Bourdeaux.
Annales d'Hygiène publique et de Médecine légale.
L'Union Médicale.
Il Progresso, Genoa.
El Siglo Medico, Madrid.
Revue de Thérapeutique, Médico-Chirurgicale.
Dublin Quarterly Journal of Med. Science.
Medical Times and Gazette, London.
The Glasgow Medical Journal.
The Edinburgh Medical & Surgical Journal.
British and Foreign Medico-Chirurgical Review.
London Lancet.
The Indian Annals of Medical Science, Calcutta.
The Dublin Hospital Gazette.

University of New-York.

MEDICAL DEPARTMENT—SESSION 1855-6.

THE Lectures will commence on MONDAY, *October 15th*, and be continued until 1*st* of *March* following. The session of 1854-5 was attended by a class of 307 students; on 106 of whom the degree of Doctor of Medicine was conferred.

FACULTY OF MEDICINE.

REV. ISAAC FERRIS, D. D., LL. D., CHANCELLOR OF THE UNIVERSITY.

VALT. MOTT, M.D., LL.D., Emeritus Prof. of Surgery and Surg. Anatomy, and Ex-Pres. of the Faculty
MARTYN PAINE, M. D., LL. D., Prof. of Materia Medica and Therapeutics. [Midwifery
GUNNING S. BEDFORD, M. D. Prof. of Obstetrics, the Diseases of Women and Children, and Clinical
JOHN W. DRAPER, M. D., LL. D., Prof. of Chemistry and Physiology. [Anatomy.
ALFRED C. POST, M. D., Prof. of the Principles and Ops. of Surgery, with Surg. and Pathological
WILLIAM H. VAN BUREN, M. D., Prof. of General and Descriptive Anatomy.
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CHARLES E. ISAACS, M. D., Demonstrator of Anatomy.
GEORGE A. PETERS, M. D., Prosector to the Prof. of Surgery.
ALEXANDER B. MOTT, M. D., Prosector to the Emeritus Prof. of Surgery.

JOHN W. DRAPER, M. D., LL. D., President of the Faculty.

COURSE OF INSTRUCTION.

The Course of Lectures given will be on Anatomy—general, descriptive, surgical, and pathological; principles and operations of Surgery; Materia Medica; and Therapeutics; Institutes and Practice of Medicine; Obstetries; the Diseases of Women and Children, with Clinical Midwifery; Chemistry and Physiology; Clinical Surgery; Clinical Medicine; Clinical Lectures on the Diseases of the Genito-urinary Organs; Clinical Lectures on the Diseases of Women and Children; Clinical Lectures on Physical Diagnosis.

PRACTICAL ANATOMY.—The Legislature of New-York having passed the Anatomical Bill, the students will be furnished with increased facilities for the study of this department.

CLINICAL INSTRUCTION will be given at the New-York Hospital, and Bellevue Hospital; and the various dispensaries of the City, including the Eye and Ear Infirmary, in which there are yearly more than 80,000 patients, will be open to the students free of charge. In addition there are held in the College Building, also free of charge to the students of the University, Five Cliniques each week, as follows:

1. AN OBSTETRIC CLINIQUE FOR THE DISEASES OF WOMEN AND CHILDREN—On every Monday from 2½ to 4½ o'clock, P. M., by PROF. BEDFORD. Since the organization of this Clinique in October 1850, there have been actually presented to the classes of the University between EIGHT AND NINE THOUSAND cases of the most interesting diseases incident to women and children.

2. A SURGICAL CLINIQUE—Every Tuesday from 2½ to 4½ o'clock, P. M., by PROF. MOTT. This Clinique presents abundant opportunity for the study of Surgical Disease, and witnessing every variety of Surgical Operation.

3. A MEDICAL CLINIQUE—every Wednesday, from 2½ to 3½ o'clock, P. M., by Prof. METCALF. Patients, laboring under Diseases of the Lungs, Heart, &c., are presented at this Clinique; and full opportunity is given to the Students, for the study of Physical Diagnosis.

4. SURGICAL CLINIQUE, WITH THE DISEASES OF THE GENITO-URINARY ORGANS—Every Wednesday, from 3½ to 4½ o'clock, P. M., by Prof. VAN BUREN. Besides its general Surgical advantages, this Clinique presents ample opportunity for the study of Syphilitic Diseases, Strictures, &c.

5. SURGICAL CLINIQUE—Every Saturday, from 11 o'clock, A. M., to 1 o'clock, P. M., by Prof. Post. During the sessions just closed, besides various operations of importance Prof. POST performed in this Clinique before his class, Lithotrity fifteen times, and Lithotomy once, with entire success.

FEES FOR THE WINTER COURSE.

Full Course of Lectures,	**$105**
Matriculation Fee,	**5**
For Instruction by Demonstrator,	**5**
Graduation Fee,	**30**

BOARDING.

Good Board can be obtained in the vicinity of the College, at about $4 per week.

N. B.—Students will please call, on their arrival, at the College No. 107 East 14th-st. and inquire for the Janitor, Mr. Polman, who will provide them with Boarding-Houses.—Letters may be addressed to Prof. DRAPER, President of the Faculty, University, New-York.

NEW-YORK, March, 1855.

Memphis Medical College.

SESSION 1855–6.

THE Regular Lectures of this College will commence on the 1st of November, and will continue Four Months.

FACULTY.

AYRES P. MERRILL, M. D., Professor of Principles and Practice of Medicine.
JOHN MILLINGTON, M. D., Professor of Chemistry and Toxicology.
RENE LA ROCHE, M. D., Professor of Physiology and Pathology.
HOWELL R. ROBARDS, M. D., Professor of Surgery.
ARTHUR K. TAYLOR, M. D., Professor of Anatomy.
C. B. GUTHRIE, M. D., Professor of Materia Medica and Pharmacy.
HERSCHEL S. PORTER, D. D., Professor of Natural History and Geology.
LEWIS SHANKS, M. D., Prof. of Obstetrics and Diseases of Women & Children.
E. WOODWARD, M. D., Demonstrator of Anatomy.

The Fee for the entire Course is $105, payable in advance. Matriculation Fee $5, Graduating Fee, $25; Anatomy and Dissection $10, to be taken once before graduating. Rooms open from the 1st of October.

A Preliminary Course of Lectures, free to all students and the public, by each Professor, on subjects connected with his department, which cannot be fully taught in the regular course, will be delivered during the month of October.

CLINICAL INSTRUCTION is given twice a week at the Memphis Hospital. A City Dispensary Clinique has also been established at the College, at which Operations are performed, and a number of cases prescribed for and lectured upon by the Professors daily.

The College possesses an ample Museum and complete Chemical and other apparatus.

Students desiring further information will address Prof. L. Shanks, M. D., or, on arriving in the City, call on him at his office on Main-street.

The Preliminary Courses begin on the First Monday in October.

The Regular Lectures commence on the First of November, and continue sixteen weeks. The public commencement at which the degrees are conferred is held immediately after the close of the Lectures.

The Fees, for which the payment *must be made in advance*, are as follows:

Tickets to the Lectures of the Seven Professors,	**$105**
Matriculation Fee, for fuel, servants, &c.,	**5**
Tickets for Practical Anatomy,	**10**
Graduating Fee,	**25**

Comfortable Boarding, in private families, may be obtained at $2 50 to $4 00 per week.

Students desiring further information can apply, by letter, to PROF. LEWIS SHANKS, M. D., Dean of the Medical Faculty; or, on their arrival in the city, can call at his office, on Main-street, or at the office of the Secretary of the Faculty, in the College Building.

LEWIS SHANKS, M. D.,
Dean of the Faculty.

MEMPHIS, TENN.

UNIVERSITY OF LOUISVILLE.

MEDICAL DEPARTMENT.

The Nineteenth Annual Course of Lectures in this Institution will commence on the last Monday in October next, and terminate on the last of February, under the following arrangement:—

Benjamin R. Palmer, M. D., Professor of Descriptive and Surgical Anatomy.

Lunsford P. Yandell, M. D., Professor of Physiology and Pathological Anatomy.

Samuel D. Gross, M. D., Professor of the Principles and Practice of Surgery.

Henry Miller, M. D., Professor of Obstetric Medicine.

Lewis Rodgers, M. D., Professor of Materia Medica and Therapeutics.

J. Lawrence Smith, M. D., Professor of Medical Chemistry and Toxicology.

Austin Flint, M. D., Professor of the Theory and Practice of Medicine.

T. G. Richardson, M. D., Demonstrator of Anatomy and Director in Pathological Anatomy.

The fee for admittance to the Lectures of each Professor is $15, ($105 in all,) payable invariably in advance. Matriculation and Library fee together, $5. Graduation fee, $25. Practical Anatomy and Dissection, $10—ticket to be taken at least once before graduation. Rooms open from 1st of October.

A Preliminary course of Lectures will be delivered, without additional charge, during the month of October.

Clinical Instruction is given twice a week at the Louisville Marine Hospital. Ticket $5, to be taken once before graduation.

A clinique has been established in connection with the University, at which cases are examined, prescribed for and lectured upon in presence of the class.

☞Good boarding can be procured at $3 per week.☜

B. R. PALMER, M. D.,
Dean of Faculty.

MASSACHUSETTS MEDICAL SOCIETY.

PRIZE QUESTION.

THROUGH the liberality of one of its Fellows, the Massachusetts Medical Society is authorized to offer the sum of *One Hundred Dollars* to the author of a Dissertation, which may be adjudged worthy of a Prize by a Committee appointed by the Councillors of the Society, on the following subject, viz :

"*The History and Statistics of Ovariotomy, and under what circumstances the operation may be regarded safe and expedient.*"

Dissertations for the Prize must be sent, post-paid, to the Corresponding Secretary, Dr. C. E. WARE, 6, Temple Place, Boston, on or before the *First Wednesday* of April, 1856.

Each Dissertation must have written upon it some device or sentence, and be accompanied by a sealed packet on which is written the same device or sentence, and within which is enclosed the author's name and residence.

The packet accompanying the successful Dissertation will be broken, in open meeting, at the annual meeting of the Society, in May, 1856, and the author's name announced. Such portions of the Dissertation as the Society may desire, may then be read, and the whole may be printed in the Society's Communications.

All unsuccessful Dissertations will be deposited with the Corresponding Secretary, from whom they may be obtained, with the sealed package un-opened, if called for within one year after the result shall have been declared.

The Prize is open to the Profession throughout the country.

By order of the Mass. Medical Society,

B. E. COTTING, *Rec. Sec.*

ROXBURY, *Mass., July* 31,-1855.

UNIVERSITY OF NASHVILLE.

MEDICAL DEPARTMENT.

The fifth Annual Course of Lectures in this Institution will commence on MONDAY, the 29th of October next, and continue till the ensuing March.

PAUL F. EVE, M. D., Principles and Practice of Surgery.
JOHN M. WATSON, M. D., Obstetrics and the Diseases of Women and Children.
W. K. BOWLING, M. D., Theory and Practice of Medicine.
C. H. BUCHANNAN, M. D., Surgical and Pathological Anatomy,
ROBERT M. PORTER, M. D., General and Special Anatomy.
A. K. WINSTON, M. D. Materia Medica and Medical Jurisprudence.
J. BERRIEN LINDSLEY, M. D., Chemistry and Pharmacy.
THOMAS R. JENNINGS, M. D., Institutes of Medicine and Clinical Medicine.
WILLIAM T. BRIGGS, M. D., Demonstrator of Anatomy.

The Anatomical Rooms will be opened for Students on the first Monday of October.

A full **Preliminary Course** of Lectures, free to all students, will be given by the Professors, commencing also on the first Monday of October.

A Clinique has been established in connection with the University, at which operations are performed, and cases prescribed for, and lectured upon, in presence of the Class.

Amount of Fees for Lectures in the University is $105. Matriculation Fee, (paid once only,) $5. Practical Anatomy, $10. Graduation Fee, $25.

Good Boarding can be procured at about $3 per week.

Further information can be obtained by addressing

J. BERRIEN LINDSLEY, Chancellor of the University.

NASHVILLE, TENN., July, 1855.

PHILADELPHIA
COLLEGE OF MEDICINE.

The WINTER Session will begin Monday, October 8th. The SPRING Session will open in March 1856 and close in July.

DEGREES will be conferred in March and July.

FACULTY.

GEORGE HEWSTON, M. D., Prof. of Anatomy.
B. HOWARD RAND, M. D, Prof. of Chemistry.
HENRY HARTSHORNE, M. D., Prof. of Institutes of Medicine.
JAMES L. TYSON, M. D., Prof. of Materia Medica.
ISAAC A. PENNYPACKER, M. D., Prof. of Practice of Medicine.
JAMES BRYAN, M. D., Prof. of Surgery.
LEWIS D. HARLOW, M. D., Prof. of Midwifery, &c.
JOSEPH PARISH, M. D., Emeritus Prof. of Midwifery, &c.

FEES.

One full Course, $84.
Perpetual Ticket. $150.
Matriculation, $5.
Graduation, $30.

The Students are examined Daily by the Professors upon each branch. A ticket of admission for the year to the Philadelphia or Pennsylvania Hospital will be furnished to each advanced or perpetual Student; such as are sufficiently advanced will have also opportunities of attending cases in Medicine, Surgery, and Midwifery, under care of the Professors.

For announcement or other information address

B. HOWARD RAND, M. D., Dean,
At the College 5th street below Walnut.

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FOWLERS AND WELLS, 308 BROADWAY, NEW-YORK, publish the following Scientific SERIALS, which afford an excellent opportunity for bringing before the public all subjects of general interest.

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It shows the well-known energy and tact of the spirited publishers, as caterers for the people.—*N. Y. Tribune.*

The cleanest, smoothest, and whitest paper, printed in a style of typographical beauty such as we never saw exceeded—no, nor equalled.—*Tioga Co. Agitator.*

We pronounce it the most beautiful weekly paper in the Union.—*Rhode Island Reformer.*

THE WATER-CURE JOURNAL AND HERALD OF REFORMS. Devoted to Hydropathy, its Philosophy and Practice; to Physiology and Anatomy, with Illustrative engravings; to Dietetics, Exercise, Clothing, Occupations, Amusements, and those Laws which govern Life and Health. Monthly, at One Dollar a Year.

Standard authority in all matters pertaining to Phrenology. The beautiful typography and the superior character of the illustrations are not exceeded in any work with which we are acquainted.—*Am. Courier.*

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It holds a high rank in the science of health; always ready, straight-forward, and plain spoken, it unfolds the laws of our physical nature, without any technicalities, but in a form as attractive and refreshing as the sparkling element of which it treats.—*New-York Tribune.*

Within the whole range of our acquaintance, we know of no publication so well adapted to doing good as the WATER-CURE JOURNAL.—*Lockport Messenger.*

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THE NEW ORLEANS

MEDICAL AND SURGICAL JOURNAL

FOR JANUARY, 1856.

ORIGINAL COMMUNICATIONS.

ART. I. *Experimental Researches into Animal Heat in the Living and Dead Body:* by BENNET DOWLER, M.D.

(*Continued from page* 308.)

"*Je sais que la vérité est dans les choses, et non dans mon esprit qui les juge, et moins je mets du mien dans les jugements que j'en porte, plus jesuis sûr d'approacher de la vérité.*"

Temperature of Negroes.—Sept. 21, 1851; air sunrise, 71°; weather dry and clear; light winds; Mr. M.'s plantation 11 miles below New Orleans; 11½ A. M., to 2½ P. M.; Dr. Cartwright present assisting.

Linda, a Guinea negro slave, quite black, and aged about 75; axilla, (hairless,) 99¾°*.

Quammy, a Guinea negro slave, aged 90, or more; axilla, (hairless,) 101½°.

A slave negro, a native of Africa, supposed to be aged 100 years. In the shade, bend of the arm, 97½°; axilla, (hairless,) 99°; after exposure to the sun for half an hour, the axilla gave 99½°.

*Speaks French, and a little English; says he left two children in Guinea—has forgot his native language; but on giving him a number of names in French and English, which I supposed to be such as he would be most likely not to forget, he recalled several, as he said—as sun, which he called randah—mouth, ocha—bread, massah—God, Allah, &c. The latter is, as all know, the Arabic name of God.

A middle-aged, healthy negro slave, after sitting in the sun half an hour, gave, in the bend of the arm, 99¾°.

A healthy slave boy, quite black; axilla, 99°; bend of the arm, 98°.

A woman, quite black, aged 25; bend of of the arm, 99°.

A black healthy child, aged 5 or 6; bend of the arm, 98½°.*

Same time and place: Dirt-eater; anasareous subject.—John, slave, quite black, of middle age, intelligent; face, legs and scrotum slightly anasarcous; skin dry and rough; pains in the left kidney; occasionally, chiefly at night, discharges from one to two gallons of urine; pulse regular; percussion affords normal resonance; voracious appetite, particularly for dirt; to restrain him from dirt-eating, he wears a large iron mask or muzzle, secured with chains and an iron band: hand, 98°; bend of the arm, 98½°; axilla, 100°.

Dropsy.—Madison, a black slave of middle age, has abdominal dropsy, dry rough skin. In the shade, hand, 93°; bend of the arm, 97½°; axilla, 98°. He was exposed to the sun for 30 minutes, (which, as he affirmed, gave him head-ache,) and was brought back into the shade, when his temperature was taken again, immediately, hand, 98°; bend of the arm, 98½°; axilla, 99½°.

WHITES, PATHOLOGICAL SERIES.

Miscellaneous Cases.—Circumscribed false aneurism.—1843; Nov. 2nd. H. W. S., a young Englishman, stabbed in the left axilla with a penknife, two weeks since, has, in consequence, a small oblong pulsatory tumor in the tract of the axillary, for which Dr. Mercier ligated the left subclavian artery.

Nov. 4th.; the right hand 102°; the left hand, (the aneurismal side,) 102°. Died 14 days after.

Traumatic Tetanus; Opisthotonos and Trismus.—H., aged 19; right bank of the Mississippi, (Freetown,) opposite New Orleans, received a splinter in the sole of the foot, two weeks ago; sick two days; axilla 100½°. Died 24 hours after.

Amputation of the Leg: 1848; Sept. 18th. A young man in the shrubbery of a swamp, mistaken for an alligator, was shot† in the foot and ankle, three months since. Just before Dr. Compton began the amputation, this man's hand gave a temperature of 89°; the bend of the arm, 95°.

*The mother of this child and six others, was born in Virginia, and is now about 40 years old, and has, during a long residence in Louisiana, contracted an enormous bronchocele.

† About the same time, a similar accident occurred to another citizen of New Orleans.

During the inhalation of ether, which did not produce complete insensibility, the bend of the arm gave, in three minutes, 97½°; in ten minutes after the operation, the same region gave 95½°. Next day—hand, 103°; bend of the arm, 104°. Had lost much blood during the night; now arrested by ligature. Recovered in due time.

Apoplexy—Post-mortem Heat.—E. T. D., aged 46, born in France; for many years resident in New Orleans; stout and fleshy; long a sufferer from strictures and retentions of urine; would allow neither the catheter nor sound to be applied. About a month after my attendance upon him for an attack of acute pneumonia, he was seized in the night with a chill and fever; after rising from his bed in the morning, he fell and instantly expired; 30 minutes after which, the axilla gave 102°; 10 *m.* 105°, continuing stationary 25 *m.*; 5 *m.* 104¼°; 5 *m.* 104°, remaining stationary 10 minutes, that is, as long as observed. A partial post-mortem examination brought to light a stone in the bladder of enormous size.

Congestion of the Brain.—1846; March 18th; air about 70°. A. B., aged 56, sick three days; comatose, insensible, dying; skin clammy; axilla 103°.

Apoplexy, Post-mortem Refrigeration.—1843; Dec. 13th; a stout man, aged about 30, whose last symptoms were supposed to indicate apoplexy, and whose death took place 1½ hours before the following experiments; was freely exposed to the air, at 54½°, and gave these results: axilla, 10 *m.*, 91°; 8 *m.*, 89°; rectum, 5 *m.*, 95°; 3 *m.*, 95°; thigh, 5 *m.*, 92°; 2 *m.*, 91°; epigast., 10 *m.*, 94°; heart, 10 *m.*, 94°; brain, 7 *m.*, 89°, and falling.

Dysentery.—1847; Aug. 6th; F. H., a Scotchman, aged 22, resident nine and sick five days; hand, 102½°; bend of the arm, 103¾°; axilla, 104°. Cured in 11 days.

Chronic Enteritis, with Pulmonitis. Post-mortem Heat.—1843; Aug. 18th; room about 86°; M. H., a female, aged 30, sick about 60 days; dead two hours; greatly emaciated; an incision three inches long, in the umbilical region, admitting the air freely; temperature, 10 *m.*, 102°; in 15 *m.* 104°: in 20 *m.* 106½°; in 30 *m.* 104°; heart, in 20 *m.*, 104°; in 20 *m.* 104; in 25 *m.* 104°; in 30 *m.* 104°, and slightly declining; right lung infiltrated with pus, gave, in 10 *m.*, 102°; thigh, 100°.

Chronic Enteritis of three months, following Yellow Fever.—1844; Jan. 3rd; P. V., born in Nova Scotia, aged 31; convalescent; hand, 95°; axilla, 100°.

Enteralgia, following Dysentery.—1854; Jan. 6th; air 57°; G. V., aged 27, born in Denmark, resident two months, sick seventeen days; hand 82°; bled eight ounces; hand 77½°; skin generally cold; subjectively hot; recovered.

Post-mortem Heat in Dysenteric subjects: Period of Refrigeration: Chronic Dysentery.—1843; Oct. 21st; air about 81°; H. L., Irishman, aged 23, resident eleven years, sick four months; dead one hour; epigast., 100°; brain, through the orbit, 93°.

Chronic Dysentery—Post mortem Refrigeration.—1843; Dec. 29th; room 61°; Mrs. E. O., aged 26, sick fifty days; delivered prematurely three weeks since of a child, which died yesterday; mother dead seven hours; heart and left lung, 20 *m.*, 86°; liver, 15 *m.*, 89°; brain, 30 *m.*, 81°; 15 *m.*, 80°; centre of the thigh, 15 *m.*, 74½; brain, 10 *m.*, 78°.

Chronic Ophthalmia of three years replaced for 24 hours by Yellow Fever symptoms—return of the Ophthalmia.—1843; Aug. 26th; air about 83°; S., aged 34, taken 24 hours ago with symptoms of yellow fever, bled to syncope; to k a saline purgative and porter; the fever receded; axilla, 102°; hand, 99°. The ophthalmia returned.

Traumatic Erysipelas.—1843; Feb. 5th, 4 P. M.; M. F., aged 42, steamboatman, received a wound of the scalp over the posterior margin of the parietal bone, a week ago, followed by erysipelas of the scalp and face, with delirium: hand, 98½°; axilla, 101; the face, (the patients' hand used to press the thermometer against the cheek,) 102°. Result unknown.

Erysipelas of the Leg; same day; J. J., aged 43, Scroto-perineal region of the right side corresponding to the limb affected, 104°; axilla of the same side, 104°; the hand being 94½°. Recovered.

Diabetes Mellites.—1854; May 2nd; W. W, aged 43, resident four months; under treatment one month; moderately emaciated; skin dry; thirsty; dejected; average discharge of saccharine urine, nine pints daily; hand, 103½°; axilla, 102½°. Died 23 days after.

Scarlatina.—1845; Sept. 28th; R.'s girl, aged 7, sick three days; hand and axilla each 104½°; 29th, hand and axilla each 103½; 30th, convalescent.

Scarlatina—Artificial Refrigeration.—1845; Dec. 8th; air 66°; Miss C., aged 6½ years, sick two days and without treatment; a very severe case; tongue, hand and axilla each 105°; fold of the arm, 104°. I used cold affusions for five minutes; water at 50°. In fifteen minutes

after drying the skin, and replacing the patient in bed, the hand gave 96°; the axilla 103°. In 6 hours after, hand 102°; axilla 103°; air 72°.

Dec. 9th, noon; hand 103°; axilla 103½°. The patient recovered in ten days, having used various medicines; but, before any medicine had been given, it was found that the heat had been reduced by affusions alone; it never rose after the affusion so high as before.

Scarlatina.—March 18th, 1846.—J., aged 5; sick three days; pulse 140; hands 103½°; axilla 104½°. Result not noted.

Phthisis and Ascitis.—1844; May 2; R. G., aged 27, had intermittent for six months; hand 100°; axilla 100°. Died three days after.

Phthisis and Hepatitis.—1844; May 2; A. O., an Italian, aged 26, resident seven months and sick six months; hand 104°; axilla 103½°. Died 25 days after.

Phthisis.—1843; Sept. 25th; 4 P. M.; person exceedingly emaciated; lungs disorganized; twenty-five minutes after death the axilla gave 107°

Typhoid Pneumonia.—1843; Feb. 11th; 1 P. M.; J. R., aged 26, sick 15 days; hand 101°; axilla 107°. Died next day.

Pneumonia.—1844; Jan. 4th; air about 80°; M. O., aged 24, sick two weeks; hand 100°; axilla 104°.—6th; air 57°; hand 107°; axilla 106¾°. Recovered in about two months.

Pathological Series. *Animal Heat: Typhus—Recoveries Chiefly.*—Feb. 9th, 1848. J. M., Irishman, aged 37, sick five days; axilla 101½°; bend of the arm 100¾°; hand 101°. Three days afterward, convalescent.

Same disease and date: M. M., Irishman, aged 24, resident one year, sick four days; axilla 104°; bend of the arm 101°. Result unknown.

Same disease and date: T. O., Irishman, aged 25, resident four days, sick five days, (from the ship River Dale;) axilla 105°; bend of the arm 102½°; hand 104°. Convalescent three days after.

Same disease and date: P. W., Irishman, aged 23, resident three days, sick two weeks; (ship River Dale, 11 weeks from Liverpool;) axilla 102½°; bend of the arm 101½°; hand 101¼°. Cured, Feb. 28.

Typhus (Ship) Fever.—1848; Feb. 12th. B. M., Irishman, aged 23, resident two weeks, sick five weeks, confined to bed three weeks at sea, (ship River Dale;) recovered so as to walk about for a week after reaching New Orleans; relapsed six days ago; axilla 106°; bend of the arm 105°; hand 104°. Living, Feb. 27th.

Typhus.—1848; Feb. 15. D. B., Irishman, aged 30, resident four months; axilla 105°; bend of the arm and hand, each 103°. Feb. 22d. cured.

Typhus.—1848; March 1st. P. F., born in Ireland, aged 35, resident eight weeks, sick ten days; axilla 104°; bend of the arm 104° Recovered.

Typhus (Ship) Fever.—1848; Feb. 9. M. M., Irishman, aged 19; (ship Courier, 8 weeks out;) resident six days, sick ten days; axilla 105°; bend of the arm 103½°; hand 102½°. Convalescent in six days.

Typhus.—Feb. 12, 1848. J. H., Irishman, aged 20, six weeks in the State, and two in the city; sick four days; axilla 105¼°; bend of the arm 105°; hand 104°. Feb. 11th, axilla 105°. Feb. 12th, tied down; axilla 104°; bend of the arm 103°. Feb. 27th, convalescent.

Typhus.—1848; Feb. 11th. B. S., Irishman, aged 34, resident five years; had yellow fever in 1847; sick three days; axilla 104°; hand 102½°; hand against the abdomen, 102°. Cured six days after.

Typhus.—1848; Feb. 13. P. T., Irishman, aged 18, resident three weeks; immigrant (ship Courier); sick one week; axilla 105°; bend of the arm 104½°. February 15th, axilla 103½°; bend of the arm 103°. Recovered.

Typhus.—1848; Feb. 15th. M. O., Irishman, aged 22, resident one month; immigrant (ship Courier); sick seven days; axilla 104°; bend of the arm 104°; hand 105°. Feb. 18th, cured.

Same date and disease: R. L., Irishman, aged 20; immigrant, (ship Courier); resident twelve days; sick five days; axilla 104°; bend of the arm 104½°; hand 104°. March 17th, living.

Typhus; Fatal cases; (Ship) Fever.—1848; Feb. 9. P. B., Irishman, aged 40, resident six days, sick nine days; took three doses of castor oil; axilla 104½°; bend of the arm 103°. Died Feb. 28th.

Typhus.—1848; March 1. M. R., Irishman, aged 22, resident 22 days, sick 14 days; axilla and bend of the arm each 103°. Died nine days after.

Same disease and date: P. M, Irishman, aged 20, resident three weeks, sick fourteen days; axilla 104°; bend of the arm 101½°. Result unknown.

Typhus (Ship) Fever.—1848; Feb. 9. P. H., aged 30, Irishman, resident two days; sick on the ship River Dale, 12 days from Liverpool, Nov. 17th; has taken no medicine; axilla 104½°; bend of the arm 103½°; hand 102½°. Feb. 11th; axilla 104°; bend of the arm 102°; next day, axilla and bend of the arm each 103°; hand 101°. Died Feb. 24th.

Typhus.—1848; Feb. 9. J. H., Irishman, aged 31, resident thirteen weeks, sick six weeks; axilla 105°; bend of the arm 104½°. Died 10 hours after.

Typhoid Fever.—1844; Jan. 30; 5, P. M. W. J., aged 22, sick 29 days; hand 106½°; axilla 108°.

Feb. 3rd; 2, P. M.; hand 104°; axilla 104°.

Feb. 5th; 3½, P. M.; hand 100°; axilla 104°. Died two days after.

Post-mortem Heat. Incipient Refrigeration. Typhoid Fever.—A case which had been diagnosed "*endocarditis*"; the treatment for several days before death had been expectant. The history inclined me to think the case congestive remittent, though the lesions found indicated typhoid. Heart, natural: 1848; Dec. 17th. R. M., Englishman, aged 40. Dead 1½ hours; rectum 5*m.* 106½°; 5*m.* 106¾°; 5*m.* 106¾°; axilla 5*m.* 98°; 5*m.* 97°; 5*m.* 96°; 30 minutes later, rectum 103½°.

Typhus: Post-mortem Heat.—1848; Feb. 15th. W. J. F., born in Maryland, aged 22, last from Natchez, resident five weeks, sick four weeks; dead 15 minutes; axilla 10 minutes, 103°; 5*m.* 103°; 5*m.* 103½, stationary; axilla, 1½ hours after death, 100°.

Same time and disease: Miss ***, aged about 22; dead about three hours; axilla 102°, and falling.

Typhus: Post-mortem Heat.—1848; Feb. 28th; air of the room about 65°. Mrs. *** aged 26, born in Ireland, last from New-York, resident two months, 16 days sick; dead 20 minutes; axilla 100°; 5*m.* 101½°; 10*m.* 101½°; vagina 5*m.*, 107°; 5*m.* 107½°; one hour after death, 107¼°; 15*m.* later, at dark, when the experiment ended, 107¼°.

Typhus: Post-mortem Heat.—1849; Jan. 21st; house 64°: a man dead half an hour; axilla 106°, and rising still when the experiments ended.

Typhus: Post-mortem Heat.—1845; July 22nd; air, 5 A. M., 76°; 5 P. M., 94°. A. T., a Swiss, aged 30, last from Havre, ship Swanton, 51 days at sea; died the second day after landing; experiments began 25 minutes after death, and lasted without interruption 2½ hours, having been stopped by the funeral. At intervals, the axilla gave 109°, 110°, 110½°, 110¾°; rectum 111½°, 111½°, 111½°; axilla 110½°, 110½°, 110¾°; rectum 111°; epigast. 109°; left hypogast. 110°; right do. 110½°; iliac and umbilical 110°.

Typhoid Pneumonia with Pericarditis—Hepatization.—1844; May 2nd, 30 minutes past noon; air about 88°. P. M., aged 35, sick eight days; hand 90°: bend of the arm 99°; axilla 104°; poplitial region 99°;

Died 4½ hours after. Remained in bed fifteen minutes, and then as long in the dead-house, covered with a linen sheet only; 35 minutes after death, the axilla 104°, and the popliteal 100°; in 5*m.* axilla 105°; popliteal 101°; 5*m.* axilla 105¾°; popliteal 101°; 5*m.* axilla 106°; popliteal 101½°; bend of the arm 101°; rectum, 5*m.*, 100°; bend of the arm 101°; 5*m.* groin 102°; bend of the arm 100°; 10*m* groin 100°; hand, 10*m.*, 100°; rectum, 5*m.*, 106°; axilla, 5*m.*, 108 nearly. The arm having been extended, and the axilla exposed for some minutes, the heat of the latter was only 101°. The following observations were made in the order in which they stand, at intervals of one, two three or more minutes: rectum 108½°; axilla 101°; rectum 109½°; axilla 101½°; rectum 110°; axilla 102°; rectum 110½°; axilla 102°; rectum 110½°; axilla 102°; rectum 110½°; axilla 102°. The observations lasted about an hour and a half, and were stopped by the lateness of the evening, at about two hours after death, the air being then near 79°. Brain, 17 hours after death, 83°; centre of the thigh 89°; air 83°. Putrefactive odor absent at 22 hours after death.

Here the axilla attained a maximum of 108°, nearly one hour and a half after death, exceeding that of the living state 4°, as taken 4½ hours before death, exceeding that of the dead subject 35 minutes after death by the same number of degrees. A still greater contrast is found in the palm. The rectum arose from 100° in an hour o 110½° after death, to the maximum of 110½° at 25 minutes later, and was stationary afterwards, having gained and retained 10½°, while the axilla gained 4°, lost 7°, and regained 1°, and then remained stationary; when night approached, preventing further observations. It is probable that when the arms ceased to be moved, that the axilliary focus was re-established for the period (varying in different cases) anterior to physical refrigeration. The upper third of the thigh, which was not punctured, is supposed to have attained a temperature equal to that of the rectum, although the surface at the groin (an unfavorable place for accurate observation without puncture) indicated a low, oscillating calorification.

Congestive Fever.—1848; Aug. 26th. B. S., born in Ohio, resident in Louisiana five years, aged about 25; sick nine days; hand 97°; bend of the arm 97½°; axilla 99°. [He had previously used warm baths, blisters, sinapisms and other means for twenty-four hours. When first called, on the 8th day, I found him colder to the touch. He recovered in a few days. About two weeks after having left his room, I was called to see him in an attack of yellow fever, from which he recovered in about

ten days. He resumed his business, (engineering,) whereupon, he was attacked with intermittent. Thus, in two months, he had three different fevers, all having been severe attacks, and in the same place. Within fourteen months preceding his last attack, he had had two attacks of congestive fever.]

Congestive Fever.—Last stage.—Death.—1843; Aug. 23rd; air 86°. J. C., aged 25, late from Bayou Sara, sick seven days; hand 80°; fold of the arm 83°. Died in the night, six hours after. One hour after dissection, and thirteen after death, the thigh gave 92°, the room being 82°, though the room where the body had lain exposed to the air had been much cooler during the preceding night. [In this case almost all kinds of internal and external stimulants were tried by his physician, as brandy, porter, opium, turpentine, camphor, doses of quinine from 90 to 120 grains each, blisters, sinapisms, liniments of cantharides, oil of turpentine, &c., &c.]

Congestive Fever: Convulsions: Cerebral and Abdominal Lesions.—1848; Sept. 22d. F. H., aged 28, resident on the River coast, near New Orleans, 11 years; sick 30 hours; hand 91°; bend of the arm 98°; axilla 100°. Died next day, 64 hours from the inception of the disease. The skin became hot before death; but 13 hours after was cold to the touch, the air having been as low as 66°.

Congestive ("pernicious") Fever, complicated with Cholera.—1849; May 18th. W. C., aged 35, sick five or more days; axilla 101°; bend of the arm 97¼°; palms 94½°; popliteal 95°; ankles 89½°; tongue 95°. Died the same day.

Congestive Fever: Post-mortem Heat.—1848; Aug. 28th; room 88°. A. T., born in Maine, resident six months, aged 35; sick seven days; dead forty-five minutes; axilla, 5*m.*, 108°, 5*m.* 108½°, 5*m.* 109°, when the experiment ended.

Remittent, ending in Intermittent.—1846; Oct. 7th. D. M., aged 25, sick 20 hours; hand 103½°; axilla 104½°. Recovered in two days.

Remittent, (variously diagnosed as Typhus, Hepatic, and Intermittent Fever.)—1851; May 12th. J. B. aged 26, sick five days; ten minutes after having been sponged with vinegar and water, hands 103½°; bend of the arm 103°; axilla 104°; calves of the legs 103°. Two days after convalescent.

Same disease and date:—P. N., aged 44, sick five days; axilla 104°; bend of the arm, palms and inner ankles, each 103°; calves of the legs

102°. Convalescent in two days; continued to improve until near the close of the month, when he was carried off by cholera.

Intermittent.—1846; Sept. 16th; air 90°. P. L., aged about 50; two weeks ago had an intermittent; recovered, and two days ago had a relapse; now in the chill, hand 104°; bled 16 ounces, the blood falling on the thermometer in the bowl raised the mercury to 102°; (the blood clotted in three to four minutes;) and in about 2*m.* fell to 100°; in 3*m.* to 99°; 4*m.* 98°; 3*m.* 97°. Cured in three days.

Intermittent.—1845; Sept. 8th; air about 84°. J. M., aged 22, late from St. Louis, resident three weeks; recovered two weeks ago from an intermittent which had lasted one month; relapsed two days ago; daily chill, without complete intermissions; chill two hours since; hand 105°; bend of the arm 105°; axilla 106°. Recovered in four days after.

Same disease and date: J. H., aged 26; ague a month ago; recovery; relapse four days since; a chill two hours ago; hand 105°; bend of the arm 104°; axilla 105½°. Recovered, it is supposed.

Intermittent Fever.—1843; Aug. 14th; room about 86°. A. H., aged 27, 4 days sick, conclusion of the hot stage; axilla 108°; hand 103°; the sweating stage having now set in, the heat declined 2½° in 10 minutes.

Aug. 15th. Complete intermission; axilla 95°. On the following day the cold, hot and sweaty stages were repeated. Recovered four days after.

Intermittent Fever.—1843; Sept. 1st. A C., aged 28, sick five days, chills daily at 11, A. M.; in the chill, 98½° in the hands; one hour after the chill, hands 104; during an intense nausea, ending in vomiting, the mercury fell 2° in 4*m.* 7th, cured.

Intermittent.—1843; Sept. 4th; air about 83°. J. I., aged 31, sick five weeks; hand during a chill 102°. Recovered, it is supposed.

Intermittent, with general Dropsy.—1843; Oct. 6th; air about 89°. W. M., aged 29, sick nine days; (chronic enlargement of the spleen; ascitis;) hand 5*m.*, during the extraction of twenty ounces of blood, 103°; blood in 6*m.* 96°, coagulating. Probably recovered.

Yellow Fever, complicated with Hepatic and Pulmonary Engorgement and Pericarditis.—June 20th, 1844, 2¾ P. M. A. M., aged 40, sick three weeks, 12 days from Vera Cruz; hand 100°; bend of the arm 103°; axilla 104°. Died six days after.

Yellow Fever, complicated with Pleuro-Pneumonia.—1843; Oct. 14th;

air about 71°. W. M., born in Ireland, aged 70, resident four weeks, sick eight days, leeched, cupped, blistered; hand 93°; axilla 101°. Died the same day.

Yellow Fever, Congestive type.—1843; Oct. 30; air about 77°. A German, aged 30, resident three years at Carrollton, near New Orleans. Case variously diagnosed as Congestive, and Yellow Fever; lower part of the body blueish; the upper mottled with yellow, blue, red and white; hand 10*m.*, 81°; axilla 7*m.*, 90°; 4 hours later, the same. Died 7 hours after.

Yellow Fever, complicated with Pneumonia of both Lungs.—1843; Nov. 4th; air about 80°. M. D., aged 22, late from St. Louis, sick three or four weeks with pneumonia; yellow fever supervened; breath and expectoration extremely fœtid; hand 102°; axilla 104°. The sputa, consisting of yellow and slate-colored mucosity, blood and pus, became more and more putrid; the skin and eyes more and more yellow, until the patient died, four days later.

Yellow Fever, Intermittent type.—1843; Aug. 29th. A. R., German, aged 28, late from New-York, resident eight days and sick four; chills second and third days; bled 24 ounces; twenty minutes after, while the blood was coagulating, the bulb of the thermometer being immersersed in it, gave, in 5*m.*, 98½°; 5*m.* 98°; 10*m.* 95°; air 83°; hand, 21*m.*, 104°; axilla 5*m.*, 107°; 5*m.* 107°.—30th; hand 96°; axilla 102°. Died 2 days after, having become very yellow.

Yellow Fever, commencing with Intermittent: Post-mortem Heat.—1843; Oct. 10th; room 80°. J. H., born in New York, aged 26, late from St. Louis, resident two and sick with intermittent eight days; with yellow fever two days; dead three hours; exposed to free ventilation on a stone floor; experiments in order following, ended five hours after death, having been recorded every five or ten minutes, more or less: axilla 101°; rectum 100°; chest 100°; epigast. 101°; brain, through the orbit, 97°; thigh 100°; epigast 100°; thigh 99½°; brain 95°. The liver, removed from the body, cut into four pieces, exposed to the air at 80°; when the parts were brought together around the thermometer, the air being at 80°, gave, in 8*m.*, 104°, at five hours after death, and one hour after the dissection commenced.

This man had walked up three flights of stairs without difficulty the day before death.

POST-MORTEM SERIES, ILLUSTRATIVE OF THE PHYSICAL LAWS OF REFRIGERATION IN HUMAN CADAVERA.

Before proceeding further, it may be proper to add examples of refrigeration in human cadavera, leaving the reader to explain them, if possible, as the writer's only concern at present is, to record facts.

Typhus.—1849; Jan. 27; sunrise, 47°. T. P., aged 37; dead 4½ hours; air at death 52½°; during the experiments, which lasted 1½ hours, the air rose to 59°; each observation lasted from one to five minutes, in the order following: rectum 97½°; centre of the thigh 90°; of the calf 77°; concave surface of the liver 99°; thigh 90°; calf 76½°; brain, (through the orbit,) in the centre, 87°; at the circumference next the skull, 85°; thigh 89¼°; calf 76°; brain, centre, 86½°; circumference 84°; thigh 88½°; calf 76°; brain, centre, 86°; thigh 88°, 89°, 89¼°; calf 74½°; thigh 87°; brain, centre, 85½°; circumference 84°; thigh 86½°; calf 75°; brain, centre, 85½°; circumference 84°; thigh 87; calf 74; rectum 94°; thigh 87°; calf 73½°; brain, centre, 84½°; circumference 83°.

Notwithstanding the oscillations of temperature or occasional elevations, the tendency to refrigeration, from the circumference towards the centre, agreeably to the physical law, is here demonstrated. At no time did the temporary increments equal the original points of departure. The slow ratio of refrigeration in this case, as well as those risings and fallings, and fallings and risings, alternately, including the prolonged stationary state of the mercury, which have been or will be detailed, are expressive of a peculiar kind of caloric, or peculiar laws of calorification after death, hitherto unknown in physiology, physics, or chemistry.

Illustration of the Physical Law of Refrigeration, from the surface towards the centre. Congestive Fever.—J. C., a Swiss, aged 47, last from Havre, resident two years; died on the 13th day of his illness, Aug. 14, 1845. The skin was generally cool before death; the body after death was probably hot; at 19 hours after death it was rigid; 21 hours after death rigidity began to decline. The experiments lasted an hour and a half, having ended at 30 minutes after noon, at which time the air of the room was 87°; some other media in contact with the cadaver, as the stone floor, &c., were probably of a much lower temperature. Right axilla 88°; calves of the legs, on being pressed together, 84°; rectum 91°; epigast. 93°, and falling; right hypogast. 92°, and falling; left do. 91°; left axilla 87½°; right 87¾°; bend of the arm 86½°; in 2 min., 86¼°; 2 min. 86°; calves 84°; epigast. 92°; left hypogast. 91°; right do. 91½°; calves 84°.

Remittent.—1849; Jan. 15th. H. D., aged 30; dead eight hours; rectum 95°; liver 97°; pericardium 97½°; right chest 95°; left 95°; thigh 90½°; calf 81½°; nine hours after death, thigh 89½°; calf 80°; soon after, thigh 88½°; calf 79½°. The air at sunrise, 68°; in the house where the experiments were made, at 11, A. M., 74°.

Yellow Fever.—1843; Sept. 12th. A young man dead 20 hours; room 91°; epigastric 91°; thigh 91°.

Another man, dead about 15 hours: Oct. 6th; room 86°; epigast. 92°; chest 91°; thigh 87°.

Yellow Fever.—1843, Oct. 2nd. A man dead 19 hours; room 86°; epigast. 91°; thigh 89°. Another, 18 hours dead; epigast. 90°; thigh 88°. Another, (Sept. 28th,) dead 22 hours; air 86°; epigast. 91°. Another, (Oct. 15th,) dead five or six hours; air 66°; axilla 89; thigh 89°; brain, (through the orbit,) 86°; epigast. 93°.

Yellow Fever.—1843; Oct. 20th; air of the room about 80°. A man, aged about 30; dead 12 hours; room 78°, 80°; thigh, 10*m.*, 89°; brain, (through the orbit,) 10*m.*, 83½°; epigast 5*m.*, 92°; heart 5*m.*, 91°; chest 5*m.*, 91°; rectum 5*m.*, 91°; thigh 89°.

Another man, dead about ten hours, the next day exposed to temperature ranging from 60° to 80°; thigh 86°; epigast. 86°; brain, (through the orbit,) 84°; incipient putrefaction.

Yellow Fever.—1843; Dec. 13th; room 54½°. W. J., born in Maine, aged 35, resident 44, and sick 19 days; dead 24 hours; epigast. 65¾°; thigh 56¾°; brain 56¾°; calf 54½°; the same as the room.

General Refrigeration, nearly complete; the Calf Refrigerated; began to be Reheated.—(The heat of the weather has been omitted by mistake, but must have exceeded 87°.) The experiment lasted 1¼ hours:—

Malignant Fever.—J. H., born in Ireland, aged 32, last from the River coast, where he had suffered from dysentery for six weeks; resident two days; died of "Malignant Fever;" 13 hours after, axilla 96°; rectum 100°; epigast. 102°; left hypogast. 100°; right do. 101; right and left chest each 98°; thigh 95°; calf 87°; axilla, epigast, chest, and left hypogast. as above; right hypogast. 100°; iliac regions 99°; thigh 95°; rectum 99½°; calf 86½°; chest and axilla the same; epigast. 98°; right and left hypogast., iliac, and rectum each 99°; thigh 94°; calf 87°. The experiments were made at intervals of a few minutes, consecutively.

Inflammatory Fever.—1845; Sept. 6th; air of the room 83½° to 85°. P. L., aged 27, sick 8 days; dead 16 hours; thigh and shoulder (deltoid)

each 86°; in two hours these regions coïncided in temperature with the room.

Gangrene of the Leg, from a Compound Fracture; death on the 4th day.—1843; Dec. 13th. J. A., born in Germany, steamboatman, aged 23; dead 2½ hours; right foot and leg black, vesicated, and almost of double size as far as the knee, being emphysematous, crepitant; discharging air bubbles, with noise, copiously from incisions, as long as observed, that is, four hours; bubbles also escaped from the scrotum, abdomen, brain, and opposite leg, in like manner; the right leg emitted a highly putrefactive odor. Left hypochondriae, 10*m.*, 104°; right 5*m.* 104°; right thigh, (the gangrenous side,) near the groin, 10*m.*, 97½°; the left or sound side in the corresponding region, 10*m.*, 102°; left axilla 10*m.* 102°; 5*m.* 102°, nearly; left hypogast. 10*m.*, 103°; right 10*m.*, 102°; right thigh 98°; brain, (through the orbit,) 3*m.*, 93°; 10*m.* 91; left thigh (old incision) 98°; left hypogast. 5*m.*, 100°; axilla 10*m.*, 99°. Much air, blood and serosity escaped from the brain, through the orbit, by an apparently fermentative action, in successive bubblings. The day was windy; the body was exposed freely, and rested on a stone floor; the air of the room 54½°, at first; was doubtlessly becoming cooler in the evening. Although muscular contractility was not wholly absent in this body, the *rigor mortis* had not appeared at the end of five hours after death.

CHOLERA SERIES—HEAT BEFORE DEATH.

Cholera.—1849; Jan. 15th; sunrise 68°. J. R., Pennsylvanian, aged 31, sick 16 hours; tongue 98°; bend of the arm 95½°; axilla 99½°; febrile symptoms followed on the 16th; next day he died.

Cholera: Reäctionary Symptoms.—1849; Jan. 28th. M. R., aged 28, sick ten days; bend of the arm 95°; axilla 102°. Died three days after.

Cholera.—1849; May 14th. R. J., aged 31, sick 21 hours; axilla 98½°; bend of the arm 96½°. Died 68 hours after.

Same date and disease: C. B., aged 47, collapsed; axilla 96°; bend of the arm 91½°; palms 84½°. Died next day.

Cholera.—1849; June 10th. A. B., aged 25, sick 16 hours (citizen of Gretna;) palms 86°; feet 86½°. Died an hour after.

Cholera.—1848; Dec. 18th; air 76°. F. S.; 18th hour; bend of the arm 91½°; axilla 95°; an hour after, tongue 94½°. Died six hours after.

Same date and disease: J. P., born in Pennsylvania, aged 62, resident 13 years; hand 90½°; axilla 96°; tongue 94°; two hours later, about the same. Died one hour after.

Same date and disease: N. C.; tongue 90°; popliteal 90°; bend of the arm 93½°; axilla 96°. Died six hours after.

Cholera.—1848; Dec. 19th; air about 80°. F. S.; tongue 88°; bend of the arm 88°; axilla 93½°. Died a few hours after.

Same date and disease: P. F.; tongue 87½°; bend of the arm 87½°; axilla 95½°. Died next day.

Cholera.—1848; Dec. 24th. P. N., sick ten hours; tongue 88°; bend of the arm 92°; which latter, an hour later was 92°; the axilla 96°; an hour after, the same. Died 1½ hours after.

Same date and disease: B., sick 11 hours; tongue 89°; hand 84½°; bend of the arm 92°; axilla 96°; same two hours later. Died next morning.

Cholera.—1848; Dec. 25. P. R., sick 20 hours; tongue 86°; bend of the arm 87°; hand 79½°; axilla 93½°. Died next day.

Same date and disease: W. G. R., sick three days: tongue 90°; bend of the arm 90°; axilla 96°. Died next day.

Cholera.—1848; Dec. 26. P. N., sick 16 hours; hand 80°; bend of the arm 90°; tongue 88°. Died three days after.

Cholera.—1848; Dec. 17. J. K., Irishman, resident seven years; diarrhœa two days; fully developed cholera for six hours; sickly two months with intermittent; hand 85°; bend of the arm 92°. Died eight hours after.

Same date and disease: T. G., born in Missouri, aged 28, resident seven weeks, sick one day; hand 85°; bend of the arm 94°. Died 8½ hours after.

Same date and disease: H. B., born in Vermont, aged 28, resident three days, last from Illinois, sick 40 hours; hand 86°; bend of the arm 93°. Died in the night.

Same date and disease: M. G., Irishman, aged 24, sick one day; hand 84°; bend of the arm 89°. Died two hours after.

Same date and disease: L. A., German, aged 36, resident 1½ years, sick one day; put in a cold bath at 50°; water poured on the head for several minutes; one arm raised out of the water gave, at the bend, in about 5*m.*, 79°; under the tongue 83°; one hour after the bath, under the strong applications of artificial heat; tongue 88°; bend of the arm 91°; axilla 93½°. Died in the night. [In the history of this case, in-

cluding the post mortem examination, I do not find any note of the following facts, which I now subjoin from memory: The patient was treated by his physician with the most active stimulants, as brandy, carb. ammon., capsicum, blisters, &c., without any apparent relief; whereupon, another physician asked permission to immerse the patient in a cold bath, which he regarded as the only certain remedy in cholera; a remedy which he tried on himself subsequently, in the same disease, with the same fatal result. The Dr. aforesaid, after the application of the cold bath, put L. A. to bed with bottles of hot water to the feet; but forbid the patient to drink any water. But soon after, the patients' thirst was so great that he removed the corks from the bottles and drank all the hot water in the same, before the nurse discovered it.]

Cholera.—1848; Dec. 17th. J. H., German, aged 48, resident five days; under the tongue and in the bend of the arm 92°; axilla 95°. Died 10 hours after.

Next day, a cholera patient; under the tongue 85½°. Died 3 hours after.

Cholera.—1848; Dec. 18. J. K., resident 10 days, sick three hours; costive for 24 hours previous; collapsed; cramped; under the tongue 90°; bend of the arm 93½°. Died 16 hours after.

Cholera.—1848; Dec. 30th; air 49°. G. G., aged 46, sick seven hours; collapsed; hand 76°; bend of the arm 84°; axilla 90°; tongue 84°. Died 15 hours after.

Same disease and date: W. H., aged 30, sick 4 days; collapsed; bend of the arm 84½°; axilla 90°. Died 5 hours after.

Cholera.—1849; Jan. 6th; room 70°. W. S., aged 30, sick two days; tongue 85°; hand 87°; bend of the arm 92°; axilla 98°. Died in the night.

Same date and disease: H. M., Frenchman, aged 37; tongue 82½°; hands 80°; bend of the arm 85°; axilla 90°. Died next day.

Cholera.—1849; Jan. 9th; air 46°. H. N., aged 9; hands 71°; bend of the arm 78°; axilla 88°. Jan. 12th; hand 78°; bend of the arm 91°; axilla 92°; feet 73°. Died 6 hours after.

Cholera.—1849; Jan. 11th. M. A., aged 33, resident one month, sick two days; collapsed; hands 69°; bend of the arm 75°; axilla 91°; tongue 76½°; popliteal 81½°; calf 77°. Died 7 hours after.

Cholera.—1848; Dec. 24. G. W., born in Massachusetts, aged 24, late of the U. S. A. of Mexico; 24 hours sick; tongue 90½°; bend of the arm 90½°; axilla 96½°. Dec. 25th; tongue 95°; bend of the arm 92°; axilla 98°. Died two days after.

CHOLERA SERIES, BEFORE AND AFTER DEATH.

Cholera.—1848, December 18th; air of the house 76°. P. K., Belgian, aged 44, collapsed; bend of the arm 92°; axilla 96°. Died an hour and a half after;—30 *m.* after death, axilla 99°; 15 *m.* later 99½°; 15 *m.* 100°, and rising as long as observed; tongue 91°.

Cholera.—1849, Jan. 15th; air, sunrise, 68°. J. H., aged 40, sick 31 hours, cramps 7 hours; subjected for 15 minutes to a hot spirit vapor bath in a room at 78°; 10 minutes after the vapor bath, tongue 89°; bend of the arm 89°; axilla 94½°; hands and calves 90° each.—Died same day.

Jan. 16th; air, sunrise, 64½°; house 74°. *Refrigeration*; 15 hours after death, rectum 89°; centre of the thigh 81½; of the calf 77°.

Cholera.—Refrigeration except the calf.—1849, Jan. 21; sunrise 60°; dead-house 64°; J. G., born in Maine, aged 36; died at midnight, 11 hours ago; rectum 89°; thigh 89°; calf 70°; 30 to 45 minutes later, thigh 79°; calf 79½°; middle of the arm under the biceps 79½°; thigh 79°; epigast. 91°; thigh 78¾°; right and left sides of the chest, each, 88°; thigh 78½°.

Cholera.—1849, Dec. 30; air 49°. P. G., born in Ireland, aged 27, last from Wiskonsin, resident 4 days; collapsed; hand 68°; bend of the arm 77°; axilla 88°; 3 hours after, dying; hand 64°; bend of the arm 79°; axilla 88°. Died. Axilla 5 *m.* after death 89°—5 *m.* 90°. Carried to the dead-house, stripped and laid on the stone floor; 20 *m.* after death, bend of the arm 82°; axilla 98°; 5 *m.* 99°; rectum 5 *m.* 94°; 5 *m.* 94½°, and still rising when the experiments ended.

Cholera.—1849, Jan. 9; air 46°. W. H., born in Virginia, aged 28, resident 2 days—collapsed; hands 83°; bend of the arm 92°; axilla 96°; tongue 80°; calf and popliteal, each, 90°; feet 79°. Died 7 hours after. In 15 hours after death (the air ranged from 37½° to 44½°) the rectum gave 72°; centre of the thigh 63½°; axilla 70½°; falling.

Same disease, time, place and temperature.—J. F., aged 30, resident 2 years; diarrhœa 2 days; cholera 1 day; hands 76°; bend of the arm 90°; axilla 93½°.

Jan. 13th, died. Air of the dead-house 72°—minimum of the day 64°. Two hours after death, axilla, 98°; rectum 101° for 15 minutes; 2¾ hours, centre of the thigh 92° and falling; at 3 hours, thigh 93° and rising; centre of the calf 89½°; 3¼ hours, thigh 93° and stationary when the experiments ceased.

CHOLERA SERIES, HEAT AFTER DEATH.

Cholera.—1848, Dec. 30th; air of the house 49°. T. C., aged 30, resident 6 years; affected with scrotal hernia; dead 2 hours; bend of the arm 89°; axilla 91°; rectum as long as observed, that is 5 *m.* 101½°; axilla 2½ hours after death, 96°; brain through the orbit 98°; epigastrium and liver, as long as observed, that is, 15 *m.* 103° each; heart and pericardium and left lung, each, 99½°.

Cholera.—1849, Jan. 6th; air of the house 53°. P. G., born in Tennessee, aged 31; dead one hour; axilla 5 *m.* 92°; 5 *m.* 93°; rectum 3 *m.* 93°; 5 *m.* 98°; 5 *m.* 99°; still rising as long as observed.

Cholera.—1849, Jan. 8th; air of the house at noon 56°. H. F. T., aged 31, late of Mexico, dead 12 hours; liver 94½°; heart 90°; pelvic centre 92°.

Same disease, time, place and temperature.—Mrs. * * *, aged 26, resident one month, sick 28 hours (during which time her child aged 18 months, still at the breast, died of cholera;) dead one hour. The experiments lasted about two hours, in the following order and times—axilla 100°, rising; vagina 1½ hours after death 102°; half an hour later, vagina 101¾°; epigast., liver and abdominal cavity, each 100°; pelvic centre 97°; axilla 91°; centre of the thigh 97°—of the calf of the leg 77°; of the upper third of the arm 85½°; of the left mamma (much distended with milk) 85½°; of the left chest near the spine 86¼; of the heart 96°; of the epigast. 93°; and of the vagina 99°, over three hours after death.

Cholera.—1849, Jan. 29; air of the room 72°. T. M., aged 27; premonitory 24, and cholera 17 hours; dead 4 hours; two thermometers at different points at once, noted at intervals of two to five minutes, in the order following, for three hours ending seven hours after death:—axilla 98°, 97¾°, 97½°; rectum 102°; abdomen opened; umbilical region 103°; concave surface of the liver 104°; right lung 102½°; epigast. 103°; centre of the left thigh 99°; calf 91°; brachial centre 91°; interval of about one hour; brain through the orbit, at the circumference 91°; centre 92°; thigh 93½°; calf 86°; arm 82½°; brain 92°; 92½°; arm (new puncture) 82½°; thigh (new puncture) 93°; calf 84°; brain 92½°, when the experiments closed.

Cholera.—1849, Jan. 16th; sunrise 64½°; room 74°. C. S., Englishman, aged 29, resident 8 weeks, sick 9 hours, dead 10 minutes; 24 double observations were made with two thermometers at the same time, each occupying five minutes, beginning ten minutes after death,

having been only interrupted five or six minutes by the removal of the corpse to the dead-house:

Bend of the arm,	91°	92°	Popliteal,	96°	97°	Bend of the arm	89°¼	
Axilla,	98	98	Axilla,	98	98	Axilla,	97¾	

A thermometer was placed in the axilla and another in the rectum, which were not changed until the close of the experiments. It will be seen that, although the mercury in the rectum oscillated slightly, the tendency to rise continued as long as observed, that is, nearly two hours:—

Axil. 97½, 97, 97, 97, 96½, 96½, 96 95¼, 96, 96, 96, 96, 95½, 95½, 95¼, 95,
Rect. 101, 101, 101, 102, 102, 102, 101½ 101½, 102, 102, 102½, 102½, 102¼, 103, 103, 103¼

Cholera.—1849, Jan. 20th; sunrise 57°; room 64°. M. W., aged 39, sick 30 hours; dead 20 minutes; rectum 100°; axilla 98°; 10 *m.* rectum 100°; axilla 98°; one hour after death, rectum 100¾°; axilla 95°; centre of the thigh 97°; of the calf 88°; 5 *m.* 89°; two hours after death 96°, at which time the liver 101°; heart 101°; base of the right lung 98°; of the left 99°.

Cholera.—1849, Jan. 10th. Air of the dead-house 44½°. T. G., dead 30 *m*; axilla 5 *m.* 90°; 5 *m.* 92°; 2 *m.* 94½°; rectum 5 *m.* 97°; 2 *m.* 97½°; 15 *m.* 96°; 15 *m.* 95°; 3½ hours after death, rectum 93½°.

Cholera.—1848, Dec. 18; air of the house 76°. A stout man, very cold before death; dead, 30 minutes, rectum 10 *m.* 103°, and an hour after death 102°.

Cholera.—D. M., aged 25, gave the next day, an hour after death—rectum 2 *m.* 99°; 5 m. 100½°; axilla 94°; air about 80°.

Cholera.—1848, Dec. 20th; air of the house 79° to 81°. E. B. C., Kentuckian, aged 34, dead 30 minutes; axilla 3 *m.* 97°; 2 *m.* 99°—rectum 15 *m.* 108°; three hours 106°.

Same date, place and disease.—J. R., aged 25, dead one hour; axilla 5 *m.* 96½°; 5 *m.* 97½°; rectum 10 *m.* 101½°; 10 *m.* 102¼°.

Cholera.—1848, Dec. 24th; air of the house 78°. H. P., Swiss, dead about 30 minutes; each experiment being consecutive, lasted about five minutes in the order following: axilla 104½°; 105¾°; tongue 98°; rectum 108°; 106½°; 106⅓°; 108°; 108½°; 109°; epigast. 108°; 110°; 110½°; brain through the orbit 103°; concave surface of the liver 108°; heart 109½°; brain 102½°; abdominal cavity 108°; concave surface of the liver 109°; rectum 103½°. The experiments ended about two hours after death.

(To be continued.)

ART. II.—*Remarks on the Treatment of Pneumonia:* by W. TAYLOR, M. D. of Alabama.

REGARDING Pneumonia, more essentially febrile than inflammatory in its commencement, I have of late years avoided adopting any treatment based on the doctrine, that it is an original inflammation. Looking at the antecedents, and accompanying general phenomena of the disease, we rarely find a case which either requires or tolerates kindly, a general antiphlogistic treatment.

At one early period of my professional life, I became convinced of the useless, not to say pernicious effects of general blood-letting in pneumonia. Whilst yet a student in medicine, I witnessed the treatment of a case at a Western hospital, which fully opened my eyes to the absurdity of the then *so called* systematic treatment.

The case was a deck-hand on board a steamboat running on the Ohio river, who had suffered severely during the autumnal months with intermittent fever. Nervous temperament, pale and exsanguine in appearance, æt. about 35. He entered the hospital laboring under pneumonia, of apparently a mild form; had a rust-colored expectoration in moderate quantity, and comparatively free from pain. He was met by the class, with one professor of practice, who was also our clinical teacher. After examining him thoroughly, he made some remarks on the inflammatory character of the disease, and prescribed a rigid antiphlogistic course. This was commenced by bleeding him to the extent of about thirty ounces, to be followed up by repeated doses of mercury. The next day he was seen again by the doctor, and found to be much worse; inflammatory symptoms running much higher; expectoration almost ceased; cough hard, dry, and painful. Ordered to be bled again to the extent of sixteen ounces, and the mercury continued. On the following day the patient was brought before the class a second time, but in a much more enfeebled and critical condition than when we first saw him; cough dry and painful and no expectoration. The doctor, who was not only systematic in the practice of medicine, but also, in almost every thing else, remarked at some length on the obstinacy of the case, and finally concluded by prescribing a further loss of twelve ounces of blood and substituting tart. emetic water for the mercury. As the poor fellow was carried back to his ward to submit to a still further draw on his life-blood, a fellow-student from South Alabama, who sat by my side, turned to me and remarked in a rather feeling tone, that "the next time we see that patient, he will be on the dissecting table." Had he

spoken with prophetic inspiration, he could not have better foretold the result. We met him again, on the following day, sure enough, on the dissecting table, and to my surprise, autopsy revealed a comparatively trifling degree of inflammation in the lungs. Nor could pathological lesions be found in any of the other organs sufficient to justify the fatal result. This is but a picture of one of many.

Although convinced that a strict antiphlogistic treatment was not the proper one, I did not wholly discard it on commencing practice, because, perhaps, all the systematic writers on the subject were against me. The first few cases therefore, that fell under my treatment, were bled; but while I could not discover that any of the cases were materially improved by the loss of blood, some of them were essentially injured. In some cases, it is true, the pain and inflammatory symptoms would seem for a time to be very considerably mitigated by the remedy, but in the course of a few hours they would be followed by a re-action, which would surpass in severity, all the violence which the disease had previously attained. I attributed this result, not to the *course of the disease*, but thought it was justly due to the loss of blood. I seldom bled the same case a second time, and rarely witnessed a second high exacerbation of the symptoms. I soon discarded the practice altogether, and came to look on the remedy as being little less than inadmissible in the disease.

Adopting the Rasorian administration of tartar emetic, I regarded it for a time as being the most likely to insure a speedy and certain cure of the disease. But I had not employed this agent a great while before I began to regard it with suspicion, as setting up a gastro-enteritis, which was more difficult to control than the original disease.* Finally, laying this aside, I treated the disease, for some years, with the addition of an expectorant, very much as I would a case of *remittent fever*, because I regarded pneumonia in its pathogenic condition, as it occurs in the Gulf States, as being little less than an inflammation of the lungs engrafted on that disease. Quinine, opium, calomel and sudorifics were the remedies on which reliance was chiefly placed, and I was better pleased with this practice than either Sangradoism or Rasorism.

In 1852, Dr. S. Ames, of Montgomery, addressed a letter to my associate, Dr. W. H. Moore and myself, giving his treatment of pneumonia, with quinine, aconite and a solution of phosphorus. His views

*The pernicious effects of this remedy, were forcibly set forth in an able and instructive article, by Dr. Wm. M. Boling, of Montgomery, in the *N. O. Med. and Surg. Journal*, Vol. V. No. 3.

of the disease and its treatment, according very much with our own, we adopted it, and were highly pleased with the result. Dr. Ames has subsequently given his treatment at length, together with his views of the disease, in an able paper in the *N. O. Med. and Surg. Journal.* (Vol. x. No. 4.) To this paper we would refer the reader, as an able exposition of the inefficiency of the three old remedies, viz: blood-letting, mercury, and tart. emetic, and a just vindication of the substitutes which he proposes.

On visiting a patient of adult age, laboring under pneumonia or pleuro-pneumonia in the first or second stage, Dr. Ames makes the following prescription:

℞. *Tinct. Aconitum Napellus* (*saturated*) gtt. xij; *Quinine Sulph. vel Ferro Cyan.*, gr. xxxvj; *Morphia Sulph.* gr. j; *M. ft. pil.* xij.

℞. *Solution of Phosphorus*, gr. xvj; *Water*, ℥ iv. *M.*

Of the first, two pills are directed to be taken every third or fourth hour, each dose being preceded one or two hours by a teaspoonful of the phosphorus mixture. If an anodyne be required in addition to that contained in the pills, a quarter of a grain of morphine is given at bed-time. If much pain exists, not yielding permanently to anodynes, a large blister is applied over the seat of the disease. A piece of flannel saturated with warm spirits of turpentine, and applied on an extensive surface over the seat of the pain, I have often found an effectual substitute for the blister.

The preparation of aconite used, is a saturated alcoholic tincture. The solution of phosphorus referred to in the prescription, is a saturated solution in anhydrous alcohol. Of the process for preparing the two preparations, Dr. Ames is ample and interesting in detail.

The above has mainly constituted my practice, tempering the dose according to the age and condition of the patient, with such *juvantia* as might be indicated in any particular case, for the last three years. As yet we have had no occasion to lay it aside. Having kept no strict register of cases, we could not state precisely what success has attended the treatment, but the mortality of those fairly treated has not, perhaps, been as much as five per cent.

With regard to the phosphorus in the above prescription, it is contended by very respectable authority, with a good deal of zeal and earnestness, that the dose is too infinitisimal to make any impression on the system, either in health or disease. But be this as it may, if it fails to demonstrate the potency of the remedy, it at least proves the power of

negation; and few, we apprehend will deny that it is safer and at the same time more rational to employ a *harmless negative* agent, than to administer a *hurtful positive* one; especially when we consider that in the great majority of diseases, there is a natural tendency to cure, if let alone Nor is this more true of any disease than pneumonia. It is not less true that the world is too much physicked, than that it is too much governed.

In verification of the fact that the treatment of pneumonia has heretofore been too active, we have only to refer to the example of Dr. John T. Metcalfe, who has treated the disease in the New-York Hospital with success, with no other means than diet, repose, change of position, &c.—*New-York Med. Times*, May, 1853.

Nor has a negative treatment proved successful only in New-York. Skoda, employing solely extractum graminis, a few grains of nitre, and in a few instances corrosive sublimate, lost three only out of forty-four patients of adult age.

Wachaer and Baumgartner, teach us how the disease may be successfully brought to convalescence, by giving no medicine internally, except chloroform vapor applied to the mucous membrane of the lungs. Varrenhapp following their example, shows a mortality of only one in twenty of those treated in that way, or five per cent., agreeing closely with the two former, Hebling and Smidt, who in nearly two hundred cases lost but 4.25 per cent. on the chloroform treatment.

A physician of Cracow, Dr. Dietl, reports nearly one thousand cases treated by diet and rest alone, with similar success. He trusts to the potency of nature and employs little else than hygienic and dietetic means. Nor is there reality in the treatment of Skoda or Varrenhapp, for it is not believed that the inhalation of chloroform does any thing in the way of curing the disease. It only gives nature time to act, and shows what she can do when allowed to pursue her own course, without restraint and interference. These physicians deserve the gratitude of the profession for their researches, proving that pneumonia has a natural tendency to get well when let alone, in the great majority of cases when it attacks in healthy subjects; and showing what seems to be little recognized by the profession, that as a general rule, more harm than good results from the employment of depletive and heroic remedies in its therapeutics. The rule of action in its treatment, as in hospitality, is not so much in doing, but in not doing.

Had these experiments been made with the infinitisimal doses and triturations of homœopathy, instead of adopting the course actually pursued, it is easy to conceive that the minds of the experimenters would have been converted to the transcendental doctrine of Hahnemann, on comparing the result with a rigid antiphlogistic treatment. But truth is never found either in one extreme or the other, but usually exists in the "happy medium."

So then in the treatment of pneumonia, we would not be understood as advocating wholly a negative or *do-nothing* treatment, but would especially commend quinine, with such *juvantia* as might be required by the exigencies of any particular case. The combination as prescribed by Dr. Ames, has proven in my hands, so far, highly satisfactory. In districts in which intermittents and remittents prevail, pneumonia presents almost invariably, more or less of the periodical type; hence from the powerful antiperiodic properties which quinine is known to possess, it should form a component part in its treatment. Again, it is an established physiological law, that a high peripheral action, and an intense central one cannot exist in the system at the same time. An increase of the one is invariably followed by diminution of the other. Hence all febrile diseases dependent on an engorgement of the abdominal or thoracic viscera, are usually brought to a rapid convalescence when the circulation can be invited or driven to the surface and maintained there sufficiently long to produce free and prolonged perspiration. Nor do we know any agent better qualified to fulfil this indication than quinine with a few simple adjuvants.

TALLADEGA, ALA., Sept. 21st, 1855.

ART. III.—*A Case of Concealed Hæmorrhage;* by C. C. HOWARD, M. D., of Lowndesboro, Ala.

THE following brief detail of a case of concealed hæmorrhage forming a detachment of the centre of the placenta, it is thought will be read with some interest, and is therefore placed at the disposal of a journalist. In view of the fact that such cases are not of frequent occurrence, never having been seen by some men of much experience, and even not admitted by others no less respectable; it is proper to state that this is the

only case that has ever occurred in my own practice, which, though always limited, has extended over a period of fifteen years.

25th June, 7 o'clock, P. M.—Called to see Mrs. ——, aged 31, leucophlegmatic temperament. This lady had a premature labor on 13th Feb., 1854, in which case the placenta and cord were abnormal, and has had several miscarriages. Her first pregnancies, however, were more fortunate, and she has two boys living.

Her last catemenial flow ceased on the 12th October last, and she has had no show since.

Patient very restless and impatient; respiration hurried; pulse feeble and accelerated; face, lips and tongue exsanguineous; feet and legs œdematous. She had strong uterine pains half an hour before I saw her, which she allayed to a considerable extent by an anodyne. Neither the pulsations of a fœtal heart nor the placental *soufle* were audible. Os uteri dilating—no hæmorrhage externally, nor even so much blood as to stain the finger—dull heavy pain in the left iliac region. In about two hours Mrs. —— was delivered of a dead fœtus, which had attained about the eighth month, and almost immediately afterwards, in less than one minute, the placenta was expelled.

Upon an examination of the placenta it was found to be as follows; viz: of medium size, and more condensed than usual. To the maternal surface, from the centre to within five-eighths or three quarters of an inch of the entire circumference, was attached a coagulum, which I supposed would have weighed about one pound. After the removal of said coagulum, that portion of the surface to which it had been attached, instead of being rough and spongy as usual, was found to be quite as smooth as the fœtal surface; and in this respect wholly different from the circumference or rim, which evidently was the only part that had recently maintained its attachment to the uterus.

The shape of the coagulum was lenticular, and therefore, the rim of the placenta had the appearance (as indeed it was) of being turned over on the body, and from this latter to the rim several bands passed; just such as are seen to result in pleuritis, and this was the only peculiarity of the *fœtal* surface.

Mrs. ——, about ten days previously to this labor had palpitation, giddiness and tendency to syncope, which unpleasant symptoms were removed by lying down; but which continued to return once or twice daily up to the time of her confinement.

Remarks: However we may theorize in relation to the possibility of such a case as the one just detailed; whatever may be said of the habitual weakness of the adherences of the placenta, or rapid distension of the uterus; can any one reasonably doubt that this coagulum was of blood; the most of which had been poured out several days previously to the labor? Although it may be admitted that this conclusion might not be just, if drawn from the appearance of the coagulum alone, or in connection with the symptoms, yet, the changes in the placenta itself, it is submitted, leave no room to doubt that this was a case of concealed hæmorrhage, dependent on detachment of the centre of the placenta, and highly interesting, in view of the fact that the woman had no blood to spare.

[The Editor begs leave to append to the above, a passage from Prof. Rokitansky's Pathological Anatomy just issued from the press: "Apoplexy of the placenta is one of the most frequent causes of abortion; the blood may be diffused through the parenchyma to a greater or less extent, or be extravasated and accumulated at one spot, which may either adjoin the uterine parieties or be situated deeply within the placental tissue. The placenta is undoubtedly sometimes affected with plethora, congestion and inflammation in the rapidity of the circulation, a condition which is important on account of the impeded vivification of the fœtal blood. It is then of a darker color, externally and internally of a dark violet or livid hue, the vessels are overcharged, the entire organ appears enlarged and heavier, and feels harder and denser."]

ART. IV.—*Rupture of the Spleen.* STATE OF TEXAS *vs.*, JOHN DORMA: by R. H. CHINN, M. D., of Brazoria, Texas.

SOMETIME in October, 1853, I received a visit from Jose Antonio, (a Mexican,) who was partially anæmic and very debilitated; skin soft and inclined to perspire on the least exertion; countenance anxious and suffused; tongue broad, clammy and covered with a white pultaceous fur; pulse usually soft and small; palpitation of the heart on the least excitement of the circulation; abdomen somewhat prominent, with slight tenderness over the epigastric region; anorexia, and often constipated; spleen enlarged; urine high colored, offensive, and dribbling through an aperture located on the front, and immediately in the raphe of the testes. This sinus was traced by a probe through the remaining portion of the

testes, and between the skin and urethra, until it entered near its bulb. The man was entirely an object of pity. He had connected himself to an invalid negress that was living a mile from this village, at Sam Hardin's, a free mulatto. He wandered about, drawing heavily upon the hospitality of our planters, and could not be induced to leave, and find some charitable asylum. He then, and as often afterwards as he called, received some medicines that would answer as placebos, and other little gifts. On all subsequent visits there were no apparent changes in these symptoms.

On April 11th, 1855, at 7 o'clock, p. m., I was suddenly called to him at Sam Hardin's. Hardin had employed Lewis and Dorma. Dorma in a fit of drunken frenzy had struck Jose over the left shoulder with an axe, and as he fell kicked him several times in the left side of the abdomen, and was in the act of striking him again with the axe, when Lewis interfered and put Jose on his horse and started off. This occurred about 3 o'clock p. m. Sometime in the evening Jose's negro wife who was returning from a neighbor's found him lying on the ground, some hundred yards from the house, and had him carried to her home and placed on a pallet. The countenance expressed the most intense anxiety; his mouth was slightly open, and he was giving vent to his sufferings in a low whine, peculiar to that race of beings; his pulse 160, skin clammy and cool, his respiration quick and panting, the expiration being attended with that whine, and the breathing was diaphragmatic; the shoulder was painful when handled, the integuments covering the abdomen could not bear the least touch, his thighs and legs were firmly flexed, and he could not be moved or jarred without screaming with the most intense agony; tongue dry but natural; thirst great.

Ordered: ℞. *Calomelanos*, grs. xxiv. *Ext. Hyos.* grs. vj. *Pulv. Doveri*, grs. xxiv. *F. Pil. no.* xij.

One every two hours. *Tinc. Aconiti*, gtt. vj, every intermediate hour; gum water freely as a drink.

April 12th.—Has taken four pills, and 24 drops of aconite; pulse 120; skin moist, and warmer, little or no thirst, no ease or rest, nauseated. Emplast. Canth. 6 x 4 above the epigastric region, which was neglected, and the abdomen blistered over a large space. Continue pills; aconite to be repeated once in every six hours. Small quantities of prepared arrow root.

April 16th.—Dozed, and often supposed to be asleep; pulse 135; pain of the abdomen more mild; other symptoms the same.

April 20th.—In company with Dr. R. G. Salmon. Pulse 140; other symptoms the same. Ordered, soap suppository.

April 24th.—Sam Hardin, in his daily report, informed me that the suppository had failed, and that the abdominal pain had increased in severity. Then ordered in its place an enema of warm water, which caused intense agony, and produced a hard black fæcal discharge, which was followed by several fluid discharges. In company with Dr. H. C. Hoid. Pain declining, face hippocratic, indifferent to surrounding objects, pulse 130; respiration in number to the minute 50, extremities inclined to be cool. R. *Vin. Kentuck.* ℥x; *Aqua Pura*, ℥xx; *Sacc. Alba.* ʒj; every hour.

April 27th.—Died.

April 27th.—An inquest was held on the body, and by consent of the coroner, W. S. Spencer, esq, the body was carried to the back yard of my office, a slight breeze was blowing at the time, (8 o'clock p.m.) so as to disturb the light and prevent the examination of the genitalia. The body was examined 24 hours after death by Dr. David and myself in the presence of Drs. J. T. Sandfer and Salmon. The lungs with the exception of some old adhesions of the right lung were perfectly healthy. The heart slightly hypertrophied. On opening the abdomen, a large quantity, something more than a quart, of very reddish serum escaped. The entire peritoneum was of a deep scarlet color. Among the folds of the intestines were found a number of large clots of dark looking blood; after dissecting away, very cautiously, the intestines from near the spleen, the latter was found to be about ten inches long, four inches wide, and three inches deep; from an inch to one and a half inches from the pelvic extremity was found a firmly adherent clot, which when removed, displayed an abrasion of about one inch in width to one and a half inches in length, and about a quarter of an inch at the deepest part of the excavation; most of the removed tissue consisted of the fibrous tunic and substance of the spleen, an inch nearer to the thoracic or upper edge of the spleen, and somewhat diagonally to the left was a laceration one and a half inches long, a quarter of an inch at the widest part, and still another laceration about an inch nearer to the upper extremity, but diagonally to the right, half an inch long. The fibrous coat of the spleen was soft, and easily detached; its substance was soft, dark, and grumous. The stomach was contracted, pale, and mamillated. No other disease among the abdominal viscera was noticed.

In traeing the gradual changes that oeeurred in the eourse of the symptoms, they present some phenomena worthy of note. The affair transpired, as near as Lewis eould testify, between 3 and 4 o'eloek P. M. The fright and tremendous shoek to the nervous system must have rendered him almost an inanimate being. The abraded portion then, with the reaction and eonsequent hæmorrhage must have operated upon the peritoneum and given rise to the train of morbid symptoms; his removal after some time to the house, no doubt aeeelerated this. Then being left under the attention of incompetent, but willing nurses, the peritoneum, after being subjected to a most powerful irritant for 16 days, presenting no other marks exeept those of violent congestion, it might be asked, what peculiar preventives, if any, did that morbid parenehymatous substanee of the spleen present? What influenee the treatment exereised, it was impossible to do more than eonjeeture, as it was based upon the diagnosis of rupture of the spleen, and eonsequent hæmorrhage and peritonitis, it would only offer palliatives to the following indieations, as the eontrolling the hæmorrhage, the subduing the irritation of the peritoneum, and eonsequently, the eausing of absorbtion of the blood, the healing of the wounds, the keeping up the seeretions, and the quieting of the disturbed nervous system. His idiosyneraeies would not admit of the administration of powerful opiates, and his habitual eonstipation, aided by the Dover's powders, was a sufficient guarantee against the purgative aetion of the ealomel and hyoseyamus. The first aetion of the blister was to stimulate the abdominal eireulation; the seeond was, no doubt, to deplete.

At the May term of the District Court, John Dorma was arraigned for murder in the first and seeond degrees. James H. Bell, a very astute and enthusiastic lawyer, entered on the defenee by examining minutely into the dimensions, eomposition, and funetions of the spleen.

"The spleen is a highly vaseular and easily distensible organ; in the adult it is generally about five or five and a half inehes from the upper to the lower end; three or four inehes from the anterior to the posterior border, and one or one and a half inehes from its external to its internal surface, and its usual volume, aeeording to Krause, is from nine and three-quarters to fifteen eubie inehes. In the greater number of a series of eases examined by Dr. John Reid, its weight ranges from five to seven ounees in the male, and was somewhat less in the female, but when perfeetly free from disease, it may fluetuate between 4 and 10 ounees. After the age of forty, the average weight gradually diminishes. The

specific gravity of this organ, according to Haller, Sœmmering, and Krause, is about 1.060 to 1.000. In intermittent and other fevers, the spleen is much distended and enlarged, reaching below the ribs and weighing as much as eighteen or twenty pounds. In enlargement and solidification of this organ, it has been known to weigh upwards of forty pounds, and it has been found reduced by atrophy to two drachms."—*Quain and Sharpey's Anat. Vol.* 2, *p.* 49.

It is a remarkable fact that the endemic fevers of this country extend to the domestic mammalia; for the pathological anatomy, the most certain evidence of disease, shows its existence in their liver and spleen. In the horse, the animal most noticed in this country, the whole train of symptoms have been traced out and treated under the name of the "*Spanish Fever*," but it is really a remittent fever. I noticed the single instance in one of my riding horses, the symptoms of a chill—then of a fever; then the undoubted marks of a violent perspiration. Quinine, 3vj cured him.

Jose had been an old settler, and it is singular that a post mortem examination did not display some disease of the liver, as the splenic and mesenteric vein form the portal vein. It would be well if some careful examination could be entered into the pathological anatomy of these organs in our adults, for the prevalence of these diseases are so great, and the consequent functional and organic derangements are so universal that we become more thoroughly interested in all their actions, functions, and pathological changes, than in those of any other set of organs.

The composition of the spleen: "The proper tissue of the spleen is composed of an areolar and pultaceous matter of the color of Port wine lees."—*Cruv. Anat. Ed. by Prof. G. S. Pattison, p.* 405.

Nothing definite is known in reference to its functions. Richerand and some other physiologists regard it as the reservoir for the excess of blood in all excessive abdominal congestions. Prof. Wood, in detailing the pathology of its diseases, in his Theory and Practice, conveys the same idea at the present day. Its object in health is equally indefinite.

"The function of the Spleen is to regulate the quantity and quality of the blood.—H. Gray, *Amer. Jour. of Med. Sci., Vol.* 28, *p.* 492.—"A true secreting gland, and its product which is some organized or organizable albuminous compound, is absorbed into the venous blood of the portal system, and contributes, but is not essential to nutrition."—W. R. Saunders. *Am. Jour. of Med. Sci., Vol.* 1, *p.* 188. "Belongs

to the lymphatic glandular system which includes the spleen, thymus, thyroid, supra-renal, pituitary, pineal, and lymphatic glands."—Bennet, in Braith. *Retros. part* 30, *p.* 301.

The next point urged by Mr. Bell, was, whether the injury of the spleen above mentioned, was not produced by carrying the body from Sam. Hardin's to this village in an ox-cart, distance one mile. This involved another question: was the spleen injured at the time of the assault? No motion of either handling, or of an ox-cart, could have produced that abrasion; the firm attachment of a consistent clot of blood, was the first step towards the natural reparation of the injury, and, consequently, must have occurred during life; a blow given direct to the central axis of an organ, would bruise and crush its tissues, given diagonally, to a softened organ, would have removed or crushed a portion of the tissue. Pertinent to the subject of blows or kicks, when the injury was made, were there any bruises? It was answered in the negative, and then followed up by a train of questions all bearing upon the doubtful point whether a blow could produce so serious an injury without causing a bruise. When this word is applied to any part of the human form, it implies that the tissues have been ruptured and their contents poured out between their cavities. The soft tissues (the muscular, cellular, and dermal) possess a certain amount of resiliency or elasticity depending in a great measure on their tonic force; when weak, soft, and pliable like wool, they would yield, and then rebound under the influence of a blow as in the integuments covering the abdomen, but a blow of much less force would crush them when covering a solid body, as the skin over the forehead and orbits, but when they are more firm like the pulp of an apple, peach or pear, a much slighter blow would produce a more intense bruise. The pliability of the tissues depend upon their tone, all organs in the frame help to increase by the full performance of their functions, the strength of each tissue. The organic disease of one single organ destroys the unity of action, and leaves undone something necessary to build up and support that strength; in this case it was the diseased spleen and urinary fistula. It excited some surprise why the physician's attention was directed solely to the spleen. This was perfectly plain after examining Dr. Bigsby's account of the symptoms of the rupture and laceration of the spleen.

"In the instances which proved fatal in a few hours, the symptoms are great shiverings, coldness of the body, vomiting, and other signs of extreme collapse. When there is time and strength for re-action,

there is considerable fever, with remarkable heat of skin, and great pain in the left side or all over the abdomen; the stools and urine are nearly natural for a short time at least."—*Prac. Med.* Vol. 4, p. 229.

The other hooks of the defense to hang a loop upon, were rather slight and of no real importance. The reddish color of the serum escaping from the abdominal cavity, must have arisen from the peculiarity of the splenic blood.

"It differs from ordinary venous blood in the deeper color of its serum, in the greater number of the colorless blood corpuscles, in the nature of the colored elements, and in the presence of blood corpuscles holding cells and their derivatives.—*Kölliker. Amer. Jour. Med. Sci.* Vol. 23, p. 492.

"It contains less solid matter than arterial or venous blood, far less blood globules, a considerable increase in the amount of albumen and fibrine, more fat, but a variable amount of iron, and lastly, its serum presents in all cases, a dark, reddish tinge.—*H. Grey: Amer. Jour. of Med. Sci.* Vol. 28, p. 492.

All matters not produced by a membrane, either in health or disease, is foreign to that membrane, and consequently, causes a violent irritation of it. The first indication for aiding and abetting the reparative progress, would have been to have checked the hæmorrhage, for the flow of blood washes away the natural adventitious growth, and by its irritative qualities upon the peritoneum, causes a new disease; but where the organ is broken, and its fibrous tunic and the peritoneum remain intact, (splenic apoplexy) an abscess, or the healing process might occur. The supply of blood to the organ is very great, the splenic artery being the largest of the cœliac axis, and the splenic vein four or five times larger than the artery, and without valves, thereby permitting regurgitation of the blood. "The capillaries terminate by becoming continuous with the smaller venous trunks, but some of them cannot be traced directly continuous with the veins, and these communicate with interspaces of the pulp parenchyma which are finally connected with the veins." —*H. Grey: Amer. Jour. of Med. Sci.* Vol. 28, p. 492.—The spleen is indirectly marked by these vessels into lobes, the main trunks branching off and supplying different portions of the organ, and from its capillary circulation, especially when in a state of chronic inflammation, the particles contained originally in its vessels would first pass off, and regurgitation must necessarily succeed.

Such an accident occurring to one who was suffering under atonic gastric dyspepsia, the constitutional irritation caused by an urinary fistula of long standing, and a chronic inflammation of the spleen, in the mean time leading a wandering life from house to house; then, after the above occurrence, living for sixteen days with a violent peritoneal congestion, the reparative progress of the spleen having actually commenced, presents one of those anomalous cases, the correct history of which deserves, I think, the notice of your valuable journal.

John Dorma was found guilty of murder in the second degree and sent to the penitentiary for five years.

ART. V.—*Remarks on the Physiology, and Pathological Anatomy of the Spleen:* by BENNET DOWLER, M. D.

THAT external violence may rupture the spleen without involving the walls of the abdomen in any well marked lesion, as suggested in the preceding article, is a truth for which I can vouch, as I have seen this organ, including its capsule fractured in several directions, by a fall upon the edge of a barrel; the hæmorrhage had been very slight, and the patient had died subsequently, from other injuries, as fracture of the skull, received at the same time. In the mean while, the reparative process had nearly healed the rupture in the parenchyma of the organ, without, however, having reproduced the capsule along the tracts of the rupture.

A few general remarks upon the spleen, without pretending to investigate, in a special manner, its normal, pathological, or physiological anatomy, will, it is hoped, be acceptable and suggestive to students desirous of entering into the "straight gate," that is, the door of the dead-house.

The cohesion, density, resiliency, tenacity, and size of the spleen have not been settled and made known so fully as to enable the medical man unpractised in morbid anatomy, to draw safe conclusions, in many cases, with respect to its precise normal, or abnormal conditions. Even the most experienced pathological anatomist may sometimes be misled, or may be uncertain as to the anatomical history in cases where the post-mortem examination has been delayed one, two, and three days; as post-mortem changes in color, consistence, and so forth, may during

these periods take place, breaking down and softening its texture, rendering it a pulpy grumous mass, unlike the normal organ, and yet very like some of its morbid alterations, such may be found often in typhous subjects.

The normal spleen, compared with other organs, the brain excepted, is extremely soft, is easily torn or broken down, being excessively vascular, and of a dark red color, excepting its periphery which is blueish. Its sensibility is of a low grade except when developed by external pressure; even pressure may not be painful during a passive non-inflammatory engorgement of the organ.

I have examined many hundred spleens soon after death from acute diseases, not specially involving that organ, which I am satisfied had been long and greatly enlarged by anterior diseases, as intermittents. This enlargement is very common in persons from the Western States of this Republic. These persons had been thoroughly cured, or at least they had not suffered a deterioration of health, but had been robust for years, until suddenly destroyed by yellow fever, &c. Their spleens not infrequently were found natural, excepting in size, showing, however, the effects of previous disease, as thickening, opacity, whiteness, and even cartilaginous degeneration of the subserous capsule, with strong unnatural adhesions to the omentum, stomach, pancreas, peritoneum, diaphragm, &c.

In a healthy state, the size of the spleen is exceedingly variable. One spleen may be larger or smaller than another without any morbid alteration.

In some instances the spleen is so small as to appear but a rudimentary and unimportant organ. I have found it disseminated or subdivided into portions or small spleens.

Atrophy of the spleen, as a morbid change is rare, and is not so far as I have seen, characteristic of any malady, cholera excepted, and, even in this there is a collapse, with anæmia rather than a morbid wasting. In this organ, therefore, a deterioration in magnitude, unaccompanied with any other element of change, is not, unless immoderate, a very significant pathological alteration.

The following is a remarkable example of hypertrophy: On Aug. 26th, 1828, I was called into the country, six or seven miles from Clarksburg, Virginia, to see the child of James Webb, aged a little over three years. The parents informed me that this child had been afflicted for three months with a tumor in the left side, (hypochondrium)

which had been constantly increasing. The abdomen, slightly dropsical, was distended by this tumor to nearly half the size of a barrel; the tumor reached to the pubis. The spleen, including the liver, which was also enlarged, was estimated as being nearly as heavy as the residue of the child's body—which latter was much emaciated. Three days later, the child died.

As already intimated, there is a remarkable deviation in the size of the spleen in cholera, the pathological import of which is problematical. The average size of the spleen in this disease, will, perhaps, fall short by one-third that which is observed in both normal and diseased bodies, who have died from causes other than cholera. Independent of size, there is in the choleraic spleen little alteration, except a diminished supply of blood in most cases, and, as a consequence of this, a diminished turgidity, diminished brittleness, or increased suppleness or pliability—a condition that *à priori* could not have been anticipated in cholera, seeing that this is a very spongy, vascular organ, which would seem to invite venous congestion in the abdominal centre. To call this collapsed state of the spleen, *atrophy*, a morbid wasting, is a strong term, perhaps too strong. The lungs, urinary bladder, fingers, &c., are in a similar condition, collapsed, rather than atrophied. This change is not accompanied with softening or pulpiness; the organ recedes before or rolls under the knife more than it does in the natural state, being shrivelled or *wilted*. In fact the organ seems more tenacious than usual, owing, doubtlessly, as before suggested, to the diminished tension of its parenchyma and capsule, and from the diminished distension of its cells with blood.

This shrivelled condition of the spleen in cholera, resulting from the choleraic evacuations, has not been satisfactorily explained. In other algid diseases, the contrary condition of this gland prevails, particularly in the cold stage of intermittents, in which the blood flows and ebbs at each paroxysm, frequently ending in engorgement and hypertrophy of a permanent character.

Experimental physiology, including vivisections, may perhaps, nevertheless, afford a plausible explanation of the collapsed state of the spleen often found in choleraic subjects, since it appears that the spleen, during or soon after the active stage of digestion, is temporarily distended, and that animals which are supplied with abundance of nutriment have more blood and greater tension in their spleens than those which are badly nourished, or starved. The sudden serous and chylous evacuations

which take place in cholera, may be supposed to reduce the normal quantity of the splenic blood, the venous system of which contains, as experimenters affirm, an increased proportion of serosity, albumen, fibrine and colorless corpuscles. In cholera the nutritive processes is almost wholly suspended, if, indeed, it be not actually retrogressive. If, therefore, the spleen be, what some recent writers assert, a nutritive organ whose principal function it is to elaborate or modify the nutritive process, then choleraic evacuations would be likely to drain this organ of its fluids, leaving it shrivelled—a condition which is, however, by no means uniform.

This ductless gland, naturally very distensible, is intersected by innumerable reticular bands of trabecular tissue, forming multitudinous septa, approaching the erectile tissue in structure. Its functions, though little known, have been supposed to be concerned in sanguification, while the organ also serves the purpose of a diverticulum for the blood. And yet, strangely enough, experimenters who have removed this organ from dogs and other animals, show that its complete extirpation is often neither fatal to the animal nor injurious to the economy.

In splenitis, parenchymatous inflammation is not so easily detected, nor as common as capsular. The characteristics of the latter are better known than those of the former. Hence, perhaps, the scepticism as to the former being the seat of inflammation. But on incising the organ, in splenitis, a little pressure will sometimes cause pus, fibrinous, and serous exudations, and putrefying blood to escape from its parenchyma, which latter is not frequently rendered semi-fluid by inflammatory action. It must be admitted, however, that morbid alterations of the blood, in which the local affection is but secondary or incidental to diseases of the whole system, may produce similar changes. Whence, it follows that to judge accurately of the abnormal conditions of the spleen—whether it be anæmic congested, inflamed, enlarged, softened or indurated, requires an experimental knowledge which books cannot well afford, and which must be acquired by the post-mortem examination of individuals which have succumbed from various diseases, both acute and chronic, and from sudden accidents, in which disease has produced no apparent alterations of the spleen, its parenchyma, or investing membranes. Equally difficult to the inexperienced, is the correct appreciation of the pathological import of splenic symptomotology.

Chronic diseases, particularly the *dyscratiæ* and tedious intermittents, often produce, as already indicated, enormous splenic alterations which

do not disappear on the recovery of health, which remain permanently, and which, nevertheless, occasion little inconvenience. These changes are numerous as hypertrophy, with and without induration, vascularity, brittleness or increased tenacity; redness or paleness, increased development of the trabecular septa or cellular tissue, anæmia, hyperæmia, thickening, cartilaginization, or ossification of its fibrous capsule, adhesions of its serous investment to surrounding organs, softening, &c.

Idiopathic diseases of the spleen are probably less frequent than its secondary, reflected, or intercurrent affections, arising from both acute and chronic, local and general maladies not primarily splenic.

It is often difficult to distinguish between these primary and secondary lesions; thus, a primary inflammation of the splenic parenchyma with interstitial sanguineous, fibrinous, and purulent infiltration and pulpy softening, may resemble changes found often in typhus.

The recent progress, real or apparent, in splenic physiology, which assigns to this organ a large share in nutrition, sanguification, not to name its long assumed function as a diverticulum for the blood, forms a strong contrast to the vague, grim and ghastly jurisdiction assigned to it in times past, when it was supposed to preside over melancholy; hence the expressions, "splenitic," "fits of the spleen," "lying-in of the spleen," "vapors," "humors," &c.

> "*Spleen* to mankind his envious heart possest
> And much he hated all, but most the best."
>
> POPE'S HOMER.

> "I was not one, a miss, who might presume
> Now to be crazed by mirth, now sunk in gloom;
> Nor to be fretful, *vaporish*, or give way
> To *spleen*." CRABBE.

While physiology cannot sanction these grave charges against the spleen, it has of late, probably exaggerated its merits, since it has been ascertained, as already mentioned, that *spleened* animals not only survive its extirpation, but thrive very well without it.

Advances in physiology prelude with more or less certainty, advances in pathology and therapeutics. If recent views of the paramount functions of the spleen as a metamorphoser of the blood and nutritive fluids shall be confirmed, practical benefits will probably result therefrom, particularly in the treatment of anæmic diseases.

A disease which now attracts much attention, called *Leucocythemia*,

is attributed to splenic disease, or hypertrophy. In another part of the present number of this Journal, a paper will be found, illustrative of this malady, which is characterized by an increased proportion of the white blood cells.

ART. VI.—*Experimental Researches into Animal Heat in the living and in the dead body.–Solar Asphyxia:* by BENNET DOWLER, M. D.

(*Continued from page* 451.)

PATHOLOGICAL SERIES.—SOLAR DISEASES.

Solar Asphyxia, Coup de Soleil, Insolation, Ictus Solis or Sun-stroke. 1845; July 24th; a day of extraordinary heat; air at 6 A. M., 80°; noon 93°; deaths from sun-stroke, officially reported, 10; omitted and misnamed by estimation, 5: total 15. G. J., born in Boston, aged 28, some minutes before 6 P. M., fell while at work at the corner of Camp and Julia streets;—30 minutes after, the experiments began; for 20 minutes, during the agony, the arm pit gave 111°; 8 *m.* after death, 112°; in 15*m.*, 112°, in 20*m.*, 112½°; at about 7 P. M., 113°.

The body was then stripped, laid on a cooling board, exposed to a free circulation of air, and was dressed in a muslin shroud. The axilla had been in the mean time freely exposed, but gave at 7*h.* 25*m.* 112°; at 7*h.* 35*m.* 112°; at 7*h.* 40*m.* over 112°. Two apothecaries, Messrs. Banks and Cochrane, at whose store J. died, now, at my request, took charge of the experiments; they gave the next day the following report in writing: 7*h.* 45*m.* 112°; 7*h.* 55*m.* 111½°; 8*h.* 30*m.* 111°; 8*h.* 45*m.* 110¼°;" at 9*h.* 109⅞; 9*h.* 15*m.* 109°, when the observations ceased.

"The highest temperature," says Prof. Carpenter, "which the soil usually possesses in tropical climates, is about 126°, though Humboldt has once observed the thermometer rise to 140°, (§ 108, Phys.) The day before J.'s death I obtained the following and numerous other results with mercurial thermometers, (the only ones at all reliable,) whose correctness had been verified by every kind of test, as freezing, boiling, &c. To these tests was added another, the comparative: that is, thermometers with accurate freezing and boiling points, and having scales and cylinders uniform in appearance, were immersed in fluids and air at various temperatures, so as to compare their dynamic conduct and agreement with each other.

The results referred to are : July 23d, 1845, at 6½ A. M., 84°; at 8, 85°; at 7½, 87°; at 8, 88° ;at 9, 90°; at 10, (some haze,) in the sun near a wooden wall, 115°; touching the same, 130°; at 11, sand in the street, 143°; at 2, P. M., sand in the street, 152°; roof of a house, touching, 150°; at 8½, air 89°. River at 8, A. M., 83¾°; 3, P. M., 84½°; in the shade, near the sun, at 3, 102°; in the house, 97°; do. 4, 96°. Such is the history of this unexampled day.

Sun-stroke—Fatal.—1847, June 16th; 3, P. M.; Mc.,Irishman, aged 40, chicken merchant, resident 3 years, I saw him when dying on the pavement, an hour after he had fallen; axilla 109°; air, sunrise, 77°.

Sun-stroke. Post-mortem Experiments 6½ hours after death; great central Heat; Period of Decrement.—1844, May 3d; 10 A. M.; an unknown, found in the street yesterday evening, insensible from insolation, as it was supposed, died at 3½, A. M., 30 minutes after, was carried to dead-house, the air of which was about 72°; 6½ hours after death air 83°; axilla, 10*m.* 99°; rectum, 10*m.* 107°; 5*m.* 107° nearly; axilla 98¾°; reetum, 20*m.* 106¼°; left hypogastrium, 15*m.* 104°; right 10*m.* 105°; 15*m.* 104°; thigh 10*m.* 100°; 10*m.* 98½°; calf 10*m.* 87½°; thigh 5m. 98½°; 10*m.* 98°; leg 10*m.* 87°; epigastrium 100°; left chest, 15*m.* 97°; heart, 10*m.* 101½°; the experiments lasted about 3 hours; the air now was 88°.

Solar Asphyxia or Sun-stroke, complicated with Sero-meningeal apoplexy.—1848, August 30th; 11*h*, 45*m*. A. M., dead-house 97°; W. C., Irishman, aged 35, resident one year, eat his breakfast as usual, worked until 9½, A. M., soon after fell insensible; died 20 minutes past 11, A. M.

Dead 25 minutes. The thermometer remained in the axilla 55*m*. without having been changed,as follows: 5*m*. 105°; 5*m*. 106½°; 5*m*. 108°; 10*m*. 108°; 10*m*. 108°; 10*m*. 108°; 10*m*. 108°; 10*m*. 108½; knees 106°; thighs 108°; scroto-perineal 108°; reetum, 7*m*., 111°; 5*m*. 111°; 15*m*. 110°; epigast. 109¾°; middle of the thigh 108¾°; chest 107°.

The history of the experiments upon this subject, showing the rapid circulations of the chyle and of the blood, including the post-mortem examination, fills ten large pages. It would be incompatible with the aims of this paper to give the entire history. It may be proper to say that the quantity of chyle was incomparably greater than I had ever before witnessed in any subject, how sudden so ever the death may have been. The original note on this subject is copied from M S., vol. XVIII, page 545. The small intestine contained from one to two pounds of

chyle; thin, in and near the duodenum; thick and pasty in the middle and lower third of the jejunum; semi-coagulated, but little adhesive, soft clots or flakes of a milky opaline color prevailed in the ileum; in the lower third of the latter, especially near the valve, a faint scarcely perceptible yellow hue was noticed.

Inasmuch as bloodletting before and after death may be supposed to influence the animal heat of the body, a synopsis, in this behalf, may be necessary in a case, perhaps the most extraordinary upon record, going clearly not only to establish a great and persistent development of animal heat, but a vigorous and prolonged circulation of the blood after death, all of which has been confirmed by many other experiments having a similar import, which I have made directly on the human body soon after death.

While the above experiments on W. C. were progressing, the veins became greatly distended; a ligature was placed on the arm, a vein was opened, about two ounces of blood jetted out, after which a trickling took place for a considerable time, amounting, by estimation, to twelve ounces. The circulation was found to be very rapid about the head; the skin of the face and neck was injected, dark, livid and somewhat mottled, there was no cadaveric hyperæmia or injection of the dependent parts; the external jugular veins were distended, as if ready to burst. The left jugular was opened, as for ordinary bloodletting, *but no bandage or pressure* was used, the head being raised, so that the orifice was nearly on a level with the breast bone. The blood jetted completely, without wetting the skin, forming an arch, the diameter of which continued to extend for five minutes; at the end of eight minutes the arch had contracted, owing, apparently to small clots on the margins of the orifice, and the skin having once become wet, the blood, without being materially diminished, ran down the neck, jetting occasionally on removing clots from the orifice. I caught about three pounds at first, but as much of it did not jet out, but run down the neck, I could only estimate the amount (which I did) at five pounds, or eighty ounces. As the bloodletting progressed, the congestion and discoloration of the skin of the face diminished.

Now it will be seen that the orifice in the jugular did not discharge the blood as fast as the circulation replaced it, there was a surplus, because the venous tension or jetting augmented for five minutes, and had not ceased during eight minutes. There was, as already mentioned, no bandage or pressure. It is fair to presume that it would be quite diffi-

cult in this way to bleed a living man as much, as collapse of the vein, fainting, etc., would prevent it. Hence the circulation in the veins was probably more active and persistent, than in health! Let it be supposed that the upper or *distal* end of the jugular, contained one ounce, when opened—this being discharged, no more could replace it, only by a circulatory force. But here the jugular vein was filled about eighty times in a few minutes, the circulatory force having acted in opposition to that of gravitation, the head having been raised upon a block.

Whether this post-mortem bloodletting lessened the intensity of the heat, the reader must judge. The affirmative is probable from analogy, as the following example of a low post-mortem temperature, supposed to have been influenced by excessive bloodletting practised some years ago in yellow fever, may indicate; at least it is worthy of a place among the curiosities of theraputics.

Yellow Fever—Scorbutic Diathesis.—A young man, several years resident in New Orleans, while convaleseing from scurvy, was attacked with yellow fever, [for which he was bled from the arm, in five days, 14 pounds by estimate—was cupped and leeched several times, notwithstanding which, hæmorrhages spontaneously occurred before death;] baths; enemata; sinapisms; blisters; quinine; castor oil, and porter, completed the treatment: maximum of the day 86°; two hours after death, axilla 25 *m.* 100°; rectum 10 *m.* 99°; four hours after death, axilla 95°; at five hours after death, abdominal convexity from putrefactive gasses; body large, adipose tissue abundant. Gangrene of the calf of the right leg, with a similar condition of the skin of the abdomen, where in both cases blisters had been applied. The post-mortem examination which I made, showed anæmia, &c. No muscular contractility; no rigor mortis, except slightly in the neck.

Sun-stroke. Post-mortem Re-Heating after Refrigeration.—July 22d, 1845. M. G., aged 25; born in Liverpool, last from Havre, resident three weeks, sick 2½ hours; dying at 4½, P. M. Dissected 18½ hours after death; air of the dead-house 91°, and growing warmer; thigh 89°; calf 84°; liver 93°; heart 92°; 45 min. later, thigh 89½°; leg 85°; 45 *m.* later, thigh 89½°. This last figure is supposed to represent the mean temperature of the surrounding media, as the air, the stone floor, &c. At the beginning of the experiment, the animal heat of the centre had not been fully replaced by the physical heat; the latter elevated the temperature of the calf of the leg 1°, during the experiments. The atmospheric temperature had receded during the preceding night.

Putrefaction had not decidedly taken place; rigidity had left the neck, but not the limbs; the muscles were a little softened and darkish, and there was abdominal convexity. This, on the whole, is a very good example of refrigeration in sun-stroke, during a very high temperature.

Observe, it is not within the restricted scope of this paper to give a general or monographic exposition of solar diseases, except in one point of view, namely, temperature. Hence, in order to give this paper its contemplated brevity, it will be necessary to omit many of its most valuable and fundamental parts, that is to say, the history of individual cases and the post-mortem examinations illustrative of its pathology, noted without selection, as they fell under the writer's observation; cases in which the temperature was not ascertained by the thermometer, though sufficiently characterized by the touch to admit of classification.

In these omitted cases, all the organs were examined, and their anatomical characters noted. They illustrate the classification as published in 1841, in the New-York Medical Gazette, a document, which, with all its imperfections, I beg leave here to introduce, hoping that I shall have an opportunity to offer in this journal, or in another and more enduring form, evidence far more satisfactory upon this whole subject.

Observations on Solar Asphyxia.—Coup de Soleil, or Sun-stroke.—In the numerous works written or re-published in the United States, I have not seen any satisfactory notice of this very frequent, and in the South, most fatal of all maladies. During five weeks, ending with last month, (July, 1841,) five fatal cases occurred in my practice alone.

The name I have chosen for the disease, *Solar Asphyxia*, being descriptive of its leading symptoms, will, I trust, receive the sanction of the profession and the public. I adopted it several years before I had an opportunity of testing by dissections, the character of the disease, which itso fully expresses. *Pulmonary Apoplexy*, is a name, more characteristic of the morbid appearances of the lungs, but it makes no allusion to its solar origin, or to the symptoms of suffocation, which mark its progress.

Solar diseases require a particular arrangement or classification, which is highly important in a practical point of view. I submit the following:—

I. *Solar Exhuston or Syncope,*
II. *Solar or Sun-pain;*
III. *Solar Excitement or Inflammation;*
IV. *Solar Asphyxia;*

the latter of which I propose to make the principal subject of this investigation.

1. Solar exhaustion differs from solar asphyxia, both in symptoms and treatment. In solar asphyxia, the skin is extremely hot, and generally dry; there is a choking sensation and a total loss of sense.

In solar exhaustion, the skin is moist, pale and cool; the breathing is easy, though hurried; the pulse is small and soft; the vital forces fal into a temporary collapse, the senses remaining entire. Horizontal position, free air in the shade, external stimulants and frictions, are usually sufficient to restore the patient. Vomiting is very useful, and is easily excited, as there is usually nausea; warm water, and if necessary, a few grains of ipecac. may be given. Vomiting appears to throw the blood from the centre to the circumference. The pulse rises.

That fatal disease of northern summers, ascribed to drinking cold water, is probably nothing but solar exhaustion, in which cold water has but a secondary agency. It happens only in very hot weather.

II. Solar, or as it is commonly called by the people, sun-pain, is a chronic disease in which the abdominal organs are more or less deranged though the most remarkable symptom is a pain in the head, while the sun is above the horizon.*

Solar excitement or inflammatory re-action, sometimes follows solar asphyxia of the second degree, being attended with febrile heats, arterial throbbings, and headaches.

Case.—A cooper while working in the sun, fell so suddenly as to bruise and lame himself considerably. He soon got up; but feeling feverish, and having pulsations in the head for several days, he tried the Thompsonian treatment without benefit. He called on me for advice.—He was bled freely, which caused a long continued syncope, from which he arose cured. He took no medicine and went to work the next day.

J. E. had been to the town of Bath, six miles distant, on the 4th day of August, 1837, in company with Dr. R. and another person; while attempting to walk back to New Orleans, upon the rails of the Nashville railroad, not then finished, the doctor fell sun-struck, and expired in a few minutes. The body was abandoned. The other companion of E. had not walked far, when he too fell, and died in like manner. The next morning as E. was passing opposite my door, on the sunny side of the street, he fell. I instantly bled him, upon the pavement. The blood

*This affection, which is not frequent, requires quinine for its cure, yet it does not exhibit the regular or essential symptons of intermittent fever.

trickled slowly at first, but soon after flowed in a good stream, and the pulse, though feeble, became fuller during the operation. In a few minutes, the man walked to his boarding-house, without feeling any unpleasant symptoms; but a moderate re-action coming on during the day, cathartics were given, and by the following day, his health was restored. In this case, blood-letting was probably useful, but in nine cases out of ten, it is useless if not worse, accelerating the death from five to fifteen minutes. During the last five years, I have been called to see a very considerable number of sun-struck persons within five or ten minutes after they fell in the streets: formerly, I used to bleed them, and though the great heat of the body is thereby suddenly diminished, the pulse becoming as soft as air, yet by the time the arm is tied up, (which is done more for form than necessity,) the patient is choked suddenly, and to appearance, by a dense tenacious mucus, the breathing not ceasing gradually, as in other diseases, but instantly, the face turning livid, and even its veins, especially upon the forehead, becoming at the moment distended. Bleeding hastens the strangulation, though it is always desired by the friends.

Sun-stroke in the second degree, preceded for 24 hours by headache, sleeplessness, slight delirium, ending in convulsions and remittent fever: recovery in nine days.—1847, Aug. 2d; air, sunrise 75°; H., aged 58, resident 2 years, fell at 10 A. M., in attempting to save his property from a conflagration; was bled 5 ounces; axilla 106°. Continued insensible 5 hours, the skin having become cool—sent to the hospital.

Without anticipating the description of sun stroke, to be found in the sequel, I may add another variety, a sub-acute affection, beginning with solar excitement and ending in asphyxia.

Case.—A gentleman who was not acclimated, exposed himself to the sun until noon, when he sent for a physician who bled him most profusely, (two pounds,) gave him cathartics, applied mustard on the stomach and legs, cold to the head, &c. Afterwards he walked about for some time, but in the afternoon became insensible. About sundown I was called in, and found him asphyxiated, unable to swallow, totally insensible, breathing as in sun-stroke ; pulse air-like and quick ; the skin hot. He did not die until late in the night. This affection lasted about fifteen hours ; more than fifteen times longer than the average duration of acute solar asphyxia, which has but one stage, as truly as hanging, drowning, or suffocation from carbonic acid gas, with this difference, that in the former there is not a movement in any of the muscles, except

those concerned in breathing and in circulating the blood, except, immediately before or after the last breath, when there is sometimes a very slight contraction of the fingers, and a kind of bending or turning of the body towards one side, though this is scarcely observable.

Solar exhaustion in its mildest and chronic form, that of debility, is a uniform effect of our hot season, until after acclimation. During this period, though the health may be good, the ability to perform the usual amount of labor is diminished. Even horses are debilitated, often get the *thumps*, and frequently die from solar asphyxia, during the acclimating period. This is so well known that an acclimated horse or mule is worth much more than one not so protected.

Slaves from Missouri, Virginia, and Maryland, suffer as much if not more from debility than the whites, during the first and second summers. I have seen some whose tongues were pale and flabby, whose pulses were feeble and irregular. In these cases the muscular power is lessened; the skin is covered with an abundant, cool perspiration, and sometimes there are palpitations of the heart, not unlike those which attend organic, rather than functional disorders of that organ, requiring the horizontal position, than which nothing is more important for the removal of these affections during solar acclimation.

Solar and terrestrial heat differ essentially in their action on health; the latter seems never to produce any morbid effects resembling sunstroke, though many firemen in boats, foundries and furnaces are exposed to a high temperature. The solar rays may undergo some unknown modifications from local causes, independent of mere calorific influence.

In Louisiana, solar asphyxia is rather an *urban* than a *country* disease, affecting those not thoroughly acclimated to the city. The persons alluded to in the following extract, were doubtless unacclimated. "In 1821, H. M. Frigate Liverpool, was proceeding from Muscat to Bushire, the weather gradually increased in warmth, double awnings were spread, the decks kept constantly wetted, and every precaution used to prevent the exposure of her men; yet in one day, from a *species of coup de soleil*, she lost three lieutenants and thirty men. If, for however brief a period, they exposed themselves to the sun, they were struck down senseless. The frigate's main deck at one time, is described to have resembled a slaughter house, so numerous were the bleeding patients. (Travels by J. R. Wellstead, Esq., F. R. S., F. R. A. S. Vol. i., p. 75, 1841).

Upon the 24th of May, 1839, after visiting a man who fell asphyxiated, in the St. Mary's Market, and who lived only twenty minutes, I

called at another place to visit a patient, and while in the house, a man of very robust appearance, fell with great force upon the floor, causing the blood to flow from his nostrils freely. He soon recovered, and informed me that he had been exposed to the sun, and had fallen once before during the day, but feeling very well as he said, he declined the offer of my medical services. I met him daily for some time after this occurrence, in good health. He declared that no pain or inconvenience attended his falls, except some bruises.

Solar asphyxia, sometimes has taken place in the shade, immediately after exposure to the sun, and, even as late as five or six o'clock in the evening. In several instances, the patients came in at five o'clock, p. m., and fell unknown to any one, and were not discovered in their rooms for an hour or two. Attacks late in the day are not so quickly fatal, as those occurring between noon and the middle of the afternoon.

If the attack happen in the hottest part of the day, it terminates in death, in about half an hour.—July 26th, 1838, at 3 o'clock, p. m., when the thermometer placed against a brick wall, upon which the rays of the sun struck obliquely, stood at 130°, I was called to visit a paver, a stout middle aged man, who fell in Fourcher street, near my office. I saw him within five minutes after his fall, his skin intensely hot, breathing noisy, irregular and with subdued sobbings, unable to swallow, pupils rather contracted, eyelids nearly closed, pulse extremely variable, irregular and quick. A vein being opened, the blood jetted and stopped alternately, the pulse becoming gaseous as the blood flowed. Ice-water was poured upon the head and neck, a mustard paste was spread over the body. He lived thirty minutes, expiring upon the pavement.

If the attack should happen late in the afternoon, it may last from one to two hours, or even longer. I have had at least five or six cases, in as many years, where persons have not long before sunset quit work on account of the heat, rather than from any sickness; they had returned to their rooms, where an hour or more after, they had been found accidentally, in a dying state from solar asphyxia, not having made any noise to arrest the attention of the family.

The most usual place of attack, is among paved streets and brick walls, or upon the levee, where there is no shade. The structure of our wharves and levees, would admit of many shade-trees, without interfering with the utilitarian cravings of commerce. Such an improvement would be alike ornamental and useful.

Almost the only persons subject to this malady, are white males who

labor in the sun, and who have not passed through the acclimating period of three or four years. I never saw but one negro die from this cause. He fell in Julia street, Aug. 2d, 1837, and lived about an hour. He was very stout, but I do not know whether he had been acclimated. A negress, while at the wash-tub was struck down. I found her senseless, speechless, and breathing with some difficulty, but she retained the power of swallowing; and by the use of cathartics, sinapisms and blisters, recovered in two days.

It is often impossible to get exact histories of the premonitory symptoms. In some instances the patient has not probably had any. The history of the case is something like the following: he had eaten his dinner as usual at noon; urged by his wants or love of gain, he went forth to brave the heat of the sun. The walls, roofs and pavements, now heated to the utmost, radiate an intense heat, the temperature exceeding that of the human body, from 30° to 40°. The laborer, perhaps, wears a thin straw hat, and his hair cut close, in order to keep the head cool; this in fact, exposes the head to the solar influence much more than a thick coat of hair, and a wool hat would do; from the same false theory, he wears a thin cotton shirt, which is the only garment with which his chest is covered, and which, when saturated with sweat, affords but a feeble resistence to the conduction of heat into his body. Now placed in an atmosphere 30° or 40° hotter than his body, it is plain that two shirts, one of flannel or wool, and one of cotton, would be a great defence against the sun, affording the coolest kind of dress, except to such persons as are in the shade.

Thus thinly clad, the laborer engages at the hard exercise of rolling cotton bales, loading or of unloading ships, coopering, digging or paving. The exercise increases the influence of the atmospheric heat; he finds his skin becoming hot and dry, the next instant he falls, or perhaps, he may conclude "to knock off" from work. He proceeds homewards a square or two before he drops to rise no more; the passers by collect around him: some run for a doctor, some apply ice to his head, and the first bleeder that can be had, performs blood-letting. From the total loss of sensibility in the patient, the first impressions of the physician lead him into the belief that the malady is apoplexy. Of this, more hereafter.

The patients' mouth is found rather open; the under jaw has fallen; a tenacious mucus appears between the lips and in the nostrils; the breathing is irregular, unequal, laborious, the chest not expanding and

contracting well, reminding the beholder of the voluntary efforts which patients sometimes make, in fractures of the ribs, and pleuretic or rhumatic inflammations, to prevent the movements of the chest, necessary to full breathing. The wind-pipe moves violently up and down, the abdomen and diaphragm rising and falling simultaneously. The breathing is noisy, but not stertorous. Mucous ronchi may be heard several yards from the patient. Just below the clavicles, the sounds are heard through the stethoscope are very remarkable. Some are acute, some are dull, with a puffing or gurgling sound. By applying the hand to the chest, a bubbling or boiling can be felt beneath. As death approaches, these rattles recede from the extreme branches of the wind-pipe, and occupy the upper portions of that tube. At length the accumulating mucus obstructs the passage, an involuntary effort is made to breath, but in vain ; yet sometimes, as in the fatal moment of croup, one or two additional respiratory movements take place. Almost always, the breathing stops *suddenly*, by a strangling fit. Often at the instant of death, or at the instant after the cessation of respiration, the face turns almost black, and the veins of the forehead swell, as if a violent effort, was being made to get another breath. Before breathing ceases, retchings sometimes take place; there is a kind of strangling cough, or an inarticulate moaning like that from some of the dumb animals when in pain; or perhaps there is a kind of suppressed sobbing or sighing like that caused by sudden immersion in cold water. Yet in everything except respiration, death takes place with the utmost tranquillity, not being accompanied with spasmodic or convulsive distortions, so common in fevers and affections of the brain. Be it what it may, the cause of death begins, continues and ends in the breathing apparatus.

The pulse is hurried, hobbling and unequal ; very often gaseous or air-like, but never slow, hard and large, as in apoplexy and some other diseases. The external veins are not full, and the arteries of the arm, are easily compressed by a ligature. When a vein is opened, the blood sometimes trickles, then starts in jets, stopping and starting several times. As the blood flows, the pulse becomes more and more gaseous, the heat diminishes, perspiration begins, and strangulation almost immediately follows.

From the commencement of the disease, the power of swallowing is totally gone in almost every case. Whatever is poured into the mouth runs out or rattles in the throat, according to the position of the body; I have given a mixture of mustard and salt, or ipecac; but I am now

satisfied, that to put anything into the mouth, is not only useless but positively hurtful, as it often drops into the windpipe. The eyes are not projecting, discolored or rolling, but generally maintain their parallelism, though they are sometimes turned upward; they are less closed than in sleep; the pupils are perfectly natural; the power of winking is totally lost; the eye is lustreless, and expressive of a dying state. The patient is usually found lying on his back; he has no power to change his position; his neck, body, and limbs are free from rigidity, and motion throughout the attack. In the act of dying, I have noticed a slight curving of the body laterally, with a feeble contraction of the fingers. In solar asphyxia, the symptoms, and the manner of death, are more uniform than in any other malady. The heat of the body, both before and after death, is a most remarkable circumstance. In the hurry, incidental to a death so sudden, I have not had an opportunity of applying the thermometer, to ascertain the exact temperature; but judging from the sense of touch alone, it would seem much greater than in the hottest fevers. The heat may be felt radiating from the patient's body, at the distance of two or three feet. In cases where the patient has not been bled copiously, the heat is very pungent. The heat of the body continues, generally, many hours after death, including the whole night. This is the more remarkable, as our nights are not hot and sultry, but accompanied with breezes, which, by morning, cool even the walls and pavements.

After the death of the lungs, or the cessation of respiration, the heart and arteries will, in some instances, continue to act.

Case.—Mr. C. died of solar asphyxia, on the evening of July 24, 1836. About an hour after he had been laid out, two messengers called on me to visit the corpse, which was supposed to be alive. I found the body as warm as at death, though it had since been washed. I found a slight pulsation at the wrist, and a feeble motion of the heart.* Dr. Young, of this city, was lately called under similar circumstances, about two hours after breathing had ceased from sun-stroke. He found the body very hot, and, as he thought, slight motion of the heart and arteries. I dissected two bodies at the same time, that had died the day before, and found the heat of the trunks about equal to that of a person in health.

After death, the face and neck became of a blackish, or purplish

* I have never, to this time, (1855,) met with a similar case.

spotted hue; a mucous foam, often mixed with blood, begins, soon after death, to issue from the mouth and nostrils, and is very copious in many cases.

Solar Asphyxia, or Coup de Soleil, has long been regarded as apoplexy; the entire loss of the senses—the universal paralysis—all seem at first view, to sustain this common, but erroneous opinion. In the worst cases of apoplexy, the patient is not always instantaneously deprived of volition, feeling, and motion. The apoplectic, in the early stages of the malady, may be awakened, and can answer, though not able to speak more than a word or two. He will generally open his eyes on being spoken to; can swallow, and will start from the lancet, or the application of ice; and he possesses some power to move the muscles.—Nothing of all this, happens in solar asphyxia. Effusion of blood upon the brain, extravasation into its ventricles or substance, as well as congestion, are much more gradual in their effects. The depression of large portions of the skull, and the presence of enormous clots of blood upon the brain, do not destroy all sensibility. In trephining the skull, while the patient seemed in a deep, snoring sleep, I have sometimes found it necessary to cause his hands to be held down, as he evidently felt pain from the operation.

The worst cases of apoplexy last from twelve to twenty-four hours, generally; solar asphyxia, as many minutes. Mr. Solly, in his work on the Brain, says that in the most acute typical form of apoplexy, "so severe that *all* the effects of extravasation are produced, all the nervous power in the cranium being affected, the patient dies in the course of forty-eight hours." Apoplexy frequently affects one side, or half of the body with palsy, and sometimes is attended with convulsions. After the apoplectic fit goes off, the palsy often remains, sometimes, permanently. Nothing of the kind occurs in solar asphyxia. In the former, the breathing is infrequent and snoring, the pulse is slow and hard; in the latter, the breathing is quick and rattling, the pulse rapid and gaseous. The former happens to the rich, the luxurious, the sedentery, the corpulent, the plethoric, those who have thick short necks; the latter happens to the poor, the laborer, the exposed, who undergo hardships. The former happens in cold weather and in hot, in the daytime and at night; the latter only in hot weather, and during the day. Solar asphyxia has no premonitory symptoms, except a sudden heat, and dryness of the skin; neither headache, scintillations, or any cerebral affection. Apoplexy has well known premonitory symptoms:—"Napoleon, who dreaded

apoplexy, asked Corvisart, his first physician, for some information respecting this disease. Sire, replied Corvisart, apoplexy is always dangerous; but it is *always* preceded by certain symptoms; nature seldom strikes the blow without giving warning. A first attack which is always slight; is a *summons without costs—sommation sans frais;* a second, *summons with cost—sommation avec frais;* but a third, *is an execution on the person—prise de corps.* Corvisart, himself, afforded a melancholy proof of the truth of his assertion."

Solar asphyxia is probably an universal lesion of the nervous system;* but more particularly of that part which is necessary to the pulmonary circulation. The blood which suddenly accumulates in the lungs, ceases to be arterialized; it gorges not only the blood-vessels, but infiltrates the pulmonary substance, forming the most perfect example of hyperæmia, and even penetrates the coverings of the lungs,—*pleuræ pulmonalis,*—and is copiously effused into the cavity of the chest, as I have seen several times. In this contest, the lungs are, probably, throughout the attack, in a passive state, permitting the blood not only to distend its proper vessels, but to permeate readily throughout the pulmonary texture, until the lung is, perhaps, one-fourth heavier than is usual. Whether the pulmonary congestion be the primary or secondary condition of insolation, I will not say; but I must remark, that of all morbid appearances of a congestive character, this is the least equivocal, so far as I have examined. Here nothing is ambiguous; the congestion or hyperæmia, is marked.

Although physiology teaches us that man is endowed with the power of maintaining the same heat of his body in all climates and situations, with few exceptions, still it is possible, under peculiar circumstances, that the body may become actually heated. A chemico-vital refrigeration, by means of perspiration or evaporation, is constantly going on in health, especially in hot climates. The "fire-kings" themselves, when in a heat of 500° or 600° would roast and turn into cinders were it not for this refrigerating process, in conjunction with a vital energy, which for a time neutralize the accumulating power of caloric. The solar heat probably accumulates in the body faster than nature can refrigerate through the lungs and the skin, by evaporation; inequilibrium presses upon the vital energy, which, being exhausted in the contest, as well as by excessive previous labor, is unable longer to neutralize the excess of

* I now regard this opinion as hypothetical and unsupported by pathological anatomy.

internal and external temperature—the latter often 40° more than that of the body. Vital chemistry is unequal to the task of preventing the conduction of heat into the body, and death is the consequence.

June 19, 1841.—James Stevenson, a stout muscular man, aged about 35 years, a cooper, for six months a resident of this city, ate his dinner in good health, and after working about three hours on the Levee, complained that he could not sweat as usual; he requested one of his friends to put his hand upon his (Stevenson's) breast, which was found very hot and dry. Stevenson started home, but fell before he reached his house, in St. Joseph street. Some passers by ran instantly for aid.

The skin was much hotter than in the most burning fever; on holding the hand near the body, a strong sensation of heat radiating from it, was perceptible. The pulse was quick, gaseous, variable, and hobbling; sometimes throbbing and full, especially in the arteries of the neck; from a vein, opened in the arm, the blood trickled down at first, but started soon into a full stream, and falling upon the hands of an attendant, he declared that it was almost "scalding hot." The breathing was irregular and laborious; the larynx, moving up and down two or three inches during each respiration, which was attended with fits of strangling, and loud, phlegmy rattles, and occasionally a kind of imperfect, involuntary cough, bringing a tenacious froth into the nose and mouth.

During inspiration, the expansion of the chest was very imperfect, as if the respiratory muscles had been disabled, or the lungs distended, reminding the observer of a patient having broken ribs, in which full expansion or elevation of the ribs gives pain, and is, therefore, avoided.

While Stevenson's chest was comparatively quiescent, the windpipe and abdomen moved and heaved with great violence.

He was wholly insensible, and was unable to swallow; the eyelids were nearly closed, and the pupils somewhat contracted; no distortion of features; the under jaw slightly fallen; no muscular contractions or convulsions. Died in an hour.

Shields, one of his companions, died at the same time, from the same disease; he lived at the same house; had been in the city the same length of time; was about the same age; followed the cooper's trade. He ate his dinner as usual, and worked several hours, and died not far from his boarding-house on his way home.

On the next morning, about sixteen hours after death, I examined

their bodies in the presence of a number of gentlemen. They were as warm as in health; the faces and necks were of a dark, purplish, spotted appearance; a vast quantity of bloody, mucous froth issuing from the mouth and nostrils, as is usual after strangulation, drowning or asphyxia of any kind. At least half a pint of dark fluid blood was effused or extravasated into the cavity of each side of the chest.

Nearly the whole of the lungs were dark, and injected with blood; the central and posterior parts, comprehending at least two-thirds of the pulmonary substance, presented the appearance of an enormous black clot of blood, somewhat solid, and united by a texture, bearing no resemblance to the light, elastic and contractile texture natural to healthy lungs. On cutting several slices from the lungs, they resembled a dense black jelly, the cut surfaces appearing smooth and glossy; the substance did not recede much before the knife, as is the case in cutting in a healthy lung. More than half of the lungs must have been impermeable to the air, and these portions appeared to contain none of that fluid in the cells. By grasping them with the fingers, they broke readily, in several places, into fragments, like clots; they swam in water, but sunk in alcohol. After soaking six hours in several portions of these fluids, the pieces, when cut, presented a glossy, black, jelly-like appearance. In both these men, the morbid phenomena were exactly alike.

The abdominal contents presented no diseased appearance. The heads were not examined, for want of time. The cause of death being evidently in the lungs, further examination, though desirable, was not deemed essential.

Case 3.—July 28th, 1841.—About 7 o'clock, P. M., was called to New Levee street, to see Robert Davis, Esq., a native of Scotland, late of Placquemine, an engineer, aged 35, a resident in the United States for the last five years, chiefly in the South; uncommonly robust, large bones, massive muscles; and very fat. He took dinner as usual; complained of no indisposition; returned again to his hotel at 5 o'clock, P. M., and, though his mind was much excited at the results of a law suit, he appeared in no respect sick. He went directly to his room, where he was found, in an insensible state, just before I was called in; and, though his death was not as quick, by a few minutes, as is usual in the earlier part of the day, yet his case was so precisely marked that I thought it my duty to inform his friends that he could live but a few minutes—certainly, not an hour. Skin intensely hot; pulse gaseous, quick, and variable; expansion of the chest imperfect; respiration quick, rattling, lab-

orious, and irregular; gurgling and boiling sounds in the air passages; eyelids closed; pupils contracted as in health, when exposed to the light; unable to swallow a tea-spoonful of water; total insensibility; ice placed on the stomach produced no shock; no convulsive action or rigidity of any muscle; the imperfect breathing and irregular circulation alone indicated that he was alive. Having declined to do any thing in the case, another physician (Dr. Young) was called; and as a number of persons present regarded the case, as usual, to be apoplexy of the brain, and not of the lungs, as I said it was, the doctor bled the patient. In five minutes after he ceased, all of a sudden, to breathe; the blood rushed to the face, which became livid; the fingers became slightly flexed. He was dead.

July 26.—6 o'clock, P. M. Dr. Young of this city, made a scientific and very minute dissection. The brain was perfectly healthy. I never saw the brain of any large fat man, dying suddenly, that was more free from blood. There was, perhaps, two tea spoonsful of limpid water in the ventricles; Dr. Young thinks from two to three drachms; but in either case, the quantity does not exceed that proper to the most healthy brain. M. Magendie thinks that the quantity "cannot much exceed two ounces without producing some bad effects."—(*Vide* Andral's Path. Anat., vol. 2d, p. 475.) The abdominal organs were healthy; the heart contained fluid blood; the bronchial tubes were full of mucous foam; the left lung was a black, congested mass, two-thirds or three-fourths of which must have been impermeable to the air; the right lung was in a state of congestion through one-third of its substance; about one-third of its substance was congested; the residue was less infiltrated with blood, and less solid.

Prof. Dickson, of Charleston, in his new and interesting work, "Elements of Medicine," (1855), says that "the direct effect of heat is shown in its influence upon the circulation, producing apoplexy, phrenitis, hæmorrhage. The vital fluid is not exempt from the law of increment of volume upon addition of caloric; and, thus distending the vessels it occasions congestions, or escapes by transudations, or by disruption, or laceration of tissue at the 'part of least resistance.' This may differ in different individuals, at different times, and in different places. Insolation, which, under my own notice, and that of many others, is a cerebral affection—apoplectic, or simulating apoplexy, was found by Dowler, of New Orleans, to offer no other lesion than a profound pulmonary congestion. Russell, too, in Madras, examined three cases of

coup de soleil, in which the brain was uninjured, but the lungs 'congested even to blackness!'" 30-1.

"During the intensely hot weather of the summer of 1830, I witnessed," says Dr. Gerhard, of Philadelphia, "the opening of the bodies of between 20 or 30 persons who died from this cause, [the effects of heat]; we found no organic lesion of the brain, but merely a slight congestion, such as is observed in other acute diseases, which it would be idle to set down as the cause of death. These were the appearances in those only who died suddenly of exposure to heat; for if time elapses for reäction to come on, inflammation of the brain may take place, but it is then a secondary affection." (*Clin. Lect.*)

T. Clarke, surgeon, in his work on Fevers, (Edin. 1801,) gives an abstract of his practice in his regiment, at Colombo, for 23 months, from 1796 to 1798, from which it appears, among other causes of death, that 7 soldiers died from fevers, and 8 from *coup de soleil;* on dissecting three of the latter, he reports:—"there seemed to be a great *accumulation of blood in the lungs;* we opened the head of one, but did not detect *any effusion.*" He accounts for the death by "*the expansion of the fluids.*" He says the body "undergoes such a preternatural increase of temperature, as may be quite inconsistent with life."

Under the head of Apoplexy, Prof. Dickson gives the following diagnostics of that disease. "Apoplexy resembles profound sleep, but the sleeper may be aroused; it is distinguished from syncope in doubtful cases, by the respiration which is almost always noisy and laborious; generally, also, by the pulse, which is full and slow, and the countenance which is, in a majority of cases flushed, &c.; the surface is of natural temperature—sometimes pale or livid, with a cold moist skin; hemiplegia is a very common result; paralysis may precede as well as follow apoplexy."

In no variety of sun-stroke is there hemiplegia, paraplegia, local palsy, or tonic spasmodic contraction, as a primary element, or sequel of the disease—a fact highly significant of its differential diagnosis as compared with apoplexy.

The antecedents, age, season, subjects, habits, predisposition, exciting causes, symptoms, progress, duration, repetitions, varieties, results, treatment, sequelæ and pathological anatomy of apoplexy, differ from those of solar asphyxia or sun-stroke, at least in the latitude of New Orleans.

In his new and able work on Pathologieal Anatomy, Prof. Rokitansky, without alluding to sun-stroke, makes the following remarks, which, to some extent, apply to the distinguishing lesions of that malady as it has fallen under my observation: "*Hyperæmia*; *Stasis; Apoplexy of the Lungs:* No organ with the exeeption of the brain, is so frequently the seat of hyperæmia as the lung. It occurs in various degrees, and develops itself either gradually or with intense rapidity, and is the anatomical basis of most sudden deaths.

In a lesser degree, as simple hyperæmia, it is frequently an habitual, and not rarely a periodic affection of an active nature; it often ensues with great rapidity, and may prove fatal by itself, or more frequently by the superaddition of acute œdema. We then find both lungs uniformly puffy, and of a dark-red color; their vessels, even to the capillaries, being filled with dark blood, and their tissue being sueculent and softened but still crepitating. In the bronchia we find a grayish, sometimes reddish mucus mixed with air bubbles. The heart is usually somewhat dilated, and always contains a large quantity of thin liquid, or slightly coagulated dark blood, especially in the right cavities. The veins of the membranes of the brain are usually full to distension, and serous effusions into the cerebral ventricles frequently occur as a consequent complication. The outer surface of the body is characterized by livor, and the rapid occurrence of extensive and very dark colored death-spots; the face in partieular is very puffy, and of a more or less bluish tint; the eyes and mouth are more or less open, and the conjunctivæ injected; the mucous membrane of the mouth is livid, and that of the throat is covered with tough mucus. Grayish or pale reddish, frothy mucus is found in the traehea.

In a higher degree hyperæmia amounts to *stasis*. In this stage the parenchyma of the lung is of a purple or black-red tint, and, as it were, saturated with blood. When the stasis has continued for a longer period, the walls of the air-cells and the interstitial tissue become swollen, so that the former may beeome perfeetly impermeable to the air: the parenchyma consequently becoming denser, hard, and heavy, and ceases to crepitate; and on making an incision only, a comparatively trifling quantity of thick fluid blood escapes. The blood appears, as it were, fused into the tissue of the lung, the whole affected portion having a somewhat shrunken appearance."

Prof. Rokitansky adopting Laënnec's account of the eharacteristic signs of pulmonary apoplexy (a term, by the way, which Dr. Rush had

previously used,*) gives the following summary, which agrees better than the preceding description without being identical with the lesions of solar asphyxia [sun-stroke]:

"We find blackish-red patches in the substance of the lungs; which attract attention not only by their color and consistence, but also by their definite outline. On examining the cut, or, what is better, the torn surface of the diseased portion, we observe it to be more or less coarsely granular, &c. The whole represents an effusion of blood into the cavities of the air-cells, which distends them to a certain extent and then coagulates within them. The interstitial tissues are compressed, and infiltrated with blood; the bronchial tubes are also filled, &c. When this form of apoplexy is very much developed it is accompanied with *laceration of the pulmonary tissue*, we find a cavity in the lung similar to those which are often met with in cerebral apoplexy, and containing coagulated blood; the surrounding texture is torn, suffused with blood, &c." (IV., 58, 59, 60, 62.)

It is probable that serous apoplexy of the lungs may take place as the effect, in some cases, of sun-stroke. This disease, which may be called a water-stroke, is rapidly fatal as in genuine sun-stroke, being attended with asphyxia, cyanosis, and a copious discharge of foaming serosity. In persons who have died from sun-stroke, there is usually a great quantity of bloody serosity in both sides of the chest. In cases where the examination has been long delayed, this effusion may originate in post-mortem transudations, or exosmotic action through the pulmonary tissue and pleuræ, by which the serum of the blood that had first accumulated in the lungs, may have been transported into the pleural sacks after death.

Post-mortem hypostatic hyperæmia or congestion from gravitation of the blood into the posterior, spinal aspect of the lungs, is not similar to that which occurs in solar asphyxia, as will be evident from the few and imperfect descriptions accompanying this paper. The lungs are seldom equally affected, the effused blood being, for the most part, coagulated in the centres, rather than in the periphery or posterior portions of these organs; their parenchyma being infiltrated, and not their bronchial vessels, as in hæmoptysis. Apart from the lesions incidental to solar

* Apoplexy, originally restricted to cerebral hæmorrhage, or congestion, was, by Dr. Rush, and afterwards by M. Laënnec, applied to certain analogous lesions of the lungs; others, among whom is M. Cruveilhier, have applied this term to conditions of the spinal cord, heart, muscles, placenta, &c.

asphyxia, the lungs, so far as I can remember without consulting my records, are always normal, largely developed, and inclosed in chests of the most capacious dimensions. Sun-stroke-subjects are superior to all others for the study of the normal appearances of the organs. As death takes place usually from one to two hours after dinner, the chyle will be found very abundant in the intestines, the lacteals of the mesentery and thoracic duct.

In Dr. Watson's Lectures on the Practice of Physic, (3d Ed. 1849,) is the following notice of sun-stroke: "It is a complaint of which the cause has long been known by the inhabitants of hot climates. There is a case of it related in the Bible: 'And Manasses was her husband, of her tribe and kindred, who died in the barley harvest. For as he stood overseeing them, and bound sheaves in the field, *the heat came upon his head, and he fell on his bed, and died* in the city of Bethulia.' Pathologists are not agreed respecting the nature of this distemper, nor about the manner in which it destroys life. Some regard it as a sort of apoplexy, and hold that death takes place in the way of coma. But the most approved remedies of apoplexy, bleeding and other evacuations, have not proved successful in relieving it. The natives of India prefer the pouring of cold water upon the head to every other curative measure. Our army surgeons found that stimulants, rum and water, for instance, answered better than depletion. I have never seen this affection, but I should conjecture that it is more akin to the state we call concvssion than to true apoplexy. It would appear that the sun's rays act upon the brain like a shock."

The *Revue de Thérap. Méd. Chir.*, for Oct. 1855, quotes from a German Medical Journal, what purports to be a most efficacious remedy for the cure of *coup de soleil*, as announced by Dr. Weisenberg, of Eisfeld, namely, acetic ether dissolved in wine vinegar, to be applied as a lotion on the forehead, temples, cheeks, hands, and chest; the same is given internally every half hour, with coffee.

The object in making these quotations is to show the importance of describing and classifying solar diseases. In genuine solar asphyxia, it is probable that Manasses would have died in the harvest field, or at least before reaching the "city of Bethulia;" rum and water, ether and vinegar, cannot cure, because the patient cannot swallow.

The descriptions of sun-stroke in Philadelphia, New-York, and other Atlantic cities which the writer has met with, differ essentially, as might be shown, from the characteristics of this disease as it appears in New

Orleans. In the Northern cities, the type, judging from such cases as have been published, represents what I have described as solar exhaustion, debility, or syncope, which is fundamentally different from sun-stroke proper.

In view of the energy, ability, and research so honorable to the Northern medical mind, it is amazing that accurate histories of sun-stroke have not been published, seeing that a disease having this name is, in that region, often very fatal.

The student, physician, and teacher, should bear in mind the importance and necessity of recording the phenomenology of the diseases which appear in their particular locality, which will differ more or less from other places, without departing from fundamental, yet universal types, as in the geology, flora, fauna, and climates of different geographical districts.

The most common objective conditions in sun-stroke may be thus summed up—high external temperature, perhaps including light, diminished cutaneous transpiration, with a dry, hot skin; exposure to the sun, fatigue, excessive labor, and non-acclimation. The subjective conditions are probably the following—thirst, sensation of internal heat, *malaise*, debility, diminished or arrested pulmonary exhalation, rarefaction of the atmospheric air in the air-cells of the lungs, rarefaction of the pulmonary tissues and the gases and blood within the blood vessels; the air cells becoming unduly distended, ruptured, and infiltrated with blood,—the *stasis* of the latter impedes the circulation and prevents the decarbonization of that vital fluid, as indicated by the sudden cyanosis of the face, neck, &c. Although the writer has never seen a person dying of poison from carbonic acid, yet, the descriptions given of that mode of death agree in many respects with sun-stroke of the first degree, that is, solar asphyxia.

Sun-stroke ought, in a special manner, to arrest the attention of the pathologist, since it affords the strongest type of acute disease, serving as a stand-point from which the investigator views the rapid march of symptoms, morbid alterations, and death.

(Researches on Animal Heat, to be continued.)

PROGRESS OF MEDICINE.

ART. I.—*Rademacher, the Empirical Reformer in Germany; his Doctrine and Therapeutics:* translated from the "*Revue de Thérapeutique Médico-Chirurgicales,*" of August and September, 1855: by M. MORTON DOWLER, M. D., New Orleans.

(*Continued from page* 404.)

LAXATIVES.

Enema of Solution of Table Salt.—In constipation depending on diminished sensibility of the rectum. We must find out, by several trials, the quantity of salt which will procure an evacuation in about five minutes. We order these enemata to the patient about the same hour every day.

Colocynth.—Used only where the want of intestinal evacuations depend on want of sensibility of the large intestine. The tincture of colocynth is given in drops, and in small doses, 10 to 30 drops two or three times a day.

Laxative Salts.—When the enemata do not produce any hope of amelioration, and when the cause of the disease resides in the whole trace of the intestinal canal, laxative salts, perseveringly employed, are the true curative agents. Glauber salt, or Rochelle salt is to be used. Half an ounce of Glauber salt, in at least fifteen ounces of water; for the water augments the laxative effect of the salt. Each individual must try, on his own person, what quantity is necessary.

Anti-Verminous Remedies.—All are uncertain excepting the following:—1, copper; 2, aloes; 3, oil; 4, semen contra. (Wormseed.) For Lumbrici the semen contra is to be given; for the ascaris vermicularis, aloes; and oil is given in various doses. The extract only of the semen contra is to be used.

REMEDIES FOR THE PORTAL CIRCULATION. (SYSTÈME DE LA VEINE, PORTE.)

The concomitants which attend plethora of the vena porta are the following: Hypochondria, vertigo, dimness of sight, chronic inflammation of the amygdalæ, and isthmus of the fauces, cough, asthma, bladder-affection, arthritic pains in the tarsal and scapular articulations.

In some rare cases; colic, cardialgia, principally during digestion; coxalgia; virile impotence, and immoderate luxuriosity.

Sulphur.—Sulphur acts very efficaciously on the venous system of the abdomen. The sulphur sublimatum is the kind to be used. Administered in powder, it is in its simplest and least expensive form. But it is equally useful when administered in the form of pill, especially when prepared with mucilage of gum arabic, and a little sugar. The following are the formulæ:—℞. *Sulph. Sublim.*, *Sacch. Albi*, āā ʒiij; *Mucilaginis Gummi Arab.*, q. s.; make into 180 pills. Dose, 8 or 10, three times a day.

In Powder.—℞. *Sulphuris Sublim.*, ʒss.; *Pulv. Ext. Glycrrhizæ*, ʒij; *Sacchar. Alb.*, ʒss. Daily, three dessert spoonfuls, in a glass of water. Should the alvine evacuations be tardy, we must confine ourselves to medium doses, and provoke evacuations by a solution of Rochelle, or Glauber salt.

Sanguineous Depletion, by means of Leeches to the Anus.—When hæmorrhoidic persons of the age of from 18 to 20, or 24 years, complain either constantly or temporarily of frequent strangury, it is necessary to draw blood from the anus, by which means we prevent the formation of vesical hæmorrhoids. By this treatment, we can change the vesical hæmorrhoids into rectal ones. Here the leeches have the effect, not only of producing an evacuation; but they also favor the flow of the sanguineous flux towards the anus. The sympathetic affections, as strangury, or dysuria, is often subdued with rapidity by sulphur, nitre, and by the repeated application of leeches. To combat abdominal plethora, it is necessary to secure three sanguineous evacuations, by the application of from six to eight leeches; one application every eight days.

REMEDIES FOR THE URINARY APPARATUS.

The sympathetic affections which accompany the primary affections of the kidneys, are periodical cephalalgias affecting one side of the head, cough without expectoration; asthmatic symptoms; heart-burn, which does not yield to any stomachic agent; vomitings; pain in the intestines; chronic diarrhœa; vesical tenesmus; dropsy; generally ascitis; pain in the soles, and on the back part of the feet, and in women, metrorrhagia.

Magnesia. Lime-Water. Alkaline Salts.—In cases in which uric acid predominates in the kidneys, and disturbs their functions to such extent that there results from this cause, a derangement in the secretion of urine. Purgatives here act as irritants on the intestinal canal; and in bringing back the urine to its normal state, they cure the disease of the kidneys. Their action is uncertain.

Magnesia is preferable to lime-water, to carbonate of ammonia, or any other of the alkaline salts or earth. Laxatives, administered in small doses, produce, here, the same effect as when they are given in large doses as purgatives.

Soluble Tartar. (*Tartarus Boraxatus.*)—It is a very efficacious diuretic in dropsy. The dose of soluble cream of tartar, ought to be regulated in such manner, that it shall not produce frequent alvine evacuations. [In doses of from gr. viij, to 3ss., given several times a day, it suffices to produce its diuretic effect.] [Note of the (French) translator.]

Colocynth Seeds.—As a diuretic. The largest dose is 30 drops, four times a day. Before employing the seeds for preparing the tincture, they should be dusted and then washed.

Watery Preparation of Opium.—In affections of the kidneys which manifest themselves by a diminution of the urinary secretion. The renal affection shows itself by pleurodynia of the right side, by the urine, which becomes red without any affection of the liver; by pains in the tarsus and back of the feet without there being any affection of the liver, spleen, mesentery, or brain. We give three or four, and at the highest five drops of the tincture of opium, mixed with a small quantity of water, in 24 hours.

Cochineal.—This is an excellent remedy for diseased kidneys. It acts almost uniformly, but it is inefficacious in cases of renal calculus. It cures, almost certainly, pains of the head and face, depending on a renal affection.

Doses.—℞ *Cocc. Cact.* 3ij; *Sacch. Alb.*, 3vij. Dessert spoonful every hour.

Golden Rod. (*Solidago Virga Aurea.*)—This is an ancient, excellent renal remedy, and which is a specific in diseases of the kidneys. It brings back the kidneys to their normal state. It agrees with a particular pathological state. It has no effect in renal calculus. Sometimes, gravel and renal calculi do not act consecutively on the bladder and

urethra; cough, cramps of the breast, pains in the side, continual heart-burn, or constipation, cadaverous odor of the urine, pain in the heel and backs of the feet; metrorrhagia and hysteria in women, are the ordinary accompaniments of renal calculi. We rarely see continual dysuria, coxalgia, or paralysis of the inferior extremities. If there be a tendency in the calculi to pass out, violent cholic pains, accompanied by vomiting, make their appearance; and in children we see a tendency to cramps and spasms. When the calculi are at rest, the patient does not suffer from them; magnesia and lime are the agents which by preference we ought to administer to calculous patients.

Doses.—We administer this medicine in the form of a ptisan. We infuse daily, half an ounce of this plant, for half an hour, in five cups of boiling water, pass through a sieve, and take this infusion, cold or warm, in the course of a day.

Warm Fomentations.—Warm fomentations to the renal region, are an excellent resource in combatting the symptoms which accompany renal calculus. Wheat bran is to be steeped in warm water, with which bran a sack is to be filled, and the patient made to lay down upon the sack thus prepared.

Sulphate of Calcined Magnesia and Cochineal. (*Magnesia Sulphurica usta cum Cochenilla.*)—The sulphate of Calcined Magnesia, administered with cochineal, renders incontestable service in renal gravel. The employment of this combination calms the various insupportable pains, and favors the expulsion of the gravel.—[℞. *Cocci Pulv.* gr. ivss.,—gr. ix; *Magnes. Sulph. ust.*, ʒss; ʒj; *Sacch. Alb.*, gr. ¾; make into a powder. One three or four times a day. [Note of the (French) translator.]

Tincture of Shepherd's Purse. (*Tinctura Bursæ Pastoris.*)—This is a special agent in causing the evacuation of gravel from the kidneys, Its continued employment, combats all of the sufferings which attend renal gravel. The tincture is prepared like the tincture of Chelidonium. *Dose*, 30 drops three times a day.

MEDICINES FOR THE BLADDER AND URETHRA.

Bédeguar (*Pomme Mousseuse, éponge Eglantier; Fungus Bédeguar, seu Rosarum, seu Cynobasti, Spongia Cynobasti.*)

Bedeguar is found on the branches of the eglantine, (rosa canina, cynorrhodon.) The fungi cynobasti act efficaciously on the neck of the bladder and on the urethra. The primary affections of the bladder and urethra are rare. In grave cases of strangury and retention of urine, this

agent is very efficacious. From 30 to 40 drops of the tincture are given every hour or every two hours; or we may resort to the following potion:

℞. *Tincturæ Fungi Bédeg. Mucilaginis Gummi Arabici*, āā ʒj; *Aquæ* ʒvij; *Syrup. Balsam.* ʒj; a spoonful every hour. Or further:

℞. *Olei Papaveris Alb.* ʒvij; *Tinct. Bédeg.* ʒj; *Syrupi Corticis Aurant.* ʒjss.; every hour a tablespoonful. The mixture ought to be well agitated before it is administered

Liquor Ammonia Sulphurati.—This agent is not to be despised in affections of the urethra. From 5 to 6 drops are given every two hours in half a glass of water.

REMEDIES FOR THE UTERUS.

Tincture of Nux Vomica and Castoreum.—When pains precede menstruation or accompany it, that originates in many cases, from a special affection of the uterus. The mixture of the tincture of castor and nux vomica rapidly subdues such pains. On the appearance of vomiting in pregnant women we must, with the view of greater certainty, combat the gastric affection, as it then may be called, especially when it is not practicable in the existence of a gastric constitution, to determine whether the pathological state of the pregnant woman depends on their dominant gastric constitution, or in conception itself. Even in the pains which follow accouchment, when they incontestibly depend on an idiopathic affection of the uterus. The following mixture given in equal parts, is perfectly applicable:

Doses: *Tinct. Castorei, Tinct. Nucis Vomicæ*, āā ʒ ss. Take 30 drops five or six times a day so long as the menstral flow continues. If this mixture is taken every month, it will completely remove the long continuance of the disease. Good Canadian castor costs less, and is as good as the castor of Siberia.

Borax.—The diseases of the womb that take place after delivery, are almost always the consequence of an affection of the whole organization, having its seat in the uterus. Nevertheless, it often exists as true pain of the womb, which enables us to presume that there exists a true illness of that organ. When the mammary secretion appears, the lochia may re-appear more or less abundantly sanguinolent or otherwise, without the painful affection disappearing. Borax here is the best remedy. It calms the painful symptoms as well as the fever, and better than antiphlogistic means. But when the secretion of milk is re-established, and when

the uterine pains and fever persist, then we are sure that nitre is necessary, from the abundance of the mammary secretion.

REMEDIES FOR GASTRIC AND ŒSOPHAGEAL INFLAMMATION.

Boracic Acid.—When gastric fevers prevail, gastric and œsophageal inflammation is frequent. This complaint is often so violent that the patient can no longer swallow. Boracic acid is here to be administered, which, owing to its weight will descend into the œsophagus. Erysipelatous inflammation, visible in the throat, will rapidly yield to this treatment, and deglutition, difficult at the commencement, will be restored as a result of this treatment.

Magnesia.—In inflammation of the œsophagus, we give after preparatory administration of boraic acid, a potion of magnesia. Ammonia is not to be administered in these cases.

All kinds of soups are very injurious to persons who are subject to sourness of the stomach. The patient who is subject to this indisposition should not eat before dinner either bread, cakes, meat, or any other solid ailment. He ought to content himself with some cups of coffee or tea with simple milk in place of cream. Meat, however, when not fat, nor cooked in butter, is very well borne by such patients. Fish may be well digested by some persons, and very badly by others.

Doses: R. *Magnesiæ*, ʒ ss; *Aquæ*, ʒ ix. To be taken by spoonfuls.

REMEDIES FOR THE ORGANS OF THE CHEST.

In Digitalis idiopathic affections of the heart, not depending on organic causes, either congenital or acquired, and in sympathetic affections of the other organs which depend on such affections, digitalis is the best direct remedy, producing its theraputic effect directly on the heart.

We must suspend this medicine immediately when the hurried respiration and the tension in the pit of the stomach disappears. The sympathetic affections which are produced by organic faults of the heart, are the following:

Hydrothorax, ascitis, sanguinolent expectoration, morbid affections of the lungs, which manifest themselves by asthmatic attendants, affections of the liver, with augmentation rather than diminution of its biliary secretion, affections of the stomach, which declare themselves by tension of the epigastrium, or by a continual uneasiness, and sométimes by belching up of the food; affections of the kidneys, which show themselves by an excess or deficiency of the urinary secretion; or by difficult mic-

turition, or by an abnormal color of the urine, a contraction of the rectum, by which the stools pass away in a slender volume, with frequent calls to stool, and finally by a remarkable sensation of decay and powerlessness. The calmative treatment for organic vices of the heart, consists in endeavoring to remove the water from the chest; and the use of digitalis is the most sucessful plan of treatment.

The sympathetic affections which we now consider, are cured by digitalis; but if they appear as a primary affection, independently of the organs, we then make use of the means proper to combat them.

Doses: ℞. *Fol. Digital.* gr. viij—gr. xij; *Aquæ*, ʒix—ʒxij ss; reduce to one half by boiling. Take four tablespoonfuls a day, so that the portion shall last two or three days.

REMEDIES FOR THE LUNGS.

Hydrochlorate of Ammonia, [*Sal Ammoniacum*]—This is the remedy which acts best on the internal surface of the lungs affected with morbid secretion of mucus. It allays gradually this mucous secretion and calms the cough to which it gives rise. It arrests also the purulent secretion in the opened vomicæ in the lungs. In the small purulent vomicæ which attend pulmonary tubercles the sal ammoniac is often very useful.

Doses: ℞. *Ammon. Hydrochlor.* ʒij; *Gummi Tragacanth.* gr. viij; *Extracti Hyoscyami*, gr. viij; *Aq. Destill.* ʒiij ss. Take in 24 hours. The action of sal ammoniac is of the same nature as that of nitre, and it may here be given in place of nitre. If, however, in the mean time the organism is affected with an iron disease, which can be cured by iron, the sal ammoniac must not be administered.

Golden Sulphuret of Antimony.—*Soufre doré*, (*Sulphur Auratum Antimon.*)—In affections, febrile or non-febrile, painful or painless, which manifest themselves under the form of cough, whether accompanied or unaccompanied by shortness of breath, this agent acts so certainly, that the most sceptical must be forced to recognize it as a valuable remedy in affections of the lungs.

The employment of the *soufre doré* is an excellent means in urgent affections of the lungs. Immediately when a *soufre doré* cough threatens to pass into phthisis pulmonalis, we doubtless ought to combat it in every way we can by other means; but we cannot cure it by any other means as readily as by the *soufre doré*. In the same manner, when the cough declares itself in a *soufre doré* tuberculous lung, we may singly, by this agent, prevent the irruption of phthisis. There are no signs which enable us to recognize a similar antimony disease of the lungs. In

these cases we must be guided by the epidemic constitution. We give the golden sulphuret in doses of ¾ of a grain 4 times a day, with a little sugar of milk.

We may give from gr. iij, to gr. viij, in 24 hours, under the following form : ℞. *Sulph. Aurati Antimonii*, gr. viij; *Gummi Arabici*, ʒj; *Aquæ*, ʒiij; every hour a tablespoonful.

Nicotiane, (*Nicotiana Tabacum*,) *Tobacco.*—In true pulmonary cough, the nicotiana is one of the best remedies, and there is no other remedy which can supply its place. In a particular affection of the lungs, which, unfortunately, afford us no certain sign by which it may be determined, a sure and rapid remedy is found in this agent. There is not the least doubt that, with the extract of tobacco, threatened phthisis pulmonalis may be removed from the manner in which the rooted cough disappears by the power of this agent. It is the best remedy in calming idiopathic hæmoptysis; but it must be observed that we refer here to the hæmorrhage that is commonly called coughing of blood.

The good effects that the carduus marianus produces in sympathetic hæmoptyses, originating from abdominal disease are produced by extract of tobacco in idiopathic hæmorrhages of the lungs. We must here direct our attention, as in all idiopathic hæmorrhages, to the general state of the organism. This latter is often found out, especially in young subjects, by the administration of nitre, and under these circumstances, it is good to associate the nitre with extract of tobacco. But there are nevertheless, some hæmoptyses which denote an iron affection of the organism. In such case, though the use of tobacco is not always injurious, its use is at least superfluous.

Doses. There exists in fresh tobacco a volatile active matter, which is also found in the extract. If we obtain the juice of the leaves by expression as soon as they are gathered, and inspissate the juice, this extract has not any of the taste of dry tobacco. The extract of tobacco is given to the extent of from gr. jss, to gr. iij, or gr. vj, in 24 hours, and from gr. ss. to gr. jss for a dose. Given to the extent of gr. iij, in 24 hours, it acts certainly and promptly against cough. We can also give it with the powder of the root of marsh mallows, made into pills containing ¾ grain of the extract of tobacco.

REMEDIES OF WHICH THE SPECIAL ACTION IS REFERABLE TO THE BRONCHIA.

Golden Sulphuret of Antimony.—When during hoarseness the patient experiences a sensible pain in the larynx, when the pain is augmented

during cough and pressure, we can calm the patient with *soufre doré*, and especially when the disease is not too deeply rooted. This agent is at the same time a precious specific, which acts on the bronchia and on their ramifications, and on the larynx. When the hoarseness is deeply rooted we ought not to depend on this remedy.

Mercury.—This is a very good remedy in deeply rooted hoarseness. Generally it disappears as soon as the breath appears fœtid to the patient himself. It is not necessary here to push the remedy till the gums become affected.

REMEDIES FOR THE ORGANS OF THE HEAD.

Means in Coryza.—Fumigations of the head or sternutatories of camphor, with the administration of nitre internally, are sufficient to combat it, in a very short time, and often rapidly, the ordinary coryza.

REMEDIES IN EPISTAXIS.

Iron.—If the epistaxis be an affection of the whole organism, which manifests itself by the nose, and which is an iron affection, we must employ chalybeate medicines. In many cases the epistaxis is sympathetic and accompanies the irregular circulation of the vena porta, and obstruction of the liver and spleen. We have already pointed out the means of combatting it.

Ice or snow applied on the head or to the nucha, or irrigations of cold water administered by causing the patient to be placed under a pump, so that the stream of water may fall on the head and nucha are very efficacious. We administer the most astringent preparations, as the tincture of the perchloride of iron, or the styptic liquor of Loof.

Zinc.—When the epistaxis is an idiopathic disease of the nasal mucous membrane, we cure it the most frequently by the cephalic remedies, principally by zinc. (See cephalic remedies.)

In case of painful pustules, which show themselves on the internal surface of the alæ nasi, suppurating and forming ulcers, and thus becoming an intolerable disease, the zinc pomatum is a very good application, and where it does not succeed, the mercurial pomatum is indicated. This ointment, as a friction every evening applied to the nose, is a very certain remedy. None of the other pomatums have any effect.

REMEDIES IN APHTHÆ OF INFANTS.

Borax.—This is the best remedy in aphthæ of infants. When the sucklings are attacked with aphthæ, the wet nurses ought to be submitted to the administration of soda or ammonia.

Doses. R. *Sodæ Borat.* ʒj ; *Aquæ*, ʒiij ; take by tablespoonfuls.

Hoffman's Balm of Life, with Syrup of Orange Peel.—Spongy or bloody gums are too often improperly regarded as a symptom of scorbutus. A very efficacious remedy for the cure of bleeding gums is the balm of Hoffman, mixed with the syrup of orange peel.

A drachm of the Hoffman is to be mixed with half an ounce of syrup of orange peel, with which the gums are to be rubbed many times a day.

REMEDY IN ENGORGEMENT OF THE PAROTID GLAND.

Iodine.—Sometimes the engorgement of the parotid is chronic, and in these cases iodine administered both internally and externally, produces good effects. The best treatment of inflammation of the glands of the neck in children, is the following:

We apply on the engorged gland cloths of sufficient size, covered with a layer of zinc pomatum, and we give to children, in order to calm the sympathetic fever, a little nitre. If the pain and tension are very severe, we apply during the day, a cataplasm, and during the night, the zinc pomatum. We resolve in this manner the engorgement. But the most essential point of this treatment is that when the inflamed gland cannot be removed by resolution, the zinc pomatum favors suppuration, and calms the pain better than any other agent can do. When the suppuration is established, we the more readily effect the opening of the abscess by a simple wax pomatum.

REMEDIES AGAINST THE HUMID EXANTHEMS OF THE EXTERNAL ORGANS OF HEARING.

Corrosive Sublimate.—There is a humid exanthem of the external organs of hearing with a fœtid discharge, which yields to a solution of the corrosive sublimate. It is sufficient to introduce into the ear once a day, a little lint dipped in this solution. By long continuance, this treatment cures the disease effectually.

℞. *Sublimat. Corrosiv.* gr. $\frac{3}{4}$; *Aquæ*, ℥ss; for external use.

CEPHALIC REMEDIES.

Tobacco.—Tobacco constitutes an excellent and very certain agent in case of cerebral affections. The volatile principle of the tobacco acts specially on the brain and spinal marrow. In encephalites, pain in the occiput, is a constant and characteristic sign.

Doses: ℞. *Sodæ Nitratis*, ℥ij; *Tinct. Nicot. Tabac.*, ℥ ss; *Aquæ*, ℥vj ss; every hour a tablespoonful.

If this agent does not produce its effect, which may be the case when the organism has already taken another character, of which the symptoms do not allow us sufficiently to determine, we give in place of the nitrate, the following potion:

R. *Ferri Carbon.*, ʒij; *Gummi Tragacanth.*, gr. viij; *Aquæ*, ʒvj ss; take every hour a tablespoonful.

There may be prepared in place of the tincture of nicotiana, a spirituous water, which possesses the virtue of the tincture. This water is obtained by distillation of the fresh leaves of tobacco, with water and alcohol.

R. *Aq. Nicotianæ*, ʒ ss—ʒj; *Aq. Puræ*, ʒvj ss; *Gumm. Adragant.*, gr. xv; take in 24 hours. The spirituous water of tobacco produces neither vomiting nor diarrhœa, and combats in an astonishing manner, disorders of the bowels. The green leaves must be used.

Strammonium.—In violent cephalic diseases accompanied with fever, or when the pain has its seat in the brain and on the top of the head, and not in the occiput. The pain is at first very violent, becoming remittent, and afterward ceasing entirely.

The tincture of stramonium is to be given in doses of ʒj in 24 hours. In these urgent cases we may augment the quantity cautiously to ʒjss; or we may administer as follows: *Tincture of Stramonium*, ʒj; *Ferruginous Tincture of Klapreth*, ʒj; *Gum Arabic*, ʒj; *Water*, ʒvj ss; take in the space of 24 hours, every hour a table spoonful. In ordinary cases half a drachm is sufficient.

Chloruret of Silver, (*Argentum Chloruretum.*)—If it so happens that this agent in most cases, produce action on the bowels, this effect will of itself cease in a very short time.

This agent is to be employed in cerebral fevers, when the patients complain of light vertigo; for even if this be not a certain pathognomonic sign, all the patients, at least who have been cured by this agent, have complained of light turnings of the head, which approached to vertigo. This feeling of turning, as also the fever, disappears almost invariably by the employment of this agent.

The chloruret of silver given in quantity of gr. j ss, at four doses during the day is borne without inconvenience.

R. *Chlor. Argent.* gr. j ss; *Succ. Glycyrr. Pulv. Althææ*, āā q. s.; make into 8 pills, to be taken at 4 times during the course of a day.

Zinc.—Zinc is a calmative medicine which has a great analogy to opium, without however producing the least excitation. It is a most

preeious remedy in calming the violent pains of the teeth; in ophthalmia; in erysipelas of the head, when these affections run high and are aecompanied with violent fever and delirium; or when the head is covered with large vesieles; for in sueh cases a true delirium supervenes.

Zinc is an agent which calms this terrible eondition in 24 hours, or at least visibly arrests its progress. We speak here of erysipelas of the head, which shows itself as an idiopathie disease of the part visibly affected. In erysipelas of the head, which has gastricism for its cause, we naturally act by anti-gastrie remedies.

Zine also cures numerous internal pains of the head, and even in some cases, internal pains of the ears. Experience teaehes that there are four painful affections of the head, whieh may be diagnosed, very justly, aecording to the remedies whieh eure them, namely; affections cured by nieotiana, or nicotiana-diseases; those eured by stramonium, or stramonium-diseases; those eured by chloride of silver, or ehloride of silver-diseases; and those eured by zinc, or zinc-diseases.

Zinc very rapidly cures the painful affeetions of the external tissues, whieh present themselves under the name of rheumatism, gout, neuralgia, etc.; and especially the painful affection of the seiatie nerves, whieh is well known under the name of sciatic rheumatism.

Even in the dorsal pains which co-exist, and are often eonfounded with the affections of the sciatic nerves, it cannot be denied that zinc is a truly curative means. In many cases we have no other remedy excepting zinc, in cerebral fevers. In true continued delirium, or in the comatose state, the fever appears to create a transport, owing to its intensity. Where this excitement has taken plaee, we not only appease the delirium by zine, but we remove the disease often in the space of two or three days by this agent. Zinc is not less useful in those comatose states which pass readily into acute cerebral inflammation. The acetate of zinc may be given in doses of from ʒj ss to ʒij in 24 hours. The ordinary dose is ʒj ss; the extraordinary is one ʒij for the 24 hours.

℞. *Zinci Acetat.* ʒj ss; *Gummi. Arab.*, ʒj; *Aquæ*, ʒvj ss; a tablespoonful every two hours. We can administer it with some inactive extraet, or with gum Arabic.

℞. *Zinci Acetatis*, ʒj ss; *Gum. Arab.*, q. s.; make into 30 pills; every hour a pill. We give only half of the quantity prescribed, during the first four or five hours.

In delirium we give the zinc every hour, and awaken the patient to administer it.

REMEDIES FOR THE EXTERNAL ORGANS.

Bitter and Aromatic Ptisans.—Often we see herpetic eruptions disappear under the use of bitter and aromatic ptisans. We make use of the menyanthus trifoliata, (water trefoil,) to which we add a little guaiacum and sassafras wood.

Soda with Lard.—This compound is very efficacious in cutaneous eruptions.

℞. *Sodæ Carbonatis*, gr. xv; *Adepis Suill.*, ʒ ss;

Rub the skin lightly many times a day. Before using it the scabs must be softened.

Lime-Water.—Very efficacious in habitual eruptions of the head in children. It cures at first the eruptions, and its continued use afterwards removes the engorgement of the glands of the neck. The action of lime-water on the eruption is sometimes truly miraculous. Lime-water is given internally with milk, from four to six table spoonfuls of the lime-water being given in a day, in half a cupful of milk.

Carbonate of Magnesia.—This agent often cures herpetic eruptions which resisted every other remedy.

The crusts must be softened, and sores powdered with the carbonate of magnesia, rubbing lightly with the finger. This treatment to be repeated every day, care being taken to soften the crusts before applying. The crusts become thinner and thinner, and finally cease to form.

Solution of Corrosive Sublimate.—This is employed against the itch. In the commencement of the disease it grows by the employment of this agent; but afterwards the itch pustules are soon cured.

℞. *Corros. Sublim.* ʒ ss; *Ammon. Hydrochlor.*, ʒ ss; *Aquæ*, ʒxvj; wash the parts affected with this solution every two days, especially if the patient scratches or has burning of the skin.

Sulphur.—In the itch, and other cutaneous eruptions. When the other means have not given any relief, sulphur produces the best effects. The interior of the shirt may be strongly rubbed with dry sulphur. The same means may be used on gloves, and the linen garments of the patients. We sprinkle several times a day with precipitated sulphur.

Marjorum. (*Origanum Marjorana.*)—In chronic inflammations of the skin. It is applied to the skin, either enveloped in cloth, or without envelope, depending on the kind and the seat of the inflammation.

Anti-Erysipelatic Powder.—This is an ancient and very valuable remedy, which is not to be despised in chronic cutaneous eruptions. In

inflammations of the feet where other remedies have been unsuccessfully employed, the disease is often cured by sprinkling the surface with powdered roses.

Bitter Almond Water.—With this agent very severe cutaneous inflammations may be cured. The non-alcoholic water of bitter almonds is the form employed.

Mercury and Lead.—The combination of mercury with lead cures in a special manner, chronic inflammation of the skin, as also obstinate herpetic eruptions. It is employed also with much success in obstinate ulcers of the skin.

℞. *Præcip. Alb.*, ʒj; *Plumb. Acetatis*, *Adepis Suill.*, āā ʒ ss; We need not further speak of the relation existing between the mercury and lead.

Acetate of Zinc.—This is an excellent remedy in cutaneous inflammations. We may remark that this salt of zinc cures venereal chancres more promptly than any other remedy, whether they be local or symptomatic in their nature. We ought to prescribe the acetate of zinc in the form of saturated solution, in case of chancres as in case of other inflammations. The following is the form in which this agent is to be employed.

℞. *Zinci Acetatis*, gr. xv; *Aquæ* ʒj.

Solution of Table Salt.—A solution of culinary salt is sometimes an excellent remedy in herpes, in cases in which mercurial frictions and the muriate of lime had failed.

REMEDIES FOR INTERMITTENT FEVER.

Mixture of Quinoidine and Quinine.—This mixture of quinoidine and quinine possesses all the virtue of the bark; it is the best remedy in intermittent fever; it is more certain than any other means which has ever been devised hitherto in this disease. This combination possesses a great superiority over the quinine or the bark.

℞. *Quinoidinæ* ʒj; *Quin. Sulph.*, gr. viij; *Alcoholis* ʒij; take 50 drops four times a day The best method of administering this remedy is the following: put a table spoonful of pounded sugar in a large spoon; pour in 50 drops of this mixture, put it in the mouth and wash it down with a swallow of water. Persons who cannot support the bitterness, may envelop this sugar in a wafer, and swallow it. The patient ought to take these drops during both the days of the presence and absence of the

fever. In the fever-days the drops ought to be administered for a long time before and after the appearance of the fever.

REMEDIES AGAINST FURUNCULI.

Chloride of Calcium.—Chloride of lime produces the resolution of furunculi, even when they are open; the sores are rapidly cured by this agent.

℞. *Calc. Chlor.*, ʒ ss; *Aquæ*, ʒvxvj; to be applied on compresses.

REMEDIES FOR THE MUSCLES.

Arnica montana.—This agent calms the local permanent pains of the muscles.

Folia Fraxini.—In muscular pains this agent surpasses all the remedies called anti-rheumatismal. It has also a miraculous effect in the obstinate rheumatism sometimes attacking the head externally. The infusion of the leaves is to be used. Let ʒ j of the leaves be infused for half an hour with a sufficient quantity of boiling water, and let this infusion be taken in small quantities, in the space of a day.

Glauber Salts.—In the involuntary tremor which shows itself as an idiopathic affection of the nervous system, the glauber salt produces the best effects. The time required to effect this has not been determined, but a marked amelioration quickly shows itself. Dissolve two ounces of glauber salts in lb ij ss. of water, and give a glassful or cupful every 2 hours, so as to procure 3 or 4 stools daily.

Iodine.—Muscular pains are often cured with astonishing success, by the administration of Iodine.

Nux Vomica.—A remedy of extraordinary virtue in local rheumatism.

℞. *Tinct. Nucis Vom., Spirit. Saponis*, āā ʒj ss; rub the parts affected for half an hour, several times a day.

Chloride of Lime.—An agent very useful in profuse perspirations, whether diurnal or nocturnal.

℞. *Liquoris Chlor. Calc.* ʒj; take five times a day, 15 drops in a glass of water. This mixture is prepared by dissolving one part of the chloride with two parts of the distilled water, and filtering the mixture.

In a succeeding article we shall give the general remedies and doctrine of Rademacher.

[*Note by the American Translator.*—Instead of the *Kilogrammes, Grammes, Centigrammes, and Milligrammes* of the original, we have

given the approximate equivalent in the weights and measures of the U. S. Pharmacopœia, with every required degree of exactness. We have also translated the French text of the prescriptions into the abbreviated Latin.]

ART. II.—*Bromo-Iodurctted Preparations:* translated from the French by M. MORTON DOWLER, M. D., New Orleans.

THE following is a summary of the conclusions arrived at by Dr. Lunier, in a long memoir contributed by him to *L' Union Médicale.*

PART FIRST. 1. The cod-liver oil acts at one and the same time by its oily matter, and by the iodine and bromine of potasium which enter into its composition.

2. These two haloid salts, favor the digestion of the oily matter, by increasing the activity of the pancreatic secretion.

3. This fatty substance, and highly combustible aliment, play an important part in the act of respiration, and in the development of animal heat.

4. The iodine and bromine associated together, act with much more energy than when separately administered.

5. That we can supply the place of the cod-liver oil, by the bromo-iodurctted preparation, associated with any hydro-carbonaceous substances, as chocolate for example.

6. The bromo-iodurctted medicine augments the secretion of the digestive juices, gives activity to the organic functions, and especially favors the development of the adipose tissue.

7. This agent sometimes determines on the skin and mucous membranes, a light inflammation, which has not, however, any tendency to suppuration.

8. It exeites also, some cerebral affections, which take on the form of nervous fever, and more generally it puts on the form of general progressive paralysis.

9. The oily matter enters the digestive apparatus, or provides for the transformation of the immediate non-azotie principles.

10. The oily matter is deposited in the tissues when the oxygen introduced into the system is insufficient to consume it. (*La Brûler!*)

PART SECOND. 1. Leanness, which has not its origin in any serious

organic lesion, is successfully treated by the cod-liver oil, or the bromo-ioduretted agent, mixed with oily matter.

2. Opium, more than any other medicine neutralizes the effects of this medicine; (the cod-liver oil) employed with precaution is capable of being useful in the treatment of obesity.

3. The bromo-ioduretted treatment would appear to modify, advantageously, certain diseases of the pancreas.

4. In phthisis pulmonalis, the cod-liver oil acts in a special manner, in furnishing an aliment to the pulmonary combustion; (*un aliment à la combustion pulmonaire!*)

5. It is therefore contra-indicated in the acute stage of the disease, when there is an urgent necessity of leaving the affected organ in a state of repose.

6. The mineral waters, the fucus, the lichens, and sea-salt, owe their virtues, in the treatment of pulmonary consumption, to the iodine and bromine which enter into their composition.

7. In tubercuIous chloro-anæmia, and in certain inveterate cases of chlorosis, the bromo-iodine treatment should be associated with the use of ferruginous preparations.

8. In scrofulous and syphilitic affections, in goitre and glandular enlargements, the bromo-iodine treatment succeeds by impressing on the capillary circulation, and the secretions, an excess of activity which eliminates the morbific elements from the organism.

9. It it especially to the fatty substance that we most attribute the good effects of cod-liver oil in rickets.

10. In chronic coryza and ulcerated ozœna, bromo-iodine treatment modifies rapidly the state of the mucus of the nasal fossæ.

11. This treatment, owing to its direct action on the uterus, and the active impulse which it gives to the capillary circulation, will often be employed with success to reëstablish or excite menstruation.

1. *Bromo-ioduretted cod-liver oil:*

℞. *Iodide of Potassium or of Iron, Bromide of Potassium or of Iron, of each,* gr. iv.; *Cod-liver oil* (*brown*) ℥xvj.

Ft. Mist. secund. art., of which take from one to five spoonfuls daily.

2. *Bromo-ioduretted oil:*

℞. *Iodide of Potassium or of Iron, Bromide of Potassium or of Iron, of each,* gr. viij; *Neat's Foot Oil, or Sweet Almond Oil,* ℥xvj.

Ft. Mist. secund. art., and take from one to five tablespoonfuls daily.

3. *Bromo-iodurretted Chocolate.*

℞. *Iod. of Potas. or of Iron, Bromide of Potas. or of Iron, of each* gr. iij; *Cake-Chocolate, Powdered White Sugar, of each* q. s.;

M. ft. secund. art. a mass of ʒviij, to be divided into troches, (tablettes) of ʒj. each, of which from one to five are to be taken daily.

4. *Bromo-iodurretted Biscuits.*

℞. *Iod. of Potas. or of Iron, Bromide of Potas. or of Iron, of each* gr. iv.; *Bread Biscoté* q. s.;

M. ft. secund. art., ten biscuits, and take four or five daily.

5. *Bromo-iodurretted Salt.*

℞. *Iod. of Potas. or of Iron, Bromide of Potas. or of Iron, of each* gr. iv.; *gray Table Salt* ʒiij;

Mix carefully, and preserve in a close vessel. Take from ʒij. to ʒv. daily by salting.

6. *Bromo-iodurretted Butter.*

℞. *Bromo-iodurretted Salt* ʒv, *Fresh Butter* ʒxvj.;

to be consumed in two or three days.

7. *Bromo-iodurretted Solution.*

		No. 1.	No. 2.
℞.	*Iodide of Potas. or of Iron,*	gr. xix.	gr. xij ss.;
	Bromide of Pot. or of Iron,	gr. xij ss.	gr. xix.;
	Extract of Gentian,	ʒiij;	
	Water,	ʒxx;	

M. ft. secund. art., a solution of which take from one to three tablespoonfuls daily at meals. The extract of Gentian ought to be left out when a nearly tasteless mixture is desired.

8. *Bromo-iodurretted Pills.*

		No. 1.	No. 2.
℞.	*Iodide of Potas. or of Iron,*	gr. xix.	gr. xij ss.;
	Bromide of Pot. or of Iron,	gr. xij ss.	gr. xix;
	Powder and Syrup of Gentian	q. s.;	

M. ft. sec. art. pil. xl., of which take from one to three daily at meals.

9. *Emmenagogue Potion.*

℞. *Iod. of Potas. or of Iron, Bromide of Potas. or of Iron, of each* gr. iv; *Syrup of Artimesia* ʒv.; *Distilled Water of Artemesia; Distilled Mint Water, of each* ʒx;

M. ft. secund. art.,a portion of which take one or two tablespoonfuls every morning on an empty stomach.

ART. III.—*Remarks on the Alterative Treatment of "Continued Fevers."* by JOHN REID, Surgeon.

(Read to the Medico-Chirugical Society of Glasgow.)

IN a short essay like the present, I have no intention of entering minutely into the very extensive subject of fevers, either physiologically, pathologically, or therapeutically, in reference to the many different species and types, but simply to found upon one broad pathological condition as the *origo mali*, or seat of these diseases; and farther, to recommend a general system of treatment as applicable to those abdominal pathological conditions which always obtain more or less in continued fevers, and which, in short, are the proximate causes.

The deranged state or pathological conditions of the gastro-intestinal mucous membrane are, in the great majority of cases, of typhoid or typhus fevers,* the most important changes to which we have to attend in the treatment of that class of diseases. However, I cannot agree with Broussais in ascribing *gastro-interitis* (unless that definition be admitted as embracing different pathological conditions) to be the general proximate cause of all fevers; but in the primary stage of the most of cases, we have few other symptoms to contend with than those indicative of irritative or inflammatory action of the gastro-intestinal mucous membrane; such cases being usually recognised as *continued*, intestinal, or typhoid fevers.

In this extensive class of febrile diseases, there are many different pathological conditions existing in the most of cases, as primary or secondary local affections, with their various concomitant symptoms, as indicative of the type of the fever; but the specific symptoms of different cases generally point to the abdomen as being the chief seat of the disease; the biliary organs and gastro-intestinal mucous membrane being the parts chiefly deranged. The respiratory and cerebro-spinal symptoms, more frequently the latter, commonly participate in the irritative action, as excited and kept up by the proximate cause of the fever; and we generally find the derangement of the respiratory and cerebral spinal functions bearing a proportionate intensity to the prevailing morbid conditions of the abdominal organs, as indicated by the specific symptoms.

Though we have frequently bronchitis, and very often vesicular pneumonia, occurring along with the general symptoms of fevers, those complications usually appear as distinctly indicative of such affections having occurred, either coëval with the abdominal causes of the fever, or as secondary affections, excited either sympathetically, or otherwise, in individuals predisposed or liable to such pulmonic affections. But, in all cases of typhoid fever we are apt to have, from reflex action of the abdominal section of the great sympathetic or organic system of nerves, the brain participating early in the morbid irritability of the whole system, as induced and kept up by deranged action consequent to the

* The writer does not consider *typhus, sui generis*

irrative or inflamed condition of certain portions of the gastro-intestinal mucous membrane; thus the real symptoms of the abdominal pathological conditions are frequently so masked as to lead to more attention being paid to those cerebral symptoms, as occurring in severe cases of typhoid fever, than to the morbid state of the abdominal organs—the real seat of the disease. But such irritative action once excited in the brain, and kept up by the unabated continuance of the local causes of the fever, or perhaps by too early stimulative treatment, often gives rise to all the symptoms of real cerebritis, or meningitis, or to those of both combined; thus rendering the case gravely complicated, as with the structural changes and symptoms of those almost hopeless inflammatory affections. Notwithstanding such complications, there are in every case of continued fever at the commencement, usually well-marked symptoms of a deranged or morbid condition of the gastro-intestinal mucous membrane; as shown by the various appearances of the tongue, the abdominal tenderness, as with infraction and distension, and as verified by the morbid states of the intestinal and biliary secretions and excretions, all pointing to the principal primary *or proximate*, morbid conditions which give rise to, and keep up the specific type of the fever.

In *continued* or *typhoid* enteric fevers there are many different species, according to the seat of the local morbid derangement in the intestinal canal; the symptoms of the case and the type of the fever varying much accordingly. As a general morbid condition, more especially to found treatment upon, we may adopt, for brevity's sake, the comprehensive and practical view of MM. Bretonneau, in considering the great majority of such cases, to arise from irritative or inflammatory action of the mucous membrane of the small intestines, as giving rise to and keeping up a morbid and inflammatory condition of the intestinal mucous follicles and glands, particularly those of Peyer and Brunner; which disease constitutes the *pustular enteritis*, ending in *follicular ulceration*, and which, according to the best continental and British writers, is the excited proximate and fostering cause of continued fevers, including *abdominal typhus*. But, in taking a comprehensive view of the organic causes of continued fevers, we cannot adopt the above-mentioned pathological conditions as being *de facto* the chief structural changes, as primarily excited by intestinal functional derangement, and consequent irritative or inflammatory action; for *post-mortem* examinations often show organic lesions of a very extensive nature, besides the above-mentioned peculiar follicular glandular affection; as shown in erythematic and sthenic inflammatory appearances of the intestinal mucous coat, running into thinning of the gut in patches from destruction of its epithelium and sub-mucous tissues, and ultimately into broad ulceration penetrating to the peritoneal coat itself, and that too frequently giving way from still farther destructive ulcerative process. Along with those organic lesions, inflamed and enlarged conditions of the mesenteric glands are frequently present, and as still farther proof of extensive abdominal disease, there will often be found well-marked appearances of peritonitis, with partial effusion; such

cases being easily recognised during the life of the patients by the abdominal tenderness, more or less tympanitic distension, accompanied generally by gurgling motions felt in the abdomen, as communicated to the touch and hearing by manipulation over the integuments, also by the ochrey dejections so characteristic of this species of intestinal fever.

Those authors and practitioners who are opposed to the localization of the proximate causes of fever ; or, in other words, those who consider fever a disease *per se*, as having no distinctive excitant, organic proximate causes, look upon all *post-mortem* morbid appearances more as consequences or effects of the *"ravages of the fever"* than as indications of primary morbid conditions giving rise to the disease. But derangement of individual functions from various exciting causes, as undue exposure, fatigue, the continued use of improper diet, privations, and intemperance, must tend to derange all the organic and animal functions, more particularly those of the organs of digestion ; they being the part first affected by such general exciting causes to functional derangement. Hence, in my opinion, the biliary derangement and irritative bowels in those gastro-enteric cases frequently exhibiting the "typhoid eruption," the congestive symptoms of the portal system in petechial cases, and the vitiated condition of all the intestinal secretions in the dothinenteritic cases, in which the mucous coat and glands of the bowels are peculiarly affected.

Having thus taken notice, in a cursory way, of what may be considered the principal seat of the pathological conditions which obtain in the primary stage of continued or typhoid fevers, I shall now briefly consider the kind of treatment best calculated to subdue the proximate causes, by bringing about those salutary changes, as shown in improvement of the case, and as manifested in the establishment of a crisis ; being the recurrence to a healthy state of the deranged organic actions and vital functions. As the title of this paper implies only one general kind of treatment, attention for the present will be specially directed to that alone; but it must be borne in mind, that the system of treatment about to be considered is not to supersede or preclude other curative means which may be absolutely requisite, according to symptoms in particular cases, but is merely recommended as *the basis* of treatment in all kinds of continued fevers.

To treat a case of continued or abdominal typhoid fever, with fair chance of success, efforts should be first directed to the administration of regimen, and medicines specially calculated to restore the deranged action of the organs or structures affected, if possible, to a normal condition, thus improving their functions, and consequently all the secretions and excretions as produced and kept up by the proper performance of those functions; such a change being brought about by so acting upon the morbid or irritative condition of the structures, by the remedial agents employed, as to excite a new action, *pro tempore*, to the gradual restoration of healthy action, and the consequent natural functions.

As in every case of continued fever, there are symptoms strictly indicative of a vitiated state of the biliary and intestinal secretions, the

first efforts ought to be directed to their healthful restoration; and as there is no medicine, in my opinion, which possesses the same specific powers in restoring the natural functions of the liver and alimentary canal generally, equal to mercury, its various preparations are the remedies which should be chiefly resorted to in the treatment of continued or typhoid fevers. The mild and efficient effects of mercurials as alteratives, when properly administered, have always been much depended upon in the treatment of almost every kind of disease; but as an alterative, mercury has not been hitherto sufficiently used in the primary stage of fevers. Antiphlogistic treatment, both local and general, stimulants, purgatives, emetics, and diaphoretics have all been extolled by their different advocates, and the partial use and benefit of mercurials have not been entirely overlooked; but undoubtedly the latter preparations, in being administered in the first stage of fevers, have been too generally mixed up with the former occasionally required adjuvants, from the anxiety of the practitioner to correct all the functional arrangements at once. Such having been the case, sufficient proofs have not yet been adduced in favour of the mercurial alterative plan to establish its presumed superiority, *cæteris paribus*, compared with other systems of treatment generally adopted, according to symptoms, in the course of different fevers.

It may be premised, that in every case of abdominal typhoid fever, which is generally of the dothinenteritic character, also in cases of gastric and gastro-bilious-enteric fever, as well as in pure bilious fever, a safe practice is to commence the course of treatment by the regular administration of small doses either of the *sub. mur. hydrarg.*, *pil. hydrarg.*, or *hydrarg. cum creta*, prescribed as may be thought necessary, either with *pulv. aromatici* as a gentle stimulant, or *pulv. ipecacuanha* as a mild *depressant*; either of the mercurial preparations being used individually or combined, according to the type of the fever, as inferred from the specific symptoms of the case, and the age, constitution, and habit of the patient. It is not to be understood that either full or moderate doses, given at long intervals, say every twelve or twenty-four hours, will produce the wished for salutary changes, whether as directed to the biliary organs or to the gastro-enteric mucous membrane; such doses may only act as speedy evacuants, and if copiously so, from being combined with purgatives, will irritate the intestinal mucous membrane, and exhaust the patient by a too rapid draining of the biliary and intestinal secretions. And if diaphoretics were used at the same time, the case would be rendered doubly worse, for by the increased cutaneous transpiration there is a still farther draining of the fluids, not only weakening the system generally, but deriving directly from all the internal mucous membrane; depriving it of those serous secretions absolutely required to relieve its irritative, and, as may be, congested or inflammatory condition. By such a mode of treatment, the patient is sure to be irritated and exhausted too much at the commencement of the case. The mercurials should be regularly administered in doses of from half a grain to two

grains, every second, fourth, or sixth hour, according to the nature of the case, and continued till a change of the mucous membrane is induced; as indicated by the tongue becoming more moist, and its fur, if there has been any, consequently less adherent, exhibiting signs of breaking up.

In some very bad cases of dothinenteritic typhoid fever, I have often witnessed the most salutary changes produced by the above-mentioned mode of treatment, and that in many instances in the short period of from thirty-six to forty-eight hours; and these were cases which might have been protracted perhaps for half as many days, under what may be termed the erratic system of treatment, *i. e.*, in treating every existent and perhaps only transient symptom by the varied administration of the many agents of the pharmacopœia. What should be the first object in view in the treatment of fever cases? Certainly the mitigation of the most urgent symptoms; and as these, in every case of typhoid fever, either of the bilious, gastric, or enteric species, arise from and are kept up by the diseased condition of the intestinal mucous membrane and its organic system, our efforts should be chiefly directed to remedial means, possessing specific therapeutical properties, and known to act in a direct way in producing certain salutary changes in the functional parts of those diseased vital organs.

In fevers chiefly of the bilious character, the *sub. mur. hydrarg.*, continued for two or three days, given at intervals of four hours, and followed with castor oil and *enemata*, seems to answer best; the *pil. hydrarg.* being substituted if the former evacuate too much. In many cases the quantity of green and tough bilious excretions evacuated in this way is enormous; and in such cases, if the biliary and intestinal organs are allowed to remain in their pent up and depraved condition, the very worst typhoid symptoms are apt to supervene, as exhibited in universal prostration of the system, and low muttering delirium; but by timely and proper evacuation of the biliary and intestinal organs, such grave symptoms are generally prevented. Nothing but the mercurials will produce such desired effects. Stimulants, as brandy and wine, are in such cases highly pernicious; and turpentine injections, "to rouse the patient," cannot fail to increase the already too great intestinal irritation, arising from the accumulation of pent up vitiated secretions.

In the gastro-enteric species, the urgent symptoms are commonly more of the gastric than of the interitic character, and consequently the *toleration* of certain medicines only is eminently characteristic of the chief seat of disease. There being always more or less pain or uneasiness at the *scrobiculus cordis*, either without or upon pressure, the early application of leeches in the most of cases is highly beneficial; more especially if the individual symptoms be strictly indicative of considerable irritative or inflammatory action of the mucous membrane, as shown by the raw, red, partially brownish furred tongue, and the ready inclination to retching of thin muco-serous phlegm. In such cases the pure calomel is the only medicine which acts quickly in subduing the inflammatory action. It ought to be administered in grain or two grain doses

every two hours, in the simple vehicle, a teaspoonful of water; no oleaginous or jelly preparations, either in the shape of food or medicine being allowed, for such invariably increase the urgency of the gastric symptoms as shown by increased raw redness of the tongue, arising from the irritative action of the gastro-interic mucous surface. Little else should be allowed in the first stage of the disease but plain, boiled, cooled water, which the patient may have *ad libitum;* but so soon as the tongue shows some improvement, by its becoming more moist, and less raw and red in appearance, a little thin panado or arrow-root may be given; and gradually afterwards, very weak beef tea or chicken soup. It is often necessary to continue the calomel from four to six days, but generally after the first twenty-four hours of its use, the frequency of the doses may be greatly reduced, say to every fourth or sixth hour. In no other species of fever is there so much necessity to absolute strictness in diet. The smallest liberty taken in the use of any solid food, will immediately aggravate, or cause a relapse of the case.* Neither castor oil nor any saline medicine can be tolerated by an inflamed mucous membrane, therefore such ought never to be administered in the first stages of the disease; the action of the bowels should always be assisted by the free use of emollient clysters. No wine nor stimulants should be allowed till convalescence is completely established; then small quantities of genuine port wine negus may be taken with great advantage, from its acting on the relaxed mucous membrane as a generous tonic, and salutary astringent. The use of morphia and quinine is highly prejudicial in such cases; the former being sometimes used as a sedative in the first stage of the disease, and the latter as a tonic in the stage of recovery. Of all medicines, the calomel proves the best sedative, and the best tonics are the mild nutrients above mentioned.

Following out the above view of treatment, as based upon the proximate causes of continued or typhoid fevers, all remedial means should be directed towards a correction of the existing morbid conditions which keep up the fevers; and as a salutary change in the functional action of the different abdominal secretory and excretory organs is quickly brought about, so is the crisis or "*turn of the fever*" quickly established. In my opinion, it is quite absurd to talk of fevers "taking the turn" *on certain critical days*, as the seventh, fourteenth, twenty-first, &c.; but this very learned prognostic theory, *like fortune-telling*, has been naturally based upon broad enough latitude of time, so that when a favorable crisis or turn happens to take place *on any day*, say betwixt the seventh and twenty-first, a little sage calculation, instinctively as it were, notes the seventh, fourteenth, or twenty-first, as being *the* critical day! A crisis of the fever takes place when the healthy action of the deranged organs has become somewhat established, either through the efforts of nature, alone, or as assisted by remedial means; and the crisis is sure to be a more certain one under judicious treatment, locally

*The "relapse" fever of some authors.

directed, than what might occur by long waiting on the unassisted "efforts of nature," or even by the very specious expectant system of treatment, according to the doctrines of "certain critical days." A safe crisis can only be quickly brought about, in the first stage of the fever, by restoring the healthy action of the deranged parts; for if the derangement be not speedily corrected, partial disorganization of the affected organs may take place, leading to the development of the many morbid conditions of the intestinal canal referred to above; after the occurrence of which, a salutary crisis, in the great majority of cases, shall not occur, such being the fatal cases of abdominal typhoid fevers. Prophylactic or preventive treatment is of the first importance in bringing about a favourable crisis or state of the case. *Allowing nature to take her course* is tantamount to leaving the patient to his fate, as preyed upon by a disorganizing internal disease, and as consequently kept in a severe fever by a daily increasing irritative or inflammatory proximate morbid cause.

In fevers, as much as in almost any other class of diseases, the medical practitioner has in his power the bringing on of a salutary change or crisis, and of course this will be the more certain if called in early to the case; but if, from long continuance or neglect, any disorganizing process has commenced, then the *alterative* or any other course of treatment will, in the most of such cases, fail. But even in apparently hopeless protracted cases, I have often seen all the bad symptoms give way, and the powers of the system gradually rally, under even a very short course of the *alteratives*, as followed out by the administration of continued and frequently repeated small doses; and no mercurial preparations, in such cases, is equal in curative powers to the sub. mur. hydrarg., given in grain or two grain doses, say every second or fourth hour, and simply by itself, as mentioned before, in a teaspoonful of water. Administered in this way, it seems to exert the most benign influence over the morbid state of the biliary organs and intestinal mucous membrane; and instead of having found it to act as an irritant, as some suppose it does, I have invariably found its effects to be those of a gentle salutary stimulant to the mucous membrane, and consequently to the organic system of nerves; and ultimately in proving the best sedative, by doing away alike with the concomitant irritation of the bowels and biliary organs, as with the consequent irritative action of the brain and nervous system generally. In short, so soon as the mercurial begins to exert its influence on the mucous membrane, so do all the persistent symptoms of the fever begin to give way; the skin and tongue becoming more moist, the pulse slower and softer, and the delirium, if there have been any, reduced; accompanying changed conditions of the stools and urine, giving decided testimony of the elimination of the system from all the pent up products, unavoidably generated in the different secreting organs throughout the primary stages of the fever.

In the above-mentioned system of treatment there is nothing new in principle, but hitherto the great majority of practitioners have not been

sufficiently alive to its paramount importance; indeed, I may say, to its universal superiority over all the other systems of remedial means generally had recourse to in the treatment of the different kinds of intestinal or typhoid fevers. Such, no doubt, has partly arisen from the many prevailing prejudices which exist against the continued use of mercurials in the general practice of medicine, from supposed bad effects following even slight mercurialization of the system; but I may mention here, that in the treatment of upwards of three hundred and twenty cases of continued intestinal fevers, I do not recollect of having had a single case of what might have been termed salivation. During the first stage of the fever the deranged or morbid condition of the mucous membrane seems to prevent the absorption of the mercurial; and after that has given way to its stimulative and sedative effects, all the biliary and intestinal secretions are so increased and quickly carried off, that there is little risk then of much absorption, even though the mercury should be continued for a day or two after the crisis of the fever is established.

As auxiliaries in the treatment of continued fevers, perhaps too much importance has been generally attached to the use of diaphoretics; the efficacy of those medicines being questionable in such cases, where there is generally considerable gastro-intestinal dryness and accompanying irritation, their effect being to derive from the internal mucous membrane to the skin, and consequently, to deprive the former of those advantages which would accrue from an increase, or even a tendency to that of their wonted mucous and serous secretions. Under the *alterative* system of treatment, the skin invariably becomes moist as the mucous membranes become so; the sure indications of which are the changed appearances of the tongue, and of the alvine and urinary excretions.

That the *alterative* system of treatment in continued fevers is the most rational, is founded upon physiological and pathological principles, is easily proved by a brief reference to the vital actions as existing in health, and the morbid changes as obtaining in continued febrile disease. The lassitude and general prostration of the system occurring in fevers, and as arising from the cessation of organic nervous action, in consequence of the deranged condition of the functions of those organs first at fault, in respect to both their organic and animal functions, are kept up by the necessarily generated products of the system not being eliminated by their various emunctories into the open canals and cavities, into which all the secretory and excretory vessels pour their products, in a state of health. Such being the case, the whole system becomes quite pent up, as it were, and there is neither the organic aptitude, nor the natural desire for elimination of the products generated; which general *malaise* leads to inaction of the nervous system generally, and to that peculiar irritative state of the brain, giving rise to incoherency and stupor, and likewise to that muttering delirium, which is almost peculiar to typhoid fevers. In such a state of the system, all the organic and animal functions are in a great measure suspended; and consequently, whilst the depuratory functions are all but ceased, so are the nutritent,

the system, for the time being, working upon its own encumbered vital resources; its absorbents taking up its own organic assimilated products, to throw them into the natural outlets, already too much surcharged by their constantly accumulating contents. And we must add, to that general preying upon the body by the constant action of its own absorbents, its almost utter privation from nutriment; in consequence of the lacteal and lymphatic systems, as existing in the chylopoietic viscera, being so deranged in their absorbent powers and other organic actions, as to render them for the time quite incapable of administering to the support of the system. In short, we have general prostration, in consequence of all the vital functions of the system being deranged, and more or less suspended; such derangement arising from the partial or almost complete suspension of those *sine qua non* organic actions—chylification, intestinal absorption, secretion, and excretion—the grand preservative, and health maintaining animal functions.

Such being the primary and principal pathological conditions as obtaining in typhoid fevers, the administration of mercurials, in continued, small, and often repeated doses, so as to change the existing deranged condition of the biliary organs and gastro-enteric mucous membrane, is the only sure and rational system of treatment in the primary stages of these diseases. But it must always be borne in mind, that local bleeding, blistering, counter-irritation, and other counteractive remedial means applicable to particular symptoms, are not to be dispensed with in any cases requiring such adjuvant treatment. In the majority of cases, the mercurials require the assistance of *enemata*, also an occasional dose of castor oil; but in all cases of the gastric type, with raw, red, or slightly browned furred tongue, the administration of oil in the early stages invariably exasperates the symptoms; causing great depression of the system generally, increased gastric irritation, as shown either in deeper redness of the tongue, or in its papillæ being more raised, more thirst, and also in increased intolerance of pressure over the scrobiculus cordis. In such cases, castor oil seems to act quite as irritant on the inflamed gastro-intestinal mucous membrane, and so do all saline medicines; therefore, solution of Epsom salts should not be given in any case of gastric fever, nor in gastro-enteric cases, as it drains the intestines too much of their mucous and serous secretions; but castor oil is commendable in purely enteric cases, as it at once lubricates and evacuates the bowels.

The dietetic treatment of fever cases is of the utmost importance and as the *alterative* system is incompatible with many usual practices, I shall very briefly mention a few particulars, as consistent with the use of mercurials.

As nothing tends more to the alleviation of severe feverish symptoms than the free use of diluents, such should be given, *ad libitum*, in all cases of fever. Of such beverages, plain, boiled, cooled water is the best; and in promoting the good effects of the mercurials, it seems to act by diluting the scanty, and perhaps acrid secretions, so tending to the mac-

eration and softening of the intestinal muco-villous coat; thus rendering it more susceptible of the effects of the mercury, and consequently, sooner and easier acted upon in an alterative way. All acid drinks should be avoided at first, as they invariably irritate the bowels, and create more thirst than that for which they may be given to allay; but after the tongue becomes moist, such may be sparingly allowed, in conjunction with the mild diluents, boiled water, milk and water, whey, and barley-water, or thin-strained gruel. Buttermilk is, perhaps, one of the best acid drinks we possess, and, diluted with warm water, is copiously diluent; and being somewhat nutritious, it is deservedly much used in our hospitals here, as common drink in all sorts of fevers; it is, moreover, in general, very grateful to the patient.

The diet of fever patients should be attended to as early as possible; indeed, in almost every case, it is proper and safe to give weak beef tea, or soups, from the very commencement, as they produce a good effect on the mucous membrane as nutritious diluents. I have invariably found their early use of decided advantage in promoting an early crisis, and also in the prevention of the sequelæ of fevers during convalescence; the patient having always made, apparently, more steady and progressive improvement under their continued administration. In fevers, however, purely of the gastric kind, even the weakest beef tea or soups cannot, in many cases, be tolerated in the first stages of the disease, as they seem to act on the inflamed mucous membrane similar to castor oil, viz., as an irritant; such cases must, therefore, be treated with panado, and light farinaceous milk diet, which answers well with small doses of the *sub. mur. hydrarg.* as the *alterative* medicine.

Although the mucous membrane, in many cases of gastro-enteric fever, may not be capable of digesting nor assimilating completely even slop aliments, the cautious and early administration of them gives it something salutary to act upon; which pabulum tends materially to the restoration of the healthy functions, by gradually inducing chylification, as inductive to the organic processes, intestinal secretion, absorption, and excretion, being restored. Solid food, if we except bread given as panado, should not be allowed until continued convalescence is established. Tea seems to agree well with the most of fever patients; along with weak soups, it proves an excellent, mild, diffusible stimulant.

In respect to the advantages of wine in the primary or persistent stage of continued fevers, not excepting the apparently most depressed cases of the typhoid type, I have almost universally been disappointed.—The early administration of wine or brandy, "*to support the system against the fever,*" invariably tends to produce a general irritative state of the whole system, and never fails in bringing on, or in increasing and keeping up, delirium; which general nervous and cerebral excitement too frequently ends in a comatose state of the brain, from complete inebriation, and consequent vascular congestion. By such treatment, a surcharged *spirituous* state of the system is superinduced, regardless of the already pent up and engorged state of the abdominal organs; a state or

condition requiring, in nine cases out of ten, the very opposite kind of treatment, viz., that of a generally relaxant and evacuant nature. After a crisis is established, the good effects of small quantities of wine in furthering convalescence, by imparting tone and vigor to the system, cannot be doubted; but the immense quantities of wine and brandy which are commonly given here in cases of continued intestinal fevers, by way of "supporting the strength" of the patient, cannot fail in giving rise to such increased action of the system generally, that would even prove dangerous to a person in health, as affecting the general nervous and cerebral organism. How much more, then, must the risk be, as affecting deranged or inflamed structures?

Under the *alterative* system of treatment, the rate of mortality in my practice, in 320 cases of continued intestinal fevers, was 14 deaths in all, or about one in 23, accounted for as follows:—One old woman died from senile gangrene of the feet. One married woman from hæmorrhage *per rectum;* she had got a favorable crisis, but from having been rashly taken out of bed, and shifted to the sofa, a shivering came on, which was followed by sudden and profuse hæmorrhage, from which she died within an hour. One young woman, from the weakening effects of epistaxis; the plugging of the nostrils seemed to aggravate the typhoid symptoms: this case was supported with wine. One dissipated man, aged 46, from extensive sloughing of the nates, supported with wine and brandy. One middle-aged man, from typhoid pneumonia. One child, who had syptoms of cerebritis, along with those of intestinal fever, from commencement of attack, and was treated accordingly. The other eight deaths seemed to arise from the local abdominal disease, and other organic derangements excited in the system; these having been too intense to admit of curative effects of the treatment employed. *Post-mortem* examination was allowed in only four of these cases; in one of which there was an ulceration of the mucous membrane of the ileum, with very apparent thinning of its coats, in pretty large patches, and with well-marked appearances of increased vascular action having existed in the jejunum and upper part of the colon. In two of these cases, again, some of the glands of Peyer and of Brunner were evidently tumified, and presenting the appearance of minute ragged ulcerations, as surrounding their mucous follicles. In the fourth case, the small intestines had been inflamed, seemingly throughout their entire coats, which appearances of inflammation extended over the mesenteric reflection of the peritoneum, and partially to that lining the abdominal parietes; there was no ulceration of the mucous membrane, but the mesenteric glands appeared tumified or enlarged; throughout the course of this case, there was much intestinal gurgling and ochrey stools; with partial abdominal tympanitic distension. The brain was not examined in any of the cases, as none of them showed urgent cerebral symptoms; neither were the lungs, as the chest symptoms were not of an imminent character, in which no *post-mortem* examination was allowed.

It is right to mention, that the whole of the 320 cases alluded to

were treated in village and country practice in Fifeshire; but I have hitherto found the *alterative* and non-stimulative system of treatment equally successful in my practice in Glasgow.—*Glasgow Med. Jour.* (*Quarterly,*) July, 1855.

Art. IV.—*Case of Leucocythemia, with Observations:* by James Wallace, A. M., M. D., one of the Medical Attendants to the Greenock Infirmary, &c.

On the 27*th of March*, 1852, Helen Danahy, a mill-worker, presented herself for advice and treatment at the Dispensary of the Greenock Infirmary, where I obtained from her the following particulars:—About two years previously, she received a kick on the left lumbar region, in which she had severe pain for six days; but she remained in a fair state of health for twelve months afterwards. She then, however, began to emaciate, and observed a swelling about midway between the floating ribs and Poupart's ligament on the left side. This has since been gradually increasing, and, within the last two months, been attended with occasional lancinating pain, aggravated on coughing or pressure. Seven months ago she had an attack of acute dysentery, which has returned within the last eight days. She has resided in Greenock for the last seven years, but is a native of Derry. She is now thirty years of age, and has been a widow for two years. She has had no children, but menstruated regularly till May last, since which, however, the catamenia have been entirely absent. She has never had any fever of the intermittent type, nor been in any ague district. At present she is very anæmic, the scelerotics having a peculiar pearly appearance, and the diathesis being evidently strumous.

She now complains of looseness of the bowels, attended with tormnia and tenesmus (the dejecta containing slime and blood,) and has pain, increased on pressure, in the epigastrium and right hypochondrium. A large swelling occupies the left side of the abdomen. Its anterior and inferior borders can be accurately felt, the former being a little to the left of, and parallel with, the linea alba, and the latter midway between the umbilicus and Poupart's ligament. It is smooth on the surface and along the margins (except at the antero-inferior angle, where it is deeply notched), and can be moved upwards, as well as from side to side. The patient complains of a dull pain, increased on pressure, throughout the whole of the tumour, particularly in its antero-inferior angle, the pain besides being occasionally lancinating. There is some fulness in the

right hypochondrium, the hepatic dullness being appreciable as far down as the umbilicus, but the margin of the liver cannot be made out. The rest of the abdomen is rather tympanitic; lungs clear; heart's sounds and impulse natural. *No enlargement of lymphatic glands.* Pulse 92, soft.

Having already had under my observation a case of leucocythemia, in connection with hypertrophy of the spleen, which Professor Bennet has reported in his work on the subject, I naturally suspected that this patient might afford an instance of that pathological condition. To ascertain this, I drew from a vein about half an ounce of blood, and found that, about five minutes after abstraction, a creamy-looking substance floated to the top, but was again easily diffused by slight agitation. After standing for twenty-four hours, the serum, which appeared to be normal, separated from the crassamentum, which was firm and thick, and composed of two portions, an upper and a lower, the latter being of the ordinary hue and the former of a cream colour, and about one-third of the thickness of the whole clot. Under the microscope, the white clot was seen to be made up of large, white, faintly-granular cells, immeshed in fibrine, and displaying, on the addition of acetic acid, one, two, or three nuclei with nucleoli. These were also scattered through the red portion of the clot, and bore to the coloured discs a proportion of about one to ten.

The nature of the case having thus been established, I was extremely anxious that Danahy should become an in-patient of the infirmary. She was adverse to this, however, and I had no alternative but to treat her in the out-department. Accordingly, after examining her urine, which presented nothing abnormal, I ordered her to be leeched on the epigastrium and right hypochondrium, and to take, every four hours, five grains of Dover's powder. This was followed, in five days, by chalk mixture with catechu and laudanum, under which, in a short time, the dysentery entirely abated. She was then put on the saccharine carbonate of iron, alternated with cod-liver oil three times a day, and desired to rub in iodine ointment over the tumor; but under this treatment she made no improvement, the report taken on the 30th of June being as follows:—"Cannot take the cod-liver oil. For the last three weeks, the legs have been œdematous and the face puffy, the urine being scanty, but otherwise normal. The tumour in the left side of the abdomen has somewhat increased, but is free from pain. There is still, however, some pain in the epigastrium. No fulness of the liver is perceptible, probably from the bulging on the left side of the abdomen. Feeling of fluctuation indistinct. Emaciation advancing. *Glands of neck enlarging.* Appetite weak; bowels regular; pulse 92. To have five grains of the citrate of iron and quinine three times a day."

At this stage of the case, I again abstracted a small quantity of blood, and sent a specimen of it to Dr. Robertson of Edinburgh, who

was kind enough, at the request of Professor Bennett, to analyze it for me, the results being as follows :—

Specific gravity of blood	1·044	
Specific gravity of serum	1·025	
Fibrine	1·5	
Serous solids	70·	organic.....64·4
		inorganic... 5·6
Globules	79·	
Total solids	150·5	
Water	849·5	
	1000·	

At the same time I again made a careful examination of the ordinary as well as the microscopical appearances presented by the blood.—Complete separation of the serum took place in eight hours. It seemed normal as to quantity, but was rather turbid. The crassamentum was not so distinctly divided as formerly into two portions, a considerable number of whitish streaks running through the colored part (which was of a dirty purple), in addition to a thin creamy-looking stratum, which lay on the upper surface, and was about one-fourth of the thickness of the whole clot. The white cells did not appear to have increased in quantity, but there was in addition a few free nuclei. Those of the perfect cells were clearly defined by the addition of acetic acid, and were single, double, tripartite, or quadruple; some, besides, being curved and irregular, and all rendered of a yellowish color by the re-agent.

After this the œdema of the legs increased, and the abdomen became so distended with fluid as to cause considerable oppression in breathing, for the relief of which the patient was at last prevailed on to come into the hospital, where, on the 21st of July, she was placed under the care of my colleague, Dr. Fox. The treatment now consisted of hydragogue cathartics and diuretics, which were continued till the 6th of August, when pleuro-pneumonia supervened, the termination of the case being reported as follows in the journal of the ward :—

August 6th.—Yesterday patient was in a pyrexial condition, and was suddenly seized to-day with a sharp pain in the right side of chest. The pain is augmented on taking a long breath, and by pressure. Decubitus on the left side. Percussion of right lateral region dull, a distinct friction sound being audible in that situation. *Cupping to six ounces.—Calomel and Opium every four hours.*

7th.—Pain in side relieved. Friction sound still distinct.

8th.—Pain gone, but dullness exists on left side of chest. Dyspnœa great. Clammy sweats. Pulse small and rapid. *Half an ounce of gin every hour.*

9th.—Became delirous last night, and died this morning.

The body was inspected two days after death, when, with the assistance of Mr. Gemmil, the house surgeon, I made a note of the following particulars :—The left pleural cavity contained thirteen ounces of turbid

serum, the lower lobe of the left lung being in the stage of the grey hepatization, and invested with a thin layer of recently effused lymph, which also covered the diaphragmatic portion of the pleura. The right pleural cavity contained about two ounces of turbid serum, and the lower lobe of the right lung was in the stage of the red hepatization, a few patches of fresh lymph being attached here and there to the lower portion of its investing membrane. The pericardium contained 7½ ounces of clear serum. The heart was normal, the left cavities being empty, and the right filled with very soft cream-coloured fibrine, which, in the venæ innominatæ, gradually merged into the red clot. The abdomen contained fifty ounces of clear serum. Old adhesions existed between the abdominal wall and the portion of the peritoneum covering the upper third of the spleen. This organ was very much enlarged, and occupied the left side of the abdomen, as indicated by the signs observed during life, a deep notch existing at the lower portion of its anterior border. It measured 13 inches in length, 8 in breadth, and 5 in thickness, and weighed six pounds, three ounces avoirdupois. The liver was also considerably enlarged and rather pale in color, its weight being six pounds, seven ounces. The cortical portion of the right kidney was rather vascular. The intestines were pale, and the glands of the mesentery, as well as those of the neck, groin, &c., were considerably enlarged. The other organs were healthy.

Microscopical Examination.—The blood from the inferior vena cava and the venæ innominatæ was of a dirty purplish hue, and contained some soft cream-coloured clots, which exhibited the white cells (some of which were larger than others) entangled in great numbers, with a few free nuclei, in molecular fibrine, and having nuclei of various forms, similar to those observed in the blood abstracted on the 30th of June, but not becoming yellow on the addition of acetic acid. The proportion of white to colored cells, in blood taken from different parts of the body, was about the same as that first noted, except in that from the splenic vein, in which there was a decided increase. In all the specimens of blood examined, there was seen a considerable number of small rhomboidal crystals of a yellowish color, and soluble in acetic acid.*

The pulp of the spleen exhibited, in addition to a few fusiform cells and an abundance of colored discs, an immense number of small, round, delicately-granular cells (the *splenic* cells), a considerable quantity of the *white* cells, and a few large *oval* cells,† filled evidently with nuclei of the latter. The trabeculæ, in a section made by a Valentine's knife, were observed to be distinct, but no malpighian bodies were visible.—The lymphatic glands were soft, and yielded on section a turbid juice, which presented, in great abundance, oil globules, granules, free nuclei,

* These were evidently a species of that class of crystals called Hæmatoid, to which attention has recently been directed by Virchow, and other observers. *Vide* British and Foreign Med. and Chir. Review for January, 1853, p. 277, and for April, 1855, p. 541; also an elaborate article in the number for October, 1853, by E. H. Sieveking.

† For the significance of these, *vide* Bennett on Leucocythemia, section 7.

and small delicate granular cells, with nuclei very indistinct, but more apparent on the addition of acetic acid. A small portion of the liver, squeezed between glasses, showed the hepatic cells with an indistinct outline, and loaded with oil globules.

The class of cases to which this belongs, having been so recently investigated by Professor Bennett with his accustomed zeal and ability, it will not be necessary, in this communication, to do anything further than advert to a few points in the instance just related, as illustrative of the pathological nature of the affection.

I.—The disease, as its name is intended to imply, is characterized principally by the blood presenting, under the microscope, a great increase in the white corpuscles. In the healthy state no method has been discovered of determining the amount of these relatively to the colored discs, but to the practised eye there can, notwithstanding, be no difficulty in ascertaining any moderate deviation from what must be the normal standard. The diagnosis, therefore, of the affection is exceedingly simple, and requires nothing more than the histological examination of a drop of blood taken from some part or other of the body. When squeezed between glasses, the *space* occupied by the white cells appears to the naked eye larger than that taken up by the colored, but, under the microscope, it is found that the latter, from their aggregation into rouleaux, exceed the former very materially in point of *numbers*. The only way, therefore, in the present state of our knowledge, to come to anything like a satisfactory approximation to the proportion existing between them, is that proposed by Professor Bennett, of counting in the rouleaux the number of the yellow cells, and in the interspaces the number of the white. By adopting this method, it was observed, in the case of Danahy, that the colorless corpuscles were a little more than one-third as numerous as the colored, the clot of the blood first examined, having a layer of white cells about a third of its thickness, and having these in the red portion in the ratio of one to ten of the others. From this, a very simple calculation will show that they existed in the whole blood in the proportion of thirteen to thirty, a relation which was found to be maintained throughout the further progress of the case. The report taken on the 30th of June, however, may appear to some not to warrant this conclusion, as it is stated that the white portion of the clot was then only one-fourth of the red; but this will be seen not to be the case, when it is remembered that the latter was permeated by a considerable number of whitish streaks, which necessarily increase the number of the colorless cells, as compared with the amount existing in the corresponding portion of the clot examined on the 27th of March. In this respect, therefore, the present case agrees with what has been observed in all the recorded ones followed to a termination, that, so far as the cell elements of the blood are concerned, it would seem that the white corpuscles, after reaching a certain amount, do not accumulate to any further extent. There must, of course, in the history of every case,

be a period when the white corpuscles are being gradually augmented in number; but as only one instance of advaneing leucocythemia has been noticed, and that without a knowledge of the ultimate result, the condition on which the cessation or modification of the process depends, must be looked for in the observations of Moleschott, to which allusion will be afterwards made.

II.—A chemical analysis of the blood of persons affected with leucocythemia has been made in nine instances, and in these it was found that its specific gravity was remarkably low, in consequence of the corpuscular element being deficient to a great degree, the fibrine, however, being in excess, and the solids of the serum but slightly diminished; while in two cases in which it was sought for, the proportion of iron, as the small amount of red corpuscles would naturally indicate, was ascertained to be much reduced. For general purposes, the composition of healthy blood may be stated as follows :*—

Fibrine	2
Corpuscles	130
Solids of serum	80
Total solids	212
Water	788
	1000

On comparing this with the analysis by Dr. Robertson, of the blood sent him on the 30th of June, it will be seen that the results are in accordance with former observations, except in regard to the amount of fibrine. This, in the present instance, was as low as 1·5, while two of the cases already recorded had it as high as 6 and 7 respectively, the least hitherto noticed having been 2·3, and that in a case complicated with purpura hæmorrhagica, a disease notorious for its deficiency in such an important constituent of the blood. But if, as Mr. Paget states, the colorless corpuscles "cannot, by any mode of analysis yet invented, be separated from the fibrine of mammalian blood,"† the probability is, that this substance was even less than 1·5, which should, moreover, be reduced still further, for Dr. Robertson, in a note accompanying his analysis, remarks, that "there may be some slight error in the determination of the fibrine, which was unusually soft. The bits of zinc were too heavy, and may, I fear, have broken up the fibrine a little after its separation. However, the error cannot, I imagine, exceed ·5, and the quantity has been rather *over* than *under* estimated." ‡

III.—The organs most commonly affected in leucocythemia are the spleen, liver and lympathic glands, alterations in the whole of which were exhibited in the case forming the subject of this paper. In regard to the spleen, it might naturally be supposed, from the frequency of its

* Carpenter, Gen. and Compar. Physiol., p. 799. † Kirke and Paget's Physiol., p. 57.
‡ Before transmitting the blood, I had defibrinized a portion of it, by agitating it in a closely stoppered phial, into which a few pieces of zinc had been previously introduced.

enlargement, that the disease was associated in some way or other with intermittent fever. In the present instance, particular inquiries were made on this point, but, as in the cases already recorded, nothing was ascertained that could give the slightest countenance to the conjecture. Nor is it every case of splenic hypertrophy that shows the remarkable change noticed in the blood, for, since attention was first directed to the phenomenon, instances have been met with, in which repeated examinations could not detect any increase in the colorless corpuscles. Indeed, while Danahy herself was under treatment, a child, two years of age, came under the writer's care at the Dispensary, in consequence of an enlarged spleen, which occupied the whole of the left side of the abdomen, but, though looked for from time to time, the abnormal proportion between the two kinds of cells could never be made out. The change in the organ, in fact, in the two classes of cases, is essentially different, being attributable, in those last mentioned, to congestion, increase in the fibrous tissue, or simple enlargement, existing alone, or in various degrees of combination with one another; and in the others to a superabundance of the corpuscular element, as will be seen, on referring to the *post-mortem* examination, to have been well exemplified in the instance under review. To a similar cause, also, is to be ascribed the change in the lymphatic glands, which were found in a state of hypertrophy in all parts of the body, the cells and nuclei peculiar to them being increased to a great degree. It will have been noticed, however, that they were free from enlargement when the patient first came under observation, and that no alteration was visible till three months afterwards, presenting, in that respect, a remarkable contrast to the change exhibited by the blood, which, as has been already shown, maintained during the whole time the case was under treatment, the proportion between the white and colored cells, without any appreciable variation whatever. And this will appear still more striking, when the part in which these organs play in the formation of the blood is taken into account, for it would seem, from the minute structure of the lymphatic glands, including, according to Professor Bennett (who supports the opinion advanced long ago by Hewson,) the spleen, thymus, thyroid, pituitary, pineal, and suprarenal bodies, as well as from repeated observations in cases of leucocythemia, that the white cells are nothing more than a farther phase of the corpuscles which are proper to this system of organs, and which probably enter the circulation by the veins.* It would naturally be expected, therefore, at first sight, that the blood, in the present case would have exhibited a progressive increase in the proportion of the colorless to the colored cells, in correspondence with the gradual enlargement of the lymphatic glands. But this apparent incongruity will be removed, when the changes which the former still further undergo is taken into consideration.

* It is now well established; that the splenic and portal veins contain a large proportion of the white cells in health as well as disease.—*Vide* Kolliker, Microsk. Anat., vol. ii., part 2, p. 279, and Henle's Zeitschrift, 1851, p. 172.

Before attention was called to this class of cases, it was generally admitted by physiologists, that the yellow corpuscles were formed in some way or other from the white, Mr. Paget maintaining that they were the result of a direct transformation from the latter; while, according to Mr. Wharton Jones, whatever may be the case in the oviparious vertebrata, in mammalia they are the liberated nuclei merely of the colorless, an opinion which has received additional weight from what has since been observed in leucocythemia. In this disease, particularly on the application of reägents, as was well noticed in the blood examined in the present instance, the nuclei can be seen dividing fissiparously into two or more, which, on being set free, acquire color in a way which has not yet been *thoroughly* ascertained. Since the publication, however, of Professor Bennett's monograph, *some* light has been thrown on this subject by the investigations of Moleschott. This observer found, on the removal of the liver from frogs, that the proportion of the colorless to the colored cells, in blood taken from the heart, was as 1 to 2·24, that of the healthy state being as 1 to 8; but that, after excision of the spleen, it was as low as 1 to 9·06, while, after extirpation of both liver and spleen, it was as high as 1 to 2·02; and from these results he infers that the liver is an organ in which the conversion of the colorless into the colored cells is being carried on to a great extent.* It would appear, then, that no matter what may be the amount of hypertrophy exhibited by the lymphatic glandular system, the proportion between the two kinds of cells will depend very much on the condition of the liver (which was found in the present case in a state of enlargement, with fatty degeneration,) and, moreover, that leucocythemia consists as much of an arrest in the development, as of an increase in the production of the colorless corpuscles.

IV.—In regard to the treatment pursued in the case which has given rise to these remarks, little can be said. For the whole class, the general indication, from the great amount of glandular enlargement, as well as from the small proportion of iron existing in the blood, is evidently the exhibition of that mineral, with or without iodine, in addition to cod-liver oil. As the disease, however, was well noticed in the case of Danahy, (who had two successive attacks of dysentery, and was ultimately cut off by pleuro-pneumonia,) is, unfortunately, often complicated with accidental affections, which assume, in many instances, an aspect more serious than the fundamental one, and as the results have been almost invariably fatal, it becomes exceedingly difficult to adhere to any plan that may be laid down. That the affection, notwithstanding, is not altogether incurable, would appear from a case reported in the American Journal of Medical science, by Dr. Hewson,† who found that the blood became healthy, and the spleen of its normal size, after a course of iron and quinine, continued for a space of five weeks. He states at the

* Quoted from Miller's Archiv. for 1853, in the Brit. and For. Med. Chir. Rev., for July and Oct., 1853, pp. 252 and 536.

† Quoted in Brit. and For. Med. Chir. Rev. for Jan. 1853, p. 288.

same time however, that when three months afterwards, there was an increase in the proportion of the colorless cells, although the patient was apparently in good health. An instance, therefore, of perfect recovery has yet to be recorded.—*Glasgow Med. Journal*, 1855.

ART. V.—*On Pleuro-Pneumonia*: by DR. R. B. TODD, F.R.S., Physician to King's College Hospital.

[WE give the following remarks of Dr. Todd as being very interesting in showing the peculiar symptoms which are sometimes observed in the urine in cases of pneumonia and pleuritis. The expectoration also is worthy of more notice than is generally given to it. When the expectoration is viscid, of a rusty-red hue, adhering firmly to the vessel, we have *sthenic* pneumonia. In the less sthenic, or in the typhoid pneumonia, there will be either no sputa at all, or they will be less viscid, less adherent, and the color will be *much darker*, somewhat like *prune-juice*. The case which Dr. Todd comments upon was one of pleurisy, accompanied with pneumonia and consolidation of a portion of lung.]

The treatment pursued was of the simplest kind ; turpentine stupes were ordered to be applied to the affected part of the chest three times a-day, and half an ounce of the liquor ammoniæ acetatis was given every two hours ; beef-tea and milk were allowed as diet. This plan you have now seen me follow in many cases with decided success. Bleeding and all kinds of depletion have been carefully avoided. The bowels have been moderately acted upon ; but we have been anxious rather to avoid pulling down the patient, the influence of the morbid process being quite enough for that purpose. A principal object of treatment, as regards physiological effect, was to procure sweating, and to promote the free action of the kidneys. Large doses (from four to six drachms) of liquor ammoniæ acetatis, given at short intervals, almost always operate beneficially in these ways. The cases which we find do not do so well, on this plan, are those in which a large portion of one or both lungs is affected; but these do not get on better under any other plan that I have yet seen adopted, and certainly an antiphlogistic course (so called) is not by any means more successful. When only half or a third of one lung is affected, the patients do very well on the plan I have just referred to.

I have said, that we avoid pulling down our patient—not only so, but, on the other hand, we endeavour to uphold his strength, by giving him, at short intervals, moderate quantities of nourishment, such as his stomach may easily digest; and, if signs of exhaustion or debility show themselves, we often add to these brandy or wine, in small quantities likewise, and carefully adjusted to the patients' digestive organs.

In this treatment of pneumonia no attempt is made to cut short the disease. It is founded upon the observation of the way in which the dis-

ease is often spontaneously cured, through critical evacuations of sweat or urine, or of both, and consists in an attempt to promote both these secretions. I am not, indeed, aware of any mode of treatment which can be said to cut short the disease; the plan by bleeding and tartar emetic does not do so certainly. I have heard it stated, that large doses of digitalis will sometimes cut short the pneumonia. Digitalis is an uncertain drug, not always possessing an equal amount of power, and sometimes not very controllable. Moreover, there are certain idiosyncrasies which do not bear the use of digitalis; nevertheless, it is not undeserving of trial in cases chosen with judgment. I hold that if the treatment is of a simple kind, and at the same time efficient, we cannot wish for more; and I believe we do more good in pursuing such a plan of treatment, than in endeavouring to cut short the disease by remedies whose action is at most uncertain, but which may under certain circumstances actually do harm. By following the plan I have just mentioned, if the patient dies it will be rather from a negation of treatment than from any other cause. The treatment will prove unsuccessful simply because the disease went on unchecked by it, and in such cases it is often a question if, by any known plan of treatment, such a result could have been averted.

Let me allude to a very interesting point which has been noticed in these cases of pneumonia. It may now be looked upon as an established fact, that in this disease there is either a great diminution in quantity of the chlorides in the urine, or these salts are altogether absent from that fluid. Upon following up this subject, Dr. Beale has made out, that while there is a deficiency of the salt in the urine there is a corresponding excess in the fluid poured out into the lung; in fact, that the chloride appears to be drawn from different parts of the system to the inflamed lung.

The amount of chloride in the urine gradually diminishes up to the period of hepatisation, at which time, in the majority of cases, not a trace is to be detected. As soon as resolution commences, the chloride gradually re-appears until the normal quantity is found. Now, the method of testing the presence of this chloride is so simple that you should always ascertain for yourselves the accuracy of this statement wherever an opportunity occurs. All you have to do is to add a few drops of nitric acid to a portion of the urine in a test-tube, and then a few drops of a solution of nitrate of silver. If chloride be present, a dense white precipitate of chloride of silver, which is insoluble in acids, will fall. If chloride of sodium be altogether absent, no precipitate whatever will occur.

What appears somewhat contradictory of the above statement is, that on the 11th we tested this boy's urine, and found evidence of the presence of much chloride; but on the 12th there was a diminution, and on the 14th the quantity had again increased; so that in this case there was no total absence at any period; and from this circumstance alone we might infer that the hepatisation of the lung was not very extensive. The disease began as pleurisy, and when hepatisation took place, the

chloride in the urine diminished in quantity. I may contrast this with the case of Mary Coley, which was one of simple pleurisy of an acute form. The rubbing sound was very loud and well-marked. She was treated with opium and large doses of liquor ammoniæ acetatis, and recovered rapidly. At no period of the case did we find any diminution of the quantity of chlorides in this patient's urine. In this case of pleurisy, then, the chlorides in the urine did not appear to be affected, while in pneumonia the quantity of these salts is observed to undergo a marked diminution. At present, however, we must not generalize too quickly on these interesting points.—*Braithwaite's Retros.*

Art. VI.—*On Necræmia:* by Dr. C. H. Jones, F.R.S.

This term is applied by Dr. Williams to that condition of the blood, in which it appears to be itself primarily and specially affected, and to lose its vital properties. It is, in fact, death beginning with the blood. The appearance of petechiæ and vibices on the external surface, the occurrence of more extensive hemorrhages in the internal parts, the general fluidity of the blood, and frequently its unusually dark or otherwise altered aspect, its poisonous properties, as exhibited in its deleterious operations on other animals, and its proneness to pass into decomposition, point out the blood as the first seat of disorder; and, by the failure of its natural properties and function, as the vivifier of all structure and function, it is plainly the medium by which death begins in the body. The blood, the natural source of life to the whole body, is itself dead, and spreads death instead of life. The heart's action is faltering and feeble ; the atonic vessels become the seat of congestions, and readily permit extravasations. The brain, insufficiently stimulated, after slight delirium, lapses into stupor ; the medulla no longer regularly responds to the *besoin de respirer;* and the respiratory movements become irregular. Muscular strength is utterly lost; offensive colliquative diarrhœa,or passive intestinal hemorrhage often occurs; sloughing sores, or actual gangrene of various parts are easily produced; and putrefaction commences almost as soon as life is extinct. The track of the superficial veins is marked by bloody stains; hypostatic congestion takes place to a great extent; the blood remains fluid, and stains the lining membranes of the vessels. Rokitansky describes the blood as often foamy, from the development of gas, and of a dirty red raspberry-jelly color; its serum dark from exuded hæmatine; and its globules swollen up by endosmosis. Coagula are either totally absent, or are very soft and small. The exudations are of a dirty red—turbid, thin. There is scarcely any rigor mortis; the tissue of the heart and of other organs is flaccid and softened, and stained by imbibition of the serum. Gas is quickly formed in the vessels and in the areolar tissue,

giving rise to a kind of emphysema. It is very remarkable that this necræmic condition, or one closely resembling it, may be brought on by violent shocks inflicted on the nervous system, as well as by the introduction of miasmatic or animal poisons into the circulation. Violent convulsions, overwhelming emotions, the shock of an amputation, a stroke of lightning, even a severe exhausting labor, are mentioned by the German pathologist as having produced this effect. More common causes are, however, malignant scarlatina and typhus, yellow fever, the plague, and the disease called glanders. It may be said, generally, that the early appearance of sinking and prostration in any fever, indicates that the blood is thus seriously affected. We are ignorant what is the exact nature of the changes which take place in this condition of the blood.—Probably they are more of a vital than merely chemical kind—that is, they affect the properties of the blood more than its composition. The blood globules do not appear to be destroyed; but they circulate probably some time before death, as so many dead particles prove to be enlarged and to stagnate in the capillaries, and to part with their contained hæmatine. The fibrine is in great part destroyed; but how this comes to pass we are ignorant. We can perceive, on the whole, scarce anything more than that the powers of vital chemistry rapidly decay, and those of ordinary chemical affinity supply their place.—*Ib.*

ART. VII.—*Treatment of Hemiplegia from softening of the Brain:* by DR. J. HUGHES BENNETT, Edinburgh.

I BELIEVE that the most important end for the practitioner to aim at, in the early treatment of these cases, is to keep down the frequency and force of the heart's action. For this purpose the strict maintainance of the horizontal posture is of the highest moment; and when the patient is conscious, it is most desirable that the mind should be tranquilized by every means. It will, of course, likewise be necessary to remove all local impediments to the easy flow of the circulating fluid; and it is as well that the head should be slightly raised, sufficient to prevent gravitation favoring the escape of blood from the ruptured vessels, but not so as to create any impediment to the flow which might embarrass the action of the heart.

To remove any source of nervous irritation which may be operating injuriously on the brain, the bowels should be cleared; and in order that there may be as little effort as possible on the part of the patient in the expulsion of the contents of the bowels, it is expedient that this should be done by enema; but if this fail, and the vital powers of the patient do not forbid it, you may give croton oil, a drop or two of which, placed on the tongue, will operate freely; or calomel, in powder, to the extent of five or ten grains, which may be similarly administered. I would advise

you to limit the further administration of drugs, to giving some slight corrective, as an alkali—ammonia being, on the whole, the most appropriate—unless, indeed, you find the patient in an extremely prostrate condition, when it will be necessary to combine with it the cautious exhibition of other stimulants, and restoratives, as chloric ether, brandy, &c.

The question of bleeding will arise; and, under the popular notion, that all head attacks are accompanied and caused by the rush of blood to the head, you will be pressed to have recourse to this expedient.—There are three objects to be attained by bleeding; *first*, to diminish an undue amount of blood in the head; *secondly*, to check hemorrhage, or to prevent it; and *lastly*, to quiet the heart's action.

If the patient be cold and collapsed, it is clear you should not take blood; nor should you have recourse to this practice if the heart's action be very feeble or intermittent; nor if there be an anæmic state; nor if the patient be of very advanced age; nor if the evidence of extensive disease of the arterial system, or of the heart, leave no doubt on the subject; nor would it be desirable to bleed if it were clear that already a large amount of hemorrhage had taken place into the brain. Should none of these objections exist, then you will have to consider whether any or all of the indications above named need to be fulfilled, and whether bleeding (local or general) promises to fulfil them. As to the first indication, namely, the diminution of an undue amount of blood in the brain, I think modern investigation of the actual state of that organ clearly points out that the brain is not in a hyperæmic state, in the cases in which the form of hemiplegia under discussion is likely to occur. Will taking blood check or prevent hemorrhage? The sudden or rapid abstraction of a moderate quantity of blood, either from the arm or temple, or by skilful cupping from the nape of the neck, may, I can conceive, check hemorrhage; and with this object it is, sometimes, a very justifiable practice, but the quantity taken should not be large. Now and then bleeding helps to diminish the frequency and force of the heart's action; but here, again, the quantity of blood withdrawn should be moderate, for the removal of much blood is apt to quicken the heart's action and render the blood poor. I would have you to look upon this question, to bleed or not to bleed, as almost the most important one you will have to decide; and, judging from my own experience on this point, as well as from the results of the practice in a large number of cases collected from various sources, as I pointed out in a former lecture, I have come to the conclusion that, in cases of white softening, with or without hemorrhage, you are less likely to err by omitting rather than by adopting the practice.

You will often be consulted as to "some expedient for promoting the restoration of the paralyzed limbs to their normal condition." To this question, after having given a fair trial to the various means which have been proposed, I must reply, that I know of nothing which more decidedly benefits the paralyzed limbs than a regulated system of exercise;

active, when the patient is capable of it; passive, if otherwise. As to the use of electricity, which is now much in vogue, or the employment of strychnia, which has been strongly recommended, I feel satisfied, as the result of a large experience, that the former requires to be used with much caution, and that the latter is very apt to do mischief, and never does good. I have seen cases in which, after the employment of electricity for some time, that agent has apparently brought on pain in the head, and has excited something like an inflammatory process in the brain. And so strychnia also will induce an analogous condition of the brain, and will increase the rigidity of the paralyzed muscles.—*Ib.*

ART. VIII.—*On a Prevailing Form of Chronic Pneumonia:* by Dr. RICHARD PAYNE COTTON, Physician to the Hospital for Consumption and Diseases of the Chest, Brompton.

[Dr. COTTON thinks that acute diseases have been numerically declining whilst chronic diseases have been increasing. Chronic pneumonia has been generally considered to be a sequel to the acute form, but many cases would seem to be chronic from the first—original and independent diseases, running their course like any other chronic malady. The following account of this form of pneumonia is very interesting.]

Commencement of the disease.—The form of chronic pneumonia to which I would direct attention, may arise in persons under the most opposite circumstances as regards temperament, age, and predisposition. The strong and robust are as often its victims as are the feeble and the fragile. The old and the young are equally liable to its attacks. I have met with cases at the ages of four and of fourscore; but the middle period of life affords the greater number of patients.

Its exciting causes are those which might induce bronchitis, pleuritis, or a more active pneumonia,—such as exposure to cold and damp, sudden changes of climatic condition, and the like. Certain states of the atmosphere, however, seem to exercise a great influence upon its development, several cases often occurring simultaneously, and having many of the characters of a true epidemic. Sometimes it is the sequel to a tedious or neglected attack of bronchitis, more especially of the capilliary form of this disease, in consequence of the extension of a low, inflammatory, or congestive action into the cellular structure of the lungs.

The initiatory symptoms are not always alike, but they are for the most part slight and singularly deficient in all external manifestation of local disease. There is seldom pain in the affected lung; generally, indeed, not the least uneasiness is complained of. Dyspnœa is rarely observed; and the breathing is, in most cases, scarcely if at all affected until the pulmonary disease has made considerable progress. There is

generally, however, more or less cough, which, in some instances, has a spasmodic character, and is severely distressing to the patient; yet I have seen a few cases in which this symptom was entirely absent, even at a period when part of the pulmonary structure was unmistakably impervious to air. The expectoration is no less variable; sometimes it is entirely absent. I have twice seen slight hæmoptysis, and, on three or four occasions, a few brown or rust-colored sputa; but, in the greater number of cases, and throughout the early stage of each individual case, little else is expectorated than frothy or slightly muco-purulent matter.

The pulse is at first very little affected, seldom exceeding 80 or 90 in the minute; but in this symptom much variety may reasonably be expected. Its frequency and strength, however, are of great use in prognosis, the quickness of the circulation being in constant proportion to the extent and severity of the attack. There is seldom much, and oftentimes no symptomatic fever; but night perspirations are more or less observable.

The patients are, for the most part, singularly unwilling to regard their disease in a serious light, flattering themselves that they are affected merely with dyspepsia, or with such an attack of bronchitis as a little care and a very little physic will easily remove. The early symptoms, indeed, are generally of so slight and almost negative a character, as scarcely to excite the apprehension even of the medical attendant; and nothing but their long persistence, added to a feeling of debility, with a gradual loss of spirits and of health, leads to a suspicion that the malady is, after all, not quite so simple in its nature.

Progress of the disease.—The disease may thus go on for a considerable time without producing any very decided, and no alarming symptoms. Weeks, indeed, may pass away, the patient complaining perhaps of little else than general debility, together with more or less troublesome cough or slight dyspnœa. Sooner or later, however, less flattering symptoms are too liable to present themselves. The cough becomes severe and spasmodic, breaking the patient's rest by night, and sadly harassing him by day. The dyspnœa is more marked, and unfits the sufferer for all active pursuits. Night perspirations grow more frequent and more copious. Emaciation steadily advances. Hectic fever makes its appearance. The spirits flag; and the hopeful fancies of the patient are exchanged for doubtfulness or despair.

Termination of the disease.—In by far the greater number of cases the chronic pulmonary disease of which I have been speaking terminates, under timely and judicious treatment, favorably; the formidable symptoms just now enumerated do not occur; the patient gradually regains health and strength; and, although it may be some length of time before the disabled lung thoroughly resumes its proper functions, yet the local mischief is stayed, and finally disappears. Unhappily, however, even under the most careful treatment, the course of the disease is not always so encouraging. The cough, the night-sweats, the loss of flesh, with the consciousness of being and the necessity of acting as an invalid,

tell sadly upon both mind and body, and it is only after a long, severe, and doubtful struggle that the malady is dissipated.

When the disease is destined to terminate fatally, it does so in one of three ways. 1st. By so wearing out the sufferer by its obstinacy, as to render him the ready victim to some other malady: or, 2nd. By inducing structural changes in the pulmonary tissues, which lead to a set of symptoms having all the general external characters of phthisis: or, 3rd. By laying the foundation of true pulmonary tuberculosis.

1st. Of the first of these three results I have seen but one example. This was in a patient at the Consumption Hospital, whose disease resisted, for several months, every kind of treatment, and whose health finally gave way, death taking place from an attack of diarrhœa, which, under other circumstances, would, in all probability, not have proved fatal. In this case, the lung was simply contracted and consolidated; there was no softening of its tissue, nor any tubercular complication.

2nd. The second result is, of the three, by far the most common. After a career of a few weeks, or sometimes even of a few months, during which time the general symptoms are progressively advancing, the tissue of the lung softens, and a fatal issue is too evidently threatened. Hectic fever, with profuse expectoration, night-sweats, or diarrhœa, rapidly supervene, and the patient ultimately sinks, exhausted and emaciated, as in ordinary phthisis. I have met with five examples of this kind; in all of which, had it not been for a knowledge of the previous history of the patient, and for the local disease being concentrated at the lower and middle lobes, rather than at the apices of the lungs, I might have mistaken the malady for true tubercular consumption.

Some patients, however, even at this stage of the disease, will struggle on for months, or perhaps years, the disease passing into *chronic pulmonary abscess*. When this happens, there is usually from time to time, an expectoration, or rather a discharge of a quantity of fetid mucopurulent matter, which, for a while, relieves the urgency of the symptoms, and flatters the sufferer with hopes of recovery. But the secretion is quickly renewed, to be discharged again at a subsequent period; and the system, at length worn out, succumbs to the disease. I have lately seen this in a lady, who, for upwards of four years, has been in the habit of expectorating, little less than a pint of offensive purulent matter, every six or eight weeks. During the intervals she rallies considerably; but each attack leaves her more exhausted than the previous, and she has, for a long time, been a confirmed invalid. Recovery, however, is not absolutely impossible, even at this advanced and apparently hopeless stage. In a few cases, the health may be restored; the lungs gradually contracting, and the pulmonary symptoms disappearing. Such instances, however, are comparatively rare.

3rd. The third result does not exhibit itself, except where the disease is associated with a tuberculous predisposition. Phthisis originating in this way is invariably of a most intractable, and sometimes of a fearfully rapid kind, presenting, in many respects, the character of ACUTE

CONSUMPTION. The consolidated portions of the lung seem to undergo tuberculous degeneration, and are found after death to be more or less in the condition known as *tubercular infiltration.* The patients often die before vomicæ have had time to form; but occasionally true tuberculous excavations are abundantly met with.

Pathology of the disease.—In the *first stage* the lung is, probably, in a state of engorgement, and presents the usual and well-known appearances of that condition; as a general rule its volume is unchanged; but in a few cases, it is, I believe, slightly augmented.

In only two instances have I been able to see the local consequences of the malady. In one of these—which may be regarded as representing the disease in its *second stage*—the entire lung was diminished in volume; it crepitated slightly at the apex, but below this the whole tissue was dense, firm, and resisting, appearing, indeed, as if it had been filled up with some albuminous or fibrinous exudation, which had afterwards contracted. The pleural covering was thickened, but no adhesion existed between the visceral and costal membranes.

In the other case—which may be looked upon as an illustration of the disease in its *third stage*—the lung was softened in its structure, of a reddish gray color, and filled with a dark purulent matter; towards its base were several small cavities separated from each other by soft and easily broken tissue—the lung, in fine, presented the usual appearances of *grey hepatization.* We might, perhaps, expect in the majority of cases to meet with some evidence of pleuretic inflammation, and, probably, in none should we find that the pleural membrane had not participated in the attack. But I am anxious to draw a broad distinction between the disease I have been describing, and that which is termed *pleuro-pneumonia*, wherein the pleura is prominently, and, in most cases, principally involved. In the chronic form of pneumonia inflammation to which I would direct attention, the pleura appears to be only secondarily affected, and even then to an inconsiderable extent; there being little if any disposition to pleuretic effusion. There may, of course, be an occasional exception; and the one form of disease may even pass into the other; but the great majority of cases which have fallen under my notice have exhibited the peculiarity in a very marked degree. It is probable, from this circumstance, that the disease has both its commencement and its intensity more frequently in the central and lower portions of the lung than towards the circumference or at its very base.

Physical Signs.—Inspection and Mensuration.—At the outset of the attack, and while the lung is simply engorged, there is no change in the form of the affected side; but, with the advance of the disease, and as the lung diminishes in volume, the thoracic parietes become more or less contracted. In cases of long standing, this contraction is usually very striking, manifesting itself even to the eye.

The respiratory movements are affected in proportion to the extent, the stage, and the duration of the pulmonary disease. When this is inconsiderable, or of recent date, it may not be easy to detect any differ-

ence in the two sides, except, perhaps, on deep inspiration; but it is impossible for the lung to be much, or for any length of time, involved without at once betraying its condition during the respiratory act, in the diminished movement of the costal structures.

Percussion, carefully employed, will generally, even at an early period, indicate both the existence and extent of the local disease. At first, there is simply diminished clearness; but, as the pulmonary consolidation increases, the sound becomes more and more dull, until, at last, it often acquires the quality which has been termed *wooden*. The sense of resistance to the percussion-stroke is also gradually developed, and is, I think, oftentimes more distinctly marked than in any other pathological condition. The *wooden* character of the sound, when fully developed, is very peculiar, and may help to distinguish the disease from pleuritic effusion.

Auscultation.—The respiratory murmur is at first either weak or harsh, or it is suppressed; it is seldom bronchial. The extent and situation of the pulmonary disease must, of course, greatly influence this particular; but weak and harsh breathing, extending for some distance beyond the dullest part of the lung, would seem to be the usual attendant of the early stage of this form of pneumonia. In some cases there is, even for weeks together, an entire absence of secretion sounds; but, more generally, the subcrepitant rhonchus is more or less abundant, and oftentimes so minute as closely to resemble *fine crepitation*. The latter sound, however,—erroneously regarded as the true characteristic of pulmonary inflammation,—is very rarely indeed to be detected. Sibilant and sonorous rhonchi are sometimes heard at different parts of the chest, and are indicative of attendant bronchitis.

There is more or less bronchophony; and the vocal and tussive fremitus are correspondingly developed.

In two fatal cases, I had an opportunity of watching the gradual changes in the auscultatory murmurs, induced by the softening process. The harsh breathing became by degrees bronchial, and subsequently cavernous; whilst the subcrepitant râles, increasing in abundance and size, gradually gave place to the cavernous or gurgling.

Differential diagnosis.—The disease under consideration is unlikely, if not impossible, to be taken for any other except bronchitis or phthisis; and, to distinguish it from either of these, it is only necessary to make a physical examination of the chest.

I was consulted a few weeks back by a healthy looking farmer, who had been gradually getting thinner, and was troubled with a dry irritable cough. He had neither dyspnœa nor thoracic pain; but his chest had never been thoroughly examined, and all his symptoms were referred to an obstinate bronchitis. On making an examination of the lower lobes of the lungs, I found that on the right side completely dull and impervious to air.

Last year I saw a gentleman supposed to be phthisical. He had long had a severe, dry, spasmodic cough; he had been getting thinner,

and was much harassed by profuse night perspirations. The base of the right lung was found, on percussion, to be completely dull and wooden; the respiration was in that part feeble, and marked by abundant fine subcrepitant rhonchi. Here, as in the preceding case, there was no difficulty about the diagnosis, immediately that the physical signs were taken into account. It would not be easy, perhaps, to name another disease wherein the value of a physical examination is more apparent.

Treatment.—If the attack be of recent date, either cupping, or the application of leeches, according to particular circumstances, and to an extent depending upon the patient's strength, will generally be productive of marked relief. In consequence, however, of the insidious nature of the disease, it rarely comes under treatment quite at its onset; and I have found the greater number of cases far more benefitted by immediate recourse to counter irritation.

The choice between the repeated application of blisters and the continued use of an irritating liniment, must be determined by special circumstances. I have generally applied in the first place one or two blisters, trusting afterwards to a strong liniment either of croton oil or iodine, or a combination of both. This treatment should be pursued for some weeks, indeed until some impression be made upon the pulmonary disease. More active counter-irritants, such as issues or setons, are, to say the least, undesirable; they are too exhausting in their effects, are less easily regulated in their action, and cannot so safely be discontinued when their use becomes no longer necessary.

The selection of internal remedies must, likewise, be determined by the particular stage of the disease, and by other special conditions. Where I have either discovered or suspected a tuberculous tendency in the patient, I have never given mercury; but, in the absence of this, and in proportion to the patient's strength, I have found it a valuable agent. I have generally at once administered small and repeated doses, until the gums have been slightly affected, taking care, however, not to carry it to extreme salivation. At the same time, I have prescribed some form of conium or hyoscyamus, combined generally with ipecacuanha or with squill, according to special symptoms. In a few instances, where the pulse has been rather quick, the respiration rather hurried, and the cough troublesome, I have found the addition of antimony of considerable use; but, more generally, depressing agents of this kind, even at the onset of the attack are rather contra-indicated.

As the disease passes into a more chronic state, continued, but mild mercurial action, in conjunction with a general tonic treatment, should be perseveringly employed. The syrup of the iodide of iron,—the iodide of potassium, with some vegetable tonic,—or one of the mineral acids, with quinine or cinchona, will now become of essential service. To either of these, cod-liver oil may be advantageously united; but if I were required to say from which combination I have seen the most advantage, I should, without hesitation, name that of the iodide of iron with cod-liver oil.

But I am far from being the advocate for an exclusive, or even a general use of any such remedy; it is to the class, rather than to the individual, to which I would direct attention. When the patient is anæmic, some of the salts of iron, in conjunction with cod-liver oil, are frequently useful. For children, I have often successfully prescribed a mixture of steel, wine, and cod-liver oil, twice daily; and, at night, small doses of ipecacuanha.

But it would be folly to attempt the treatment of this disease by physic only. In no other malady, perhaps, is the use of hygiene more called for, or more apparent. When the early symptoms have passed away, change of air and scene, and mental relaxation, should, as soon as possible, be resorted to. Pure country air, sea-breezes, healthful and happy associations, freedom from business and care, are now the allies of physic, without whose aid victory must always be uncertain and seldom permanent.

Even at the very earliest period of the disease, the diet should be nourishing. It is impossible to lay down very precise dietetic rules for the first stage of the attack, as everything must depend upon the activity, or otherwise, of some particular symptom, and the physical powers of the patient. Few persons, however, will bear any great reduction of their accustomed fare; and, I am convinced, that very few indeed will be found to require it.

When the disease is stationary, or passing into a more chronic stage a liberal and nourishing diet is absolutely essential. The addition of wine or of beer is now not merely harmless, but really efficacious. To keep a patient upon a low diet because he may cough or be a little feverish, would be, I am satisfied, only to treat the symptoms and to disregard the disease. The observant practitioner will, of course, occasionally see the necessity of departing temporarily from such a practice; but as a part of the general system of treatment, he must speedily discover its vast importance.—*Ib.*

ART. IX.—*Treatment of Erysipelas:* by Dr. JAMES S. HUGHES, Dublin.

[EARLY in the attack of erysipelas, when the pulse is hard and full, without gastro-intestinal irritation, Dr. Hughes gives an emetic, but this must be done very early in the case. He prefers tartarized antimony, either alone or combined with ipecacuanha. He then gives the tartarized antimony in solution, in minute doses at long intervals. As soon as the fever and erysipelas begin to abate, he commences with bark and nutritious diet, combined with wine or brandy. The most important point to

decide, is, when to commence with wine or brandy. Dr. Robert Williams, of London, commences with wine very early in nearly all cases of this description, and we think justly so, as the affection is one which has more frequently a malarious origin than not. Dr. Williams puts his patients on a milk diet and gently opens the bowels, and then always allows them from four to six ounzes of port wine daily. On this subject Dr Hughes remarks:]

In the administration of wine in any given case of erysipelas, you ought, however, in my mind, to be guided, both as to the period of giving it and the quantity required, by the age, constitution and habits of life of the patient, and by the type of the fever; thus, if you are called in the early stage of the disease, and if a high degree of fever exists, instead of pouring in wine at once, you should first unload the stomach and bowels by suitable medicines, and exhibit diaphoretics, after which wine may, according to my experience, be given with greater safety and advantage: if, on the contrary, this first stage should have lapsed, or the attack has been ushered in by a low form of fever, the sooner you order wine the better.

In some cases, lately under our observation, we found six or eight ounces of wine during the twenty-four hours, sufficient; whereas, in others, as you are aware, it became necessary to order more than double that quantity within the same period. In hospital practice, where the patients have been more or less accustomed to the use of ardent spirits, we have found brandy, or malt whiskey, in suitable quantities, to be better stimulants than wine. In cases of erysipelas in which the patient loses his power of swallowing, liquid food should be introduced into the stomach by means of the œsophagus tube; or, nutritious and stimulating enemata should be administered to him at proper intervals; for, we should ever hold in recollection, the possibility of persons recovering from this disease under the most unpromising circumstances. And here, let me impress on you the vital importance of sedulously watching, in all these cases, the state of the patient's bladder. In my first lecture I told you, that although patients in the advanced stages of erysipelas frequently labour under incontinence of urine, yet, that retention of urine sometimes occurs in the latter stages of the disease; therefore, examine the condition of the patient's bladder, at each of your visits, not trusting to the nurse's report who may, possibly, mistake stillicidium urinæ for incontinence of urine; and should retention have taken place, you will of course introduce a catheter to unload the bladder, and have the operation repeated at proper intervals.

Bronchitis was, as you are aware, a prominent symptom in Austin's case, and in him we found support of the system by wine and light nourishment, in judicious quantities, as necessary as in the low forms of external erysipelas. In this variety of bronchitis, the application of sinapisms and blisters proved highly beneficial.

In the local treatment of the lighter forms of true erysipelas, the application of finely levigated flour, or hair powder, affords much com-

fort to the patient; in some instances, especially when the disease is situated in the lower extremities, the use of the nitrate of silver, as recommended by Mr. Higginbotham, appears to limit the disease; in more severe cases, where the vessels of the skin are in a highly congested state, puncturing the surface freely with the lancet, as proposed by Sir Richard Dobson, affords relief; in a few instances, we have found the solution of sulphate of iron, as recommended by M. Velpeau, apparently of some advantage; and both Dr. Snow, of London, and Mr. Busk, of the Dreadnought, speak favourably of the employment of collodion to the surface of true erysipelas.

The topical remedy, however, which proved especially useful in the most unpromising cases of the prevailing erysipelas, was the employment of mercurial ointment to the inflamed surface. The mercurial inunction requires to be used in these cases with consirable caution; the diseased surface should be covered with the ointment, and the application renewed at proper intervals; but if we do not watch the effects of the inunction with care, the patient may, to our great annoyance and his discomfort, become suddenly hyper-salivated; in Robertson's case, three drachms of mercurial ointment had scarcely been used to the face and forehead, in divided portions, and at short intervals, when salivation set in, but from that moment all his symptoms improved, although we had previously looked on his case as one of the most unlikely to recover that we had met with during the session. Whilst using the mercurial ointment, externally, in erysipelas, we must not lose sight of the constitutional treatment.—*Ib.*

ART. X.—*Treatment of Diarrhœa by Chloric Ether:* by GEORGE B. MEAD, ESQ.

[WE often find that many cases of diarrhœa resist all ordinary treatment, opium amongst the rest. In 1846, '7, and '8, an epidemic prevailed at Bradford, Yorkshire, which was attended by a diarrhœa of an intractable nature.]

This diarrhœa was combined in many cases with vomiting and spasmodic pain of a very distressing character. We had very little difficulty in treating those cases in which pain was absent, but we found a certain proportion in which the diarrhœa obstinately continued despite the use of a multitude of remedies; and the pains, though temporarily relived by the use of opium, returned directly the narcotism passed off; the opium suspended, but did not remove, the spasms. At length we adopted the following formula:—

℞. *Ætheris Chlorici* ʒ ij.; *Speciei pro Conf. Arom.* ʒ ss.; *Misturæ Cretæ Compositæ ad* ℥ vj. M. Fiat mistura.

The fourth part was directed to be taken directly by an adult, and repeated every half hour, or at still longer intervals, according to the severity of the attack, and its effects upon the patient. Occasionally, opium, either in the solid form or the tincture, added to the mixture, was given; but this was seldom necessary, and I think every case would have recovered without its use. The effect of the ether in every case was marvellous. The spasms and pains were relieved, as if by a charm; the diarrhœa ceased; warmth returned to the extremities; the pulse, before perhaps flagging, increased in force and volume; one bottle never failed to relieve, or two to cure even the worst cases in which all other plans had failed. The relapses were infrequent, and were generally checked at once by a single dose. After the introduction of the chloric ether, we had no further trouble with diarrhœa. The medical man in whose practice this occurred is since dead; otherwise I am sure he would have felt great pleasure in confirming this statement. Often has he expressed to me his high opinion of the efficacy of the ether in cases of diarrhœa combined with spasmodic pain. After this, at the time the cholera last visited this country, I was residing with Dr. Morris, of Spalding. It reached Boston. Great alarm existed in Spalding, and the public were fully aware of the importance of checking the premonitory diarrhœa which began to prevail, and was exceedingly troublesome in many cases to check. Recollecting the ether, I ventured to suggest its use. My friend acquiesced. It was tried, and in not one case failed. As at Bradford, hundreds of cases in which alarming cramps existed were cured like magic; none ran on into Asiatic cholera, though many appeared to be on the verge of it, or, at any rate, were equal to those of English cholera of the severest character. So prevalent was the diarrhœa, that the surgery was thronged from morning to night by applicants for medicine; the policemen in the streets, sailors in the vessels on the river, travelers upon the rail, were equally affected: the cause was evidently ubiquitous, whatever it might be.

I could refer to many of my medical friends who have used it upon my recommendation, and whose experience, after numerous trials, has strongly corroborated my own. Though I have used it in at least fifteen hundred cases myself, and indeed I think not improbably three thousand cases, I have never yet found it fail.—*Ib.*

ART. XI.—*A Plate of Artificial Teeth swallowed, and subsequently discharged per anum:* by JAMES PHILLIPS, M. D., of Nashville, Illinois.

HAVING noticed a case reported by Dr. Mussey, of Cincinnati, in the Lancet for October, 1853, somewhat similar to the following, it occurred

to the writer that the following would be *a fortiori* the more interesting from the fact of the plate being larger and the teeth more numerous.

Mr. J. W. Y., of this county, on Saturday, in January, 1854, while at dinner, in the act of swallowing a piece of bread, accidentally disengaged and swallowed a heavy gold plate, having a clasp on the left side, fastened to the first bicuspid, with the right clasped to the cuspidatus of its corresponding side. The plate supported a full set of heavy incisors for the upper jaw, four in number. The patient living five miles in the country, concluded to try his hand at the practice. He says he felt somewhat trepidated at the time of the accident, but soon relieved his fears by a reflection that, as he believed, "nature had made a way for the getting out of whatever could get in." He soon took a dose of purgative pills, which he happened to have at hand; they operated freely, but brought away no teeth. He then reasoned in the following manner; that so long as he continued to take purgatives the contents of the bowels would be liquid and thereby be but illy calculated to surround and carry along the foreign body. That the liquid fæces would pass by the plate, leaving it entirely naked and free to be caught by the clasps in the convolutions and there remain, whereas had the fæces been indurated the inequalities of the plate would be concealed in the mass and quietly be carried through the intestinal tract. He therefore took no more pills, but ate his accustomed food, and keeping at his usual avocation, that of a farmer, quietly awaited the result. On Tuesday morning, two days and eighteen hours from the date of the accident, he passed the plate per anum, with but little pain, surrounded and impacted in a mass of indurated fæces, thus relieving him of all apprehension of further trouble.

The practical point to be deducted from the above would be for the patient to use that kind of food that would make bulky solid fæces; placing no reliance on the efficacy of medicines that increase the peristaltic action of the bowels. Preferring also an erect position of the body a part of the time, as required by out-door work, thereby alternating with the decubitus of night.—*Western Lancet, Sept.* 1855.

ART. XII.—*Carbuncle.*

[A PAPER upon this disease, copied into *Braithewaite's Retrospect*, from the *Med. Times & Gaz.*, concludes with the following summary:

1. The frequency of carbuncle has vastly increased of late years, and still continues to do so.
2. But little is known respecting its predisposing causes.
3. It may affect any age, excepting perhaps the very young.
4. Men are much more liable to it than women.
5. It occurs without distinction, at all periods of the year.

6. It occurs in almost equal proportions among the temperate and well-fed and the intemperate and ill-fed.

7. It has a premonitory stage in a considerable proportion of instances.

8. Its general treatment should be by purgatives and alteratives in all cases, and by stimulants or salines, according to the character of the constitutional disturbance.

9. Incisions are demanded when a carbuncle is spreading, or attended by much pain.

10. In a great majority of cases, free incisions relieve the pain, and in a considerable degree arrest also the spread of the disease.

11. If the spreading and the pain have already ceased, no benefit will be derived from incisions, but the sloughing and suppuration will be much increased.

12. The "core" which separates consists, for the most part, of dead areolar tissue.

13. No proof exists that carbuncle exerts any eliminative influence on the system.

Art. XIII.—*Upon the Inefficacy of Phosphate of Lime.*

Experiments have been instituted in the Bethany Hospital, at Berlin, with reference to the use of phosphate of lime recommended by Beneke, in cases of atrophical children, persons with scrofulous affections, caries of the joints, suppurating lymphatic glands, spina ventosa, &c. Not the slightest improvement, not even the amelioration of a symptom, was evidenced. In every instance, an increase of the affection was observed. The preparation ordered was from two to four grains three times daily, which was continued without interruption for eight weeks.—*Günns. Zetschr.* v. 6. 1854, *Schmidt's Jahr.*—*Phila. Examiner*, Oct. 1855.

Art. XIV.—*Hints from a Cupper and Leecher.*

Messrs. Editors:—Having spent many years in cupping and leeching, perhaps I shall be excused for giving the profession, through your journal, a few hints in relation to some points which should be observed in the practice of this branch of therapeutics.

And first, let me say, that in the use of leeches, certain errors are by

no means unfrequent, namely, that in leeching adults, the error in many cases consists in too *little* depletion; whereas, in young children it consists in too *much*. It should be remembered that one leech for a child a year old, is, in ordinary circumstances, fully equal to twenty-five for an adult. A leech bites a child as though it were a perfect luxury. All the tissues are tender. But this is not all. It is not only easy for a leech to find blood-vessels in a child, but the circulation being more rapid than in adults, the flow is consequently augmented. Neither is this all. As a general rule we can safely bleed a strong man until he faints; but never an infant. Moreover, two small leeches are always safer for a child than one *large* one; it being easier to control the bleeding from six bites of the former, than from one of the latter. As a general rule, leeches should not be applied to the *throat* of a child, especially over the trachea. It is safer to select the superior portion of the sternum, which will usually fulfill the indications. Wherever applied, a young child should never be covered up, and left for nature to arrest the hæmorrhage. I trust your readers will pardon me for calling their attention, as some of them will recollect, for the second time, to the importance of a cataplasm before leeching. It is common to foment the part after the leeches come off. But, if it cannot be done but once, it had better be done in advance, and I will give a few reasons for such a conclusion. In the first place, it makes the part very acceptable to the leech, as it almost never refuses to fasten at once upon the skin thus prepared, and the time thus saved may be of great importance to the patient. It also saves much fatigue anxiety, and enables the leecher to serve much sooner some other sufferer who counts the moments of delay as hours. But this is not all. It answers the end for which the poultice is intended (namely depletion) more perfectly when applied before leeching, than subsequently. It is not an easy matter to soften and relax the dermoid tissue so as to promote the flow of blood to the best advantage in a moment. It takes time. If the poultice be delayed until after the leeches fill, it cannot be applied until the last one comes off; and it often happens that before this occurs, some of the bites have nearly closed, so that the benefit of the cataplasm, to a great extent, is lost. When, however, the poultice precedes the leeching, the moment that one lets go, the bite bleeds at once, whether any thing is applied or not. To be efficient, the poultice should be large and hot; and if a little mustard be added, so much the better. In a large majority of cases, leeches are preferable to cups, for the abdomen, perineum, neck, face, and extremities. For the thoracic, dorsal, and temporal regions, and especially for pulmonary, renal, spinal, and ophthalmic affections, cupping is often far more efficient than leeching. Moreover, the quantity of blood taken in leeching is always uncertain, there being in one case much more, and in another case much less depletion than is intended. It is impossible to tell before the leech is applied, how much blood will flow, there being so many modifying circumstances; some of which, perhaps, I may mention, though most physicians may be familiar with them.

Much depends upon the size of the leech; and hence many physicians, to take advantage of this fact, order large ones. But this is decidedly wrong; for, in purchasing leeches, we have to take them as they run, both large and small; and therefore, if we select the large ones for those who first call, we cannot supply those who call subsequently, with even an average size, and it is not treating them fairly; and though we give them the largest that we have, the doctor is deceived, and perhaps the patient suffers. Not only so, but sometimes we are compelled to purchase a lot (because we can do no better) which has not a *large* leech among them. The proper course seems to be to have the medium size the criterion, and to modify the number as a deviation from this standard may demand.

Again, the *condition*, and also the *position* of the part, modifies the bleeding. If the part be inflamed or vascular, the discharge may be profuse. If it be hard, swollen, œdematous, cold, or exsanguineous, little blood may be obtained. The force and the frequency of the *pulse* should be taken into consideration. The position of the part will also, as I said, modify the bleeding. For example, a leech-bite upon the hand, which bleeds profusely while it hangs down, will stop at once on raising the hand above the head. There are other modifying circumstances which I need not stop to name. The average quantity of blood that a leech draws, is about two drachms, which, with the subsequent bleeding, amounts to about three-quarters of an ounce. To arrest the bleeding, I have always found a simple compress sufficient, though various styptics are used.

Although I intended to say something further on the subject of cupping, yet as I have already occupied more space in your valuable journal than I have any right to claim, I must omit it, at least for the present.

In regard to sustaining those who make a speciality of this branch of therapeutics, perhaps I may be permitted to say a word. It is generally admitted that there should be, in all large cities, competent persons to attend to these applications, and in cases which require very nice and careful management, physicians are generally very glad to avail themselves of the service of some skilful hand. But it should be remembered that these cases will by no means sustain him. His principal support must be derived from the common, every-day cases; and if physicians adopt the practice, as is often the case, of sending to the nearest apothecary for the leeches, or a leecher, saying anybody can put them on, he cannot be sustained. The truth is, apothecaries, by each one doing a little, do just enough to spoil the business, with little or no profit to themselves. Moreover, if the patient, or any inexperienced person applies them, he seldom does it to the best advantage—frequently cannot make them bite, almost always produces much fatigue, generally loses time, and gains nothing in the end.—J. H. Ross.—*N. Y. Medical Times.*

ART. XV.—*Chemical Examination of the Baker's Bread of Philadelphia:* by CHARLES M. WETHERILL, PH. D., M.D.

BREAD is the most important element of our food, not only for its nutritive properties, but because it is susceptible of adulterations, which, though they may be small in amount, are nevertheless so constantly taken into the system that they cannot fail in the end to prove detrimental to health. We find accordingly a very general prejudice against the wholesomeness of baker's bread, and the fault is attributed to the use of alum, which is supposed to be the reason that such bread presents a finer appearance than that made at home. Although this is a vulgar error, since such fine appearance is the result of art, and the bread need not contain any different ingredients from that which is home-made, bakers have thrown themselves upon the suspicion, for wherever the bread has been examined on a large scale, adulterations have been found present, and, in some places, are of universal use. Mr. Normandy, author of the *Commercial Hand Book of Chemical Analysis*, states in the same work that "bread really pure, that is, made altogether of genuine wheat flour, is, without doubt, to be found no where in London;" in all the samples of bread examined by him, with but one exception, alum was detected, and in that exception, like the others, a certain quantity of potato flour or pulp was found.

Liebig, in his Chemical Letters,* states, that he saw in an alum factory in Scotland, small mountains of finely ground flour of alum for the use of the London bakers. In the same work he gives an explanation of the mode in which the alum acts upon the bread, and why it is used by the bakers. When the millers moisten their grain in order to facilitate the grinding and do not subsequently dry the flour, or when the flour is exposed to the moisture of the atmosphere, the gluten acts upon the starch to form acetic and lactic acids, which render the gluten soluble in water, which it is not originally; the dough from such flour does not rise well, and the resulting bread is heavy and of bad appearance. Several salts act chemically upon the altered gluten of such flour and render it insoluble again, so that the resulting bread becomes white, elastic, light, and as if made from the best of flour, and capable of retaining more water, yielding, consequently, more bread from a given quantity of flour. The salts which produce this effect and which are used more or less as adulterations are, alum, sub-carbonate of magnesia, sulphate of copper, and sulphate of zinc. The use of blue vitriol by bakers in the north of France and in Belgium, has been abundantly proved, as may be seen by a reference to Ure's Dictionary. Carbonate of magnesia, if it be not in too great an excess, cannot be regarded as injurious. Liebig has recently made some experiments upon the use of lime water in the baking of bread, and found that five pounds of a saturated solution of lime water for every 19 lbs. of flour, gave

* P. 541 of Third German Edition.

a bread of fine appearance, and which he deems more wholesome than if made by any other process, as such treatment supplies to bread the deficiency of lime which places it below peas and lentils in nutritive power.* He proposes therefore to substitute the harmless lime water, which acts in a similar manner, for the injurious adulterations in frequent use.

The above mentioned substances being used to make a fair looking bread from damaged flour, and to cause it to retain a greater weight of water, another class containing chalk, plaster, lime, clay, &c., is employed sometimes, but I think rarely here, and which acts in increasing the weight of the bread; these cannot be added to any great extent without injuring its appearance, and are readily detected by the quantity of ash yielded by incineration. Finally, potatoes, starch, &c., are added in some places to the flour, and do not act injuriously to the health, although they diminish from the nutritive power (for relative weight) of the bread, and may be regarded as adulterations when the loaf is sold at the same price as the same weight of pure wheat bread. Sal æratus with the acids or salts used to liberate the carbonic acid, are only injurious when in excess in the bread; they act economically in affording the carbonic acid which puffs up and renders porous the bread, and which would otherwise have to be supplied by the flour itself by the action of the yeast.

I am not aware whether an extended examination of the bread for adulterations has been made in any of our cities, and it seemed interesting as well as important to ascertain whether we are furnished with a pure article, or if in any other respect an advantage is taken by the bakers over the consumers of bread. It was expected that a careful examination of the bread of 24 bakers taken indiscriminately from all classes of bakeries, and from different parts of the city, would supply the desired knowledge, and I am happy to be able to say, that although adulterations are employed in a very few instances, our bread is generally pure. It is gratifying to learn this, and although manifest reasons prevent publishing the names of these delinquent bakers in this article, there is a law to reach them, and I am ready at any time to give their names to the proper authorities.—*Am. Jour. of Pharmacy, Sept.*, 1855.

Art. XVI.—*Narcotics in Nervous Diseases.*

In the September number of the Iowa Medical Journal, Prof. John R. Allen, M. D., concludes his papers on the use of Narcotics in Nervous Diseases,—from which the following interesting extracts are taken:

What are the effects of a medium dose of these remedies? Primarily, but transiently stimulant, but ultimately anodyne, and in full doses

* Liebig calculated the amount of lime in such bread, and finds it equal to what is naturally present in the seeds of the Leguminosæ.

hypnotic—in other words, their effect is, to allay nervous excitement, to control the nervous force.

This effect follows soon after their administration, and is an effect which may be maintained for any length of time by a repetition of doses in quantities commensurate with the increasing tolerance of the economy. Where the object is to alleviate acute pain, or relax spasm, or quiet convulsions, we resort to decided and repeated doses and obtain the immediate repose desired, and there can be no estimate of the value of these agents here. But in cases of habitual neuralgia or spasm, or cases affecting the mental faculties, and the object is not to give immediate relief, for we cannot hope to do this, but to remove a persisting cause from which the symptoms arise, another mode of procedure is desirable.

It is here that I think we are at fault, usually. We lay aside as but palliatives a class of remedies which should be regarded as curative. We forget that the suspension of the pain or temporary control of the nervous force may, by being maintained for a long time, enable the affected part to return to a normal state, which could not have been gained in an equal contest with the irritation and perturbation, unaided by the soothing influences of the remedy.

I do not pretend to say how the change is brought about, whether it results from an alteration in the nutrition of the nerve fibre, or by a suspension of nerve force induced by the medium by which irritation is held in abeyance until the nervous equilibrium is established, or otherwise. I only know that it is often brought about, and in a most gratifying manner.

The mode of application which I would suggest, is not that, as I have remarked, looking to immediate results, but to a permanent, a prolonged narcotic effect—an *actual course*, if you please, to be persevered in as we do such plans of medication, with iron, mercury, arsenic, &c., when we desire to eradicate some inveterate morbid process, which we cannot reach by any direct and decisive attack.

The plan I propose is to begin in such cases with whatever particular remedy we may select of this class, in a medium dose, and repeat as often and increase as much, as may be needful to produce and maintain such a state of ease or quietude as may be required. Quantity is not to be estimated, effect is to be looked for and aimed at.

Suppose I should say I have given Laudanum, Tinct. Hyoscyam., &c., &c., in ten drachm doses every four hours, for months at a time, and with the best results, in insanity and some forms of epilepsy! Surprising as this may appear, I will add that I have given *more than twice that dose*, and in the same way, with the greatest benefit. Nor am I alone in this, others have done so. I could cite case after case, thus treated successfully.

This course as will be perceived, was not intended for merely allaying the urgent calls of the case. If this happened well and good, but not being the expected result, the remedies were continued until the danger of recurrence was over. The nerve force is not only to be

restrained but held in check, until we find, upon withdrawing gradually, as we had increased by degrecs the remedies, that the symptoms do not return.

They may be administered internally and applied exterually, as the location and nature of the particular case may demand, but the principle of the treatment recommended is, to strive for a permanent effect to be wrought upon the nervous force or tissue, by a persistent narcotic impression, so prolonged, that it shall break up the morbid process, or destroy the morbid habitude of the nervous force.

I should transcend the intended measure of this article by going into detail on the application of narcotics in the neuroses, and fearing in the hurry of preparation of this paper, I may not have made myself understood, I submit the following propositions:

1st. There is a morbid state of the nerve force, manifested by delirium, spasm, pain or paralysis, independent of any appreciable structural lesion.

2nd. Narcotics have a controlling influence over the nerve force, exercised in proportion to the dose administered, as to degree, and in proportion to the repetition and augmentation of the amount administered as to persistence of effect.

3d. In disorders of this nerve force of a persistent or habitual character, it is essential to the success of a narcotic treatment, that a prolonged impression be maintained upon the nervous functions in order to remove them.

4th. The method of administration should be by commencing with medium doses, and then a gradual increase to meet the increasing tolerance of the system for the remedies; the *effect* not the *quantity* to be the measure of their prescription.

It is now too late to question the efficacy of narcotics in incipient inflammations wherever seated, and in very active inflammation in particular localities, however high the authority for so doing.

No one doubts their applicability in painful diseases, acute or chronic, as palliatives at least. If we can thus momentarily relieve, why may we not prolong the impression which can be thus temporarily made, so that the *painful habitude* so to call it, may be interrupted and the normal powers overcome the tendency to neuralgia, while thus checked by medicines?

To this latter question we ask the attention of the profession. The suggestions we have made are directed to this point, and we do not fear the practical results, whatever may be thought of the *modus operandi* which we have supposed to obtain.

At some future time we hope to be able to pursue more at length, and more at leisure, this very interesting topic. For the present we must content ourselves with these hasty thoughts, trusting hereafter to illustrate the opinion inculcated by the results of their application.

* * * * * * *

Since the first part of this article was published, I have met in the New Orleans Medical and Surgical Journal, an article from the pen of a

very intelligent writer, Dr. M. M. Dowler, in which he has quoted from Prof. Paine, of University of New-York, remarks which we had also selected, illustrative of the views generally entertained as to the nature and curative value of narcotics. We still incorporate them, feeling much gratified to find our own views coinciding with those of Dr. Dowler, as to the true merits of this class of remedies.

We refer our readers with great satisfaction to the article referred to by Dr. D., as suggestive of valuable thoughts as to the use of these agencies in phlegmasial diseases. * * * *

ART. XVII.—*Yellow Fever and its Treatment at Port Gibson, Miss.*

[THE following letter addressed personally to the editor, contains practical remarks which must interest the readers of this Journal, and is therefore published. The onerous, exacting, and incessant labors arising from the conduction of this Journal, will, it is hoped, be received by its patrons as a sufficient excuse for often failing to answer letters of inquiry.

The interrogatories with which this letter closes, will, to some extent, be answered by the following dismal data from distinguished writers; figures not very flattering to yellow fever therapeutists.

Anno 1800, in Cadiz in a total population of 57,500, the attacks amounted to 48,520—the deaths to 9,977; at Xeres 12,000 out of 36,000 patients died; at Seville 20,000 died out of 76,000 affected; in some other places half died; those who escaped the disease in Spain amounted to $\frac{1}{8}$th. (Moreau de Jonnès and others.)

Dr. La Roche, in his new work, gives the following statistical results in relation to the ratio of mortality in the epidemic yellow fever. Philadelphia, anno 1800, one death among every 17 persons of the whole population (omitting fractions); same city anno 1741, deaths one in every 50 inhabitants; same city, anno 1793, one in every 12; anno 1794, same city, one death in 50; anno 1798, deaths one in 16, or one in 6 of those who remained in the city during the epidemic of that year; anno 1799, deaths one in 65, being in all these years the proportions of deaths to the total population.

Of 324 sent to the City hospital, in the year last mentioned, 193 died, or one in 1·68; of the whole number of cases one-third died. Mortality, anno 1802, one for every two cases.

"The loss in this city (Philadelphia) has varied," says Dr. La

Roche, "from one in 12 to one in 3·86 of the number attacked ; the average of all ratios being one in 2·32."

Dr. La Roche quotes Spanish authorities, showing that in thirty towns in Andalusia (Spain) anno 1800, there died of yellow fever 61,363 ; anno 1804, in twenty-five towns of that country, containing 427,228 souls, 52,559, or one in 8·12 perished, as did about one-third of all attacked. In tropical regions a higher, and in New Orleans a much lower ratio has often been recorded. Ed.]

Port Gibson, Miss., *Nov.* 13th, 1855.

B. Dowler, M. D. :

Dear Sir—When I arrived at home the first of September last from New Orleans, I found our village, the population of which is 1200, reduced by flight to perhaps 200 or 300; at this time there had been three deaths from yellow fever in town; one of the number died the night I arrived at home. The disease had not yet become epidemic; but became so in a few days thereafter. The practice pursued here this year is a complete revolution from that which was pursued in 1853. The credit for this, (you will excuse me for saying) is due entirely to myself. Instead of a tonic, stimulant, heating and repletive plan, just the reverse has been pursued, in the use of means both internally and externally. I have not yet made the estimate of the proportion of deaths to the number of the cases sick; but it is conceded by all to be exceedingly small, when compared with all epidemics in this or in previous years. It is my opinion and the opinion of other physicians here that we have had more than an an average number of very malignant cases. The general plan of treatment here has been to control the fever as much as possible, throughout the disease, by the application of cold water to the body, and ice to the head and body, and internally using ipecac emetics at the commencement of the disease, and a mild cathartic and diuretics, and if the disease seemed likely to prove obstinate in its course, mercurials combined with a narcotic were given in order to deplete from the liver and quiet nervous irritability. Nearly all cases yielded to this course of treatment, and those which resisted it, and terminated fatally were either men of infirm constitutions or of irregular habits. I will say here, that in order to control the inordinate full hard pulse, which must be done in the early stages of all cases to insure success, (and I have reasons for saying so, which must be obvious to you,) that in conjunction with the above means the timely and efficient use of the lancet will cure almost all cases of this disease.

The greatest bulk of mortality here has been since the frosts which we had in October, and in persons who returned after having fled to the country for safety, in whom black-vomit occurred on the third and fourth days.

Last night a very worthy, temperate, returned citizen died; he had been throwing up black-vomit, twenty-four hours previously, in large quantities. His treatment was strictly homœopathic. Perhaps I may at some future time, trouble you with the result of my observations and reasonings on this disease; but my main object for troubling you with this address at this time (for which I hope you will bear with me and accommodate me at your earliest opportunity) is to obtain from you answers to the following inquiries ; To wit. :

1st. What is the aggregate proportion of deaths to the number of cases in yellow fever epidemics ?

2d. What is the number of deaths in proportion to the cases in any particular epidemic ?

3d. What is the proportion of deaths to the number of cases of yellow fever in persons of irregular or dissipated habits ?

4th. What is the proportion of deaths to cases of the same disease in women ?

5th. What is the proportion in negroes ?

Your early response to me by letter concerning these inquiries will very much oblige your friend and admirer,

E. McALLISTER, M. D.

ART. XVIII.—*On the Ligation of both Primitive Carotids:* by PROF. G. C. BLACKMAN, of the Medical College of Ohio. (*West. Lancet.*)

After the obstruction of the carotids by ligature, the brain is supplied with blood from other sources as well as from the vertebral arteries.—The first operation of trying both primitive carotid arteries on the human subject, from all the information we can obtain, was performed by Dr. McGill, of Hagerstown, Maryland.

Our table embraces twenty cases, and of these the operation was followed by fatal results in but two instances. Dr. Mott tied both with an interval of only 15 minutes, and the result was almost immediately fatal.

The shortest period at which both carotids have been successfully tied, is four and a half days. The operation was performed by Dr. John Ellis, of Grand Rapids, Michigan.

REVIEWS.

Rev. I.—*Yellow Fever, considered in its Historical, Pathological, Etiological and Therapeutical Relations. Including a Sketch of the Disease as it has occurred in Philadelphia from* 1699 *to* 1854: *with an Examination of the Connections between it and the Fevers known under the same name in other parts of the Temperate, as well as in the Tropical Regions.* By R. La Roche, M. D., Member of the American Philosophical Society; of the American Medical Association; Fellow of the College of Physicians of Philadelphia; Corresponding Member of the Imperial Academy of Medicine, and Foreign Associate of the Medical Society of Emulation, of Paris; of the Academies of Sciences of Turin, Copenhagen, Stockholm, Nancy and New Orleans; of the Medical Societies of Naples, Marseilles, Lyons, etc .Philadelphia: Blanchard & Lea. 1855. Pp. I. lxi. 615. II. 813, 8vo.

Throughout the vast expansions of the Republic, prelusory announcements of Dr. La Roche's work had stimulated expectation; eulogy preceded publication, and unanimous pæans of praise bursted forth from the medical press almost in advance of stage, steam or telegraphic conveyance. Whether the unqualified laudations of the work preceded or followed its careful perusal or not, is a question of little importance, provided the rendition of this unanimous verdict be just, according to the law and the evidence. It is this question which concerns the public, and which an impartial reviewer should endeavor to solve truly, "without fear, favor, or affection."

No one writes a small, much less a big book without expecting commendation; yet experience shows that many books superlatively lauded, at the expense of truth, have drifted to the gulf of oblivion with unusual velocity, while others, severely censured at first, have steadily advanced in public estimation from age to age. "Censure," says Swift, "is a tax a man payeth to the public for being eminent. When a true genius appeareth in the world you may know him by this infallible sign, that the dunces are all in confederacy against him." Innovators,

reformers and discoverers in the medical sciences have, perhaps, more than others, suffered from this tax, particularly in former times.

A good book seldom needs eulogy—a bad one is not always damaged by censure. In the latter case the justest animadversion being often attributed to persecution, jealousy, or malice, causes a sympathetic reäction, and gives notoriety, with all its advantages, to the assailed party, constituting, for a time, an *io triumphe*, not otherwise attainable. Thus the censure directed against quacks has of late enhanced their reputation, secured legislative protection, and made them, to an unparalleled extent, the favorites of the multitude. Whether governed by reason or not, the majority rules. There is no appeal, even in the matter of quack literature.

In his preface Dr. La Roche considers yellow fever in the southern portion of the United States "as assuming, in a great measure, the character of a true endemic." So far as New Orleans is concerned it may be remarked that yellow fever is a comparatively recent disease. During the two last centuries Philadelphia had a better claim to this unenviable endemicity than New Orleans has yet acquired, Charleston alone having been the great rival to the former, and to the whole of North America in this behalf. The yellow fever cycle in Philadelphia extended over a period of one hundred and fifty years, according to Dr. La Roche, which is nearly three times longer than its reign in New Orleans.

Dr. La Roche's Bibliography of Yellow Fever is undoubtedly the most complete enumeration that has ever been published, occupying forty-four large octavo pages.

Dr. La Roche devotes ninety-six pages of his first volume to a preliminary account of the topography, climate, population and yellow fever epidemics of Philadelphia. Of the cleanliness of Philadelphia he says: "No one acquainted with the condition of the city will refuse to confess that much yet remains to be done ere Philadelphia can justly deserve the reputation for unsurpassed cleanliness and neatness in all its parts, so often claimed in this behalf." He proceeds to enumerate "many parts of the city" as excessively filthy, "though more numerous, perhaps, formerly than at present." "The city is found to possess a climate not dissimilar, during certain seasons at least, to that of regions which constitute the legitimate home of the fever."

Dr. La Roche says that from 1699 to 1741 Philadelphia remained unscathed by yellow fever. Dr. Currie, however, gives a special account

of the origin of an epidemic yellow fever in Philadelphia in the year 1740, which destroyed two hundred persons. (390–1.) Without alluding to Dr. Currie's statement, Dr. La Roche has brought to light new documentary evidence, establishing the fact that the yellow fever prevailed in the above city in 1741.

Moreau de Jonnès quotes, as his authority for the prevalence of yellow fever in Philadelphia in 1744, Mr. James Pemberton, whose testimony Dr. La Roche invalidates to some extent, by giving an extract from a letter from Dr. Franklin to his father, dated at that city on the 6th of September, 1744, in which the doctor states that the past summer had been very healthy.

Dr. La Roche's "preliminary observations" constitute a kind of chronological tableau of the epidemics of Philadelphia. Even in this point of view it is exceedingly meagre and unsatisfactory. Had the epidemics of Philadelphia occurred during the Dark Ages, or in the reign of the Pharaohs, their early history would scarcely have been more obscure—a fault not due to Dr. La Roche, but to his predecessors. Dr. La Roche's "preliminary observations," viewed as a connected relation of the epidemics of Philadelphia anterior to Rush's era, would be positively bad, were there any hopes remaining that a fuller, better and more connected one is attainable. It seems that nothing now is known in this behalf but a few sterile facts, devoid of individual narrative, without coherency, progress or definite results. Annals, documents, reports and monographs are wanting. This paucity of data must deter even an antiquarian from attempting a connected history of epidemics in that city. It is probable that the early medical history of Pennsylvania and the adjoining provinces under the British dynasty may be yet illustrated by referring to the colonial archives of that government. The same kind of evidence, incidental though it be, exists, it is believed, in the archives of France, concerning the early history of the climate and diseases of Louisiana.

The following letter, showing the state of physic in Virginia, 168 years ago, being imbued with humoral pathology, now rising into vogue in Dr. La Roche's philosophy and that of the majority of his cotemporaries, is submitted to the reader, though it is far from eulogizing the medical faculty of the 17th century.

The Rev. John Clayton wrote to the Royal Society, May 12th, 1688, thus, of Virginia: "In July and August the air becomes stagnant, the heat violent and troublesome. In September the weather usually breaks

suddenly, and then fall generally very considerable rains—many now fall sick of endemical diseases, viz: seasonings, cachexies, fluxes, scorbutical dropsies, gripes, or the like, which I have attributed to this reason: that by the extraordinary heat, the ferment of the blood being raised too high and the tone of the stomach relaxed, when the weather breaks, the blood palls, and, like over-fermented liquors, is depauperated, or turns eager and sharp, and there's a *crude* digestion, whence the named distempers may be supposed to ensue. And, for confirmation, I have observed the carminative seeds such as warm, and whose oils sheathes the acid humors that ever result from crude digestions. But decoctions that retain the tone of the stomach, as I suppose, by making the little glands in the tunics of the stomach, squeeze out their juice, (for what is bitter may be as well offensive to the stomach as to the palate,) and then chalybiates, that raise the decayed ferment, are no bad practice; after which, I conceive, aromatic spirits might be very beneficial. But their doctors are so learned, that I never met with any of them that understood what aromatic spirits were."

In this passage, it will be seen that what now is termed poor, anæmic blood, was formerly called "depauperated blood," while the therapeutic agents of the blood, as chalybiates, stimulants, and the like, are indicated by Clayton, who (Anno 1688) did not mention acute softening, acidification, gangrene, sepsis, or necrosis of the blood, as enumerated by Rokitansky and others, Anno 1855—of which more hereafter.

Dr. La Roche, in his second volume, is, so to speak, sound on the weather question. He concludes from an extended analysis, that heat, humidity, and atmospheric vicissitudes, will not account for the occurrence of yellow fever. "The yellow fever," says he, "is produced under opposite hygrometrical conditions of the atmosphere; those who ascribe its origin and prevalence to excess of atmospheric and terrestrial humidity in all places and under all circumstances, err as greatly as those who refer it exclusively to a dry or droughty state of the air. That a high dew point plays the all-important part in the causation, attributed to it by Mr. Hopkins and some others, is far from being demonstrated. These circumstances * * * must debar us from the possibility of connecting, as efficient cause and effect, a high dew point—in the disease especially under consideration. A high dew point will not occasion the disease. The fever of this city (Philadelphia) is thus shown to be connected, in most instances at least, with a deficiency of atmospheric and terrestrial humidity. Doubtless there may, and often does exist much atmospheric humidity during the prolonged absence of rain; and the deficiency of the latter is no proof of the absence of the former. Nevertheless, this humidity must necessarily be less abundant than

during the prevalence of rain, associated with a high thermometrical range," &c.

From a vast array of authorities and indisputable facts, Dr. La Roche concludes that heat cannot be the special cause of yellow fever:

"In some countries as hot as, and hotter than, those subject to the yellow fever—where the average tropical heat is of longer duration—the disease has never been known to occur; while in others it has only done so occasionally and to a limited extent."

"The prolonged action of heat on the system is not necessary for the production of the disease, which often breaks out when the individual has been exposed but a few weeks, a few days, or only a few hours, to the atmosphere of an infected spot."

"In countries subject to the yellow fever—where it prevails endemically, or at long intervals—seasons occur in which, though the temperature is as high as, or higher than, during sickly periods, the disease either does not show itself at all, or does so to a limited extent, or in a mitigated form."

"Were the localities infected hotter than others that remain healthy, the circumstance could not be adduced in proof of heat being the efficient cause of the disease, for individuals who are unaffected so long as they remain aloof from the sickly spot, and take it by visiting the latter, are not so from the greater heat they encounter, inasmuch as the risk of infection is not as great in the hottest as in the coldest part of the twenty-four hours."

Dr. La Roche quotes and adopts Dr. S. Jackson's account of the yellow fever in Philadelphia, in 1820: "Between four and five hundred persons were attacked by it. It attacked, occasionally, a few whites of the poorer class, but not more than about twenty or thirty on the whole suffered. It was so generally confined to the blacks, that it acquired the name of the 'negro fever.'"

This statement, coming from a less reliable authority, would scarcely be credited by those who are conversant with the history of yellow fever in its relations to the black race, which, from the earliest times, has been far more exempt, in the South at least, than any other variety of the human species. Dr. Lining, more than a century ago, as quoted by Currie, (389,) asserted that negroes were exempt from this malady. Although the absolute universality of this proposition is contradicted by facts, yet, as already stated, blacks suffer far less than others, as might be shown at length, particularly in New Orleans.

But Dr. La Roche has, in the second volume of his work, with his usual acumen, investigated the susceptibility of the black race, as it regards yellow fever.

He remarks,—"Experience everywhere teaches that the disease,

without completely sparing, particularly in peculiar circumstances, the individuals of African birth or origin, whether in its sporadic or epidemic forms, affects more generally the white race. So far as the fever of Philadelphia is concerned, the negroes, though to a certain extent, obnoxious to the disease, are much less so, &c. The exemption from yellow fever of negroes born and raised or acclimatized in countries where the disease is endemic—the West India Islands, and the western coast of Mexico and South America—and especially of the natives of Africa, has been noticed and recorded by almost every writer. But although creole negroes are thus shown to be generally placed beyond the reach of yellow fever, their exemption is not found to hold universally. The acclimatization of negroes, like that of the whites, is occasionally lost by a prolonged residence in cold climates. Negroes from northern climates, though less susceptible to the disease than the unacclimatized whites, are nevertheless prone to its attacks, sometimes in its most aggravated form, when exposed to it in tropical regions."

"In other cities of the Union subject to yellow fever, where the advantages of acclimatization exist to a greater extent, the native negroes, or those inured by long residence to the climate, are usually, if not always, proof against the disease. Instances have no doubt occurred in which negroes, so inured, have taken the infection, and even perished at Charleston, or elsewhere. But the general result of observations in that city, from the days of Lining, and of Moultrie, would lead to the conclusion that the number is very restricted. In the epidemic of 1838, the official report shows that among 538 interments of yellow fever subjects, only 7 were blacks, or about 1 in 80; and these, as Dr. Dowler remarks, were probably, as usual, not city creoles. In Savannah, in 1854, the whole number of reported deaths from yellow fever amounted to 594; of these, 14 were blacks. There, as also in New Orleans, Pensacola, and Mobile, the exemption is nearly as effectual as in the West Indies, if not equally so. 'It is a well established fact,' Dr. Fenner remarks, 'that there is something in the negro constitution which affords him protection against the worst effects of yellow fever.' Dr. Dowler, in illustration of the insusceptibility of the black race, points to the year 1841: 'Among 1800 deaths from yellow fever, there were but three deaths among blacks—two having been children—or 1 in 600.' "

"Negroes from the West Indies remain exempt in the Southern States; as also the African blacks recently from their native soil. As it regards the cause to which individuals of the African race are indebted for their comparative immunity from the yellow fever, I cannot here inquire into at large. I think I do not err in saying that examples of the sanguine temperament are not of frequent occurrence among negroes, and that more generally they are found to present the characteristics of the lymphatic; which, as we have seen, affords the best chance of escape. Much, also, is to be attributed to those physical peculiarities which nature has endowed them with, and which render them able to resist with impunity the action of what will be found to be one of the most

prominent exciting causes of the disease—atmospheric heat. The negro was destined by nature to live under the vertical sun of the torrid zone, and with a view to enable him to do so in safety and without physical suffering, he was clad with a black skin and furnished with woolly hair, which we all know are admirably adapted for resisting the morbid influence of the intense solar heat of that region, and causing him to feel cool to the touch of an European, even under circumstances where the latter would be overpowered, would sicken, and be literally scorched. By this means, aided by other peculiarities of constitution, which allow him to imbibe with impunity the usual cause of infection, the negro is enabled to enjoy a comparative exemption from fevers of all grades arising from malarial exhalations, not only in Africa, but in the West Indies and this country. This exemption is perhaps too well attested to require a long array of illustration." (ii. 60, *et seq.*)

Nearly one fourth of these huge volumes is devoted to the contagion question. Facts must be the most curious, metaphysical, inexplicable, and fallacious things in all nature, since the more they show that yellow fever is not contagious the more clearly do they prove to contagionists that it is. In New Orleans, where, few if any, practically and privately fear contagious emanation from the yellow fever patient, yet many theoretically, publicly, and legally fear it much, and make arguments and quarantine laws for its utter exclusion. So long as there is no agreement about facts, La Roche's massive logic though wrought out with the patience of Job, will not convert contagionists against their will.

> "If they will, they will, you may depend on't,
> And if they won't, they won't—so there's an end on't."

If the recent melancholy, providential, but decisive experiment at Norfolk showing the impossibility of propagating yellow fever contagion in Richmond, Baltimore, Philadelphia, and many other places to which hundreds of infected subjects flocked from the former city without in a single instance communicating the disease, fortified by innumerable similar examples, will not convince contagionists of their ætiological heresy, neither will Dr. La Roche's four hundred pages octavo.

Dr. La Roche, as already indicated, does not unwarrantably assume that he can explain the origin of diseases by any known degrees and conditions of the thermometer and hygrometer. The great endemics and epidemics which have desolated nations have prevailed in the most opposite conditions of heat, humidity, dew-point and locality, the assertions, of sciolists to the contrary notwithstanding.

In the first volume, Dr. La Roche discusses the character, appear-

ance, and pathology of the blood in yellow fever. He says, "that in the yellow fever of this and other countries, the blood, from the onset of the disease, has been found variously, but certainly deranged; and that this morbid change becomes more and more evident as the case progresses."

"In some instances, the blood appears at first unaltered as regards color, proportion, firmness of the crassamentum, power of coagulation, quality of the serum, &c., and continues so till the accession of the second stage. More generally, and even in cases in which, judging from its general aspect, it would seem to preserve its usual characters, the blood is found more or less—often very considerably and as often completely—deprived of its power of coagulation; the crassamentum, when the separation takes place, being generally found broad, flat, thin, of soft consistence, and diffluent. In many instances the blood, from the onset of the attack, though, more generally, after the accession of the later stages, not only manifests a reluctance to coagulate, but remains fluid, and, as it were, dissolved. In many instances, there is no separation into crassamentum and serum, the blood drawn retaining its homogeneity, and this, whether it coagulates or remains fluid. In all cases, whatever be the appearance of the blood at the onset of the attack, it becomes dark, and even black as the disease advances and passes to the last stage. In many instances, and during some epidemics, in the large majority of cases, it assumes a dark hue throughout the whole course of the disease; and in all instances it is found so after death. In some instances, the blood has been found, even at the onset, quite fluid and of thin consistence. In other cases, it is represented as thicker, in the early and after stages, than in health, and as having the appearance of molasses. The same character of the blood is noticed after death. In some instances, there is uncommon reluctance in the flow of blood, although the pulse may feel strong and full."

In this enumeration, which is fundamentally erroneous, Dr. La Roche might have reproduced statements from some of the very authorities which he cites, showing that the blood circulating in the veins of yellow fever patients is actually putrid!

Biased in favor of those humoral doctrines, Dr. La Roche, as might be expected, finds little difficulty in constructing a pathological platform corresponding to the same, maintaining that "the cause of this complaint, however it may have originated, is a *special poison*, which having penetrated the system and entered the blood vessels in a manner well known, is carried every where through the instrumentality of the blood. It produces in that fluid changes. Hence, in some cases—under some circumstances, in the majority, if not all—the morbific action of the poison is such as to destroy at once the powers of life, or, in less rapidly fatal instances, to greatly diminish them in all the parts to which it penetrates,

and by that means, as well as by the diminution of fibrin or other changes occasioned in the blood," &c., &c.

If Dr. La Roche had been in New Orleans, and had observed its epidemics for twenty years, and had spent three or four hours in dissecting each of nearly one thousand yellow fever bodies, (not books,) he would probably conclude that, although there are probably changes in the blood both primitive and consecutive, as yet none have been discovered of a distinctive fundamental character, unless, perhaps, a diminished proportion of serum be one, (a supposition directly opposed to the doctor's theory;) that, so far as physical and physiological appearances are concerned, the blood is probably less changed in this than in any other febrile malady; that it can rarely be distinguished from blood taken from a healthful person; that it coagulates well; has a good color, both before and after death, particularly in the most violent and rapid cases; that, as in other diseases, particularly in protracted cases, exceptions sometimes occur, as to color, coagulability, serosity, increased or diminished firmness of the crassamentum, and the like. The purely chemical analysis of yellow fever blood is at present an open question. The blood may, for aught that is established to the contrary, be normal in its chemical constitution.

Twenty years ago, under the Broussaisan dynasty, yellow fever was a positive inflammation of the stomach and bowels; precisionists held that it was a pure gastro-duodinitis, thereby greatly exonorating nearly thirty feet of the intestinal canal. Then the blood gave all the indicants of inflammation. Soon a new era dawned, the star of Broussais declined and fell. The blood now became defibrinated, thin, poor, broken-down, uncoägulable, poisoned, putrid. Therapeutics changed. Sixty grains of quinine replaced sixty leeches! Three bottles of porter replaced three syncopal blood-lettings *per diem*. "The feeding" instead of the starving of a fever grew into favor.

There is, or was, a popular opinion dating with the settlement of Louisiana, and advocated by many of its early writers, that the blood of the unacclimated from the north is, at first, too rich, thick and dense, and dilatable from heat; that such a condition favors yellow fever; that acclimation causes the blood to become thinner and less rich; less subject to rarefaction from heat; that this climatic action renders individuals very susceptible to the sensation of cold, when they go to cold climates again or when the cold is unusually severe in the City. Now these opinions,

are not altogether without probability. In cold climates abundance of animal food is used, and would seem to be instinctively preferred, especially in the frigid zone, as travellers have shown. Blood made from animal food is probably richer, thicker and redder than blood derived from vegetables and fruits, which are perennial in genial and tropical climates. The blood in the stranger may have a greater amount of red globules than that of the acclimated. The blood of the unacclimated stimulated by heat, is, according to this theory, deprived of much of its serosity by the copious perspiration which a hot climate produces, and thus predisposes to yellow fever.

Since the above lines were penned, on looking into a new work the following was noticed:

"Nasse, whose labors have contributed very much to our knowledge of the blood, found that its *capacity for heat* stood in an exact ratio to its density." (Lehmann. Phys. Chem. i. 542. An. 1855.)

Without endorsing these opinions, or underrating the humoral pathology now predominant, it may be safely affirmed that the persons most liable to yellow fever are the muscular, vigorous, sanguineous, under the middle age, abounding in rich red blood, being rarely the "depauperated,' pale, or anæmic. In fact, the most elaborate works just from the press, in treating of blood-diseases, use terms somewhat like the early non-professional writers upon Louisiana and hot climates, although these writers did not express themselves by the terms hypercræmia, fibrin-crasis, stasis, preponderance of red globules, plethora, hæmatitis, blood-inflammation, not to name other hard words which accord well with the obscure pathological theories which they represent.

Neither during the progress of yellow fever, nor soon after death, does Dr. La Rache's account of the blood apply as a general rule in New Orleans.

Dr. La Roche has probably been biased in his generalizations concerning the blood of yellow fever subjects by closet theorists or dissectors whose histories relate to cadavera examined one or two days after death; when, as a matter of course, the blood is non-coägulable, diffluent, or otherwise changed, solely from physical and chemical causes, quite independently of the antecedent malady. Dr. La Roche's experiences at the bedside and in the dead-house in this behalf, are doubtlessly extremely limited, having been chiefly confined to the slight invasion of yellow fever in Philadelphia, in 1853-4.

That the blood should be profoundly altered to a diffluent or putrid liquid in any stage of the malady, is rendered improbable by many collateral phenomena, witnessed to an extraodinary extent in the recently dead body, as powerful muscular contractility, prolonged development of animal heat, rapid capillary circulation, not to name the normal appearance of the muscular tissue—which latter would be apt to be blackish, non-resilient, soft and destitute of contractility, in maladies caused or accompanied by a dissolved, black, defibrinated, serous and broken down condition of this vital fluid, such as Dr. La Roche describes.

Many dissectors and examiners of dead bodies attach great importance to the fluidity of the blood, as characterizing sudden death, &c. This, in most cases, is probably an error. The blood is fluid not only a few hours after death, and *à fortiori*, more so, at a remote period, namely, when rigidity is replaced by a softening and dark color of the muscles preluding the putrefactive process, although, in the meantime, coägulation may have occurred and disappeared. Thus, for example, Mr. Deane, in reporting a case of fracture of the inner table of the skull, (Provincial Med. Jour.,) says in his account of the post-mortem examination, "that the blood throughout the whole system was, as is usual in cases of *sudden death, fluid*. The body was in a most offensive state of putrefaction, although he had been *dead only thirty-eight hours*." Now, if this man had died of a chronic instead of a sudden disease, and had been examined "in a most offensive state of putrefaction," the blood would have been fluid, without doubt. If, at thirty-eight, or nineteen, or nine hours after death, the blood had been found *natural* or *well coagulated, not fluid*, the gentleman might have indulged in wonder, seeing that "the whole body was in the most offensive state of putrefaction." This *non sequitur* in pathological anatomy is as common as it is pernicious.

The late distinguished M. Magendie was like Dr. La Roche, misled by authorities, so far as to say in his Lectures on the Blood: "We have now ascertained that the change in yellow fever is none other than the liquefaction of the blood, which, in consequence of its altered state, is effused into the abdominal viscera, disorganizing them, causing their sphacelation." 35.

In an article on "the morbid states of the blood," Dr. M. Hall (Cyc. Prac. Med.) quotes and adopts Dr. Stevens' account of the blood in yellow fever. The latter says that, "as the disease advances, the

whole circulating current becomes black, and so thin that it has *no longer any resemblance to the blood of health. This dissolved blood is the first step towards putrefaction.*" This, as a physical history of the blood in yellow fever, is altogether erroneous.

"Talk of the Devil and he will appear." Much has been said of late about the pathology of the fluids, particularly as regards changes in the blood—its crases, its plethora, or poverty, anæmia, hyperæmia, inflammatic.—its fibrination, defibrination—its normal and abnormal proportions of red and white corpuseles, pyæmia (purulent deterioration) hæmorrhagic crasis, stasis, neeræmia, (death beginning in the blood,) albuminosis, (venosity,) and the like. The medical mind is already prepared to receive humoral explanations, vague though they be, solidism being no longer paramount. Yet solidism has in this behalf nothing to fear, nor exclusive primitive humoralism little to hope from the symptomatic, anatomical, microscopic, physiological or pathological history of this malady. The burning wave of caloric, which traverses the system during the first thirty-six hours, to a certain extent disintegrating the tissues, leaving the skin and mueous membranes "leaky," so to speak, and subject to the physical law of exosmosis and consequent hæmorrhages, not to speak of more palpable lesions of the solids, will go much farther in pathological explanation than the assumed defibrination and dissolution of the blood—which latter, at most, if true, must be regarded as consecutive, inasmuch as the blood, in the inception of the disease, is normal, so far as is known, great names to the contrary notwithstanding.

With respect to the alleged defibrination, liquefaction, and serous degeneration of yellow fever blood in the living, as in the recently dead subject in New Orleans, it can be affirmed from records scattered through numerous MS. volumes made simultaneously with the observations, that the blood often appeared destitute of the usual proportion of serosity, the crassamentum being very abundant. The following experiment, often accidental, has been repeatedly performed by the writer. Accustomed to examine all the organs *in situ* before wounding them, he has almost constantly removed them in detail for special examination, leaving both the abdominal and thoracic cavities empty, the diaphragm having been divided or removed, in consequence of which the blood settled and coägulated into two elongated columns to the right and left of the spine. These concretions proved so firm on numerous occasions

that on lifting them out, he could hang them upon the feet or ankles of the subject like a rope; they were thus suspended for hours, (the subject being on a table) without breaking, thereby indicating a tenacity much greater, it is believed, than normal blood presents. In these accidental experiments, so simple yet decisive, it was sometimes seen that the surfaces of these coägulated masses presented what is termed the buffy coat. Even on the supposition that this condition of the blood does not apply to all or to the majority of cases, still it is true, that a good coägulum is usual, and a superabundance of serosity, and still more a complete liquefaction are rare in yellow fever subjects, even during the hæmorrhagic stage and very soon after death. The blood effused into the cellular tissue and into the intermuscular spaces, appears sometimes coägulated during life, the patient being unable, for example, to extend his legs, when the effusion has been copious in the poplitcal spaces. In other cases enormous effusions amounting to pounds, under the pectoral muscles, &c., have been found uncoägulated soon after death. These, however, coägulated soon or late in the usual manner. The blood which in the closing scenes of life, oozes from the mouth, nose, &c., clots in bowls, on the sheets, in the beard and hair, forming altogether the most frightful picture that can be met with in real life, or conceived by the imagination, especially when conjoined with copious black vomitings.

Dr. La Roche, in his account of "subcutaneous and intermuscular hæmorrhages," says that "the blood is generally of a dark color, decomposed, often in an incipient state of putrefaction, and in all but recent cases has a fœtid odor." This description does not apply to the yellow fever of New Orleans. Few subjects, the choleraic excepted, present soon after death, greater exemption from putrefactive odors than the victims of yellow fever.

Dr. La Roche's chapters on black vomit are elaborate and likely to satisfy the multitude in and out of the profession that this morbid product is only blood changed in the stomach by hydro-chloric acid. This conclusion, however, is wholly gratuitous. Many years ago, during at least one epidemic, test papers were carried to the dead-house in New Orleans in order to verify this point, but acidity there was none.

Dr. La Roche says that "black vomit is acid in reäction: Litmus paper is turned red by immersion in it." He says that this acid is the hydro-chloric, and that "it is always found in the stomach in health;" that "black vomit is nothing but blood, acted on by the acid," &c.

It may be true that blood and hydro-chloric acid will make a black liquid, as will many other mixtures.

"One volume of blood, when mixed with half its volume of extremely dilated *hydro-chloric acid*, became very dark; *the blood corpuscles were not much affected;* they were all a litle thicker than usual, and those lying on their edge were baton-shaped." (Lehmann. Phys. Chem. i. 558.)

In view of the various substances which act on the blood, as alkalies, acids, gases, &c., Lehmann says: "It is clear that many of them, which modify the form of the blood corpuscles, at the same time exert a chemical action upon their walls; but whether they extend their action to the pigments, is a question as yet by no means satisfactorily answered. To judge from the properties of hæmatin, we should scarcely expect such an action, for we have seen how indifferent and inaccessible hæmatin is to most chemical reägents." (i. 562.)

Pure, recent, unfermented black vomit, is generally without odor, being bland or insipid in taste, and neither acid nor alkaline, unless accidentally or intentionally mixed with other matters, as blood, food, medicine, &c. It ferments rapidly, and emits, for many years, perhaps, the most offensive putrefactive odor known. Its color and general appearance after its fermentation are permanent. Blood during a like period affords a different color or stain.

Dr. Prout is still the principal authority for the hydro-chloric-acid-theory of black vomit!

The free hydro-chloric acid which Dr. Prout* and many others assert to be one of the normal elements of the gastric juice, has been doubted or denied by not a few of the very highest authorities. For example, in a work just from the press, that is, in Lehmann's Physiological Chemistry, Dr. Day quotes authorities showing "that the human gastric juice contains *no free hydro-chloric acid.*" (i, 457 Anno, 1855.) Of the so-called *pepsin hydro-chloric acid*, Prof. Lehmann himself says, "there are many very important facts which appear to render its correctness doubtful." (i. 446.)

"The digestive property of gastric juice," says M. Blondlot, "depends not on its chemical constitution, but upon a peculiar organic principle, which is totally destroyed by a temperature of 104° to 122° Fah." M M. Bernard and C. Barreswill, of Paris, conclude that neither acetic nor hydro-chloric acid, is found in the stomach, and, that the digestive

*Dr. Prout, who probably never saw a case of yellow fever, says, "The dark colored fluid ejected from the stomach in yellow fever, appears to owe its color solely to the presence of blood which has been blackened by the large qantitics of acid present."

fluid is a peculiar organic matter, destructible by heat. (*Comp. Rend. Dec. 9th*, 1844.)

But admit that free hydro-chlorie acid abounds in the stomach, and that it turns blood into black vomit, or liquid—this will prove too much. Nations that eat raw flesh and blood—individuals who eat blood puddings, or those who have hæmorrhages of the stomach and bowels, dysentery, or vomiting of blood (hæmatemesis), ought, also, to have black vomit as well as yellow fever patients.

Black vomit petechiæ,* in punctiform patches of the submucous tissue of the stomach, and more particularly of the bowels, have frequently been found in yellow fever subjects in New Orleans—a description of which cannot be given in this place. It is sufficient to say that the black vomit matter, like fine particles of charcoal, or like the *pigmentum nigrum oculi*, has been detected imbedded in the submucous tissue, both in patches and in isolated dots, apparently *in transitu* before extravasation into the cavities.

This black matter is probably carbon, suspended in serum, mucus, gastric juice, fibrine, albumen, &c.

The exact ratio in which this lesion, if such it may be called, has been found, would require probably several weeks' examination of MS. records. It can scarcely be less than ten *per cent.* in the dead, though it may be a constant one in the living body during the actual progress of the black vomit secretion, exeretion, production, or whatever else Dr. La Roche shall please to call it, he being vehemently opposed to the notion that this liquid is a morbid secretion; but "a rose would smell as sweet by any other name."

The difficulty of explaining the origin of melanosis in any malady is as great as it is in that of yellow fever. The black vomit pigment, whether in dust-like atoms, granules or flaky coherent striæ, mixed with mucus, epithelial *debris*, &c., is probably similar in character with what is termed *melanin*, which is chiefly *carbon*, with oxygen, hydrogen and nitrogen, and which, paradoxical as it may seem, is both a physiological and a pathological product—physiological in the *membrana pigmenti*, bronchial glands and lungs, and in the epidermis of the negro, in the ink-bag of the Sepia—pathological, in black vomit, cancer melanodes, etc.

The most recent chemical researches upon the blood pigment,

* See West. Jour. Med. for Oct., 1843: *Contributions to Morbid Anatomy*, by B. Dowler, M. D.

hæmatin, show that in this latter carbon, predominates, being combined with iron, oxygen, hydrogen and nitrogen. A complete metamorphosis of *hæmatin* has been supposed by Virchow to result in *hæmatoidin*—a substance not yet analyzed. Some have conjectured that *melanin* is a decomposition or metamorphosis of *hæmatin*.

The *pigmentum nigrum oculi* is the type of physiological *melanin*, while it is probable that the black pigment of yellow fever is the best type of pathological *melanin*, the basis of which is carbon.

In several cases of black vomit the boiling test failed to coägulate it—whence it may be inferred that it does not contain a notable quantity of albumen. This process, however, greatly tends to prevent putrefaction, fermentation, and fœtid odor, while it accelerates the precipitation of the black, carbonaceous matter, leaving the supernatant liquor (which forms about five-sixths of the whole) clearer—a condition which continues from year to year, if evaporation be prevented. Agitation, however, reproduces the original appearances.

Blood and black vomit, partially exposed to the air for a year or more, present different appearances to the eye, though less marked than at first. The blood is of a dirty, reddish hue, staining the glass, but does not throw down a sediment like black vomit; the latter, on being agitated, does not stain the glass like the former; but, in a few days, from one to six, after shaking, the original, black, dense sediment falls down again, being indestructible. After fourteen years, it emits its original fœtor, though less intensely.

Blood from the mouth, nose, and anus, has sometimes, but not very often, a fœtid odor; if blood of this character be mixed with inodorous black vomit, a fœtor will be communicated to it. In many cases, the black vomit is copiously ejected in the absence of any known hæmorrhagic effusions. In most cases, the matter of black vomit is without any tinge of blood. Upon the supposition that black vomit is nothing but blood which is first effused into the stomach and subsequently changed by hydrochloric or any other acid, it is scarcely conceivable that this fluid, thus ejected every five, ten, or fifteen minutes, should be wholly destitute of a bloody tinge—for, at the instant of vomiting, the blood entering the stomach, not having as yet undergone the gastric digestion—an inopportune moment for this process—would appear *as blood* in the matter vomited, while, upon the supposition that the black fluid entered the stomach *as such* and not *as blood*, there would be no

difficulty in accounting for its homogeneous appearance. When there is cotemporaneous hæmorrhage in the stomach, mouth, nose, &c., then, of course, there will be often found an admixture of black vomit and blood in the matters ejected, which, so far from proving their identity, afford a contrary presumption, not to say positive proof.

Porter bottles filled with black vomit will explode their stoppers with force in about one week in warm weather. If pure, homogeneous black vomit, unmixed with food and so-forth, be taken soon after death and be exposed to the sun in an uncorked phial, an acid reäction will seldom appear sooner than the third day, so far as may be inferred from a few experiments. But if it remain many hours in the body, mixed with other matters, it will ferment very rapidly, and hence it is probable that acidity will be developed at an earlier period; but neither fermentation nor age essentially alters its physical appearance. Writings with this liquid continue unchanged at least for twelve years.

Flies entangled in cups filled with black vomit appear to live quite as long as in the blandest fluid. Intestinal worms are found alive in the same. It has no deleterious or painful action upon cuts and scratches of the dissector's fingers, though some of Dr. La Roche's authorities assert that it is "acrimonous, corroding a delft-pan," whilst others regard it as the sloughs thrown off from a gangrened or mortified stomach!

Aug. 26th, 1843.—Three hours after death, one pound of black vomit, of the consistence of syrup, of intense blackness, free from acidity, as tested by litmus and by the taste, and free from odor, was taken from the stomach of Miss M. S. The stomach was excessively blanched and unnaturally bloodless; the mucous tissue could be peeled in strips, being unusually tenacious and firm.

In a few hours the black vomit presented two strata, both being opaque; the upper, three-fifths of the whole, held in suspension innumerable isolated black points, together with dark flaky aggregations; the residue or lower stratum was occupied by a black, dense sedimentary matter. The whole was taken to a chemist, (since dead,) who some weeks after presented a long memoir concerning his experiments upon this liquid, which, he asserted, was not the same as blood. Having separated the black pigment upon a filter, it assumed the consistence of a pill-like mass, being unctuous to the touch, having a somewhat sweetish taste. Distilled water, alcohol and æther did not dissolve or

otherwise change it, though in these liquids it separated again into granules; agitation reproduced its original appearance as when taken from the stomach. His other experiments, incineration and sundry tests, with a view of determining its differential analysis, as compared with blood, are scarcely worth repeating, and the more so since Lehmann, one of the most recent and eminent of Zoo-chemists, does not hesitate to say:

"We must confess, with sorrow, that even at the present day the analysis of the blood must be ranked amongst the most uncertain and untrustworthy investigations in the whole department of analytical chemistry." (i. 591.)

After all the recent splendid discoveries, histological, pathological and chemical, concerning the blood, such an *aperçu* by one of the greatest masters of the age, so thoroughly informed in the premises, "must give us pause." In fact, it is only the profound Zoo-chemist who can appreciate the difficulties incidental to an exhaustive analysis, both quantitative and qualitative of this fluid, black vomit, and the like.*

Blood taken the day before death from a patient having congestive fever, and black vomit from a recently dead subject of yellow fever, were treated alike during nearly two summers, having been exposed to the sun, in the open air, in phials partially closed; a little rain-water was occasionally added, to supply losses from evaporation.

The second day—Black vomit in fermentation; offensive odor; no deposit; the blood separated into serosity and a sedimentary crassamentum.

The third day—Blood and black vomit without acidity; the blood emits a slightly putrefactive odor.

The fifth day—Slight acidity of the black vomit, with an increased tendency to deposit, especially on the side opposite the sun.

The seventh day—The sediment augments in the black vomit; the the blood is liquid, homogeneous, increased in redness and is putrefying—*larvæ* in both.

The tenth day—Fermentation diminished, the sediment increased in the black vomit; the blood fluid as water, claret colored, without deposit; opaque, staining the glass.

The thirtieth day—Sedimentary line or stratum more distinctly

* It is hoped that Prof. Ridell, of the University of Louisiana, will continue his invaluable microscopic researches into the blood and black vomit. With an intellect moulded after the German type, that is to say, imbued with physics and patience, and having year by year opportunities of examining black vomit, let him settle the controverted questions concerning its character.

defined in the black vomit; blood dark red, fluid and homogeneous; reduced by evaporation to its original quantity, as before dilution.

At five and a half months the black vomit has one-sixth of the whole as sediment, coal-black at the bottom, reddish brown above; the more liquid part is brown, inclining to black, emitting an odor intolerably fœtid. A little agitation restored the whole to its original inky appearance. The blood is as thick as molasses, red, inclining to brown, sending forth an odor somewhat different from the black vomit, but quite as offensive. At the end of seven months a pellicle of a dull, white, fatty appearance was noticed upon the surface of the black vomit; fœtid, acid, black as at first.

At the beginning of the tenth month the appearances were nearly the same as at the last report, &c.

So far as the microscopic history of these fluids has appeared, the results are conclusive neither as to their identity nor differentiæ. The chemical, not less than the microscopic history, is in the same predicament. Negation and theory preponderate over scientific affirmation and analytic demonstration.

In pathology, as in law, the strongest evidence should be adduced; but, as before mentioned, time and space will not permit this. The following data, noted thirteen or fourteen years ago, taken from 158 post-mortem examinations, the first in an extensive series since finished, will serve to indicate with sufficient accuracy the comparative frequency, coïncidence, combination, *habitat*, isolation, and non-appearance of blood and black vomit in the dead body:

Cases in which black vomit was found in both the stomach and bowels, without blood	45
Black vomit in the stomach only, without any blood in the bowels	21
Black vomit, without blood in the bowels, none being in the stomach	11
Black vomit in the stomach alone, while both blood and black vomit were found in the bowels	11
Black vomit in the bowels only, with blood in the stomach alone	1
Black vomit in the stomach, with blood only in the bowels	2
Blood and black vomit in the stomach, the intestines having neither	5
Blood and black vomit in the stomach, with black vomit only in the bowels,	2
The intestines contained blood only, the stomach being free from both blood and black vomit	4
Black vomit in the bowels, with neither blood nor black vomit in the stomach	1
The stomach without blood and black vomit, while the intestines had both,	1
Blood in the stomach, without blood or black vomit in the bowels	7
Blood in the stomach and intestines, without black vomit in either	1
Black vomit and blood in the stomach and bowels, both mixed and separate	8
Neither blood nor black vomit in the stomach or bowels	32
	152
Errors of omission, that is, cases where the fact of the presence or absence of black vomit or blood is not noted	6
	158

This account relates wholly to the dead body. In some few instances, it was impossible to obtain the previous history with accuracy. It is, therefore, improper to attempt a comparison between the frequency of the appearance of black vomit in the discharges before and in the *primæ viæ* after death.

From these data, it appears that about twenty-one in every hundred, who die from yellow fever, have not, at death, either black vomit or blood in the *primæ viæ*, though we must make a deduction, perhaps one third, for the cases in which the black vomit and blood had been all discharged before death. In a number of instances where these have been thrown up during life, none remained, upon post-mortem examination. Still oftener, by far, they fail to show themselves during life, though they are found in abundance afterwards. Probably 86 in every 100 fatal cases, will have had either black vomit, or blood, or both.

About 8 *per cent.*, have blood either in the stomach or intestines without any admixture of black vomit. In about half the cases, (77) black vomit, without any admixture of blood, was found in the stomach or bowels, or in both ; in one fifth, black vomit and blood, both mixed and isolated, showed themselves simultaneously in different portions of the intestinal apparatus, giving an aggregate of 107, out of 158, in which black vomit matter appeared either in its simple state or combined with blood,—an arithmetical result, so pathognomonic as to stand almost without parallel in the pathological anatomy of fevers.

Having commented upon a few topics in Dr. La Roche's magnificent volumes, not without some reluctant dissents, further notice, for the present, must be deferred. In the mean time, it is hoped that the intrinsic merits and the opportune appearance of this work, will secure for it an extensive circulation, and for the learned author the acclamations of a grateful nation.

Philadelphia, honored with the first name in the literature of yellow fever, has more than one citizen to whom the inscription over the door of the Pantheon, at Paris, will apply : *Aux grands hommes la Patrie reconnaissante.*

EDITOR.

Dromio of Syracuse.—Do you know me, sir? Am I Dromio? am I your man? am I myself?

Duke.—Stay; stand apart! I know not which is which.

Comedy of Errors.

The undersigned, having written numerous articles for the New Orleans Medical and Surgical Journal, which have been extensively copied, quoted, and even attacked, intends to continue his contributions, and hopes, if at any time criticism should be deemed necessary, it will be applied to himself, and not to his brother, the Editor of this journal.

M. MORTON DOWLER, M. D.

The Medical Association of North Louisiana.

A communication, dated Nov. 26, 1855, at Shreveport, from Drury Lacy, M. D., Corresponding Secretary of the Medcal Association of North Louisiana, announces the gratifying intelligence that this association has recently been organized, and has adopted a constitution. A Committee on Cases, Reports and Essays has been appointed, with the view of preparing scientific articles for publication. In this organization many difficulties have been encountered and conquered.

The members confidently expect the friendly coöperation of their brethren in New Orleans in their praiseworthy and disinterested attempt to diffuse the lights of science and cement the bonds of friendship among the profession throughout the State—a noble aim, which associated voluntary action with firmness of purpose can the most certainly accomplish.

It is hoped that the *vis vitæ* of the Medical Association of North Louisiana will soon overcome the *vis inertiæ* of the metropolis of the State.

The fundamental principle of success in a voluntary association for the promotion of science is a love of knowledge for its intrinsic excellence, and not simply for material wealth and selfish ends. In the profession of Medicine ignorance is incompatible with the highest moral worth. Knowledge, whether it relates to the laws of the sidereal heavens, or to the structure of the minutest insect which sports its tiny wing upon the thin air, or to the natural history of diseases, affords a pleasure which misfortune cannot destroy, which wealth cannot purchase, which tends at the same time to ennoble the human character. Man's capacity for endless progression in knowledge is a "high argument" for his immortality—a light which shimmers upon the dark River of Death. "To me," says Goethe, "the eternal existence of my soul is proved from my need of activity; if I work incessantly till my death Nature is pledged to give me another form of being when the present can no longer sustain my spirit."

PALÆONTOLOGY. ZEUGLODON MACROSPONDYLUS.

From recent documents received at the Office of this Journal, it appears that Dr. Koch's Fossil Zeuglodon, formerly exhibited in New Orleans, now in Dr. McDowell's Museum, at St. Louis, has been thoroughly examined by two of the most competent naturalists, namely, Joseph Leidy, M. D., and Prof. B. Silliman, sen., who unequivocally pronounce this stupendous skeleton of an extinct animal, *to be genuine*, the bones supplied by plaster, and so forth, being usual, proper, and altogether necessary under the circumstances of the case. The editor of this Journal, after a careful examination of this skeleton in 1853, then wrote out at length, a description of it, expressing the same opinion, which, however, was not published, because he deemed himself an incompetent authority. Honor to Dr. Koch, for the greatest contribution which palæözoïc science can boast of in relation to the geological epoch of gigantic reptilians!

This very animal, though found in Alabama, probably swam many a time over the present site of New Orleans:

> "Prone on the flood, extended long and large,
> Lay floating many a rood,——
> Leviathan, which God of all his works
> Created hugest that swim the ocean stream."

A Provisional Tableau of the Geography of the Yellow Fever of 1855 *in the United States.*

June.—New Orleans.

July.—Norfolk, Portsmouth and Gosport, Va.

Aug.—Lobdell's Store, La.; Baton Rouge, La.; Bayou Sale, Parish of St. Mary, La; Pattersonville, La.; Clinton, La.; Vicksburg, Miss.; Harrisonburg, La.; Catahoula Parish, La.; Port Gibson, Miss; Port Hudson, La.; Bolivar, Miss.

Sept.—Mobile, Ala; Pointe Coupée, La.; Morganza, La.; Monroe, La.; Trinity, La.; Pointe a la Hache, La.; Grosse Tête Bayou, La.; Lake Providence, La.; Cooper's Well, Miss.; Jackson, Miss.; Canton, Miss.; Raymond, Miss.; Yazoo City, Miss.; Plaquemine, La.; Carroll, La; Natchez, Miss,; Warrenton, Miss.; Helena, Ark.; Fort Adams, Miss.; Alexandria, La.; Pineville, La.; Ashwood, La.; Grand Gulf, Miss.; Ouachita and Black rivers; Paincourtville, La.

Oct.—Houston, Texas; Avoyelles Parish, La.; Marksville, La.; Point Meagre, La.; Waterproof, La.; Centreville, La.; St. Martinsville, La.; New Iberia, La.; Memphis, Tenn.; Jackson, La.; Convent of the Sacred Heart, St. James Parish, La.; Parish of Ascension, La.; Donaldsonville, La.; Woodville, Miss.; Concordia, La.; Thibodeaux, La.; Rodney, Miss.; Montgomery, Ala.; Napoleon, Ark.

Miscellaneous.

Committee on Prize Essays of the American Medical Association.

At a meeting of the American Medical Association, held in Philadelphia May, 1855, the undersigned were appointed a Committee to receive voluntary communications on medical subjects, and award prizes in accordance with the regulations of that body.

Each communication intended to compete for a prize must be accompanied by a sealed packet, containing the name of the author, and marked exteriorly by a sentence or motto corresponding with one upon the essay; which packet will not be opened unless the essay belonging to it has a prize awarded.

All such communications must be addressed to the Chairman of the Committee, at Ann Arbor, Michigan, before March 20, 1856.

A. B. PALMER, M. D., Chairman, S. DENTON, M D.,
A. R. TERRY, M. D., A. SAGER, M. D.,
S. H. DOUGLAS, M. D., C. L. FORD, M. D.,
E. ANDREWS, M. D.

JANUARY 1, 1856.

Editor's Office.—Notices.

COMMUNICATIONS RECEIVED.

B. Brooks, M. D., Texas.
B. Haskell, M. D., Massachusetts.

BOOKS AND PAMPHLETS RECEIVED.

The Book of Prescriptions, containing 2,900 *Prescriptions, collected from the practice of the most eminent physicians and surgeons, English and Foreign; comprising also a compendious history of the Materia Medica of all countries, alphabetically arranged, and a list of the doses of all officinal and established preparations.* By Henry Beasley. Pp. 369. 8vo, Philadelphia: Lindsay & Blackiston. 1855. From Mr. J. C. Morgan, Bookseller, Exchange Place, New Orleans.

Ninth Annual Report of the Board of Regents of the Smithsonian Institution, showing the operations, expenditures and condition of the Institution up to January 1, 1855. Pp. 463. 8vo. Washington: 1855. From Hon. John Slidell, of the United States Senate.

The Transactions of the New York Academy of Medicine, instituted 1847. Vol. I. Part iv. Pp. 82. 8vo. New York: S. S. & W. Wood. 1855.

Introductory Address, delivered at the College of Physicians and Surgeons, New York, October 16, 1855. By John C. Dalton, Jun., M. D., Professor of Physiology and Microscopic Anatomy. Pp. 29. New York: John J. Schroeder. 1855.

Annual Report of the City Inspector of the City of New York, for the year ending December 31, 1854. Document No. 2. Board of Councilmen, January 1, 1855. New York: Pp. 247. 8vo.

Pronouncing Medical Lexicon, containing the correct pronunciation and definition of most of the terms used by speakers and writers of medicine and the collateral sciences, with Addenda. By C. H. Cleaveland, M. D., Member of the American Medical Association, the American Association for the Advancement of Science; Professor of Materia Medica and Therapeutics in the E. M. Institute, &c., &c. Cincinnati: Longley Brothers. 1855. Pp. 312. 24mo.

An Address, introductory to the course of lectures in the St. Louis Medical College. By Charles A. Pope, A. M., M. D., Professor of Surgery. Pp. 22. St. Louis, Mo.: 1855.

Transactions of the Medical Society of the State of Pennsylvania, at its Annual Session, held at Hollidaysburg, May, 1855. Vol. V. Pp. 160. 8vo. Published by the Society. Philadelphia: 1855. From Mr. T. L. White, Bookseller, 105 Canal street.

Synopsis of the Course of Lectures on Materia Medica and Pharmacy, delivered in the University of Pennsylvania. By Joseph Carson, M. D., &c. Pp. 196. 8vo. 2d edit. Philadelphia: Blanchard & Lea. From Mr. T. L White, Bookseller, 105 Canal street, New Orleans.

Physiological Chemistry By Professor C. G. Lehmann. Translated by George E. Day, M. D., F. R. S., &c., &c., and edited by Prof. R. E. Rogers, of the University of Pennsylvania; with illustrations, in 2 vols. 8vo. Pp. I. 648. II. 532; 24 plates; 146 figures. Philadelphia: Blanchard & Lea. 1855. From Mr. T. L. White, Bookseller, 105 Canal street, New Orleans.

Letters to a Young Physician. By James Jackson, M. D., LL. D., Prof. Emeritus, &c., &c., &c. Pp. 344. 12mo. Boston: Phillips, Sampson & Co. New York: J. C. Derby. 1855. From Mr. T. L. White, Bookseller, 105 Canal street, New Orleans.

Mortality Statistics of the Seventh Census of the United States, 1850. By J. D. B. De Bow, Superintendent United States Census. 1855. Pp. 48. 8vo.

The Case of Buranelli, medico-legally considered. By Forbes Winslow, M. D., D. C. L., late President of the Medical Society of London, etc. London: John Churchill. 1855. Pp. 69. From the publisher.

The Transactions of the American Medical Association. Vol. VIII. Pp. 763. 8vo. Philadelphia: Printed for the Association by T. H. & P. G. Collins. 1855. From Mr. J. B. Steel, Bookseller, 60 Camp street, New Orleans.

On Bandaging, and other Operations of Minor Surgery. By F. W. Sargent, M. D., Member of the College of Physicians of Philadelphia; one of the surgeons to Wills' Hospital, etc., etc. New edition, revised and enlarged, with 181 illustrations. Pp. 389. Philadelphia: Blanchard & Lea. 1856. From Mr. Thomas L. White, Bookseller, 105 Canal street, New Orleans.

An Introduction to Practical Pharmacy: Designed as a Text-Book for the student, and as a Guide to the physician and pharmaceutist, with numerous formulæ and prescriptions with 243 *illustrations.* By Edward Parrish, Graduate in Pharmacy, Member of the Philadel-

phia College of Pharmacy and of the American Pharmaceutical Association, and Principal of the School of Practical Pharmacy, Philadelphia. Pp. 544. 8vo. Philadelphia: Blanchard & Lea. 1856. From Mr. Thomas L. White, Bookseller, 105 Canal street, New Orleans.

Epidemics and Quarantine. By Horace Green, M. D., LL. D., &c., President of the Faculty, and Professor Emeritus of the Theory and Practice of Medicine. New York: 1855. Pp. 22.

FOREIGN EXCHANGES.

Gazette Hebdomadaire de Médecine et de Chirurgie.
Bulletin Général de Thérapeutique.
Journal de Pharmacie et de Chimie.
Revue Médicale Française et Étrangère.
Gazette Medicale de Paris.
Archives Générales de Médecine.
Gazette Médicale de Lyon.
Gazette Médicale de Strasbourg.
Journal de Médecine de Bourdeaux.
Annales d'Hygiène publique et de Médecine légale.
L'Union Médicale.
Il Progresso, Genoa.
El Siglo Medico, Madrid.
Revue de Thérapeutique Médico-Chirurgicale.
Dublin Quarterly Journal of Med. Science.
Medical Times and Gazette. London.
The Glasgow Medical Journal.
The Edinburgh Medical & Surgical Journal.
British and Foreign Medico-Chirurgical Review.
London Lancet.
The Indian Annals of Medical Science, Calcutta.
The Dublin Hospital Gazette.

To Physicians and Apothecaries.

Our establishment is the only one in this country where Extracts of all kinds are extensively prepared in a vacuum.

To us is due the credit of first successfully applying this principle to their preparation in this country. Our aim was the elevation of the character of American preparations and the production of an article possessing efficacy and uniformity of strength, so necessary to the successful administration of them.

They now have the sanction of the first medical men of the country; have obtained the commendation of nearly every Medical College, of nearly every Medical Journal in this country, and are in use in most Hospitals and Insane Asylums in the country.

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Oxalis Acet.—Sorrel.	1 to 4 grains.
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Papaveris.—Poppy.	10 to 20 grains,
Quercus Albæ—White Oak.	8 to 15 grains.
" Tinctoriæ—Black Oak.	3 to 5 grains.
Quassiæ.	2 to 8 grains.
Rhei.	8 to 15 grains.
Rumicis Crispæ—Yellow Dock.	2 to 4 grains.
Rutæ—Rue.	4 to 6 grains.
Rubi Villosi—Blackberry.	9 to 20 grains.
Sarsaparillæ Amer.	5 to 20 grains.
" " Comp'd.	5 to 15 grains.
" Rio Negro.	5 to 15 grains.
" " Comp'd.	1 to 5 grains.
Sabinæ—Savin.	½ to 1½ g. emetic
Sanguinariæ—Blood Root.	2½ to 5 g. expect.
Solani Lycopersici—Tomato.	
Stramonii.	1-2 to 1 grain.
Spirææ—Hardhack.	2 to 5 grains.
Saponariæ—Soapwort.	10 to 20 grains.
Sennæ Alex.	3 ta 8 grains.
Spigeliæ.	2 to 4 grains.
Sambucus—Elder Berries.	
Stillingiæ—Queens Root.	1 to 9 grains.
Taraxaci—Dandelion.	10 to 20 grains.
Trifolii—Red Clover.	
Uvæ Ursi.	5 to 15 grains.
Veratri Viride—White Hellebore.	¼ to 1-2 grain.
Verbasci—Mullein.	10 to 20 grains.
Valerianæ—English.	3 to 10 grains.
Viburni—Crampbark.	1 to 10 grains.

FLUID EXTRACTS

We have been induced to enter more extensively into the preparation of *Fluid Extracts* at the instance of many practitioners with whom it is a favorite form of administration; who complain of a great want of uniformity and certainty in the preparations to be obtained of Apothecaries generally, arising, no doubt, from want of uniformity in the mode of preparation; quality of material employed, and the inert character of Solid Extracts often used in their preparation.

Our object, therefore, is a decided and radical improvement in this class of medicines. We shall observe one standard of strength and quality; always using the best materials; a proper selection of agents to obtain the active principles; exhausting without the aid of heat in an apparatus of our own invention, and avoiding any chemical change whatever by subsequent evaporation in a vacuum.

The advantages of Fluid Extracts thus prepared are too obvious to be questioned: in relation to many articles affords the only method of preserving the whole activity of the plant; *avoids the bulk of infusion or the stimulation incident to the use of tinctures*; imparts definiteness to your prescriptions, and places at your disposal a positive and reliable article which you can recommend with confidence to families.

Co-operating with the American Medical Association and Pharmaceutical Society in their plans and aims to establish a sound system of officinal preparations, it is our duty as Manufacturing Pharmaceutists, to observe with scrupulous exactness, that none but reliable preparations issue from our establishment. With the Physician rests the duty of enquiring into the character of preparations kept by Apothecaries,—deciding what is genuine and reliable, directing the employment of such in his prescriptions, and their administration otherwise.

We feel confident, upon trial you will find all the preparations we offer to the profession. *Medicines* reliable and efficient; and that they will supply what the pro-

fession has long needed—simple preparations of our indigenous and foreign plants that can be honestly recommended as domestic remedies.

ACONITE.—A powerful narcotic. Used in rheumatism, neuralgia, epilepsy, paralysis, amaurosis, scrofula, syphilis, intermittent fever, dropsies, &c. Valuable as an anti-phlogistic remedy, and in cases of active cerebral congestion or inflammation. Dose, 5 to 10 drops.

ASCLEPIAS TUBEROSA.—(Pleurisy Root).—A sedative diaphoretic. Used in low forms of typhus fever, scarlet fever, pneumonia, asthma, dyspepsia, and pleurisy. In the treatment of dropsies of all kinds it has proved highly successful. Dose, one to two teaspoonsful.

ANTHEMIS.—Stimulant, tonic, febrifuge, antispasmodic and carminative. Used in dyspepsia, indigestion, flatulency, irritability and cramp in the stomach, in typhus fever, hysteria and nervous diseases. Dose, half to one teaspoonful.

BUCKTHORN.—Double the strength of the syrup. Used as a hydragogue cathartic in dropsy, in rheumatism, Gout, &c. Dose, one-half to one teaspoonful.

BUCHU.—Gently stimulant with a peculiar tendency to the urinary organs, as gravel, chronic catarrh of the bladder, morbid irritation of the bladder, and urethra, ulceration or incontinence of the urine, dyspepsia, dropsy, &c. Successful in the treatment of all diseases of the sexual organs of long standing. Dose, one to two teaspoonsful.

BELLADONNA.—Powerful narcotic and anti-spasmodic. Used in nervous diseases, hooping cough, spasmodic asthma, neuralgia, chorea, epilepsy, amaurosis, &c., and in such affections as have the seat chiefly in the nervous system. Dose, 10 to 20 drops.

COLUMBO.—Mild tonic. Used in simple dyspepsia in those states of debility which attend convalescence from acute disorders, particularly in enfeebled condition of the alimentary canal, in dysentery, cholera morbus and cholera infantum. Dose, one-half to two teaspoonsful.

COLCHICUM.—Used principally in various forms of gout and rheumatism, in which it is highly useful, in various nervous complaints as chorea, hysteria, &c., and in inflammatory and febrile diseases of the heart.
Dose, 5 to 25 drops.

CONIUM.—Powerful narcotic, anodyne, sedative, anti-spasmodic, deobstruant and diuretic; allays pain, irritation, and promotes sleep, and in various disorders connected with a derangement of the nervous and biliary system; it operates effectually upon the liver, restoring the secretions to a healthy state. Dose, 5 to 20 drops.

CORNUS FLORIDA.—Tonic stimulant and slightly astringent. Used instead of quinine where quinine is indicated and cannot be used from idiosyncratic peculiarity; with children and female debility. Dose, half to two teaspoonsful.

CAPSICUM.—A powerful stimulant. Used in flatulency, dyspepsia, indigestion, sea sickness, malignant sore throat, scarlet fever, in intermittents with quinine, in hot climates for obviating black vomit. Dose, 5 to 15 drops.

CIMICIFUGA.—Useful in rheumatism, neuralgia, scrofula, epilepsy, &c. Used instead of ergot, as less hazardous and as certain in its effects. Used in debility of females attendant upon uterine disorder. Dose, one-half to one teaspoonful.

CINCHONA.—Prepared from the calasaya bark. It improves digestion in functional derangements of the stomach, and invigorates the nervous as well as the muscular system. Useful in ague, remittent fever, and in all chronic diseases attended with debility. It has succeeded in intermittent cases after unsuccessful use of quinine. Dose, half to one teaspoonful.

CUBEBS.—Gently stimulant with particular direction to the urinary organs—in gonorrhea, gleet, leucorrhea, &c. An excellent preparation. Dose, one-fourth to one teaspoonful.

CYPRIPEDIUM.—Sedative, nervine, anti-spasmodic. A good substitute for English valerian. Excellent in allaying internal irritation; advantageously combined with lettuce and scutellaria. Dose, one-half to one teaspoonful three times a day.

DIGITALIS.—Possesses great power over the circulation and is peculiar in its operation; promotes the action of the absorbents. Useful in dropsy on account of its diuretic powers; in diseases of the heart. Dose, 5 to 10 drops, gradually but cautiously increased.

ERGOT.—This preparation represents all the properties of the ergot. One fluid ounce is equal to half an ounce of powdered ergot.

GERANIUM MACULATUM.—Powerful astringent. Particularly valuable for children in diarrhea, dysentery, &c. Dose, one half to one teaspoonful.

GENTIAN.—Valuable tonic. Used in dyspepsia or other gastric disorders attended with debility or torpidity, and unaccompanied by any inflammation or irritation. Dose, one-half to one teaspoonful.

GENTIAN COMPOUND.—This contains a variety of tonics, all of value, and in many cases is more serviceable than the simple extract. Dose, one-half to one teaspoonful.

JAMAICA GINGER.—Stronger than any similar preparation in use. Stimulant and carminative. Useful in indigestion, distress in the stomach after eating, pre-disposition to dyspepsia, weakness of the digestive organs, early stages of cholera, cholera morbus, diarrhea and summer complaints.

HYDRANGEA ARBORASCENS.—Dr. Butler of Burlington, N. J. has introduced this plant as a remedy for the removal of calculus or gravelly deposits in the bladder. While the deposits are small it is efficient in their removal and in the removal of the nucleus, which if allowed to remain would form stone. As many as 120 calculi have been known to come from one person under its use. Dose, one teaspoonful 2 or 3 times a day.

HUMULUS.—(Hops.)—Tonic, and moderately narcotic. Used in nervous derangement, and when sleep is desired, a very excellent preparation. Dose, one-half to one teaspoonful

HYOSCYAMUS.—A fluid preparation of this has long been needed. Useful when opium disagrees or when constipation must be avoided. Useful in all forms of spasmodic and nervous diseases. Dose, 15 to 20 drops.

IRIS.—Has cathartic alterative, diuretic and anthelmintic properties; is used often where the use of mercury is indicated. Dose, 10 to 30 drops.

IPECAC.—An excellent preparation. Its convenience, safety, and value make it valuable for children, and as a domestic remedy. Dose, one-half to one teaspoonful, repeated until the required effect is produced.

JUGLANS.—Mild cathartic. Very efficacious in habitual constipation. Used in dysentery and with bilious coustitutions. Dose, one to two teaspoouzful.

LEPTANDRIA.—Tonic, cholagogue and laxative. Employed with much success in allhepatic affections, as it causes the liver to act with with energy and without active catharsis. Valuable in dyspepsia, especially when connected with an inactive condition of the liver and torpid and debilitated condition of the bowels.
Dose, 10 to 30 drops,

LYCOPUS.—Mild narcotic, sedative and styptic. Valuable remedy for hemorrhage from the lungs, incipient phthisis, pneumonia, &c. Dose, one to two teaspoonsful.

LOBELIA.—A preparation of this plant of uniform strength has long been needed. Valuable emetic, sudorific diuretic, expectorant, and diffusible stimulant; has narcotic and alterative properties. Dose, one-fourth to one-half teaspoonful.

LOBELIA COMPOUND.—Contains Blood root and Ictodes. Dose, 10 to 60 drops, according to the effect desired.

MARRUBIUM.—(Horehound,—Employed as a domestic remedy in colds, asthma, catarrh and chronic affections of the lungs. Dose, one teaspoonful.

MATICO.—Used with advantage in diseases of mucus membranes, diarrhea, dysentery, haemoptyses, catarrh of the bladder, &c. Dose, one-half to one teaspoonfui.

OPIUM.—This is largely used in place of laudanum

Can be used where laudanum or opium is generally applicable without the unpleasant effects that usually attends the use of either.

PAREIRA BRAVA.—This preparation has been often sought for in diseases of the urinary passages. chronic inflamation and ulceration of the kidneys and bladder. &c. *Dose. one teaspoonful.*

PRUNUS.— (WILD CHERRY) Tonic and stimulant in its operation on the digestive organs. at the same time exercising a sedative influence on the circulatory and nervous system: Useful in phthisic, dyspepsia. scrofula. &c. *Dose one to two tea spoonsful.*

PRUNUS VIRGINIANA COMPOUND.—This preparation contains a variety of expectorants, is useful in coughs, colds, pneumouitis and other pectoral diseases.
Dose, one-half to one teaspoonful.

PODOPHYLLUM.—(MANDRAKE) — Cathartic and alterative, rouses the liver to vigorous action, stimulates the kidneys, promotes expectoration, augments the glandular functious, and cleanses the canal of all irritating substances. Iu small doses acts as a powerful alterative. Its range of application is perhaps more extensive than any other cathartic medicine, and is indicated in all cases where the use of mercury is indicated. Dose, one-half to onc teaspoouful

PODOPHYLLUM COMP'D.—This is the compound infusion of Senna with mandrake coubined. Much used in some sections as being more potent aud active.
Dose, one to two teaspoonsful.

PIPSISSEWA.—Highly recommended in dropsy, disordered digestion and general debility, scrofula. cutaneous eruptions and chronic affections of the urinary organs. Dose, oue teaspoonful.

QUERCUS ALBA.—As an astringent it is very valuable, given in intermittent fevers. obstinate and chronic diarrhea. Dose, one teaspoonful.

QUASSIA.—Tonic. useful iu all cases in which a simple tonic is desired. Particularly adapted to dyspepsia and to that debilitated state of the digestive organs which some imes succeeds acute disease. Dose, one-half teaspoon.ul.

RUBUS VILLOSUS.—(BLACKBERRY.)—Tonicand astringent It has long been a favorite domestic remedy in bowel complaints, and with the profession is highly esteemed in diarrhea, dysentery, cholera infantum, &c. Dose. one-half to one tea spoonful.

RUMEX CRISPUS.—(YELLOW DOCK) Very useful in scrofula, scirrhous, cutaneous. scorbutic and syphilitic affections. Dose, one teaspoonful three times a day.

RHUBARB. — Possesses cathartic and astringent powers. the latter not interfering with the former, as the purgative effect preceeds the astringent. Used in mild cases of diarrhea, chronic diarrhea and dysentery by first evacuating any irritating matter contained in the bowels. and afterwards acting as an astringent. Valuable in a variety of children's complaints. Dose, as a purgative, one-half to onc teaspoonful, diminished for children according to the age. As a tonic, oue-fourth the quantity.

RHUBARB AND SENNA.—By a union of these drugs in the concentrated form of a Fluid Extract, and in due proportion. a cathartic is obtained which is safe, unattended by unpleasant symptoms, and not followed by constipation. It will be found an excellent preparation.
Dose, one teaspoonful

SANGUINARIA.—This preparation possesses all the valuable properties of Sanguinaria. It is one of the most useful and valuable articles of the materia medica, and iu this form is safe and convenient as a domestic article in croup. Dose. Adult. ordinarily 5 to 15 drops. Emetic one-third to one-half teaspoonful. Children in croup. commence with 10 drops, and increase till vomiting occur.

SENNA.—Prepared from Alexandria senna. A great variety of preparations of senna are in market. In its preparation we use but one quality of senna and hence shall issue an article that can be relied upon as a prompt and efficient cathartic. Dose. as a purgative. one-half to one table spoonful. As a laxative, one to two spoonsful.

SENNA AND JALAP.—This is a concentrated form of the compound powder of Jalap. and is a good antibilious cathartic. Dose, from half to one teaspoonful.

STILLINGIA.—Has reputation as an alterative and is much used in syphilitic affections ordinarily requiring the use of mercury It is an alterative of valuc.
Dose, one-half to one teaspoonful.

SARSAPARILLA.—Prepared from the Rio Negro Sarsaparilla; possesses a high reputatiou as an alterative in the treatment of chronic rheumatism. cutaneou affections, scrofulous affections. and syphiloid diseases.
Dose, one teaspoonful.

SARSAPARILLA COMPOUND.—Prepared from the Rio Negro Root. in combination with several valuable Vegetable alteratives. and in many cases may be more efficacious than the simple preparation. Dose, one teaspoonful.

SCUTELLARIA.—The trials that have been made of this article leave no doubt that as a nervine and tonic combined, it is the most valuable of its class—*nervines.* Dr. Bates, iu the Boston Medical and Surgical Journal. says he has used it "with general success in the treatment of diseases attended with nervous irritation aud irritability. restlessness. &c. Iu the treatment of children. it is invaluable for allaying these symptoms. The dose is a tea-spoonful, repeated as often as the circumstances or iudications require It may be relied upon in some forms of hysteria. Patients convalescent from typhoid fevers. pneumonitis arthritis. &c . or any disease with those symptoms. will be shortiy relieved by one or two tea-spoonsful of this preparation. I have no hesitation in saying. that tho e who give it a fair trial, will find it efficient in the treatment of many diseases for the relief of which smal doses of opium are frequently given. without any of its unpleasant consequences." Dose, one half to one teaspoonful.

FLUID EXTRACT OF SPIRÆA.—(HARDHACK.)—Tonic astringent. In consequence of its tonic powers it is peculiarly adapted in cases of debility; and from the same cause, should not be given during the existence of inflammatory action or febrile excitement. As an astringent it is administered in diarrhœa. cholera infantum, and other complaints where astringents are usually indicated. and it is said to be less liable to disagree with the stomach than other astringents. Is an excellent remedy for summer complaints of children.
Dose, one teaspoonful.

SERPENTARIA. — A stimulant tonic. used in typhoid fever whether idlopathic or symptomatic. when the system begins to feel the necessity of support. but is unable to bear active stimulation. Its action may be much improved by combination with Cinchona. particularly iu intermittent fevers. Dose, one-fourth to one-half teaspoonful.

SPIGELIA.—Pink Root is an active and certain anthelmintic. especially for children. In large doses it acts as a cathartic. and in over doses. excites the circulation and determines to the brain, giving rise to vertigo. dimness of vision. &c. It should in common use be given in combination with other cathartics, as the narcotic effects is much less when it purges. Dose, one-half teaspoonful.

SPIGELIA AND SENNA.—This preparation combines the cathartic properties of Senna with the anthelmintic virtues of the Pink Root, and is a very efficacious vermifuge for children. and much more safe than Spigelia alone. Dose, one-half to one teaspoonful.

STRAMONIUM.—Employed in Tetanus, Mania, Epilepsy, Chorea, Palsy, and various nervous affections. Effectual in many acute pains, or in those arising from chronic diseases or acute uterine affections, &c.
Dose, 10 to 20 drops, to be gradually increased.

SENECIO.—Diuretic. pectoral, diaphoretic, and tonic. Used in urinary affections. Amenorrhea, Dysmenorrhea; very efficacious in producing menstrual discharge; valuable agent in female diseases. Dose, from one-half to one teaspoonful

SUMBUL.—(MUSK ROOT.)—Used by Russian Physicians in low fevers of a typhus character and in asthenic cases of dysentery and diarrhea. Its composing influ-

nee in delirium tremens is said to equal opium. Used in all nervous disorders as a nervous stimulant

Dose, one-fourth to one teaspoonful.

FLUID EXTRACT OF TARAXACUM—(DANDELION.)—The preparations f Taraxacum usually found in market are inert and worthless to an extent to create the opinion that the plant has not the medicinal virtues many writers claim for it. the error arises from want of skill in its preparation. It is a valuable alterative tonic. diuretic and aperient; it has a specific action upon the liver exciting it, when languid. to secretion. The diseases to which it is especially applicable are derangement of the digestive organs, dyspepsia, diseases of the liver and spleen. Irritable condition of the stomach and bowels. In many cases of dyspepsia and liver complaint our preparations have produced sore mouth and gums affording permanent relief; this fact alone is conclusive in its favor as a remedial agent when properly prepared. Dose, one to two teaspoonsful.

FLUID EXTRACT OF TARAXACUM COMPOUND.—This contains several valuable alteratives. as Yellow Dock in combination with the Taraxacum. and greatly increases its alterative properties and powers.

Dose. one to two teaspoonsful.

TARAXACUM AND SENNA.—In favor with many physicians as an anti-bilious purgative. Used successfully with children who take it readily. seldom producing pain or nausea. and not likely to produce constipation. Used largely in place of castor oil

Dose. one teaspoonful.

UVA URSI.—Uva Ursi is an astringent tonic. and has a specific direction to the urinary organs. for complaints of which it is chiefly used; has reputation as an antilithic; in Gravel. chronic nephritis. ulceration of Kidneys. Bladder, and urniary passages. Dose, one teaspoonful.

VALERIAN.—Prepared from the cultivated plant and possesses in a concentrated form the virtues of the plant of uniform strength. Dose, half a teaspoonful.

VERATRUM VIRIDE—This is one of the most valuable articles used by the physician. It will control the action of the heart and arteries, however inordinate and abnormal it may be; hence it is a remedy of incalculable importanee in all inflamatory fevers. in typhoid and typhus fevers. in pneumonia typhodes. in asthma. hooping cough mumps. where the disease has been translated it has been used with the happiest effect. It has controlling power over the pulse, reducing it as low as 35 beats per minute. For full directions see Pamphlet.

FLUID EXTRACT OF WAHOO—Tonic. laxative, alterative. diuretic and expectorant. Successfully used in intermittents. dyspepsia. torpid state of the liver, constipaetion. dropsy and pulmonary affections.

Dose, one to two teaspoonsful.

XANTHOXYLUM.—Stimulant tonic and alterative. used in languid states of the system and wherever a stimulant alterative treatment is required. Dose. 10 to 30 drops.

Concentrated Preparations.

Resinoids or Oleo Resins.

We add to our list some of the most important articles of this class of preparations, and shall extend the number as fast as we are able to do so. to embrace all that may be deemed important, by the praetitioner.

ASCLEPIN,
CIMICIFUGIN. [Marcrotin,]
CYPRIPEDIN,
GERANIN,
HYDRASTIN,
LEPTANDRIN,
PODOPHYLLIN,
SANGUINARIN,
SENECIN,
SCUTELLARIN,
STILLINGIN,
XANTHOXYLIN.

Saccharated Powders.

These powders having engaged the attention of some praetitioners as a convenient form of administering active and unpleasant medicines—particularly with children—we have decided to prepare the following. One ounce of the powder will represent an equal amount of the crude material.

ACONITI,
BELLADONNA,
CONIUM.
CINCHONA,
DIGITALIS.
HYOSCYAMUS,
IPECAC.
JALAPÆ.
PODOPHYLLUM,
RHUBARB.
SANGUINARIA,
STRAMONIUM,
SAVINE.
VALERIAN,

Pure Extract of Liquorice.

This article is made from the imported root and is warranted pure.

The properties and uses of Liquorice Root are familiar to every person. It is almost an universal remedy in coughs colds. catarrh. &c., and is one of the most valuable expectorants known The extract has superceded the use of the root. on accouut of its convenience. and no article in market is subject to greater adulteration. As usually found it has a black appearanee. with a burut. bitter taste. aud does not possess in any degree the peculiar flavor or properties of the root. both being destroyed in its manufacture. while its adulteration in this country with Starch, flour, and other substanees, render it nearly worthless and unfit for use.

As prepared by us, it has a brown appearance, and represents the root *in color and taste.* As this article is generally used in the early stages of coughs and colds as an expectorant. aud is relied upon as a simple remedy to heck the further progress of more serious complaints. it is a matter of first importanee that it should be reliable and represent faithfully the curative properties of the Root.

We furnish it in ROLLS of small size. and in the form of LOZENGES, put up in oval boxes and pound tin cans.

NOTICE.

Physicians and Apothecaries who may receive this, will oblige us by sending their Post Office Address by mail, if they have not already done so, that we may send them future editions of our Pamphlet, as well as notices of new preparations we shall issue from time to time, as they appear in the Medical Journals and Journal of Pharmacy.

FOR SALE BY

Druggists and Apothecaries

Generally in the U. S. and Canadas.

THE NEW ORLEANS

MEDICAL AND SURGICAL JOURNAL

FOR MARCH, 1856.

ORIGINAL COMMUNICATIONS.

ART. I.—*Anniversary Oration of the Physico-Medical Society:* by STANFORD CHAILLE, A. M., M. D.; Resident Physician of the Circus-street Hospital. Delivered *Dec.* 1*st*, 1855, and published by request of the Society.

GENTLEMEN,—We all equally indulge the hope that the door which will close upon our mortal remains, may not also shut us out from the respectful remembrance of our fellow men. This desire, conjoined with precedent, prompts me to freshen in your recollection the memory of three of our professional brothers whom the past year has taken away.

The death of the first Dr. McNeil, was attended by circumstances calculated to elicit even your sympathies, often exhausted by incessant demands. Over him the solemn Angel of death spread his wings in the very temple of gaiety ;* he cast no shadow before him to indicate the coming event, but suddenly grasped his victim in the enjoyment of the high spirits of robust health, and the vigor of mature manhood. So rapid a transition from life to death startles all from their blind confidence in the morrow, and vividly reminds us, that,

> "Our hearts though stout and brave,
> Still like muffled drums are beating
> Funeral marches to the grave."

It is not needful that I extol Dr. McNeil's virtues or disclose his faults. The former will long live in the memory of his friends, and be

* The Opera of the Orleans Theatre.

cherished forever in the hearts of his family; and by their amplitude will broadly cover the feebleness and paucity of the latter. A thousand tongues unite in singing such love and praise to him dead, as their hearts felt for him living; and no voice of detraction sounds a discord to this harmony.

His last hours were spent in the enjoyment of that art which had been a subject of his youthful studies, and had continued to be a delight of his life. Within the shrine of the Muses, the blood-vessel was ruptured, by which the frail tenure of his life was upheld, and an apopleetic lethargy swept over his senses while the grand airs of the "Prophet" were still resounding in his ears.

The scourge of the South has again brought desolation upon our land, and once more clothed our Penates in the habilliments of mourning. Our noble profession, with characteristic charity rushed to the rescue of the sick and the dying. But alas! for the impotence of man, their feeble resources so earnestly exerted in behalf of others, were inefficient to save many of themselves. In the vaults of Norfolk and Portsmouth alone were entombed thirty-eight of our confrères. In this city, two children of Medicine ventured their lives in discharge of their duty; seeking honor and usefulness, they exchanged for them the solemn shroud and the hearse. The fate of Thos. M. Neal and P. O. Tête, resident students of the Charity Hospital, and worthy sons of Louisiana, justly challenges that strong admiration due to high moral courage. Mere physical daring is an equal attribute of man and the brute creation. Let us congratulate ourselves, that our youths, if proven heroes on the fields of Mexico, by the sea-shore of Cuba, and under the "Oaks," face with undiminished fortitude any death, whether threatened by man or a pestilence. Disease may jaundice their cheeks, but fear cannot blanche them.

Never is death more touching, than when its iron hand has stiffened the vigorous limbs of youth. Youth, with its fresh beauty, its jovial hilarity, its sanguine hopes, and its lofty ambition seems as though it were not born to die. What heart is not saddened when the grave claims its victory in this "spring time of life;" when existence of itself is delight; when earth is converted into a heaven by keen enjoyment of the present, and bright images of the future? But if the sympathies of society are thus shocked, its interests too deeply suffer, when such men as we now mourn, are hastened away. They had early learned the great lesson of life, "to labor and to wait," and, if spared, an honorable and perhaps brilliant career might have left their "footprints on the sands of time." But thus cut off in the bright morning of existence, before

"wickedness had altered their understandings, or deceit beguiled their souls," they happily realize the poet's beautiful expression of death, "la mort est le soir d'un beau jour."

Fellow Physicians, join me in the hope that for these three professional brothers "the sharp edge of the grave may have proved but a foot-scraper at the wicket of Elysium," and that they now enjoy a repose, more enviable than life, where hope charms us with pleasing delusions, but unsatisfying realities scar our hearts with discontent always, and often with despair.

Gentlemen, I now invite your attention to a brief review of the benefits which the medicine of recent times has conferred on mankind, and to some reflections upon the future of our science.

The reduction of the theories of former times to the practical purposes of life has characterized the present century. A wide spread opinion seems to prevail, that our science has not partaken of this utilitarian progress. Many, while granting that our text books have vastly swollen their former dimensions, think this enlargement more like a dropsical effusion than a substantial increase of healthy tissue; an extension in theories, rather than in useful practical facts. There are some, so skeptical as to believe, that the medical art, after all, is but a delusion foaled by popular credulity, and counsel mankind to "throw physic to the dogs."

The public entertaining generally the most irrational ideas of medicine, cannot be expected to form well-founded hopes of its progress. The invention of the steam-engine and the telegraph excite the wonder of the uninitiated fully as much, as would the discovery of some potent panacea, to exterminate "all the ills that flesh is heir to." They do not reflect that the former were merely practical deductions from long established principles, whereas in medicine we have not only to deduce conclusions, but more difficult still, we must find our premises,—that however apparent to our senses may be the facts, disease and death, yet these are but results, their causes, and modus operandi being often involved in an obscurity which has baffled the sedulous investigation of ages. Thus of all sciences medicine is *par excellence* an inexact science.

In judging, then, of its comparative progress, let the comparison be instituted between it and kindred sciences. Law, Theology, the Art of Government, approximate the nearest, although each of these has certain fundamental principles for its basis, an advantage which medicine does not possess. But the professors of these sciences should beware how

they carp at our inefficiency. For if we are mystified by the same clouds which obscured the vision of Hippocrates, so we will find that what perplexed Justinian, has not been elucidated by Blackstone nor Story, —that what was dark to Plato or St. Paul, has not been illuminated by the "shining lights" of our day—and that, if the Grecian Themistocles truthfully boasted that he could make a small state a great country, we, now searching for his equal, find only those who can reverse the antithesis, —make a great country insignificant. In truth, if we would find a well-marked progress, or anything like perfection in any of these sciences, we must visit the realms of the imagination—the Golden Age, Utopia, or the Millenium!

In demonstrating the progress of practical medicine, I shall not go beyond a time that many now living can recall. In my cursory survey you will find nothing which is not already familiar to you; yet I hope, by arraying facts together, to give them a strength united, which may have been diminished by their separate consideration. "The strength of all sciences is as the strength of the old man's fagot in the band."

It must be confessed that some of our most important interrogatories to the Pythoness of our Temple, have received but oracular responses—information clothed in unsatisfactory ambiguity, or old knowledge decked in a novel and mystical form. The first principles of animal life remain as deeply secreted in the penetralia of nature as our moral existence was prior to divine revelation. Moses has told us that "God breathed the breath of life into Adam," and our knowledge of vitality is yet limited to this dictum of the inspired law-giver. Inflammation and diseases of the cerebro-spinal system, though somewhat illuminated by occasional rays of light, still rest in obscurity and darkness. Fever immolates its hecatombs of victims, but modern researches have not taught how or wherefore. And contagion, though revelling in endless discussion, and constantly hailed with shouts of Eureka, still finds its parallel in the biblical description of the wind: "It bloweth where it listeth, and thou hearest the sound thereof, but canst not tell whence it cometh, nor whither it goeth." Our savants have but little surpassed the poetical suggestion, that "hell itself breathes out contagion to this world."

The evils which result from our ignorance of these subjects are apparent to all; and the discontent produced by them causes mankind to ignore the benefits which our science has conferred upon them. It is a sad fault of human nature, that the enjoyment of what it has is always marred by its craving for what it has not. The world vanquished would

lose all its charms, were the vista filled with brighter worlds still to be conquered. Whilst deeply lamenting the imperfection of medicine, I shall now attempt to induce a better appreciation of what it has already accomplished.

The progress of practical medicine has been greatly promoted by the study of pathological anatomy. The number of functional disorders has been diminished, and well-marked organic lesions have been pointed out to characterize them. Dyspepsia has been found to depend frequently upon chronic gastritis and other organic changes; palpitation, upon valvular lesions of the heart; and asthma, upon chronic inflammation with emphysema. We are farther indebted to this study for our knowledge of laryngismus stridulus, œdema of the glottis, Bright's disease, albuminuria dependent on scarlatina, apoplexy on heart disease, and tubercle as a constant product of scrofula. The frequency and importance of local inflammation in fevers have also been more decisively established. And many diseases, as rheumatism, gout, cancer, and phthisis, formerly deemed only local disorders, have been shown to be confined to no one organ, but to be general constitutional maladies. To detail the practical information which has been recently acquired in regard even to pulmonic and cardiac diseases, would transcend my limits. Let me only remind you, that it is not many years since hæmoptysis and a "stomach cough" were regarded as *causes* of consumption, and the treatment of the same disease was an antiphlogistic regimen, and a farinaceous diet; that before the time of Corvisart and Laënnec, Carditis included all diseases of the heart. There is scarcely a disease in our extensive nosology which is not better understood now than formerly, and the immediate causes of death even have been more completely unravelled.

Chemistry, which has made so many wonderful revelations in the present century, conferring invaluable services upon the arts, has happily illustrated many medical topics. Hygiene, dietetics, physiology, and pathology, all owe to it essential additions, and many of their phenomena formerly but little understood, have been fully explained by its aid. To it is due a more accurate diagnosis of albuminous and saccharine urine, of calculous deposits, and satisfactory explanations of the therapeutic action of acids and alkalis, astringents, escharotics, disinfectants, and some antidotes. By furnishing reliable tests for many poisons, its services are constantly demanded in medico-legal investigations.

But the richest contributions of chemistry will be found in our pharmacopœia—most valuable remedies have been lately introduced therein, and though there are many morbid conditions still wanting a

controlling medicament, there is now no disease which is not amenable to one or the other of the objects of medicine, the postponement of death, or the alleviation of suffering. Among the host of new remedies introduced into our dispensatories, may be mentioned as most important, nearly all of the vegetable acids and their salts, the vegetable alkaloids, —strychnine, morphine, quinine, etc.—and their salts; iodine and its salts; salts of ammonia, soda, magnesia, potash, mercury and iron; the subnitrate of bismuth, creasote, ergot, croton oil, and chloroform. The virtues of all of these medicines are indisputable, and the benefits which have accrued from them too numerous to be detailed here. Suffice it, that there is scarce a prescription now written which does not include some one of them ; and that every practitioner can recall innumerable instances of suffering relieved, and of death averted, by their efficacy.

Many remedies have also been successfully applied to new purposes, as phosphate of lime and cod-liver oil in scrofula; iron in neuralgia ; quinine in all malarious fevers; colchicum in rheumatism and gout; blisters to check gangrene; sulphuric acid as a prophylactic in lead poisoning; the hydrated sesquioxide of iron as an antidote for arsenic; and benzoic acid in uric acid deposits. Errors and abuses which attended the application of some remedies have also been pointed out; and their qualities and virtues are better understood. I may forcibly instance mercury and tartar emetic. The therapeutic action of remedies is still involved in mystery; yet something has been done even here. Besides the classes of medicines already mentioned, as explained by chemistry, I may add the application of the physical principle of endosmosis and exosmosis, in elucidating the action of salts upon the kidneys and intestines. This sketch of the progress of chemistry and Materia Medica, though imperfect, will at least serve to prove that our profession has not been wasting its time in idle discussion and useless theoretical inventions.

About the year 1800, opticians succeeded in perfecting for the microscope a double lens, free from chromatic and spherical aberration. During the last thirty years, this instrument has been extensively used in medical researches. Whilst thus far it has not performed the service anticipated in disclosing the grand arcana of medicine, it has nevertheless thrown some light upon practical points. Histology has been created by the microscope. From this knowledge no great benefit can yet be claimed, still an accurate distinction of the different tissues must be serviceable in diagnosis and treatment, and may, when perfected, form a foundation for a better nosological system than any now extant.

Microscopists claim to have discovered an important fact, "that porrigo favosa, mentagra, aphtha, and other diseases in man, consist of cryptogamic plants growing on the skin or mucous membrane." The diagnosis of urinary deposits has received most essential aid from microscopy, uric acid and its salts, the triple phosphates, the phosphate and oxalate of lime can be readily distinguished by the microscope, as also sugar, cystine, chylous and fatty matter, blood, pus, mucus, exudation corpuscles and epithelium cells, all of which possess pathological interest and importance. Fibrine, which when exuded into the tissues and subsequently absorbed, passes off by the kidneys, can only be discovered by this instrument. Fungus of the testicle, deemed malignant, and treated by extirpation, has been proved to be simply exuberant granulations which has led to the preservation of the organ. Legal medicine has derived practical advantages from the microscopic character of blood, hair, and semen. Other useful services are claimed by some microscopists, as the distinction of cells characteristic of tubercle and cancer, but this may be fairly considered as still *sub judice.*

When we reflect how indispensable are the services of the eye in investigation, we may confidently anticipate that the microscope, which so enormously increases its power, is destined to play an important part in the future progress of medicine. The eye perceives ordinary particles $\frac{1}{4\,0\,5}$ of an inch in size, gold dust $\frac{1}{1\,1\,2\,5}$ of an inch, and threads $\frac{1}{4\,9\,0\,0}$ inch in diameter. The microscope accurately increases this truly wonderful power to the incredible extent of 100,000 times; so that a thread $\frac{1}{4\,9\,0\,0}$ inch in diameter—just within the limits of unassisted vision—would appear about one-fifth of an inch in diameter.

It has been well observed, that, that is a godlike function of the healing art, by which man is enabled to recall to his fellow man reason long banished, and restore to society the helpless victim of insanity. At least a thousandth portion of every community is composed of lunatics, whom the superstition of the past century condemned as vile creatures, thus cursed by the Almighty for their sins. They were suffered to roam at large "as the beasts of the field," or were confined as criminals in some loathsome dungeons with chains for their safeguard. Human nature shudders at the sufferings of these unfortunates, to whose deplorable state, more terrible than death itself, was added the heartless mockery of their fellow creatures. But the scientific researches, and philanthropic labors of our profession have effected a vast reform. We now pity the sad symptoms of disease, where our ancestors shuddered at the curse of God. We treat with medicinal and moral remedies, what they have

treated with the gallows. We give them all the attention which a progressive science demands—the comforts of a happy home, the kindness flowing from a well-earned commiseration, and send them forth again to the world, restored to health, usefulness and happiness. So that in the asylums of our own country, from seventy to ninety per cent. of recent cases recover, and from twenty-five to fifty per cent. of those whose insanity has existed longer than six months. Such a result is well calculated to stimulate us to prosecute still farther our study of these maladies; and well illustrates how different is the practical charity which distinguishes our profession above all others, from that verbose philanthropy founded upon a morbid love-in-a-cottage sentimentalism which is a feature of the present times!

What words are adequate to describe that improvement in our science which was contributed by the genius of Laënnec! Peruse the text books of but thirty years past, observe the ignorance prevailing upon diseases of the thorax, consider ourselves deprived of the aid of Auscultation and Percussion, and we may then duly appreciate a discovery which is alone sufficient to rescue medicine from the charge of retrogression. Auscultation and Percussion have rendered the diseases of the chest, formerly the least understood, the best understood of all internal diseases. By their assistance, we can distinguish derangements symptomatic of diseases of the chest, from those sympathetic of other affections. We can often discover latent diseases, which no manifestations of functional disorder have caused us to suspect. We can often procure invaluable information not otherwise obtainable, in diseases of children, of the delirious, and of the comatose. We can distinguish not only the tissue in which pulmonic disease is making its ravages, but also the situation, extent and progress of this disease. Additional precision and rapidity is given to our prognosis, as well as to our diagnosis, and we can frequently foretell the lesions to be found after death, with as much accuracy as the autopsy itself can disclose. To the diagnosis of disease of other organs, especially of the abdominal and encephalic, auscultation loans an indirect, but often most important assistance. Surgery is not ashamed to gather strength from its alliance, and obstetries claims its resources in solving vital questions, often involved in doubt and obscurity, the existence of pregnancy, the vitality of the fœtus, and its position in utero. Auscultation and Percussion, by furnishing a vast fund of valuable facts, have established correct indications for forming a rational basis for therapeutics, and have thus contributed to the proper method of treatment. In consideration of the almost incredible igno-

rance which formerly prevailed in diseases of the circulatory apparatus, we may in borrowed language proudly exclaim, "a radiant light has chased away the darkness, and Laënnec, the inventor of stethoscopy, has replied with a shout of triumph to the mournful exclamation of Baglivi, *O! quantum difficile est curare morbos pulmonum! O! quanto difficilius eosdem cognoscere!*"

The past twenty-five years have witnessed an indisputable progress in our knowledge and treatment of a class of diseases, which, says Parent Duchatelet, has inflicted more injury on mankind than all the pestilences which had ever ravaged the world. I refer to those maladies by which Ricord's name has been rendered so familiar to our profession, and if their introduction here required an apology, I would tender you Ricord's, "science is chaste, even stark-naked." The improvement in these diseases is, in a great measure, attributable to the introduction of inoculation as a means of study. By it, the origin of syphilis in a special cause, has been demonstrated; many undecided points in its pathology determined; gonorrhœa exculpated from causing secondary accidents; and the important distinction between the virulent and non-virulent disease has been conclusively established. Syphilis has also been divided into well marked stages of great practical value; and we have been taught the proper application of efficient remedies, as nitrate of silver, mercury, and iodine, which were formerly administered without discrimination. In fine, we diagnose with certainty, and treat with success, where doubt once prevailed, and failure followed.

A success so gratifying in the treatment of these diseases, has been attended by the most patient and praiseworthy exertions for sanitary reform. Many European countries are now reaping the benefit of these labors, and prostitution, that foul but unavoidable source of woes unnumbered, has been wisely subjected to legislative control. It has been proved beyond cavil that "every attempt to prevent public prostitution has had as its result an increase of clandestine prostitution." This clandestine prostitution has a terrible meaning to the initiated medical man. Its signification is emphatically, an increase of seductions; an increase in the profligacy of the married; an increase of illegitimate births, and an increased frequency and severity of all venereal diseases. The importance of the subject will excuse the dry details of statistics in illustration of the difference between legislative persecution and legislative control and protection of the frail nymphs of the Cyprean goddess. In the sixteenth century one twenty-fifth of the population of Paris belonged to this class; in 1837 one seventy-fifth. In 1800, one woman

in every nine was diseased; since 1830, one in every sixty. In Berlin, in 1849, there were among the soldiers there garrisoned, 1,423 diseased; in 1852, among the same number of soldiers, there were but 332. With such facts, and innumerable others of like import before us, should we hesitate to apply the remedy? Will common sense suffer itself to be longer outraged by the ignorance and inefficiency of our law-makers, and by a puritanical sanctimony which irretrievably damns all but itself?

To these conquests of the medicine of recent times must yet be added our victory over those direful plagues Scorbutus and Variola. It is but sixty years ago that effectual means to check the ravages of scurvy were adopted. This loathsome disease which formerly destroyed thousands of lives annually, checked the enterprise of merchants, and paralyzed the naval arm of governments, has now become a comparatively rare and innocent disease.

Vaccination more recently conferred a service upon mankind which a few instances of the former ravages of the small-pox will show us, cannot be over-estimated. Mexico, in a short period after the introduction of this disease, lost three millions and a half of its inhabitants! Greenland was once almost depopulated by it! And it is computed that France annually lost by it one hundred and fifty thousand children! The prophylactic remedies for scorbutus and variola are simple and sure, and both these diseases might have been ere now exterminated, and studied in our medical records only as pathological curiosities of the past, were it not for the ignorance of the people and the criminal carelessness of their governments. Medicine has supplied the means, the censure due for their non-adoption should not rest upon its shoulders.

Such, gentlemen, are some of the most important fruits of our past labors. Their merit, even if enfeebled by my weak advocacy, will abundantly suffice to establish the claims of medicine to the title of a progressive science. In every land, able and noble medical men have extended to the afflicted these benefits, which have doubly blessed those who have received as those who have administered them. That they have greatly promoted that high object, the preservation of life, to which our labors are devoted is conclusively established. Among other proofs may be offered some reliable statistical data. The records of Geneva, which extend back some three hundred years, give as the average duration of life in the seventeenth century, twenty years; in the sixteenth, thirty-two; increased in the nineteenth to forty-five years. In the last century the annual mortality in England and Wales was one in forty inhabitants; in the present it is one in sixty. This sanitary improvement is still more

apparent in our hospital records. In the eighteenth century the London hospitals lost one woman out of forty in child-birth, and of the children one in fifteen died. In the nineteenth century, the deaths in such women were reduced to one in about three hundred, and in the children to one in eighty. The Hotel Dieu, which in 1816 lost two out of every nine admissions, does not now lose two out of double that number. Facts so favorable to the progress of medicine are beyond a doubt attributable not only to the advanced knowledge of particular diseases, but also to sanitary reforms which have at the same time been originated and effected by our profession.

If legitimate medicine is entitled to increased regard, so is illegitimate medicine, as illustrated by Homœopathy, deserving of greater indulgence than similar inventions, for it is a decided improvement upon the charlatanry of former times. With no positive virtues, it can claim the great negative merit of wisely confiding for its real power in the vis medicatrix naturæ. You, who so well know how often drugs cheat nature of the praise justly due her; how often your medicines receive the gratitude due only to your discretion, cannot wonder that a plausible man should make a successful practitioner; who has the sole merit of leaving nature alone, and the tact to have *her* efficacy ascribed to the potency of *his* sugar of milk and tinctures of water. We, equally with the Homœopaths, rely upon the healing power of nature; but with patients, they gain here a decided advantage over us, for their innocuous infinitesimals never acquire the odium of having caused a patient's death, whilst we are often deemed culpable of or accessory to nothing less than murder, even when death has followed an innocent placebo. Those of you who have practised much in a certain class of our community, have surely enjoyed such flattering testimonials of your capacity. They are most likely to occur upon the presentation of your bill.

In addition to the above merit, Homœopathy has gained strength by not disgusting the "true believers" with nauseating drugs. It has been long inculcated that medicines should act "*tuto, cito, et jucunde,*" which may be homœopathically translated, inefficiently upon the system, quickly upon the imagination, and pleasantly upon the tongue. The jucunde, though the last is not the least important of these injunctions, and we are hardly excusable for having so much neglected that which, if of little importance in the *science* of medicine, acquires considerable magnitude in the practice of the *art*. Remember that the Romans conquered the world by adopting the superior arts of their enemies; let us be equally wise.

In these two virtues lies all the real merit of homœopathy; but it has a firmer foundation still in that credulity and love of things strange and new which Charlatans have ever fattened upon. This is the satirist's subject, so I leave it for him to portray the gullible public, with its pussy paunch, enthusiastically gulping down Barnum and Hahnemann *pro re natâ*—turning his head at times to damn the suffering dupe "who first cries hold, enough!" and then returning like poor little "Oliver" to lick the sugared spoon, and piteously cry for "more."

That necessity, the inexhaustible public appetite for humbug, which fathered Homœopathy, and the equally inexhaustible credulity which mothered it, never lose their generative power. Let, then, the "weak brethren," followers of this faith, continue to illustrate the "medical properties of the imagination." And since a similar evil has always, and must ever exist, long life to this "art of *amusing* a patient, while *nature* cures his disease!"

The benefits which the labors of the past have enabled the present to enjoy, I have attempted to represent to you, it is with still greater diffidence that I now draw your attention to what our future promises.

It is an old and popular belief that every poison has its antidote, every disease its restorative remedy; that life is to be preserved, old age rejuvenated, and even the "stuffed bosom cleansed of that perilous stuff which weighs upon the heart" by some magical *elixir vitæ*. Such credulity requires a vaporous imagination for its conception and superstitious ignorance for its nutriment. To anticipate from a simple remedy an immediate restoration to health, destroyed by a long continued drain upon the constitution is more chimerical than the hope of a bankrupt to be restored to fortune by a ticket in a lottery.

But is it a visionary idea that the *reason* of man is amply adequate to devise a curative means for every malady? Though man is morally defective being born "prone to sin," physically he should not fall heir to any imperfection; for health is his natural condition, and bodily suffering is a conclusive evidence of the violation of the physical laws of our being. Is there not strong probability that all of these physical laws can be discovered, and that once discovered, we may, if guided by reason avoid their violation, and consequently disease? But, were future discoveries to render it possible for men guided by reason to preserve their natural healthy condition, the passions of men which are equally natural would thwart so desirable a result. The failure which has thus far followed our exertions is, in a great degree, attributable rather to the moral deficiencies of man, to the "weakness of the flesh," than to any deficiency

in our reasoning faculties. One of the chief labors of our profession is to remedy diseases brought on by artificial wants and immoral indulgencies. We are truly waging war against the penalties of carelessness, ignorance and sin. These penalties, for the most part, are expiated by those only who have justly incurred them; but too frequently the "sins of the father are visited upon the children, even unto the third and the fourth generation," and the innocent are made to groan in atonement for ancestral dissipations. We cannot hope to contend successfully against disorders thus produced, until the prophesied Millenium smile upon a world, free from passion and from sin. Our physical health is indissolubly connected with our moral well-being!

To attempt to foretel to what extent the science of medicine may be enabled to contend against such diseases as our own moral indiscretions may give rise to, would be to advance in a maze of hypotheses and conjectures, which, while giving full play to the fancy, would set reason at defiance. Yet in counteracting the evils which flow from the violation of nature's laws, we have already accomplished much, and could even now effect much more, if the laws would lend to the requirements of medicine the weight of their authority. But the public, whilst bitterly complaining of the imperfections of our science, very inconsistently declines reaping the benefits which it can confer, and thwarts us in our attempts to render our knowledge profitable to the community. It is our duty to prosecute our studies into the causes of diseases, and to devise preventive remedies against them, for this is the principal means by which we must hope to prove most serviceable; but it is the duty of the public to promote sanitary reforms based upon the knowledge acquired by us. Unless it assists us to enforce by law what our science may teach that the public health requires our best exertions will be always paralyzed, and our most strenuous labors prove abortive. The preventive remedies whose efficacy is known the wide world over, have received no countenance from many of our legislative bodies. Variola may murder our people by hundreds to the placid indifference of those selected to labor for the common weal; and venereal diseases infect thousands, and infuse their poison into the blood of posterity, without exciting so much attention as a horse race.

To look for such legal assistance here in Louisiana is hopeless, for we can never obtain it until our profession will have degenerated into pot-house politicians and wire-working intriguers, and will condescend to regale our Solons with champagne and oysters, *ad libitum!* Such are the means that successfully repealed the only laws which made a distinc-

tion between the educated physician and universal quackery! Long since did the medical profession of Louisiana attempt to obtain from our Legislature registration laws, without which our study of the causes of disease, and of their effects upon the community, must remain unsatisfactory, and comparatively profitless. Their able memorial pointed out other interests besides the public health, which these laws would subserve; the additional security which would be conferred on every citizen in those important legal rights dependent on birth, marriage and death, as well as the elucidation of many points connected with political economy, life insurance, and sanitary reform. Political capital could not be made out of such a proposition, so your past experience will foretel the result.

Marriage is another subject which should be properly restricted by law, and is deserving of greater attention from our profession than it has ever received. Thousands of children are annually born with an hereditary predisposition to those terrible maladies, the *opprobria* of medicine, scrofula, cancer, epilepsy, insanity, etc. To remedy these, we must go to their source, eradicate their cause—improper marriage—for we cannot hope ever successfully to treat by pills and potions those afflicted with such diseases, which are literally "bone of their bone, and flesh of their flesh." Can we reasonably anticipate to cleanse an infected patient, sprung from rotten seed, whose very life-blood is a stream polluted? It is to be hoped that the day may come when as much attention will be bestowed on the generation of the "lords of creation" as is devoted to the breeding of cattle, hogs and horses; when the sportsman, who will not suffer his stallion of pedigree to mingle his pure blood with the cart-horse, may also object to the union of his scrofulous children with those equally contaminated. Intermarriages within the imprudent limits of consanguinity, and unwholesome matches between those hereditarily predisposed to disease, are forerunners of certain disease and misery! and if reason ever triumphs over passion, they, though now regarded with indifference, will be condemned as what in truth they are, disgraceful and criminal.

Consider the vast amount of disease which might be thus averted—the overwhelming amount to be avoided by temperance and morality, and the great number of disorders which we now know how to cure or prevent; and I believe you will concur in the opinion, that *reason* is competent to devise controlling remedies for all diseases, could the passions of man be subjected to rational control. Those which are not remediable by one means or another are now but few, and I doubt not that time and

labor will teach us their causes, and devise preventive remedies, which are the mostessential. For so far as mankind in the mass is concerned, it will little profit them that we can cure this or that form of disease. So long as nature's laws are violated, disease and suffering must follow. We may change their features, but we cannot avoid the result. What, then, will it benefit mankind, if, when you have severed one head of the monster disease, another equally hideous is to sprout on its shoulder? Common sense and the history of medicine alike teach the medical philosopher to found his hopes of medical progress upon the prevention of disease. The eradication of disease by drugs is the boast of quacks and the dream of enthusiasts!

The improvements already accomplished are principally due to our progress in etiology, microscopy, chemistry, physiology, pathological and comparative anatomy and statistics. They have effected much, although but in their infancy, and hold out sufficient inducements for the future to awaken the slumbering ambition of every student of nature. We can look forward with sanguine hope that a Kepler may yet arise to reduce our chaos of special facts to some general laws, and that a Newton will succeed to reduce these into but one. Then may medicine accomplish as astounding results as astronomy, and we may be enabled to foresee a coming pestilence with as much certainty as Le Verrier—to the wonder of mankind—foretold the existence and future appearance of a planet which was as yet unknown and unseen. Youthful anticipations are prone to be too sanguine, yet the progress and ultimate perfection of our science is a belief so full of pleasure and of hope, so indicative of ardor and of enthusiasm, that I would not have this credulity aborted by the sad croaking of disappointed old age. As Cicero said of Plato, "*cum quo errare malim, quam cum alias recte sentire,*" so would I say, here in the wrong, rather than there in the right. The past gives us hope, and holds in its grasp sufficient facts to convince us of the truth of Bacon's aphorism, "before a thing is done, men doubt if it can be done, and after it is done, they wonder it were no sooner done."

In conclusion, gentlemen, allow me to felicitate you upon the harmony which prevails in our profession in this city. May the blind prejudice of cliques never again throw discord in our midst! May the older members of our profession continue to incite the younger to increased exertions both by their words and their deeds! Let them hold forth their lights to illuminate our onward path! But should Young Physic presumptuously question Old Physic's infallibility, let Old Physic remember that the verdancy of spring must naturally replace the "sere and

yellow leaf" of winter; and though he *is* a giant, and Young Physic may be but a dwarf, yet the dwarf sits on the *shoulders* of the giant, and as age perfects his sight, must necessarily see farther than the giant himself. If to self-love is not added the greater sin, *self-neglecting* age should be indulgent to that fault from which its own youth was, perhaps, not exempt.

In our science the Old Fogy and Young Presumption must both be content ever to remain but as children gathering pebbles on the sea-shore of truth. Let the old and the young in unison labor to pick up sufficient of these beautiful pebbles to erect a perfect edifice. Happy he, who by talent and industry may collect enough to letter his name, on its everlasting walls, and thus wed his merit to fame and the future. But thus aspiring, it behooves us to cultivate for our profession an appetite not to be glutted by satiety, a love which will be enlarged by repletion and strengthened by age. In such a love we may happily entomb, as in a grand sepulchre, all our other passions as they successively decay. Thus feeling, thus *acting*, we may proudly reply to the invectives of sceptics and the scurrility of wits, "poor medicine may be slighted, it may be, but degraded it cannot, shall not be, so long as its foundation is science and its end the good of mankind;" and we may farther point them to the solemn but significant fact, that in the day of suffering, and the hour of death, it is to us that the sick look for succor, and the dying for comfort. The chamber of the sick man is the empire of the physician, and there at least is he duly recognized as the honored and powerful agent of that God "who healeth our diseases."

ART. II.—*Congestion of the Brain:* by B. BROOKS, M. D., of Wheelock, Texas.

ON Wednesday, Oct. 24, was called to see negro boy John, *æt.* 27 years, of good constitution, stout, robust appearance, who had been unwell for two or three days, though not confined to bed. At 12 o'clock on the day I saw him, he had been left alone for fifteen or twenty minutes, seemingly but little indisposed; upon returning to him, he was found speechless, and in a comatose condition. At the time I saw him, five hours afterwards, he seemed to be beyond the hope of recovery. His

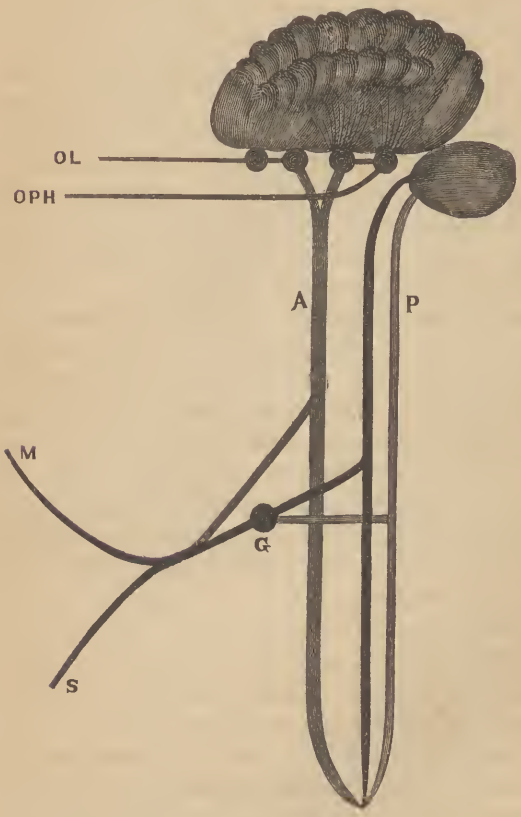
extremities were cool; pulse quite feeble and beating 100; skin dry; pupils a little dilated; respiration hurried and imperfect; he has an involuntary discharge of urine; jaws rigid; bowels acted upon the night previously. Here was a case in many respects similar to one that I attended during the summer of 1854, (reported in the Nov. No., 1854, of the N. O. Med. & Surgical Journal,) in which venesection was practised. In this case I had mustard applied to the nucha, along the spine, and to the inside of the thighs, and gave at once, though with considerable difficulty, for deglutition was very difficult, ten grains carb. ammonia. In half an hour gave three drops ol. tiglii; had his feet placed in a tub of water as hot as it could be borne without vesicating. The mustard had been applied half an hour before the least sensibility to its effects was manifested, although it was very strong. The croton oil operated twice involuntarily in about an hour after it was taken. In two hours after first seeing the patient, repeated the carb. ammonia. In four hours after I first saw him, his speech returned, though the mind was confused. The pulse had filled up, and reduced in frequency to ninety; the extremities had become warm; a gentle perspiration was beginning to make its appearance upon the surface, and in every respect the patient seemed to be better. I now commenced giving calomel, 1 grain; quinine, 8 grs.; piperine, 1 gr.; every three hours. This treatment was continued until 3 o'clock the next afternoon, at which time I saw the patient again. His pulse was ninety, and full; skin warm and moist; intellect clear; complains of slight pain in the head, which he attributed to quinine. The patient is so much improved that there is but little doubt of his recovery. Ordered the above treatment continued 24 hours longer, diminishing the quantity of quinine to five grains at a dose instead of eight. He now tells me, that at the time of his attack he felt a sharp pain in his head, which continued for a moment, after which he knew nothing more. Here was one of those cases denominated cerebral congestion, cured without the use of the lancet. Last fall, after reporting the cases above alluded to, I attended three other cases similar in character, in none of which did I draw blood, and in all of which the recovery was rapid and complete. The "Gazette Hebdomadaire" says that the time for bleeding is at the very onset of the disease, and if not put in requisition at that time, is worse than useless. My own impressions are, that it may be safely dispensed with in all stages of the disease, at least as it exists here, for it is evidently of malarial origin, affecting primarily the nervous system, and is cured by the use of counter-irritants, stimulants and antiperiodics.

ART. III.—*Researches into the Nervous System.*

ROCKPORT, MASS., *Nov. 12th*, 1855.

BENNET DOWLER, M. D.,

DEAR SIR,—I have taken the liberty of sending to you the enclosed diagram, which is intended to illustrate the plan, according to which I conceive the nervous system is constructed:



This diagram answers a double purpose. It serves to fix in the mind the leading principles of my theory, and it furnishes at a glance the main portion of the proof which is derived from the correspondence between the application of the principles and the anatomical structure. It explains itself. Above is the cerebrum, with the four ganglia at its base, viz: the olfactory lobes, the corpora striata, optic thalami and optic tubercles. The two former connected with the olfactory nerves, and the two latter with the optic. The two central ones connecting also the cerebrum with the anterior column of the spinal marrow A, and the anterior nerve root of the general nerve S G M. Posteriorly and inferiorly is the cerebellum connected with the central portion of the spinal cord, (as the cerebrum connects with the optic beds and striated bodies,) and with the general nerve by this and the posterior column P,

and the posterior nerve root which is here one, divided into two portions. These will be admitted by every anatomist to be the true relations of the parts, with one exception. My reasons for not joining the anterior nerve root with the centre, will be given before the close. The position of the parts is changed in order to display their natural connections, and all but the fundamental elements are omitted to avoid confusion.

The reason why the nervous system is thus constructed, I shall now endeavor to unfold. And, in order to do so, I must recur to the two fundamental principles laid down in the *Boston Medical and Surgical Journal*, Vol. 5, p. 476, viz: 1st, That the mind governs the motions of the body, as it is directed by its sensations; and 2d, That the nervous system is interposed between the organs of sensation and the organs of motion, to connect them together. These two principles might be deduced from a higher and more general one, and thus be introduced with some *à priori* reasoning in their favor. But I choose, for the sake of brevity, to assume them here, and trust the proof of them to their correspondence with the facts of consciousness and anatomy.

Now, there are those classes of sensations which our own experience and the observation of what passes with the lower animals, assure us are the chief directors of the mind in the regulation of the motions of the body. These are respectively touch, smell and sight—hearing, except in connection with the voice, has little direction over motion. Touch and sight are consciously the chief directors in man; and in the lower animals, particularly in the invertebrata, smell is of great importance in directing them to their food. With each class of sensations are connected two orders of motions—1st, the motion of the part on which the impression giving rise to the sensation is made; and 2d, the motion of distant parts, or that of the whole body.* If we touch the claw of a lobster, it may move that claw on the body as its basis, or it may move the body, or some other part. In the first case, the movement seems spontaneous. The eye is also continually in motion, guided by sensations of sight; and for a great part of the time there is no corresponding general movement. And either of these movements may proceed when no general movement is possible.

The origin of this division of motions into the motion of the part, and the motion of distant parts, is one with origin of the development of the nervous system from the circumference towards the centre. The mind *begins* to acquire its power over the body, by associating the movements

* This distinction is founded on observation, and has given rise to the idea of reflex motions among physiologists.

of the superficial parts, organs, segments, or members, with the sensations arising from impressions made on those parts respectively. And it therefore establishes its first nervous connection between the sensitive surface and the muscles that move it. This it does by uniting fibres leading from the one with fibres from the other, by ganglion. A ganglion is nothing more than a point of convenience, by which arterial blood is brought into relation with nervous fibres; its office (and its sole office, as it passes to the venous state,) being to polarize, or to hold them in tension, so that many fibres may be as one. Hence, we have a set of primitive associated motions, and a corresponding primitive set of nervous circles. To them the term reflex is usually applied. These primitive associations the mind subsequently unites, by developing additional ganglionic matter adjacent to the original ganglions in the invertebrata, but which in the vertebrata become locally distinct centres, through which the nerves from the sensitive surfaces unite with the more distant muscles. These centres are therefore superimposed on the others, and constitute the central portion of the spinal cord, the optic beds, and the striated bodies, the former of which is the basis of the cerebellum, and the two latter that of the cerebrum.

From the three classes of sensations, and two orders of motions above mentioned, arise six sets of nervous circles. And the union of these circles, and the relative predominance of their centres, determine the form and general structure of the nervous system. Other nerves and ganglionic centres, founded on other motions with their directing sensations, conscious and unconscious, it is true, exist. But they accommodate themselves to the already determined structure, modifying it no more than their union with it necessitates. The diagram represents these nervous circles in their natural relations. It exhibits a double nervous centre in connection with a nerve from each of the three sensitive surfaces mentioned, one of which unites the nerve with the muscles that move that centre; and the other unites it with the muscles that move all other parts of the body.

We have first the general nerves S G M. S represents the sensitive surface of a single segment or member of an animal; G the ganglion which unites it with M, which represents the muscles that move that segment or member. This connexion is necessary, and is all that is necessary, to enable the mind to move that segment or member as directed by a sensation arising from an impression made at S.

But if the mind wishes to move a distant part, as directed by a sensation arising from an impression made at S, for the same reason that the

ganglion G is necessary in the former case to connect S with M, an additional quantity of ganglionic matter is necessary to connect S with the muscles that move that point. This additional quantity of ganglionic matter is found in the spinal cord. A commissural connection is therefrom established between the ganglion G and the centre of the spinal cord by which S is connected with the muscles that move distant parts, and reciprocally M is connected with the sensitive surfaces of distant parts.

We thus get a double nervous circle corresponding to the two orders of motions for the sense of touch. The sense of smell is the next in the order of development. It governs to a great extent the motions of the lower animals in their search for food; and in the invertebrata there can be no doubt that the organ, with which it is connected, is movable. The olfactory lobe, which is admitted to be of ganglionic structure, must have held the same position to the nerve O L, and to the muscles that move the organ of smell in those animals, as the ganglion G does to S M. It would be difficult to prove this by tracing fibres direct from this centre to the muscles concerned in smell, because the ganglions connected with the nerves of specific sense are fused in one, viz: the supra-œsophageal in the invertebrata, while in the vertebrata the organ is fixed. But if comparative anatomists would turn their attention to this point, they would, I think, find enough to convince them that this is its true relation.* We say, then, that the olfactory lobe is the ganglion which enables the mind to move the organs of smell, as directed by sensations of smell. But, in order to enable the mind to move distant parts, as directed by the sensations of smell, the olfactory nerve extends to the corpus striatum, and through that, as a centre, the anterior column, and the anterior roots of the cord connects with the nerves of the muscles of all those parts.

So much for the second double nervous circle, corresponding to the sense of smell. There remains the mechanism of the sense of sight, which, though last to be developed, finally overtops all the other senses as a guide to our motions.

For this we have the optic tubercles, and the optic thalami. The optic tubercles, through which the optic nerve connects with the nerves of the muscles that move the eye; and optic thalami, through which they connect, by the way of the anterior columns G A, with the nerves of the muscles of the body generally. It is no small confirmation of this, that

* In the lobster, the nerves of smell arises from the brain, in common with the internal antennal nerves. At the base of these organs these nerves are distributed,

if the optic nerve, as it passes along the border of the thalamus, sends some fibres to it, its main termination is in the tubercle; while the third and fourth nerves may be traced nearly to the same part.

The above elementary structures make their first appearance in the lowest of the vertebrated class of animals. And whatever other parts are added or taken away, they are constant in all animals up to man. But the motions that they assist the mind in performing are simple, and chiefly associated motions. As animals rise in the scale, their limbs become developed, and their motions more complicated—a change of type takes place.

The accuracy, and precision, and long sustained effort, with which the mind in its finest development, guided by the eye, directs the motions of the hand and arm, in painting, sculpture, the mechanic arts, &c., require a more powerful centre between that organ and the muscles, than any one heretofore brought into play. For the same reason, the nice adjustment of muscular action requisite for balancing the body in the erect position, on two points of support, and for accommodating its varied movements of progression, to either of these points of support alternately, demands a close and intimate connection between the surface of touch, from which the guiding sensations arise, and the many muscles employed in the operation. The ganglionic structure, in which the vesicular matter is intermingled with the fibres, is evidently imperfect. At this point, therefore, commences the development of two great centres, in which, though the structures vary, the plan is the same in both, viz: to attain the greatest possible power in the smallest space.

The convoluted surface of the cerebrum, and the laminated surface of the cerebrum, are well adapted to the circulation of a vast quantity of arterial blood in contact with nervous fibres. Whatever the office of this circulation is in the ganglion, that office is multiplied in the brain a thousand fold. If that is to unite the fibres of the single nerves in one, this must be to unite the whole nervous system in one, by penetrating and overrunning all minor centres, and preserving such a state of tension or polarity in all the nerves as will occasion a physical impression made on any one, to vibrate throughout the whole mass, bringing, as it were, each muscle into immediate control with every other muscle, and with each organ of sense, and enabling the mind to direct its attention to the state of all. The cerebrum may therefore be considered as the further development and coalescence of the corpora striata and optic thalami, and as discharging their functions in a higher degree. In other words,

as the organ which the mind uses to govern the motions of the body when directed by the specific sensations, connecting the organs of these sensations by the olfactory, and optic nerves, &c., with the muscles of the body generally throughout the anterior columns of the spinal cord and anterior nerve roots. The cerebellum is the organ which the mind uses to govern the motions of the body as directed by the sense of touch, and it is connected with the surface of touch and the muscles of the body, by means of the central portion of the spinal marrow, (of whose office it is itself the magnifier,) and the posterior columns of the spinal cord, and the posterior nerve roots.

The above is, as metaphysicians say, the logical, if not the chronological order of the development of the nervous system. For each great class of sensations a double nervous circle is found, corresponding to its two orders of motions, and connected with its appropriate organ of sense by acknowledged anatomical relations. The centres of two of these circles merge in the cerebrum, and that of the third in the cerebellum. The unity of plan in the structure is thus established, and we are led to infer a corresponding unity in function. The principles laid down enable us to assign to each nerve and ganglion its appropriate office. They demand the nervous system to be constructed as it is. And physiological experiments and pathological facts when rightly interpreted, as has been elsewhere shown, harmonize alone with this view.

The part of the diagram, to which allusion was made, as the one not in accordance with received notions of anatomy, is the division of the posterior column, leaving no communication with the anterior root. This I hold to be the true anatomy of the parts. Had it not been for Marshall Hall's theory it would have probably been undisputed. Before his time, the subject was investigated by Bellingeri, who endeavored to trace the root of the spinal nerves to their origin. The fibres of the posterior root he traced distinctly to the centre, while he confesses himself unable to follow the anterior beyond the column. But the discovery of the reflex function, made it necessary, in order for it to harmonize with Bell's idea that the posterior column was for sensation and the anterior for motion, that there should be a direct passage from one to the other. Mr. Grainger having got himself inoculated with this idea beforehand, undertook to investigate it. But notwithstanding, he succeeded in satisfying himself, and he made one or two journeys to Germany to convince the Germans, who were particularly skeptical in regard to the anterior root, of the fact. The question has been pronounced by one of the most eminent anatomists of Great Britain, Dr. Todd, as still "*sub judice*."

He gives it as his opinion that the belief of the two cords uniting through the centre is rather an inference from physiology than from anatomy. That is, from the physiology of Bell. If that should be found erroneous, the connections laid down in the diagram, which are those traced by Bellingeri, are the true connections.

Nothing can better illustrate the tendency of the human mind to *force* conclusions in favor of a theory partially established, and which by being definite, affords a resting place from that state of indecision and doubt, and consequent malaise, with which it hovers over a multitude of apparently conflicting facts, than the different treatment, which the experiments of Magendie have received at the hands of physiologists, from that of the similar ones of Bell. The main difference between the two was, that Magendie reported facts, and Sir Charles inferences. But the facts did not exactly square with the inferences, and as the world was extremely anxious to believe the latter, the ingenuity of various physiologists was set to work to screw the former round in line with them. The first confirmation of Bell was from Muller. He, conceiving that the French experimenter made use of too powerful a battery, by which the electricity was conducted down the nerve to the muscle, and thereby excited contraction, when the posterior root was irritated, made use of but a single pair. And because he could not make the stimulus penetrate through the ganglion, and excite contraction of the muscle beyond it, he inferred that muscular contraction never took place in connection with the functional activity of that nerve. Now, he need not have been aware of what has since been established by physiologists, viz: that it is often difficult to occasion contraction beyond a ganglion, when the nerve, to which it belongs, is a muscular nerve, to have enabled him to draw the right conclusion. When the same stimulus, which applied to the anterior nerve produces contraction, fails to produce it when applied to the posterior, the question is, in what circumstances do the two nerves differ when cut from the cord? The answer is obvious, one has a ganglion, the other has not. To this difference in circumstance, is plainly attributable the difference in result, according to the second canon of Mill's Logic. Yet the importance of this ganglion was overlooked both by Bell and Muller.

The second confirmation of Bell borders on the ridiculous. M. Kronenberg having seen the experiments of Magendie at Paris, bethought himself of the happy expedient of making an incision at the point of union at the two roots, and as the animal gave no longer signs of sensations, when the anterior roots were irritated, he concluded that he had

cut off certain sensitive fibres passing from the posterior into the anterior root, and running up towards the cord. Now, it is not impossible that there are such fibres which take such a short turn round a corner; but surely it is one of the last of probabilities. If they do exist, might they not be traced as easily, at least, as Grainger traced the fibres from the anterior root to the centre of the spinal marrow? Would not, also, the section of the whole nerve just beyond the point of union, if followed by signs of sensation on irritating the anterior root, be a better proof? During the various vivisections which have contributed to build up the present structure of Nervous Physiology, we may find all sorts of cuts. The signs of sensation, it appears, are not constant upon the nerve that is *not* incised. Is it not, therefore, a more probable explanation of the facts observed by M. Kronenberg, to suppose that in some instances, muscular spasms were excited by irritating the anterior root, and the connection being maintained by the posterior, pain was felt, than to make such a forced supposition as the above? The general diminution of power in the wounded nerve would account for these signs of pain not being manifested after the incision was made. In truth, as of this, so it may be said of every other conclusion, whether drawn from experiment or observation, which has been brought forward in support of Sir C. Bell's theory, from his own invention of a nervous circle, to account for a "sensitive" nerve's losing itself in a muscle, down to Grainger's supposed proof of the connection between the anterior and posterior roots of the spinal nerves, that it bears the marks of *being forced* on its very face. And the constant reiteration of such attempts to bolster up the system, tends only to show its weakness.

BENJAMIN HASKELL, M. D.

Art. IV.—*Case of Yellow Fever in Texas.*

Bellville, Austin County, Texas, *Dec. 17th*, 1855.

Bennet Dowler, M. D.: Dear Sir,—I feel it my duty to relate the circumstances of a case which came under my immediate attention, some few weeks since, for two reasons: One is to gain some information myself; the other is to offer some suggestions, which may be of advantage to others of my professional brethren.

The case referred to was one of black vomit. The patient had just

come up from Houston with his wagon, a distance of some sixty miles. I was sent for in the night to see him; found him, lying in the prairie, in the corner of a fence, with a bed-quilt spread over him, supported by two rails extending from the fence to the ground, and a few articles of bed-clothing spread immediately over his person. I could not get a light to see him, but I examined his pulse and found it weak, feeble, and fluttering. I inquired as to the condition of his bowels and kidneys, and ascertained that their action was good. He said he felt perfectly free from pain, and experienced nothing else but weakness and prostration, together with some slight irritability of the stomach. He appeared a little flighty, and I could not gather enough information with regard to the case to arrive at a satisfactory diagnosis; so I treated him entirely according to symptoms. I left quinine to be given through the night to stimulate him, and some sol. creosote to control the nausea.

I returned to see him next morning about 9 A. M.; found his pulse improved, and discovered, upon removing the cover from his face, that the patient had yellow fever. I gave him about a table-spoonful of port wine, which I had brought along with me, and immediately he threw up about a pint of dark, coffee-ground-looking matter, which I satisfied myself was black vomit. The matter thrown up was ejected upon a wagon sheet, and the small coagula of blood were visible on it, showing that it was plainly a hæmorrhage. In about two minutes he threw up again nearly a quart of the same kind of matter, which, when dried upon the wagon-sheet, left a perfect blood-stain. I gave him *gtt.* ij. of creasote in a wine-glass of water, when the vomiting ceased. I waited about an hour, and he did not vomit again. I gave him some creasote and left him, with orders for the creasote to be given every half hour, in doses of a *gtt.* ss, and grain powders of quinine every hour, combined with a tea-spoonful of port wine. I also instructed the nurse (whom I had procured) to prepare him some beef-tea for nourishment, and allow him to drink a little of it occasionally through the day. I visited him again at 10 P. M.; the nurse informed me he had not vomited since, and that my directions had been carried out to the letter; the patient said he felt better and stronger, both in body and in mind, and was still entirely free from pain. I gave the nurse orders to keep up the same plan of treatment through the night, and left him.

During the night we had a very severe frost, and when I arrived there next morning, about 10 A. M., I found the poor fellow in the agonies of death. He, however, lived more than twenty-four hours from the time he was first taken with black vomit, although he was lying in

an open prairie in the month of November, and was laboring under all the disadvantages that a sick person could possibly labor under.

I do not know whether creasote has ever been used in black vomit before. If it never has, it would do no harm to try it, for every physician is aware of its peculiar property in controlling a hæmorrhage. Will some one inform me if it ever has been used, and with what success?

If you consider my statement worth inserting in the pages of your valuable Medical Journal, please give it a place, and oblige,

Yours truly,

J. STEPHENS, M. D.

[In New Orleans and elsewhere, creasote has been often administered in yellow fever, particularly in cases attended with either hæmorrhage or black vomit. Its reputation, based chiefly upon its antiseptic and styptic properties, never great, is declining. A drop or two as a topical astringent in the stomach, is little likely to control the universality of the hæmorrhagic tendency in many cases of yellow fever, while its agency in arresting the putridity which humoralists assume as characteristic of this fever, has been conjectured, not proved.—Ed.]

Art. V.—*Experimental Researches into Animal Heat in the Living and in the Dead Body:* by Bennet Dowler, M. D.

(*Continued from page* 491.)

TEMPERATURE OF PERSONS WHO RECOVERED FROM YELLOW FEVER OF THE INTERMITTENT TYPE; WITH SOME OTHER COMPLICATIONS.

Yellow Fever; Intermittent Diathesis; fifth hour.—1843, Sept. 9th; air about 88°. J. B. R. had intermittent a few weeks ago; had strong chills five hours ago; bled twenty-five ounces; sweats freely; hand 102°; axilla 104°. Bled again sixteen ounces, to fainting.—10th; convalescent; sweats; hand 100°; axilla 98½°.—11th; drenching perspirations. —16th; at work.

Yellow Fever; Intermittent Type; second day.—1848, Sept. 4th. T. F., Englishman, aged 17, resident in the South nine months; late from Tampico; had a chill yesterday; hand 104½°; bend of the arm 104°; axilla 105°. Sept. 6th; improving; hand 104½°; bend of the arm 104¾°; axilla 104½. Cured three days later.

Yellow Fever; Intermittent Type; fourth day; Chill, third day.—1843, Aug. 25th. J. I., born in Philadelphia, aged 20; hand 97½°; axilla 104°. Cured five days after.

Yellow Fever; Intermittent Type; fourth day.—1843, Nov. 4th; air about 80°. F. O., aged 27, resident 3 days; hand 99½°; axilla 104°. —8th; convalescent.

Yellow Fever; Intermittent Type; fourth day.—1843, Nov. 4th; air about 80°. D. F., aged 22, born in Italy, sickly for four months from intermittent, late from Ouachita; hand 104°; axilla 104°.—8th, convalescent.

Yellow Fever; Intermittent Type; fifth day.—1843, Sept. 4th; air about 83°. C. C., aged 29; hand 102°; axilla 108¼°. Sept. 5th, skin cool; 6th, convalescent.—16th, cured.

Yellow Fever; Intermittent Type; seventh day.—1843, Nov. 4th; air about 80°. W. K., born in Ohio, resident seven days, sick six days; has had intermissions of the fever and several chills; bled freely from the arm; hand 100°; axilla 107°; perineum 105°.—8th, convalescent.

Yellow Fever; Intermittent Type; Diarrhœa; seventh day.—1843, Sept. 28; air about 82°. T. M., aged 28; intermittent for two months; hand 100°; axilla 102°. Recovered slowly.

Yellow Fever; Typhoid Intermittent Type; eighth day.—1843, Sept. 3d. J. H., born in Connecticut, aged 22; hand 98°; axilla 102°.—6th, convalescent.

Yellow Fever; Intermittent Type; commencing with Influenza; fifth day.—1843, Aug. 25th; air about 87°. W. A., born in Ohio; bleeds from the nose; axilla 102°.—26th; air 87°; axilla 102°; hand 102°. Sept. 3d, convalescent.

Yellow Fever; Intermittent Type, with Spinal and Cerebral Concussion; Contusion, and Tetanic Rigidity.—1843, Oct. 20th; room 80°. J. A., aged 29, born in Pennsylvania, late from Louisville, resident one week; intermittent two months; contracted the yellow fever; being delirious, fell out of a window and contused his back; become insensible; comatose; fingers and arms strongly flexed; under jaw rigid; hand 98°; axilla 109°. In two hours copious sweats and relaxations.—21st; hand 98°; axilla 100°.—30th, improving. Nov. 19th, walks about.

Yellow Fever, with Parotitis; sixteenth day.—1843, Sept. 9th; air 88°. I. H. S., born in Massachusetts, aged 19; both parotids have suppurated extensively and are nearly healed; hand 104°; axilla 104°. —14th, convalescent. Nov. 4th, cured.

Yellow Fever, with Conjunctivitis.—1843, Aug. 30th; air about 85°.

C. S., Frenchman, aged 28, sick five days; bled largely yesterday; hand 107°; axilla 109°. Sept. 3d, no fever, but has conjunctivitis. Recovered.

Yellow Fever; Cornitis; eighth day.—1843, Aug. 14th; room 91°. J. H., aged 37; axilla 102°; next day 97¼°; convalescent; cornitis supervened; recovered in three weeks.

TEMPERATURE OF YELLOW FEVER PATIENTS HAVING THE INTERMITTENT TYPE, TERMINATING FATALLY.

Yellow Fever; Intermittent Type.—1843, October 14th; air about 71°. B. F., born in Germany, aged 26, late from Louisville, resident nine days, sick one month with intermittent; hæmorrhage from the gums; hand 89°; axilla 102°. Died next day.

Yellow Fever, Intermittent Type at its Inception, with Prolonged Coma at its conclusion. Post-mortem Heat.—1843, Aug. 29th; air about 83°. S. F., born in Cincinnati, aged 24; sick eight days, (incipient coma;) hand 104°; axilla 105°. The coma continued until death, three days after.

The experiments, with one instrument, began thirty minutes after death, and continued about two hours, in the order of time as follows, having been recorded at intervals of two, three, five, and sometimes more minutes: axilla 104°, 105°, 106°, 106°; thigh 106°, 107°, 108°, 107°; axilla 107°; left hypochondriac 109°, 109°; right 109°; hypogastric 106°; thigh 106½°, 106½°; lungs 102°; heart 103°; thigh, an hour after the removal of all the abdominal viscera, 106½°, and falling. Weather rainy; room 84°. Body exposed to a free ventilation.

Yellow Fever—Cholera Type.—1847, Aug. 10th. J. T., a Pennsylvanian, aged 38, sick about a week; hand 95°; axilla 97°. Next day—hand 90°.—Died at night.

Yellow Fever—Congestive Type.—1847, Aug. 6th. A. D., Irishman, resident in Louisiana 16 weeks; recently had congestive fever; yellow fever supervened seven days since; hand 90°.—Died six hours after.

TEMPERATURE OF YELLOW FEVER PATIENTS WHO RECOVERED FROM BLACK VOMIT.

Yellow Fever; seventh day.—1846, Nov. 24th. J. H., aged 30, resident six years, except one winter; first fever; took no medicine but one dose of castor oil, and one of calomel and jalap. I found him throwing up black vomit and blood; hæmorrhage from the gums and right ear; hand 100°; axilla 103°.—29th, convalescent.

Yellow Fever.—Relapse.—Black Vomit.—1843, Sept. 3d. P. B.,

aged 23; has had black vomit three days; hand 98°; axilla 100½°. Cured in twelve days.

Yellow Fever; Hæmorrhage.—1843, Oct. 11th; room about 86°. J. K., born in Louisiana, aged 25, resident in Carrollton and New Orleans three months; hand 102°; axilla 104°.—12th, convalescent; hand 98°; axilla 100°. Hæmorrhage from the gums.—18th, cured.

TEMPERATURE OF YELLOW FEVER PATIENTS WHO RECOVERED.

Yellow Fever; second hour.—1843, Aug. 29th; room about 88°. J. A., aged 27; hand 102°; axilla 106°; bled to syncope.—30th, cupped; hand 102°; axilla 105¼°. Sept. 3d, convalescent; hand 96°; axilla 100°; air 84°.—4th, out of bed.

Yellow Fever, ninth hour.—1843, Aug. 22d; air about 88°. T. L., born in New Hampshire, aged 30; hand 100°; axilla 106½°.—23d; air 86°; hand 98°; axilla 105°.—24th, hand 102°; axilla 102°.—25th, hand 93°; axilla 98½°. Sept. 4th; hand 91½°; axilla 98°.—28th, cured.

Yellow Fever; thirteenth hour.—1843, Sept. 25th; air 84°. T. A. B., aged 27, born in Boston; hand 102°; axilla 104°; perineum 104½°; hand, against the temple, 104½°.—28th, improving. Oct. 15th, cured.

Yellow Fever; fourteenth hour.—1843. G. T., aged 31, late of Cincinnati, resident eight days; hand 95°; axilla 102°. Next day improving. Cured in about two weeks.

Yellow Fever; sixteenth hour.—1843, Oct. 6th. M. W., born in Maine; aged 21; hand 106°; axilla 106½°.—8th, convalescent; air about 75°; hand 86°; axilla 97°.—10th, cured.

Same disease and date. A. A., aged 24; sick fourteen hours; hand 102°; axilla 105°.—8th, recovering.—16th, cured.

Yellow Fever; nineteenth hour.—1843, Oct. 14th; air about 71°. H. L. G., aged 28, born in Maryland, late of Mexico; hand 102°; axilla 104°. Cured in three days.

Yellow Fever; twenty-first hour.—1848, Aug. 14th. A. P., Englishman, aged about 35, resident nine months; hand 103°; axilla 104½°. (I had directed repeated cold spongings for six hours before the temperature was taken.)—15th; hand and axilla each 104½°. Recovered in a week.

Yellow Fever; twenty-first hour.—1847, Aug. 6th. E. W., a German, aged 38, resident four months; hand, bend of the arm and popliteal, each 101°. Cured in eight days.

Yellow Fever; twenty-fourth hour.—1846, Oct. 8th. C. L., born in

Ireland, aged 10, a resident nine months, a delicate girl; palms 103°; axilla 103½°. Recovered in three days.

Yellow Fever; mildest form.—1848, Aug. 31. Miss M. M., aged 18, resident in Louisiana ten and in Gretna five years; sick 24 hours; hand 101°; axilla 103°. Cured, Sept. 4.

Yellow Fever; twenty-eighth hour.—1843, Oct. 6th; air about 88°. J. M., aged 25; hand 102°; axilla 105°. Cured in nine days.

Yellow Fever; twenty-eighth hour.—1848, Sept. 16th. P. M., Brazilian, aged 28, for seven years a resident of Massachusetts; last from St. Louis, resident in New Orleans one week, sick 28 hours; hand 102½°; bend of the arm 103½°; axilla 104°. Cured three days after.

Yellow Fever.—1848, Sept. 6th. C. J., born in Norway, aged 21, resident three months, sick 2 days; hand 101°; bend of the arm 102°; axilla 104°. Recovered eight days after.

Yellow Fever.—1847, Aug. 5th; air sunrise 76°. H. H., aged 23; a German, resident three years, sick two days; hand 104°; bend of the arm 105½°; axilla 106°.—10th, convalescent; hand 95°; axilla 101°.—14th, cured.

Yellow Fever; second day.—1843, Sept. 1. P. C., a Dane, aged 41, sick two days; hand 100°; axilla 102°. Sept. 4th; hand 98°; axilla 100½°, recovering; a mild case.

Yellow Fever.—1846, Sept. 28th, sunrise 63½°. M. T., aged about 35, sick four days; nasal hæmorrhage; hand 100°; axilla 103°. Oct. 1, convalescent.

Yellow Fever, mild form.—1848; Aug. 29. G. M., Irishman, aged 19; resident one year; sick 40 hours; hand 102°; axilla 103°; poplit. 101°. Cured, Sept. 2d.

Yellow Fever.—1847, Aug. 10th. J. C., resident 6 years, alternately in the city and in the country; 48 hours sick; hand 100°; axilla 106°. Convalescent next day.

Yellow Fever; second day.—1843, Aug. 18. W. B., aged 21; axilla 102°.

Yellow Fever; third time (?)—1848, Sept. 4th. G. W. J., born in Germany; aged 25; resident in Louisiana the greater part of 8 years: had the yellow fever in the army, at Vera Cruz, in Sept. 1846, and the next year at New Orleans. He left the city, returned in 1848, and was taken sick three days ago; hand 103°; bend of the arm 104½°; axilla 106°; feet 102½°. Sept. 6th, convalescent; hand 98°; bend of the arm 99°; axilla 100°.

Yellow Fever.—1847, Aug. 10th. P. B., Irishman, aged 25; resi-

dent 3 months; sick 3 days; hand 102½°; bend of the arm 104°; axilla 104¾°. Aug. 12th, hand 95°; axilla 99½°. Aug. 18th, cured.

Yellow Fever.—1843, Aug. 13th. H. S., aged 24; sick 3 days; hands 95°. Aug. 15th, room 86°; hands 98°; axilla 102°. Aug. 16, room 86°; hands in 35 minutes, 103°; axilla 10 *m.* 102°. Aug. 19th, salivated; hand 94°; axilla 99½°; got well in a month.

Yellow Fever.—1843, Oct. 2d; air about 80°. D. D., aged 22, born in New-York; sick 48 hours ; hand 104° ; axilla 105°—6th, convalescent—8th, cured.

Yellow Fever.—1843, Sept. 30th; air about 86°. A. M., aged 29, had yellow fever, as he affirms, last year, in Mobile; sick for 2 days; resident 2 days; hand 97°; axilla 102°. Recovered in 6 days after.

Yellow Fever.—1843, Aug. 26th. H. C., Englishman, aged 21; sick 2 days; hand 98°; axilla 103°. Cured 7 days after.

Yellow Fever; fourth day.—1843, Sept. 25th. P. S., aged 38; hand 102°; axilla 104°. Oct. 4th, cured.

Yellow Fever.—1843, Aug. 15th; room 86°. P. F., aged 34; sick 4 days; hand 102°; axilla 104°.—16th, axilla 102°.—19th, axilla 98°.—25th, cured.

Yellow Fever.—1843, Aug. 18th. T. W., born in Virginia, aged 23; sick 4 days; hand 100°; axilla 104°. Recovered in 2 weeks.

Yellow Fever.—1843, Oct. 6th; room about 87°. H. A., aged 38; sick 4 days; hand 100°; axilla 102°.—8th, convalescent.

Yellow Fever.—1848, Sept. 11. J. D., Englishman, aged 33; taken sick the day of his arrival at New Orleans. Three days before his cure was complete, his hands, axilla, and bend of the arm, gave 100° each.

Yellow Fever.—1843, Nov. 4th; air about 80°. J. R., aged 32; sick 5 days; hand 100°; axilla 103°. Recovered in 10 days.

Yellow Fever.—1843, Oct. 26th; air about 80°. S. K., aged 25; resident 1 year; sick 5 days; comatose; despaired of by his physicians; a coffin ordered and brought by his friends; axilla 106¾°; hand 106½°. Recovered in 8 days.

Yellow Fever; fifth day.—1843, Sept. 7th; air about 80°. J. M., a German, aged 34; hand 99°; axilla 100°. Recovered in 6 days after.

Yellow Fever.—1843, Sept. 30th ; room about 85°. F. R., aged 32; sick 6 days; hand 100°; axilla 102°. Oct. 6th, convalescent—12th, cured.

Yellow Fever.—1843, Sept. 4th. T. H., aged 22; sick 7 days; cupped twice, hand 93°; axilla 100°.—7th, improving; hand 100°; axilla 100°.—10th, cured.

Yellow Fever.—1843, Nov. 8th. D. M., aged 22; sick 9 days; hand 103°; axilla 104°. 19th, convalescent for a week; hand 98°. Dec. 5th, cured.

Yellow Fever.—1843, Oct. 11th; air about 88°. C. C. F., aged 33; sick 8 days; hand 99°; axilla 101°. Recovered slowly.

Yellow Fever; eighth day.—1843, Aug. 22. J. S., Italian, aged 30, late from Havana; sick 8 days; axilla 101°; hands 102°.—27th, cured.

Yellow Fever.—1843, Sept. 7; air 80°. J. P., a German, aged 24; sick 9 days; convalescent; hand 94°; axilla 98°. Recovered in 10 days.

Yellow Fever.—1843, Aug. 19th. W. W., aged 28, born in England; sick 9 days; resident 9 days; axilla 100°.—26th, convalescent; hand 99°; axilla 100°.

Yellow Fever.—1843, Sept. 7th; air about 80°. P. L., Frenchman, aged 21; sick 10 days; hand 101°; axilla 102°. Cured in 16 days after.

Yellow Fever; twelfth day.—1843, Sept. 1st. G. B., aged 35, now convalescing; hand 91°; axilla 102°. Sept. 12th, air 81°; hand 98°; axilla 100°. Cured.

Yellow Fever.—1843, Sept. 16th; air of the room about 86°. R. G., aged 33, born in Italy; sick 13 days; hand 95°; axilla 102°.—30th, convalescent. Oct. 26th, cured.

Yellow Fever.—1848, Sept. 6th. T. W., aged 35, had yellow fever in 1843; after which he lived one year in the state of Ohio, and is now convalescent from a second attack; hand 99°; bend of the arm and the axilla, each, 100°.

TEMPERATURE OF YELLOW FEVER PATIENTS, WHO WERE EITHER BLED TO FAINTING, OR VERY COPIOUSLY, AND WHO RECOVERED.

Yellow Fever; sixth hour.—1848, Sept. 16th. A. S., Dane, aged 23; last from Hamburg; resident one year; hand 103°; during a bloodletting (1lb.) lasting 5 minutes 104½°; half an hour after, the hand 102°; the axilla 105°. Recovered in 2 days.

Yellow Fever; eighth hour.—1843, Sept. 7th. P. V., Canadian, aged 24; hand 100½°; axilla 103°; had been bled twice to fainting, and cupped. Recovered in 7 days after.

Yellow Fever; eleventh hour.—1847, Aug. 5th; air about 86°. P. L., aged 17; hand 103°; bend of the arm 103°; axilla 103½°; bled 12 ounces; blood in the basin 95°; 15*m.* after the bleeding, hand 101½°; bend of the arm 101¾°; axilla 103½°. Well in 8 days.

Yellow Fever; twelfth hour.—1843, Aug. 22; room about 86°. C. W., Frenchman, aged 30; bled 20 ounces; the blood falling on the thermometer placed in the receiving bowl, raised the mercury in about 10 minutes to 100°, at which it remained stationary for some time. An hour later, the hand in 16 minutes reached 105°; the axilla in 15 *m.* 104°.—26th, air 86°; hand 98°; axilla 100°. Convalescent.—28th, cured.

1847, Aug. 23d; air 87°. H. C., a young man, resident 8 months; sick with yellow fever 20 hours; treated for 6 hours by copious blood-letting, cold sponging, ice to the forehead, and pills of calomel, blue mass, and quinine; axilla 103°. The day following, hand 99°; axilla 102°. Recovered in 6 days.

Yellow Fever; twentieth hour.—1843, Sept. 30th. J. C., born in Alabama, aged 28; engineer on the river; had yellow fever, as he affirms, 10 or 12 years ago; had it again in 1841; sick 20 hours, (3d attack;) bled 2 pounds, to faintness; hand 102°; axilla 105°. Oct. 2d, air about 80°; hand 100°; axilla 102°; improving—6th, well.

Yellow Fever; twenty-second hour.—1843, Sept. 9th; air about 88°. C. S., a German, bled to-day to syncope, twice; hand 102°; axilla 104°. —10th, hand 100°; axilla 102°; convalescent.—13th, cured.

Yellow Fever.—1843, Sept. 4th; air about 83°. J. W., aged 23, born in Wales; sick one day; bled to syncope twice, and cupped twice; before the last general bleeding, the hand gave 102°, and the axilla 104°; during the operation, the former fell to 98°, and 10 minutes after the axilla to 102°.—6th, improving—19th, cured.

Yellow Fever.—1843, Sept. 12th; room about 91°. Mrs. M. M., aged 28; sick 24 hours; hand 99°; bled 16 ounces; the blood trickling down on the bulb of the thermometer, raised the mercury to 95°; hand, after the operation, 99°. Recovered in 5 days after.

Yellow Fever.—1843, Aug. 19th; room about 90°. T. A. B., born in New York, aged 23; sick 40 hours; axilla, after bleeding and cupping, 103°. Cured in 7 days.

Yellow Fever.—1843, Sept, 1. D. M., born in London, aged 26; sick 2 days; hand, during a blood-letting of 20 ounces, gave a maximum of 102°; nausea supervened, whereupon the mercury fell in 1*m.* to 98½°, but rose in 2*m.* to 100°; in 1*m.* 103°; in 1*m.* 104°; in 3 or 4*m.* to 105°; in 2*m.* 104°. The bulb of the thermometer, about two minutes after the blood had ceased to flow, was immersed in it, now coagulating; 2*m.* 98°; 2*m.* 98°; 5*m.* 95°.—4th, improving; hand 99°; axilla 102°.—5th, air about 83°; hand 98°; axilla 100°. Oct. 10th, cured.

Yellow Fever; second day.—1843, Sept. 16th. B. H., aged 30, late from Yucatan; bled to fainting twice; hand 98°; axilla 104°.—17th, improving.

Same Disease, and date.—J. H., aged 28, sick 2 days; bled to syncope twice; hand 99°; axilla 103°.—17th, improving—23d, cured.

Yellow Fever.—1843, Oct. 13; air about 70°. Miss H. B., aged 17, sick 3 days; hand, during a blood-letting of 20 ounces, 100°; blood during coagulation 95°. Cured in a week after.

Yellow Fever; fourth day.—1843, Oct. 11. H. G., aged 22, cupped twice; bled 12 ounces from the arm; hand 100°; axilla 103°.—13th, convalescent; hand 95°; axilla 98°.—15th, cured.

Yellow Fever.—1843, Aug. 21st; room 86°. J. W., born in New Hampshire, aged 18, sick 5 days; convalescent, having been bled to fainting, and cupped; hand 102°; axilla 104°.—25th, hand 96°; axilla 99°.—26th, hand 93°; axilla 95°. Recovered.

Yellow Fever.—1843, Aug. 29th; air 87°. T. B., aged 30, sick 5 days; bled yesterday 64 ounces; took no medicine previously; complains of weakness only; hand 98°; axilla 101°.—30th, sleeps well; Sept. 1st, improves; Sept. 3d, convalescent. Oct. 3d, cured.

Yellow Fever.—1843, Aug. 26th. E. T. N., aged 18, sick 11 days; bled to syncope, several times; cupped twice; convalescent; hand 102°; axilla 102°.

Same Disease, and date.—J. C., aged 24, born in New-York, sick 5 days; bled to syncope twice—last time, 20 ounces; convalescent; hand 98½°; axilla 100°. Sept. 1st, cured.

TEMPERATURE OF YELLOW FEVER PATIENTS IN FATAL CASES IN WHICH THE POST-MORTEM HEAT WAS NOT NOTED.

1843, Oct. 26th; room about 80°. E. H., aged 23, late from Louisville, resident 3 weeks; sick 12½ hours; hand 105°; axilla 105°. Died Nov. 2d.

1847, Aug. 12th. T. H., born in Ireland, aged 35; resident 3 years; sick 13 hours; has taken no medicine; hand 102°; axilla 102¼°. Died 5 days after.

1843, Aug. 22d. W. H., born in New-York, late from Havana, aged 22; sick 24 hours; hand 99°; axilla 100°.—24th, died.

1843, Sept. 4th; air about 83°. D. S., aged 29, sick one day; hand 104°; axilla 107°. Died 4 days after.

1843, Aug. 19th; air about 90°. H. H., aged about 26; sick 26 hours; axilla 104°; perineum 109°. Died 2 days after.

1843, Oct. 2d; room 84°. S. F., aged 28, sick 29 hours; hand 100°; axilla 109°; hot foot-bath—axilla 109°; free cupping—axilla 107°; hand 107°; axilla 108°; hand 106½°. Died 3 days after.

1843, Oct. 2d; air about 80°. C. J., aged 18, born in London, sick 34 hours; hand 103°; axilla 104°.—6th, hand 100°; axilla 105°; room 89°. Died 3 days after.

1847, Aug. 5th. W. N., Irishman, aged 24; resident two weeks. Having been just cured of an intermittent, was taken with yellow fever, 36 hours since; hand (during cupping) 105°; axilla 105½°. Sixty-second hour, hand 102°; bend of the arm 102½°; axilla 103¾°; popliteal 101½°.—Fifth day, hand 100°; axilla 101°. Died next day.

1843, Oct. 6th; air about 89°. J. M., aged 47, sick 42 hours; hand 98°; axilla 102°.—10th, hand 98°. Died 5 days after.

1848, Sept. 4th. M. R., Irishman, aged 40; resident one year; sick 3 days; hand 101½°; bend of the arm 101¾°; axilla 101½°. Died 36 hours after.

1847, Aug. 5th. H. H., a Dane, aged 26; resident 3 years; sick 3 days; hands 103°.—Fourth day, hand 101°; popliteal 101°; axilla 103°. Died the 6th day.

1843, Oct. 11th; room about 88°. J. D., aged 25, sick 3 days; hand 100°; axilla 104°. Died 3 days after.

Same date. A young man dying; ankles 94°; axilla 95°. Died in 5 or 6 hours after.

1843, Oct. 11th; air 88°. E. E., late of St. Louis, aged 18; resident and sick 4 days; hand 102°; axilla 105°.—Oct. 12th, hand 91°; axilla 102°.—14th, hand 86°; axilla 101°. 17th, died.

1843, Aug. 18th. S. P., born in Delaware, aged 33; sick 4 days; axilla 100°. Died 8 hours after.

1843, Oct. 14th; air about 71°. W. M., aged 16, sick 4 days; hand 90°; axilla 97°. Died 4½ hours after.

1848, Sept. 16th. R. D., Englishman aged 21; resident 3 years; sick 4 days; hand 96°; bend of the arm 97½°; axilla 99½°. Died 36 hours after.

1848, Sept. 22d. T. S., born in New-York, aged 40; late a soldier U. S. A. of Mexico; resident 3 months; sick 5 days; hand 97°; bend of the arm 98½°; axilla 100°. Died 33 hours after.

1843, Sept. 1st. J. H., aged 46, sick 5 days; hand 100°; axilla 104°. Died 28 hours after.

1843, Oct. 9th. A. K., aged 31, sick 6 days; axilla 98½°. Died at night.

1843, Sept. 3d. J. F., aged 21, sick 5 days; axilla 100°. Died 2 hours after.

Same date. J. S., aged 22, sick 6 days; axilla 102°. Died 3 hours after.

1843, Aug. 26th. J. C., Scotchman, aged 23; sick 7 days; hand 98°; wrists (by crossing) 96°; axilla 100°. Died 4 days after.

1843, Aug. 26th. J. M., born in Massachusetts; sick 6 days; hand 100°; axilla 102°. Died 5 days after.

1843, Sept. 7th; air 80 to 83°. W. B., a Prussian, aged 20, sick five days; hand 91°; axilla 101°. Died next day.

1848, Aug. 25th. W. H. J., Irishman, aged 22, resident five months, sick five days; hand 99°; bend of the arm 99½°; axilla 100½°. Died seven hours after.

1843, Aug. 15th; room 86°. K., aged 30, sick 5½ days; hand 93°; axilla 99°. Died next morning.

1843, Oct. 14th; air about 71°. J. W., aged 26, sick six days; axilla 96°. Died six hours after.

1843, Oct. 26th; air about 80°. M. C., aged 28, late from Ouachita, resident seven weeks, sick seven days; hand 86°; axilla 95°. Died next day.

1843, Oct. 30th; air about 78°. J. D., aged 25, born in Germany, late from Cincinnati; resident 10, sick six days; hand 84°; axilla 95°. Died in the night.

Same date: Ben, Choctaw Indian,* aged 25, resident two months, sick five days; hand 8*m.* 98°; axilla, (without hair,) 7*m.* 104°. Died 14 hours after.

1843, Sept. 9th; air about 88°. J. S., aged 20, sick seven days; comatose; pulseless; hand 91°. Died next day.

Same date: J. M., a Scotchman, aged 24, sick six days; hand 93°; axilla 98°. Died during the evening.

1843, Sept. 11th. M. F., aged 42, born in New York; sick eight days; hand 93°; axilla 99°. Died three days after.

1843, Sept. 30th; air about 86°. W. W., born in Pennsylvania, aged 25; last year suffered from intermittent; recently cured of dysen-

* Ben, in broken English, complained the day before death, and even to the last, of hunger, though he vomited much dense mucosity mixed with flaky black vomit. Ben was an excellent type of the Indian conformation—of a dark copper or brownish color; expanded face; angular, saliant, broad cheeks; coarse, straight, coal-black hair; black eyes; massive lips; large mouth, from the angles of which, wavy and angular lines made with indelible paint or ink, diverged; nose large and short; broad forehead; muscular and stout. No yellowness could be detected even in the eyes, which were much injected.

tery, followed by the fever six days ago; axilla 102°; hand 103½°. Died next day.

1843, Nov. 4th; air about 80°. W. N., aged 27, late from St. Louis, resident three weeks; sick 11 days; axilla and hand each 103°. Died in the night.

Same date: D. M., born in Ireland, aged 52, resident three months; sick 10 days; weary of life; hand 7*m*. 101°; axilla 8*m*. 102°. Died in the night as he predicted, hoped, and prayed.

1844, Jan. 3d. D. E., aged 49, born in France, late from Mexico; resident one year; sick nine days; hand 102°; axilla 103°; hæmorrhage from the nose.—4th; hand and axilla each 104°.—6th; air 57°; hand 80°; axilla 95°.—17th, died.

1848, Aug. 25th. M. F., born in Switzerland, aged 25; resident one year; sick seven days; hand 103°; bend of the arm 103½°; axilla 103°. Died two days after.

1843, Aug. 30th; air of the room about 85°. J. P., a Dane, aged 41, sick nine days; comatose; hands 95°; axilla 102°; expired air at the mouth 93°. Died in the night.

Same date: D. M., aged 25; sick eight days; hand 100°; axilla 103°. Died next day.

1843, Sept. 1st. D. C., aged about 60, sick nine days, insensible; hand 102°; axilla 100°. Died in a few hours after.

1843, Aug. 19th; air about 90°. C. G., aged 38, sick nine days; axilla 100°. Died the same day.

1843, Oct. 26th; room 80°. G. H., aged 23, late from Pittsburgh, resident three weeks, sick 11 days; hand 88½°; axilla 98°. Died two days after.

1843, Oct. 11th. M. R., aged 22, late from Cincinnati, resident two days, sick 12 days, (10 days on the river;) hand 104°; axilla 107°. —Oct. 12th; hand 102°; axilla 104°. Died four hours after.

1843, Oct. 2d; room 84°. J. A., aged 35, sick 13 days; wrists, (crossed,) 89°; axilla 100°. Died the same day.

1843, Sept. 28th; air about 82°. H. H., aged 43, sick 15 days; hand 94°; axilla 100°. Died nine hours after.

1848, Aug. 28th. C. B., aged 25, born in Germany, resident 18 days; hand 98°; bend of arm 99¼°; axilla 100°. Died 16 hours after.

1847, Aug. 6th. P. C., aged 35; dying; cold sweat; skin wrinkled; general collapse; hand and bend of the arm each 91°.

1848, Sept. 22. T. J. South Carolinian, aged 22; hand 98°; inner malleoli 92°; axilla 101°. Died three hours after.

TEMPERATURE OF YELLOW FEVER PATIENTS WHO DIED AFTER HAVING BEEN TREATED WITH COPIOUS BLOOD-LETTING.

1843, Oct. 30th; air about 78°. J. H., aged 24, born in Ireland, boatman to and from New Orleans for five years, sick 28 hours, his first attack of fever of any kind; hand 11*m.* 107°; axilla 5*m.* 107°; perineum and groin 107°; three hours later, sweating; hand and axilla each 107°. No medicine taken.—Nov. 1; bled within 48 hours, 3½ pounds from the arm; cupped. Died next day, 89 hours from the invasion of the malady.

1843, Oct. 12th. J. M., aged 26, late from Louisville, resident four days, sick 43 hours; bled the first day copiously; bled two hours since four pounds; lost about half a pound in bed accidentally from the displacement of the ligature; axilla 99°. Died nine hours after.

1843, Sept. 3d. J. W., German, aged 21, sick four days; bled to fainting and cupped second day; cupped freely third day; fourth day had copious hæmorrhages by stool; hand 89°; axilla 98½°. Died 2½ hours after.

1843, Sept. 7th; air 80° to 83°. J. M., a German, aged 45, sick five days; bled 16 ounces; cupped; hand 98°; axilla 100°. Died next day.

1843, Oct. 11th; room about 88°. G. S., aged 22, late of St. Louis, resident three days, sick six days; hand 100°; axilla 105°.—Oct. 13th; bled yesterday 15 ounces; cupped; hand 89°; axilla 98°.—14th; convalescent.—17th; cured.—20th; relapse.—26th; had been bled and cupped largely; hand 102°; axilla 102°; during a hot foot bath, hand rose to 104°, for 10 minutes.—28th, died.

1843, Sept. 7th; air 80° to 83°. J. B. S., a Virginian, aged 34, sick nine days; bled yesterday 30 ounces and cupped several times; hand 89°; axilla 95°. Died 11 hours after.—Thirteen hours after death; epigastric 95°; thigh 93°; room 88°.

1843, Aug. 19th; air 90°. J. G. H., aged 20, sick 7 days; bled on the 3d day 5 lbs., by two operations; cupped 20 ounces; hand 95°; axilla 98°.—Convalescent; pulse, respiration, tongue, abdomen, skin, &c., natural, except a dull, red flushing of the face. The physician who treats this case says, that previous to the blood-letting, the patient was nearly pulseless, and that the pulse became fuller and more active after this operation.

This patient, according to the books of the hospital, was reported as cured and discharged on the 28th of August; but, upon that day, his name appears in the list of interments. The full orthgraphy of the

name is very remarkable, which, together with the age, nativity, date and disease, show that there is probably a mistake either in the hospital or in the sexton's reports, as it is difficult to suppose that so complete a parallelism, death excepted, could exist between two individual histories.

TEMPERATURE BEFORE AND AFTER DEATH IN YELLOW FEVER SUBJECTS TREATED BY SYNCOPAL BLOOD-LETTING.

1843, Sept. 15th; noon, air 89½°. A. G. G., born in New-York, sick 4 days; hand 91°; axilla 100°; (bled to syncope, and cupped twice yesterday.) Died at 1 P. M. In five minutes after death the experiments began, and were noted, consecutively, every 5 minutes, more or less; axilla 102°, 104°, 106½°, 107°, 106°; thigh 106½°, 107°, 106½°; axilla 105½° ; thigh 106°; left lung 106° ; upper lobe 103½°; heart 104¼°; hypogastric 106½°, 106½°; left hypochondriac 105½°; right thigh 106°; left 106°; axilla 104°; left hypochondriac 104°; hypogastric 106½°; right hypochondriac 106½°; thigh 106½°; hypogastric 106½°; left hypochondriac 104°; right 104°; rectum 105°; hypogast. 105°.—16th, dead 22 hours; room 90° (noon;) thigh 89°; left lung 92°; epigastric 92°. Incipient putrefaction.

1843, Aug. 22d; room 86°. J. H., born in Virginia, aged 30; sick 12 hours; bled 20 ounces; the blood falling on the thermometer, placed in a basin, gave in 10 minutes 100°; thirty minutes later, hand 103° ; both axillæ 107° ; (blood-letting repeated to syncope ; cupping—same day.)—23d, cupped 20 ounces. Died at 10*h*. 25*m*. A. M. Experiments began in 10 minutes, ending at 1¼ hour after death, in the following order: axilla 100°, 103°; perineum 101°; axilla 101½°, 101°; rectum 103°, 103°; axilla 103°, when the experiments ceased.

1843, Sept. 30th; air about 86°. J. V., born in England, aged 25; sick 6 hours; hand 102½°; axilla 105°; perineum 103°; bled to syncope, holding the thermometer, which at that time indicated 102°. The thermometer was immediately after inserted into the coagulating blood: 1 *m*. 102°, 1 *m*. 102°, 2 *m*. 101°. Oct. 2d; bled yesterday to syncope—cupped; hand 100°; axilla 105°.—5th, died.—6th, 16 hours after death, epigast. 89°; chest 89°; thigh 87°; room 86°. Refrigeration nearly complete.

TEMPERATURE OF YELLOW FEVER SUBJECTS BEFORE AND AFTER DEATH.

Congestive Form—1843, Aug. 13th ; room about 85°. J. R., aged 19 ; born in Rhode Island ; sick about 15 hours ; axilla 102°.

August 14th. Hand 97½° ; axilla 102°.—15th, room 86° ; axilla

104° ; hand 95°.—16th, room 86°; axilla 102°.—18th, room about 86° ; hand 97½° ; axilla 102°.—19th, room 90½° ; axilla 98°. Died 3 days after. Two hours after dissection, and 7 after death, the thigh gave 91°, the room being 89°.

1843, August 15th. Room 86°. P. L., aged 20; sick 3 days ; hand 99° ; axilla 104°.—16th, hand 98° ; axilla 103°.—18th, axilla 99°.—19th, room 90° ; hand 98° ; axilla 101°.—18th, axilla 99°.—19th, room 90° ; hand 98° ; axilla 101°.—20th died.

The observations beginning 25 minutes after death, were recorded about every 5 minutes continuously for 3 hours and 45 minutes, with one thermometer, in the order following : room 86°; axilla 100°, 105°, 106½°, 106½°, 106½°, 106°, 106°, 106°½; groin 104°, 103½° ; right hypochondriac 109° ; left 108½° ; right iliac 108° ; left 108° ; right hypochondriac 108° ; thigh 109°, 109° ; cardia of the stomach 109°; 109°, 109°; circumference of the left lung 107° ; mediastinum 107°, thigh 107°, 107° ; right hypochondriac 107° ; left 107° ; heart 107° ; hypogastric 107° ; thigh 107° ; heart 107° ; thigh 107°, when the experiment ceased.

1843, Oct. 20. Room about 80°. J. G., born in Nova Scotia ; aged 16 ; sick 3 days ; hand 104° ; axilla 107°.

Died next day : 50 minutes after death, axilla in 10 *m.* 103° ; epigast. 5 *m.* 104° ; 1½ hours after death, the brain (through the orbit) gave in 5 *m.*, 100°; thigh 5 *m.* 102°.

1843, Aug. 18th.—J. F., aged 32 ; sick 4 days ; axilla 100°. Died next day : room 91° ; 15 *m.* after death, the body resting on the bed; axilla 100°; 5 *m.* 101° ; 5 *m.* 102°; 5 *m.* 103°; 5 *m.* 103°; groin 5 *m.* 102°.

The body was now carried to the dead house, stripped and exposed to a free ventilation. The temperature was noted about every five minutes, for 3 hours and 50 minutes after death, and gave the following consecutive results : axilla 102° ; (both legs now amputated) ; epigast. 103°; 103½° ; hypogast. 103½° ; right iliac 103½° ; left 103½° ; right hypochondriac 103½° ; heart 105°, 105°, 105° ; right chest 104½° ; diaphragm 104°, 104° ; thigh 102°, 102°, 102° ; axilla 102°, 102° ; epigast. 104° ; left chest 102°½, 102½°.

1848, Aug. 25th. D. R., Irishman, aged 25 ; last from Liverpool ; resident 2 months ; sick 4 days ; axilla 104°; bend of the arm 103½° ; hand 104°.

Aug. 28th. Knees 100¾° ; hands 102° ; axilla 103° ; next day, axilla 103° ; bend of the arm 101½°.—Died in the night. At noon the

following day, the room being 97½°, the epigast. and chest each gave 98°, the brain 90°. The putrefactive fermentation had progressed so far as to render the body unfit for examination for pathological purposes.

1843, Oct. 11.—Room about 88°. O. M., aged 30 ; resident 2 years ; sick 5 days ; hand 101° ; axilla 104° ; next day the same.

Oct. 13th.—Hand and axilla each 100°; 14th, died. Air of the room 70° ; body freely exposed to a fresh wind ; dead about 5 minutes ; axilla 7 *m.* 104° ; 2 *m.* 104½° (still rising) ; epigast. 8 *m.* 107° ; instrument at 107°, passed through the orbital socket into the brain; 4 *m.* 101°, (falling) ; thigh 5 *m.* 102°, when the experiments closed.

1843, Oct. 20th.—Room about 80°. W. C., aged 26 ; sick 5 days ; hand 89° ; axilla 100°.

21st, died. Exposed in the night to a temperature of 55° or 60° ; 11 hours after death ; room 80° ; epigast. 5 *m.* 96° ; left chest and heart 93°; brain through the orbit 85° ; thigh 93°.

1843, Oct. 8th.—Room 82°. P. D., aged 28 ; sick 5 days ; hand 84° ; axilla 96° ; bend of the arm 91°.

Died a few minutes after. At 15 minutes after death the experiments began, and were continued with short intervals for nearly two hours ; house about 69° ; axilla 5 *m.* 98°, 5 *m* 100°, 5 *m.* 101°, 5 *m.* 102°; epigast. 5 *m.* 102°; axilla 10 *m.* 102°; axilla 10 *m.* 101½° ; epigast. 7 *m.* 101½°; (cooled the thermometer to 84°). Epigast. 7 *m.* 101½° axilla 5 *m.* 100° ; thigh 5 *m.* 100°.

1843, Oct. 30th.—Air about 77°. H. O., aged 32 ; late from St. Louis ; resident 19, sick 7 days ; hand 72½° ; axilla 95°.

Died 2 hours after ; the experiments began in 15 minutes : axilla 5 *m.* 95°, 5 *m* 100° ; rectum 10 *m.* 104° ; axilla 10 *m.* 101°, 5 *m.* 102°, 10 *m.* 101°; epigast. 5 *m.* 101°; thigh 5 *m.* 102°; instrument at 102°, introduced into the brain through the orbit, 5 *m.* 101°, 5 *m.* 99° ; heart 5 *m.* 100° ; experiments ceased here.

1843, Oct. 11th.—Room about 88°. F. M., born in Germany ; aged 32 ; late from St. Louis ; resident 9 days ; sick 7 days ; dying ; hand 94° ; axilla 100°.

Died in one hour. Half an hour after, the experiments began, but were not completed when the friends demanded the body for burial ; axilla 9 *m.* 104° ; perineum 7 *m.* 102° ; rectum 5 *m.* 102° ; epigast. 5 *m.* 103° ; chest 5 *m.* 103° ; brain (through the orbital hole) 7 *m.* 102°.

1843, Aug. 13th. J. C., aged 26 ; arrived from Louisville, Aug 5th, became sick on the 7th. I was called to see him on the 10th, but

did not take his temperature (which always appeared low) until the 13th of the month—the day before his death. Room 89° ; hands 80°; axilla 98°.

An hour after death the experiments began, and were continued four hours in the order following ;—Room 89°, (well ventilated) ; the body nearly naked, on a stone floor. Axilla 15 *m.* 103° ; fold of the groin 10 *m.* 103½° ; rectum 10 m. 108° ; axilla 10 *m.* 101°. An hour later the mouth 97½°; an hour later rectum 102°.

1847, Aug. 23d. J. F., aged 28 ; born in Ireland ; dying, jaws parted and rigid ; axilla 10 *m.* 110°, 10 *m.* 110½°, 10 m. 110°.

Died.—Axilla for 5 *m.* after death constantly 110½° (the instrument not having been moved ; bend of the arm 107°.

Body carried to the dead house ; stripped and exposed to the air. Axilla about an hour after death 108°. Experiments unfinished.

1843, Oct. 12th ; maximum 86°. M. N., aged 22 ; born in Portugal ; late from Yucatan ; sick 13 days ; (dying) ; hand 100° ; axilla 101°.

Died 5 hours after. At 16 hours after death ; room 70¼° ; thigh 80° ; brain through the orbit 74½°.

1843, Oct. 20. Room about 80°. B. Q., aged 34 ; sick 7 days ; hand 86° ; axilla 98½°.

Died 7 hours after.—Exposed to a cold of less than 60°, ranging to 80°; 14 hours after death; thigh 81° ; epigast. 83½°; left chest and heart 84° ; brain through the orbit 78°.

Sept. 16th.—L. H., born in Wertemberg ; aged 25 ; resident one year ; last from New York ; sick 9 days ; hand 99° ; bend of the arm 100° ; axilla 102½°.

Died 3¾ hours after.—Experiments began in 10 minutes after death ; axilla 5 *m.* 103½°, 2 *m.* 104°, and rising ; bend of the arm 101° ; hand 95°. Experiments discontinued.

1843, Oct. 14th.—Air about 71°. R. B., born in Ireland ; aged 40 ; late from the Balize ; resident and sick, 16 days ; hand 95° ; axilla 100°. Died next day. About 10 minutes after death :—room 74° ; axilla 5 *m.* 98° ; left chest 5 *m.* 96° ; brain through the orbit 7 *m.* 94°. 3 *m.* 93° ; axilla 5 *m.* 95° ; epigast. 5 *m.* 94⅘° ; thigh 5 *m.* 99°, and rising, at more than one hour after death, when the experiments were abandoned.

1847, Aug. 23d.—J. F., Irishman ; aged 28 ; resident 9 months ; (dying) ; experiments before death for 45 *m.* ; hand 107° ; axilla at intervals, during 30 minutes, 110°, 110½°, 110°, 110°.

Died.—Axilla, at intervals during 30 *m.* after death, 110½° ; bend of the arm 10 *m.* 107°.

Carried to the dead house, stripped, and laid out ; axilla about one hour after death 108° ; at 2 hours 107¾°. Darkness put an end to further experiments.

1848, Aug. 28th.—Air about 89°. F. L., born in France ; aged 23 ; resident 18 months. Dying; the hand and the ball of the thumb 94°; bend of the arm 102°, and falling; axilla 106°. Dead house 89°. The experiments began soon after death, and continued with intervals for 2½ hours in the order following: bend of the arm 104° and falling ; calves of the legs brought in contact, 100° ; axilla 107° ; bend of the arm for 15 minutes 105½°, and stationary ; axilla 107½°, soon 108°, continuing for 45 minutes ; then declined to 107¾°, and in one hour after to 103¾°.

1847, Aug. 12th.—H. M., a German, aged 45 ; hand 89° ; bend of the arm 93°.

Died an hour after. At one hour after death, the experiments were made for a few minutes, having been interrupted by night : axilla 106°, 106¼°, and rising, being 13¼° beyond the living state one hour before death.

1843, Aug. 13th.—Air 91°. R. C., born in Kentucky ; aged 25 ; sick 9 days ; hand 98° ; axilla 102°.

Died next day. Room 93°. The experiments began 30 minutes after death, and were noted every 10 to 20 minutes, ending with the 7th hour in the order following :—axilla 106½° ; fold of the groin 109° ; rectum 111°, 111° ; axilla 104°, 104°, 104°, 104°, 104° ; thighs (in contact) 102° ; rectum 109°, 109°, 109° ; axilla after 2 hours exposure 100° ; rectum 7 hours after death 102°.

1844, Jan. 30th, 4 P. M. ; air about 75°. P. B., aged 44 ; sick 8 days ; hand 102° ; axilla 102° ; popliteal 100°.

Feb. 3d, 2½ P. M. Axilla 105° ; hand 106½° ; popliteal 106°.

Feb. 5th, 3 P. M. Air about 73°. Axilla 105° ; hand 102½° ; popliteal 102°. Died 3 days after.

Two hours after death, (air of the dead house 50°) ; axilla 10 minutes 94° ; rectum 10 *m.* 95°, 10 *m.* axilla 94°, 5 *m.* 94° ; popliteal 15 *m.* 97°, 10 *m.* 97°, now three hours after death ; rectum 10 *m.* 93½°; popliteal 10 *m.* 97°.

Dissection near the neck of the femur 89° in 5 *m.* ; heart 10 *m.* 91½° ; liver 5 *m.* 91½°, having been removed from the body. Brain (through the orbit) 10 *m.* 86°, 5 *m.* 85½°. 4½ hours after death, and

half an hour after evisceration, the axilla gave in 10 *m.*, 89° ; thigh 5 hours after death 86° ; popliteal 68°. The air had fallen during the observations to 48°.

Although, in this case, the temperature had probably declined considerably, upon the whole, between death and the examination, still the physical law of refrigeration was for hours counteracted or modified, as seen in the stationary condition of the axillary and popliteal regions.—The brain presented the minimum before evisceration as usual.

1843, Sept. 7th. Air 80° to 83°. J. G., aged 32 ; born in Ireland ; sick 5 days; hand 98° ; axilla 102°.—11th, hand 95° ; axilla 104°.

Died 24 hours after. The experiments began 10 minutes after death ; the body exposed to free ventilation ; the room 90° ; the axilla, 10 *m.* 109°; left thigh 5 *m.* 113° ; epigastric 5 *m.* 112° ; thigh old incision 109° ; epigastric 5 *m.* 112° ; right thigh, new incision, 5 *m.* 111°.

After an interval of one hour the heart gave in 8 *m.*, 109°; the thigh 5 *m.* 109°.

After the removal of all the abdominal viscera, the thigh still gave 110°, at about three hours after death.

About one hour after death, both arms including the scapulæ and shoulder-joints were amputated for the purpose of experimenting on the contractility of the separated limbs. The limbs and the body together discharged from 3 to 4 lbs. of blood, which did not seem to diminish the heat of the trunk, nor that of the separated limbs, so long as the experiments lasted.*

The reader will have seen, (pp. 443, 615,) in the case of I. H., that the experiments began three hours after death and lasted two hours. The maxima of various internal organs were 100°, 101°, 99½° and 95°, while the liver, still later, after its removal from the body—after its division into four pieces—after these pieces were replaced so as to surround the thermometer, gave in eight minutes, and as long as observed, a steady temperature of 104°. This and the two last mentioned cases, not to name others, show that in the dead body at least the sympathetic nerve is not any more than the respiratory function, the source of animal heat. As this theoretical exposition has lately commanded much attention, a glance at it may not be improper, in connection with the experiments that have been or may be submitted to the reader for solution.

* The following is a portion of the description of the exterior which precedes the account of the dissection. The body moderately emaciated ; abdomen concave ; skin and eyes yellow ; cornæ, unrelexed, clear and brilliant—sub-conjunctival ecchymoses in the residue of the eyes ; pupils immovable, otherwise natural ; abundance of black vomit, muscles natural, &c., &c.

Dr. W. F. Atlee's Notes, taken from M. Nélaton's Clinical Lectures on Surgery, (anno 1855,) opens with an allusion to M. Bernard's recent experiments on the Great Sympathetic Nerve:

"They show that when this nerve is cut the part of the body to which it is distributed becomes congested, and its temperature is elevated as much as in inflammation; for certain organs, indeed, as, for instance, the pleura, there is a true inflammation."—"There is still a distinction to establish in the different parts of the Sympathetic Nerve, relatively to this production of heat."—"The great Sympathetic Nerve is the only one whose section produces an increase of heat."

In regard to this neurological explanation of the origin of animal heat, Professor Lehmann, in his new work on Physiological Chemistry, says:

"Attempts have been made to ascribe to the nervous system a share in the production of animal heat, but we cannot form a conception of the nervous system in a state of action without chemical changes occurring in it. We are well acquainted with the recent experiments of certain French physiologists, who, after dividing the sympathetic at a certain spot, have found the animal heat, at definite parts, considerably higher than the ordinary temperature—an observation that I have myself had occasion to make; and while we do not overlook the difficulties which oppose an explanation of such phenomena in a special case, we must regard every view as unscientific, and, therefore, incorrect, which would refer animal heat, although only partially, to any other than chemico-physical forces. We assert that animal heat is subservient to the metamorphosis of matter, and that the latter is again subservient to the promotion of animal heat." ii. 480.

Furthermore, upon the subject of animal heat, Prof. Lehmann says that the theory of its respiratory origin "rests on a very uncertain foundation, and that the special heat of every animal organism is merely the result of chemical combinations formed within it." ii. 479.

"The very careful and admirable experiments of G. Liebig appear at first sight to oppose the idea of a chemical absorption of the oxygen in the lungs; for he found that the differences of temperature in the different parts of the circulating system, including both the arterial and the venous systems, were solely referable to the physical laws of the radiation of heat, &c., and that in the lungs especially the blood *not only undergoes no elevation, but even a slight depression of temperature.*" ii. 475.

Prof. Carpenter, in his examination of the theory of Sir Benjamin Brodie and others who ascribe the origin of animal heat to the nervous system, particularly to the brain and spinal cord, admits "the remarkable fact, that the disturbance of temperature produced by severe injuries of the nervous system, occasionally shows itself in the opposite direction.—Thus it has been noticed by many experimenters, that one of the first

effects of division of the spinal cord in the back, in warm-blooded animals, is to *raise* the temperature of the posterior part of the body, this elevation continuing for some hours. A case is recorded by Sir B. Brodie, in which the spinal cord having been so seriously injured in the lower part of the cervical region that the whole of the nerves passing off below were completely paralized, the heat of the body as shown by a thermometer placed on the inside of the groin, was not less than 111°; and this notwithstanding that the respiratory function was very imperfectly performed, the number of inspirations being considerably reduced, and the countenance livid. And Professor Dunglison states that, notwithstanding the usual depression of the thermometer on the hemiplegic side, it is not unfrequently found to be more elevated than on the sound side. According to the recent experiments of M. Cl. Bernard, it appears that an elevation of temperature constantly takes place on one side of the face, when the trunk which unites the sympathetic ganglia of the neck, on that side, is cut through; this increase being not only perceptible to the touch, but showing itself by a thermometer introduced into the nostrils or ears, even to the extent of from 7° to 11° Fah.—When the superior cervical ganglion is removed, the same effect is produced, this difference is maintained for many months, and is not apparently connected with the occurrence of inflammation, congestion, œdema, or any other pathological change in the tissues, though the sensibility of the parts thus affected is no less augmented than their temperature." (*Human Physiology.* Edited by Prof. Smith, of Phila. 1855, § 439.)

In what manner soever animal heat, whether normal or pathological, may originate, its mechanical and chemical actions and control over the vital affinities, its functions, metamorphoses, and physiological finalities, must be great if not absolutely paramount as caloric is known to be in the phenomonology, dynamics, and fundamental changes in the physical universe.

In these experimental researches into animal heat in the living and the dead body, now drawing to a close, facts have been reported without selection, without omissions, without any arrangement having in view any special theory, and without encumbering their leading characteristics by multitudinous details inconsistent with required brevity, as the hour, the pulse, the respiration, special symptoms, treatment, post-mortem examinations, etc., as recorded in the original MSS.

The recorded details, though desirable, were found not to be fundamental where the observations were numerous. Thus it was found that the number of respirations and pulsations in the minute had no apparent control or connection with the development of heat.

The temperature was usually taken from two to three hours before, to a like period after, noon, and would, therefore, probably afford a

meridianal average, though occasionally the experiments were continued until dark.

A detailed account of the treatment would, as already mentioned, extend these papers to an inconvenient length, and would throw but little additional light upon the calorific history, excepting, perhaps, blood-letting. The latter is generally alluded to in cases wherein it formed a prominent feature. In a great majority of the cases the treatment was expectant, or such as did not appear to greatly modify the morbid or normal calorification.

Without wishing, in this place, to enter upon the therapeutics of yellow fever, it may be proper to remark that cold affusions, even in the period of greatest heat, were not practised, although there can be no doubt that this method of treatment would be very efficacious, were it not for the inconvenience and fatigue it occasions to the patient. That it would to some extent repress and control the unnatural heat in the early stage, when it is highest, there can be no doubt. In my own practice, although I used cold sponging generally during the calorific increment, yet my thermometrical statistics are not complete and satisfactory, because in private practice these experimental manipulations are seldom acceptable to patients or their friends.

The influence of the hot mustard foot bath, during the hot stage, where the heat is diffused, evidently augments the general temperature, and is, in this respect, injurious, yet its revulsive action is otherwise, perhaps, beneficial.

MM. Duméril, Demarquay and Leconte, in their experiments upon the modification of the animal heat by the introduction of therapeutic agents into the animal economy of dogs, found that cantharides in doses of 8 to 40 centigrammes elevated the mercury in six hours, 2·1°, (3·8° Fah.;) cannella 30 to 45 grammes, 1·7° to 2·7°, (3° to 5·26° Fah.;) ergot, 0·80 (1·45° Fah.), in five hours; phosphorus 10 to 20 centigrammes, caused a depression; strychnine was nearly null; emetics in large doses caused a fall of 2°, (3.6° Fah.,) in two hours. (*L'Union Médicale*, May 24th, 1851). These experiments as reported, though very imperfect, are suggestive.

It will have been seen by the reader that hot foot baths, almost constantly and indiscriminately prescribed in yellow fever, suddenly elevate the temperature several degrees, which, when the existing febrile temperature is everywhere many degrees above the normal standard, must be physically, physiologically and therapeutically mischievous—is it not? A medical friend declares that "it is proper to fight the Devil

with fire!" This is the Thompsonian method of curing fever by heat, which can never be proper, unless the heat be unequally diffused or be depressed in some region of the body, except as the actual cautery used for its revulsive action.

In the British and Foreign Medico-Chirurgical Review, for July, 1850, there is a paper taken from *L'Union Médicale*, detailing Magendie's Experiments on Animal Heat, or rather on the effect of heat upon animals placed in a stove, in such a manner that their actions could be watched. Other things equal, the greater the heat, the sooner the death. A rabbit exposd to 248°, died in 7 minutes—one at 140° died in 33 min. "Three dogs exposed respectively to 212°, 194°, 176°, died in 18, 24, and 30 minutes. The same rule applies to birds, but they bear an elevated temperature for a longer period than animals. Cold blooded animals endure it longer. Thus, frogs exposed to 176°, or 212°, lived from half an hour to one hour. There is in these cases an enormous loss of weight.

The increase of Temperature.—A living rabbit having a temperature of 102°, and one just killed with a temperature of 87°, were placed in the stove at 176° ; at the end of 20 min. the former died convulsed, having acquired a temperature of 112° and in all parts of its body; the dead one 122° to 125½° externally; rectum 107½°

Reported experiments render it certain that animals always died when a temperature of 113° to 115° had been attained. Birds bear an increase to 118½°, and cold blooded animals, which soon establish an equilibrium at a medium temperature (68° to 77°), when exposed to that of 176°, died when their own reached 104°.

The following changes were constantly found in animals that have succumbed to a high temperature ; the blood black in both arteries and veins. It forms with difficulty, a dark and diffluent coagulum while the serum is rendered turbid by the globules it holds in solution, owing to this state of the blood, *ecchymoses are found in the skin, and mucous membranes. Bloody stools* are present, while the lungs, liver, and especially the kidneys, *are infiltrated with blood.*

If the experiments are repeated in *moist* air, the effect is far more rapid—hot water is still more rapid.

Effects of Low Temperature.—While an elevation of the temperature of animals is not borne beyond 8° or 10°, it may be lowered to a far greater extent. Thus dogs and rabbits exposed to a freezing mixture, their own temperature being 104°, and in some instances artificially raised to 107° or 109°, lost 5½° in 10 minutes, 11° in 15 minutes, and 12½° in 20 minutes; the loss in one example amounting to 26° in 40 minutes.

The general conclusions to be drawn from numerous experiments are: 1. An animal placed in a temperature of from 32° to 46°, during a period not exceeding 5 minutes, undergoes a diminution that may lower it to 2-3ds of its normal temperature. 2. This diminution continues to go on, even after the animal has been withdrawn from the cooling mixture. 3. Left to itself, such diminution takes place, until, having arrived at nearly the half of the normal temperature, the animal dies. 4. If this point have not been attained, the application of warmth may yet restore the normal temperature. Cold produces anæsthesia, proving the intimate connection between the functions of the skin and the animal temperature.

(*To be continued.*)

ART. VI.—*Topography, Settlement,* Climate, Population, Botany, and Diseases of Cherokee County, Texas:* by W. L. GAMMAGE, M. D., Rusk, Texas.

IN contemplating the herculean task before me, I have almost grown afraid to begin, but indulging the hope that abler minds, seeing the richness of the field for research, may devote a few leisure hours to "like histories" of Southern localities, I have determined to make the effort, relying upon the indulgence of my readers for any deficiencies of style or completeness of execution.

I had almost said this land of ours was classic ground,—certainly, but few countries can present to the inquiring mind so many interesting themes for thought and study.

* The talented writer of this extended article, has, as the reader will see, introduced three or four pages of a historical character, concerning the Indians of Texas. A topic of this kind is rarely admitted into the New Orleans Medical and Surgical Journal, except, as in this case, where it is incidental or episodical.

It is by no means essential to the purposes of the most intensely practical journal, to fill its pages with tedious histories of cases *ad infinitum*. It is far better, more practical, to induce men to think, to investigate, to discover, and then to apply.

There is not a book extant on philosophy, chemistry, physiology, or botany, equal to one that might be written on a broomstick, provided the author were competent and had a complete knowledge of this subject.

Novelty is not feature essential to an original contribution to science. A writer for instance, who describes the Fauna, Flora, and diseases of Texas, truly contibutes to the treasury of science, even in cases where the objects and results of his research and description are presisely similar to those of other investigators, in different climates. To verify the identity, or the differentiæ of a plant, reptile, or fever, in a special district, as compared with other localities, is to contribute to the progress of scence even though no absolute novelty or discovery may be developed.—EDITOR.

The county of Cherokee is situated near the centre of what is known as Eastern Texas, being about midway between the Sabine river on the east, and Trinity on the west, Red river on the north, and the Gulf on the south. Its immediate locality is between the Angelina river, which forms its eastern, and the Neches river, which forms its western boundary.

The first settlements that were made in the county were by Jo. Durst, (who opened a farm on the west bank of the Anglina, where the little village of Linwood now stands,) and Cooney Allen and James Bradshaw, farther west on the San Antonio road. This was in the year 1830. About the same time, Nathaniel Kellough, with the energy and fearlessness of spirit which so signally characterized the hardy and honest pioneers of this early day, (who outstripped civilization and braved the dangers of the wilderness) settled himself and a few other men of like "iron mould," with their families, about 30 miles north of the San Antonio road, near what is now the flourishing village of Larissa.

About eight years before these settlers had moved into the country, a mixed breed by the name of Bowls, had enticed away from the Cherokee nation in the western part of the State of Arkansas, a number of Indian warriors, with their squaws and pappooses, and in their wanderings had made their way to this county, and were peaceably settled upon a creek which is now known as Bowls' creek. This was about eight miles south of where the town of Rusk now stands.

Bowls was not pleased with the idea of having pale-faced neighbors so near; and, indeed, three years before the Indian war broke out, he had attempted to induce neighboring tribes of Indians to take up arms against the Texians. In 1836 he visited those tribes on the Trinity and its tributaries, viz: the Shawnees, Delawares, Kikapoos, Twowokanies, Wacoes, Keechies, Cadoes, and Ionies, for the purpose of arranging a general plan of attack and producing a concert of action between the various bands of warriors that could be brought into the field. The vigilance committee of Nacogdoches, whose chairman was Col. Raguet, sent out two gentlemen, to-wit: C. H. and William Simms, to have a talk with Bowls, and they reported that they found him and his tribe drying beef and parching meal in great quantities, and preparing otherwise for war.

The Indians began now to commit depredations upon the white settlers; but the settlers forbore until the Indians made an attack upon the northern settlement, and murdered, in cold blood, their innocent and

unoffending women and children, amongst whom were the aged mother-in-law, and some of the children of Nathaniel Kellough. Immediately the whole country became alarmed; trusty messengers were despatched to Nacogdoches, and in a little while a brave little army from Shelby county, under the command of Col. Landrum, and from Nacogdoches, under Genl. Kelsey H. Douglass, and Col. (now Genl.) Rusk, marched into the country, and encamped on the west bank of the Neches, where they met Major Walters, who had been ordered with two companies to occupy the same place. Col. Edward Burleson was also ordered to march his troops near the Cherokee country. About this time the government came into possession of some papers belonging to Emanuel Flores, a Mexican spy, amongst which were letters addressed to Big Mush, and Bowls.

Maj. Burleson was then ordered to increase his command, and enter the nation, which was done on the 14th day of July. The command of all the troops was given to Gen. Kelsey H. Douglass, who attempted to treat with the Indians. His proposition to them was, that they should give up their gun-locks and return to the Cherokee Nation, in the western part of Arkansas, to the place they had been removed to about sixteen years before by the government of the United States, and offering, upon the part of the State of Texas, to pay them for their improvements and crops. Bowls emphatically refused, stating that they had an absolute right to the country, and that there was no use in moving—for the whites would never cease their persecutions of the Redmen so long as "*grass grew and water ran*," unless they could drive them into the Pacific, and thus exterminate the whole race.

The Indians were at this time encamped five miles below the Texian soldiers, on the same river.

General Douglass put his troops in motion, but the Indians retreated. A company of spies, under the command of Majors Kaufman and Durst, (I believe,) followed on their trail, found them, and, returning, reported that the Indians had posted themselves on the point of a hill, near a ravine, and were prepared to give battle. The Texian army came up with them and occupied a ravine and thicket below; the action soon began, and, after many signal acts of bravery, the Indians retreated, leaving eighteen killed upon the field. The Texians had only three killed and five wounded. The battle began at sunrise, and the pursuit ended at sunset. The next morning, which was the 16th day of July, the pursuit was renewed, and the Indians were again found posted in battle array. The Texian soldiers began the firing at one hundred and

fifty yards distant, and, when fifty yards distant from the enemy, charged them; then began that great act of retribution which was to visit upon these barbarous savages the reward which their murders entitled them to. The fight lasted about one-and-a-half hours. After many daring and courageous deeds upon each side, the shout of victory from the conquering whites mingled with the cries of the dying and the yells of the infuriated and retreating savages.

General Bowls, who had been seen all the time in the thickest of the fight, shouting with the voice of a stentor, the Indian war-cry, and, as if by magic, escaping the deadly aim of our riflemen, was, at last, shot from his horse, and the warriors, seeing their brave Chief weltering in his blood, fled precipitately, and never attempted another rally, but dispersed, none ever knew whither.

Some few roving bands were afterwards found engaged with the Camanches in the West, and other tribes on the Northern frontier; at any rate, they never attempted to gather their scattered remnants to form another distinct settlement.

This war took place under the administration of General Mirabeau B. Lamar, as President of the Republic, and David G. Burnett, as Vice President.

Gen. Burleson, in with a fight the Indians on the Colorado, on the 25th of December, in the year of 1839, captured the helpless widow and children of Gen. Bowls. This is the last historical account of the "Tribe of the Cherokees."

Thus, in a few months, did a brave but badly armed and disciplined army of 500 volunteers, who were fighting for their wives and their children, their altars, their homes, and their firesides, conquer and disperse a well-armed and determined band of savages of nearly *twice* their own numerical strength. All honor to the brave and noble Texian soldier and pioneer!

Peace having been established, and the yell of the ruthless savage no longer heard in the land, the sword was turned into a ploughshare, and the bayonet into a reaping hook.

Invited by the richness of the soil, the purity of the water, and the beauty of the hills and valleys of the newly-conquered country, settlers began to pour in so fast, that that which was until late a wilderness, now is a populous and flourishing country.

In regard to climatic influences this country is perhaps more favorably situated than many localities in the same latitude; being in the centre of a densely timbered country, we never suffer from the severity of winter

winds commonly called "*Northers*," and yet are sufficiently contiguous to the Gulf to derive some benefit during the long summer days and nights from the sea breezes—this is somewhat speculative, yet I feel that it is nevertheless true.

Soil.—The character of the soil is various. The low lands near the leys, of our water courses, being covered by alluvial deposit from the beds of streams, and mould arising from decaying vegetation, are immensely fertile and productive when reclaimed from the annual inundations, which usually take place in the spring season. Upon the high lands the soil is gray, sandy, and on the plains chocolate or red loam; the chocolate soil being fine and soft; the red, coarse and gravelly—both are arable and highly productive. An average crop of corn on the gray soil is about 30 bushels when cultivated well; on the other two varieties of soil about one-third more.

Water Courses.—The Angelina river is on the east, and the Neches river is on the west side, both of which have been alluded to before. They are small streams abounding in such fish as are generally found in Southern waters. Neither of these streams have been navigated as high up as our boundaries, save by a few keel-boats which are poled down the Angelina when it is full of water. There are a number of tributary streams to these two rivers, with clear sparkling water, and pebbly bottoms, which afford abundant facilities for grist and saw-mills, for the different neighborhoods, while their valleys supply to the agriculturist a variety of farming timber in great abundance.

Mud Creek, a branch of the Angelina, waters the north-eastern portion of the county, and from the shallowness of its banks, and the flatness of its swamps never fails to overflow at least once every year. This is a fruitful source of disease during the summer and autumn, especially to those who live in localities which subject them to the influence of a south-east wind which prevails nearly the entire summer and autumn.

Population.—There are about ten thousand four hundred souls in the county, of all ages, color and sexes; the divisions of which stand about as follows:

White males, over the age of 16 years	2,400
White Females over the age of 16	2,100
White Males from 6 to 16	1,264
White Females from 6 to 16	1,139
White children under 6 years	1,000
Slave population	2,416
Mexican population	100

Of this population there are about 150 in the town of Jacksonville, near the centre of the county; 200 in Larissa near the northern boundary; 125 in Alto, on the San Antonio road; and 1,200 in Rusk; the balance is pretty equally located in the different parts of the county, engaged principally in agricultural pursuits.

Our towns are settled with intelligent members of the learned professions, industrious and temperate mechanics, and tradesmen, and our farming districts are as a general thing occupied by tillers of the soil, who are "*distinguished less for wealth, than for patriotism and virtue.*" The moral tone of our society is exceedingly healthy, as is evidenced by the several colleges in our villages and the flourishing district schools all over the country, where during the week the "*rudiments* of English, and occasionally the mysteries of *hic, hæc, hoc*" are taught, and on Sunday the sturdy yeomanry with their "*household treasures*" are assembled to hear the teachings of the Bible.

Our villages are supplied with one or more churches, which are seldom tenantless during two consecutive Sabbaths, and not unfrequently protracted meetings are held which last weeks at a time—where much is done to imbue into the hearts of our people with the spirit of Christianity.

Botany.—I fear that the meagreness of what I shall be able to lay before my readers upon this subject, will detract very much from that deservedly high reputation which our prairies and woodlands have enjoyed always in the botanical world,—but the results of my labors in this interesting and instructive field of science, must be considered as only having embraced imperfectly, the area of our own county, and been confined to a timbered district, which, whilst it may abound in useful as well as ornamental shrubs, cannot compare with the broad spreading prairies, whose very winds are laden with fragrant odors, and whose surface throughout their broad expanse,

"*Is but a sea, whose beauteous waves are flowers!*"

I alluded in an early page to the adaptation of our trees to agricultural and mechanical uses. Among the most useful of these is the family of oaks.

Quercus Tinctoria. Black Oak. This tree is one of the largest in our forests, often measuring 15 feet in circumference; it is very fruitful and seldom fails to produce an abundant harvest. Its bark is much used by tanners, and its timber to make fences, and boards for covering houses. Its bark is dark colored, and contains a quantity of tannin, which recommends its use very highly in decoction as a wash for abraded and inflamed surfaces. The country people make a poultice of the decoction

and meal for various medicinal purposes, as a topical application. The bark is sometimes chewed as a remedy in dysentery and diarrhœa, though more frequently they drink the decoction. It is powerfully astringent.

Quercus Rubra. Red Oak. Resembles the *Q. Tinctoria* very much, and the uses of both are very much the same. The fruit is biennial; the timber, when recent, is very red, from which fact it derives its name.

Quercus Palustris. Sand Jack or Sand Oak. This tree is of but little service, except for fire-wood; its fruit is biennial, and a fine food for stock; both hogs and cattle feed freely upon it. The tree grows about 15 or 18 feet high.

Quercus Obtusifolia. Iron or Post Oak. So called from its durability. The bark is grayish-white, leaves rough, oblong, obtuse, and sinuate; fruit annual. The timber is much sought after for garden and fence posts, which latter are inverted when placed in the ground, as the farmers say, and with a great show of reason, to prevent the damp and moisture from ascending the pores of the wood, and thereby hasten the process of decay. It may be used for almost any of the farming purposes that any of the above varieties are used for.

Quercus Aquatica. Water Oak. Leaves obovate, cuneiform, very entire, apex obscurely 3 lobed, bears a smooth acorn with hemispherical cups, grows 30 to 40 feet high and very slender. It is useful for farming purposes; fruit biennial.

Quercus Nigra. Black-Jack. Grows upon the highlands in great abundance; is short and small; bark black and tortuously seamed; berries biennial. The lower limbs die as the tree grows, and remain on the tree giving it a bleak and dreary appearance. The timber is only useful as fire timber, as it cannot be "split" easily.

Quercus Alba. White Oak. This tree grows to an immense size. It is used for making boards, for which purpose it is preferred above any other of this useful family. It has an oblong sinuate leaf, and bears a large fruit. The tree grows from 70 to 100 feet high. The fruit is annual.

Quercus Macrocarpa. Overcup Oak. This is found in low lands and rich bottoms; it is a large tree; the leaves are lyrate, sinuate, lobed and quite downy beneath; has a large overcup which covers two-thirds of the acorn. The fruit is annual.

Quercus Bicolor. Swamp White Oak. Leaves short and petioled; the fruit grows in pairs, is oblong and ovate; the tree grows only about 20 feet high here, and is rather scarce; it is much used in basket making, for which purpose it is prepared by being worked in to what is called "*splits.*"

This closes the varieties of the oak found in our hills and valleys.—We have no timber whether for ornament or use which excels this family.

Carya Alba. Shag-bark Hickory. It grows about thirty feet high and from 12 to 24 inches in diameter ; the bark is rough and dark, generally three pairs of leaves opposite on a long petiole, with a terminal leaflet; fruit small and globular, nut compressed and oblique. It grows on the plains to great perfection, and is much used by wood workmen for wagon timber, axe helves, ox bows, &c. Its bark is astringent and tonic; the inner bark is used in domestic dyeing, giving to cottons a beautiful yellow color.

Carya Sulcata. Scaly-bark Hickory. So called from the scaly appearance of the outer bark; grows in swamps, and sometimes attains the height of 150 feet; fruit roundish and four-keeled; leaves opposite or along petioles, about eight pairs with a terminal leaflet.

Carya Amara. Bitter Nut Hickory. Leaflets about 9, acuminate, smooth both sides, fruit sub-globate with prominent sutures, putamen easily broken, nucleus bitter, (from which fact the tree takes its name); it is sometimes called bitter Pecan. This tree grows about the water branches where other larger timber is sparse; it is small and crooked.

This concludes the family of Hickory Nut trees found with us. The decoction from the bark of any one of the above varieties, is considered useful as an astringent in diseases of the bowels. The fruit is esteemed quite a luxury; and it is not unusual in the winter time amongst the country people that a plate of Hickory Nuts is laid before their visitors after supper.

Pinus Rigidi. Pitch Pine. This pine is very rich in pitch, and affords, when felled to the ground and allowed to remain until the sap has decayed, the finest lighting wood in the world. The leaves grow in threes, the sheaths are abreviated, burs are ovate and small; the timber is much used here in building, first being made into planks. It attains quite a respectable size, being from 75 to 100 feet high and 20 or 30 inches in diameter.

Pinus Variabilis. Short-leaved Yellow Pine. It differs from the above variety, in having its leaves a little longer and channelled. Its timber is considered more valuable, on account of the greater durability of the "sap," or outer wood. The cone is ovate-conic, and generally solitary. These are the only varieties known here. The *P. Palustris* and *P. Ledia*, so extensively found east of the Mississippi, have never been discovered in our country, or, if found at all, in very

small bodies. I believe about eight years since I saw some small trees of the *P. Palustris*, on the banks of the Sabine, in Harrison Co.

Ulmus Fulva. Slippery Elm. This is a smaller tree than the *U. Americana;* grows on creeks, and blossoms in March, branches rough and white, leaves whitish, ovate oblong and downy on both sides; the inner bark is mucilaginous, and is extensively used, being steeped in coldwater, and drunk in inflammatory diseases. It is altogether better than Gum Arabic as a medicinal agent.

Ulmus Rubra. Red Elm. Grows upon the plains, and that class of lands known as second bottoms; leaves serrated and somewhat glabrous; flowers sessile, inner bark red; and (so far as my knowledge extends) unmedicinal.

Acer Saccharinum. Sugar Maple. This is a large tree, which blossoms in April; the leaves are palmate and five-lobed, heart-shaped at the base, its edges serrated and glaucous beneath. There may be other varieties, but I do not know them. The juice of the maple is full of saccharine matter, but is never cultivated here for its sugar.

Robinia Pseudo-Acacia. False Acacia, or Locust Tree. The leaves are pinnate, with a terminal leaflet, branches thorny, and flowers in racemes; the pod, which contains the seed, is smooth and brown; 3 inches long. It grows abundantly on our lowlands, and when transplanted and cultivated, makes one of the most beautiful and graceful shades. It grows from 20 to 30 feet high, but owing to the shallowness of its roots it is frequently blown down. This is the only variety known here.

Juglans Nigra. Black Walnut. It grows in rich valleys, sometimes attains the height of one hundred feet, and measures from 3 to 5 feet in diameter; bark rough and blackish, leaves numerous, lanceolate ovate, serrated and pubescent beneath; fruit globe-shaped and scabrous, nut black and wrinkled. The bark and hulls are used successfully in domestic practice as a remedy for "*Tinea Capitis,*" and other eruptive diseases of the skin and scalp. This is the only variety known here in the county.

Fraxinus Acuminata. White Ash. Leaves acuminate, oblong and shiny, glaucous beneath; blossoms in March; flowers calycles. It is a beautiful tree, grows on meadow land, and is highly prized on account of its mechanical uses; the wood is soft and yielding, when sawed into boards it warps too much for outside work on buildings. The bark is considered tonic.

Fraxinus Ornus. Flowering Ash. This is a small tree growing

from ten to fifteen feet high; leaves pinnate; flowers in June. The roots are used in decoction and tincture as a remedy for rheumatism.

Fraxineum Xanthoxylum. Prickly Ash, or Tooth-Ache Bush. This has a green and white flower; thorny branches, leaves lanee-oval and subentire; grows in the valleys. It is pungent and stimulant. The bark is said to relieve tooth-ache when chewed; a tincture of the bark is frequently used in domestic practiee, as a tonic, in the treatment of chills, enlarged spleen, rheumatism, &c., &c

Aralia Spinosa. Angelica Tree. Tooth-Ache Tree. This is one of our most beautiful, arborescent trees, growing (in fertile, shady woods,) about 10 or 15 feet high; the stem is erect, simple. and furnished near the top with very long and large leaves or stems, which are supplied with opposite smooth oval-pointed, slightly serrated leaflets; the flowers are in hemispherical umbels, small and white, and appear in June and July, and are followed by small, oval, blaek berries .The bark, root and berries are medicinal, and are used in tincture; when given in small doses they are stimulant and diaphoretic, but emetic and cathartic in large doses. It is said that when the use of this medicine is persevered in, it has been known to produce salivation.

Morus Rubra. Red Mulberry. Leaves heart-shaped, oval and taper-pointed, with cylindrical stems of about equal size; the bark is smooth and whitish externally, yellowish within. The tree grows from 15 to 25 feet high, and is much sought after as an ornamental shade; the timber is used in making bedsteads and other cabinet furniture. It has a large berry, which, when fully ripe, is of a dark red color, and is very sweet. The bark is supposed to possess medicinal properties analagous to that of the *Populus Tremuloides.* White Poplar, or American Aspen.

Prunus Virginiana. Wild Cherry. This is a graceful and beautiful tree, growing in rich meadow and valley lands to the height of 20 or 30 feet. The leaves are oval-oblong, acuminate, and unequally serrated; smooth on both sides; the raeemes are erect and elongated; flowers in April, and bears a small berry containing a stone. The wood is highly prized for its hardness, and is suseeptible of almost as fine a polish as mahogany. Birds beeome intoxicated from eating the berries, and cattle die from the poisonous effects of the leaves when eaten. The bark contains hydrocyanic aeid. It is much used as an ingredient in tonie bitters. This is the only variety known.

Cornus Florida. Dog Wood. A beautiful tree with spreading branches and large white involucred flowers; it blooms in March before the leaves are fairly open, the appearance of the dog-wood flower is to the farmer

the signal for corn planting; for he knows when he sees their large white petals spread out to the breeze, that frost has bid us adieu for the season.

The leaves are ovate, acuminate, and glabrous; the berry is egg-shaped, and grows in heads containing 6 or 8 together. The dog-wood grows from 15 to 20 feet high; its bark possesses tonic and anti-periodic properties; a decoction is sometimes made into a poultice for the cure of dog bites, and is very efficacious as I can testify myself from personal experience.

There is a resinous extract of the Cornus Florida, called *Cornin*, prepared by the eclectic chemists of Cincinnati, which is supposed to contain all the active properties of the bark, and is said to be a good substitute for quinine, in doses of from one to six grains.

Nyssa Multiflora. Sour or Black Gum. It grows in low lands, and to a great height, sometimes being 80 feet high and 6 feet in circumference. Leaves lanceolate, very entire, acute at each end; flowers (in umbellated clusters) in May; pericarp nearly round and dark blue. The timber of the black gum is highly valuable for its hardness and durability, though not capable of being applied to farming purposes on account of the great difficulty of splitting it.

Liquidamber. Styraciflua. Sweet Gum Tree. Its generic name is derived from *Liquidum, fluid* and *amber, fragrant,* in allusion to the gum which distils from the tree whenever wounded. There is no tree which is more generally known in the South than this, and certainly but few that excel it in beauty and gracefulness. Its leaves are palmately lobed with acuminated points and serrated edges. Liquid storax is obtained by boiling the leaves, and is used by some who highly recommend it in coughs and colds. The resin from the tree is frequently incorporated into domestic salves, which it makes highly stimulating and *"drawing."*

Nyssa Biflora. Tupelo Gum, or Swamp Hornbeam. This is a large tree, larger at the bottom and decreasing in size rapidly as you ascend the tree. Leaves oblong, ovate, very acute, and entire, two-flowered (from which it derives its name of *Biflora*) drupes oval, grows in swamps from 40 to 80 feet high; its timber is used for the same purposes as the *N. Multiflora.*

Rhus Glabrum. Sleek Sumach. Branches, petioles and leaves smooth; lance-pinnate and many-paired, leaflets lance-oblong, serrate, and whitish beneath; the fruit is velvety, and grows in bunches; the berries are red and very sour. The leaves are said to be useful in dyeing morocco, and when added to tobacco in the proportion of one to two, give a delightful flavor to the former, and add another pleasure to

the luxury of that pleasant winter evening companion, the pipe; the Indians call this compound, "*Kinnekinnick.*" As a medicine, the whole shrub has been variously used: the berries, when steeped in water sweetened with honey, make a convenient and useful gargle for apthous sore mouth, salivation, and sore throat. It is an astringent, and may be taken for diarrhœa, be applied to irritable ulcers, prolapsus ani, &c. I never have used it.

Ostrya Virginica. Ironwood, Hop Hornbeam. This tree grows here in great abundance; it is small, with very hard wood, growing about low lands and meadows, about fifteen or twenty feet high. The leaves are alternate sub-cordate, acuminate and serrate; the flowers are cone-like, and resemble very much those of the *H. Lupuli.* Its timber is considered valuable in wagon and carriage-making, on account of the density of its fibre and its great hardness when dry.

Sambucus Canadensis. Blackberried Elder. The branches and petioles of this shrub are smooth, the stalk is jointed, and the pith is very large; the leaflets are paired oblong, oval, smooth, and shining above, pubescent beneath. The flowers are white, and appear in May; the flower stalks are limber, and in number about five, arising from a common centre; the berries are black and numerous. An ointment made of the powdered bark, and lard, is much used in common country practice in the treatment of hæmorrhoids. The bark is powerfully diuretic, and when as much as a gill of the decoction is taken it purges and vomits. There is but one variety here. It may generally be found in low grounds, near fences, and by the road-side.

Juniperis Virginiana. Red Cedar. The cedar never grows large with us, and is very scarce; its average height is about five or six feet. The leaves are adnate at the base, growing in threes; they have a strong aromatic smell, and a hot pungent taste, slightly bitter. There is an essential oil in the leaves and wood, which is said to be useful in the treatment of inflammatory rheumatism.

Salix Nigra. Black Willow. It grows on low marshy grounds, at the head of spring branches, and near the edges of ponds. It grows 15 to 20 feet high. The leaves are lanceolate, and acuminate at each end; green on both sides. It is a beautiful tree, and when transplanted with great care, makes a valuable and ornamental shade for yards and gardens. Its bark is used as a substitute for Peruvian Bark. The Salicine of the shops is an extract of the willow, and in my practice has proved itself a better remedy than Quinine for chills in females, when complicated with hysteria or irritable stomach. There may be other

varieties of the *Salix* here, but I have not had an opportunity of examining for them.

Myrica Cerifera. Bayberry. Wax Myrtle. This shrub grows about the heads of spring branches, and is very abundant. The flowers are purple and green, leaves acute, fruit globular and naked, containing a wax, which exudes in the fall season, and is said to be useful in the treatment of scrofulous ulcers. The bark is narcotic, astringent, and emetic. It is used in the preparation of the composition powders of the Botanical school.

Cratægus Pyrifolia. Pear Leaf Thorn. It is so named from its resemblance to the pear leaf. The stems are very thorny, leaves roundish and sawed, flowers 3-styled, has a white blossom, which appears in June. The bark is medicinal; said to be useful as an emmenagogue.

Cratægus Crus-galli. Thorn Tree. This grows about hedges, on valley lands; its leaves are leathery, and placed almost immediately on the main stem; flowers white, and appear in May, *the same medicinal properties* as the *C. Crus-galli.* There are several other varieties of the *Cratægus*, such as the *C. Flava*, *C. Lucida*, *C. Punctata*, &c., &c., all bearing general analogies, and possessing about the same virtues.

Vitis Labrusca. Plum Grape. This variety grows in great abundance all over our hills, where it may be found generally in multiplied stems, though occasionally trailing on fences or trees. It blossoms in May and June; leaves are broad, cordate, lobe-angled, downy and white beneath. It bears a large grape in clusters, which when ripe is of a dark purple color, and a fruit which we are justly proud of. It has obtained the name of the Texas Grape, by travellers, from its great abundance. It is a singular fact that the vine usually ceases to bear when cultivated, though this may be owing to the injurious effect of shade upon the germ.

Vitis Æstivalis. Summer Grape. This grows near creeks and on the banks of streams, ripens in October; its leaves are 3-lobed, the younger ones are rusty brown beneath—when grown, nearly smooth; the berries are nearly purple, and very pleasant to the taste; when dried they are good fruit for the table.

Vitis Vulpina. Frost Grape. So called from the fact that the fruit does not ripen until frost; the leaves are cordate, acuminate, gash-toothed, and smooth on both sides; the berries are small, and when ripe, nearly black; they remain on the vine, until consumed by birds and other inhabitants of the forest. There is no country where

grapes are more abundant than here—certainly none where the wild varieties are more productive or more valuable as an edible fruit.

Miegia Macrosperma. The Cane. Stem erect, smooth, hollow-jointed and rigid; leaves growing in two opposite rows at the joints, lanceolate, subacuminate, and downy beneath. It grows from 7 to 25 feet high, and is used to make baskets, chair-bottoms, bed-mats, though I must be allowed to say that *I know* other *material* which would answer these purposes better; for the last named use it is in great requisition, and withal very useful for fishing-rods, as all the lovers of the "*piscatory art*" will testify.

Diospyros Virginiana. Persimmon. This tree abounds in our red lands about the heads of branches and in the meadows. Its blossoms, which appear in May, are yellow and solitary; the leaves are oval, oblong, acuminate and attenuate on the stem, smooth on both sides. The fruit, when green, is sour and astringent, but, when fully ripe, is exceedingly palatable, being about the size of a plum, and much used in making what is called persimmon beer, which is a very fine drink for the table in the long winter months when milk is scarce. The tree grows sometimes to the height of fifty feet, and 20 inches in diameter. The timber is used for "*cogs*" in gin machinery, and for "*hubs*" in wagon and other carriage wheels, and is said to be the best timber known for these purposes. The bark is highly astringent, and is considered very valuable in decoction for diarrhœa, and as a wash for ptyalism, when used in connection with sage tea.

Diospyros Pubescens. Persimmon. This is a smaller tree than the preceding; is very sparse, leaves oblong, acute and hairy beneath; the fruit is smaller than the *D. Virginiana*, and has fewer seeds.

Laurus Sassafras. Sassafras Tree. It grows in great abundance everywhere in the county; sometimes it obtains the height of 30 feet, and of a size sufficient for farming and mechanical purposes; though generally it is only about 4 or 5 inches in diameter, and from 8 to 12 feet high.—Its leaves are entire and lobed; outer bark soft and cork-like; inner-bark yellow and quite fragrant; its flowers are yellow and appear here in April; the berries are about the size of those of the *C. Florida*, and are very pungent and aromatic. The bark is used as a stomachic and tonic, and the leaves and pith as an emollient in ophthalmia, abraded and inflamed surfaces, &c., in the form of poultices; the bark of the roots is gathered in great quantities in the spring, and is used by the country people as a substitute at breakfast for coffee; they say it "*purifies and thins the blood.*" Its thereaputic properties are probably diaphoretic,

tonic, and less stimulating than coffee. The essential oil of sassafras, is very useful in rheumatism, and as a stimulating discutient when prepared in the form of liniment. I saw, a few weeks since, a gentleman who had received a gun shot wound at the elbow, which so paralyzed the arm, that though the wound was quite healed, the arm was useless; a steady perseverance in the application of the oil of sassafras for 6 weeks had nearly restored the limb to its original usefulness, and this was after continual use of a variety of other counter-irritants for nearly twelve months.

Ilex Opaca. American Evergreen. Holly. This is a most beautiful evergreen tree, growing abundantly on the banks of our purling streams; the flowers are green and white; appear in April; leaves evergreen; ovate, acute, spinose and smooth, having a terminal prickle; flowers scattered at the base of the shoots of the preceding year. The bark and leaves are both used in decoction as a febrifuge; the tincture of the bark has some reputation in the treatment of intermittents. [The Holly was the subject of a very laughable if not ridiculous mistake, made by the notorious Mrs. H. B. Stowe *whilst on her great anti-slavery crusade amongst the Europeans.* In her "*Sunny Memories of Foreign Lands,*" she speaks of seeing a Holly bush at "*Dingle Bank*"—regrets that we have no holly bushes in America, and makes a drawing of a leaf as though it were a botanical discovery! The ignorance displayed in regard to this shrub, is in exact keeping with her wilful perversions of Southern people and Southern institutions.]

Laurus Benzoin. Spice Bush. This is an aromatic shrub found in creek and river valleys. The leaves are wedge, obovate and pubescent beneath; its flowers which open in April, long before the leaves appear, are yellow; the buds and flower stems are smooth. It grows from four to ten feet high. A decoction made from the bark or leaves is used as a diaphoretic, and is said to possess anthelmintic properties.

Æsculus Parvia. Buckeye. This is a handsome shrub, blossoming among the very earliest in the country. It grows from 5 to 9 feet high, has leaves in five divisions, downy beneath, the flowers, which appear in March, being in long racemes of a bright red color. The fruit is inclosed in a rough hull which contains three or more nuts. The bark of the root, in decoction, is good for hæmorrhoids; the *ignorant suppose that to carry the buckeye in the pocket is a specific against piles.*

I shall henceforth confine myself to a description of those *plants* which are not only known to be indigenous, but those alone which are known to possess useful medicinal virtues, being convinced already, from my past

labors, that it would require immense labor and research to give a complete and perfect history of all the plants (and their name is legion,) that may be found within the limits of our county; and I will take occasion to say just here, in the conclusion of these remarks, that I have adopted the arrangement of the subjects so as to give precedence to those which are *most* conspicuous on account of their size, usefulness and abundance, without any regard to a more proper botanical arrangement, endeavoring all the time to simplify and condense.

Phytolacca Decandra. Poke Weed. This is a large annual plant, with a perennial root. It grows alongside of roads and old fields. It may sometimes be seen 12 feet high, but its usual height is from 5 to 6 feet. It is one of the earliest harbingers of the vernal season. Its leaves are ovate and acute at both ends; the flowers are white, and appear as early as the 1st of June, growing on long pendent racemes. The berries are about the size of the summer grape, being flattened at each end; they contain a red coloring matter. The plant dies out every winter, or rather every autumn. The root is used in the treatment of rheumatism, by steeping it in whiskey; it is said to be very useful in the treatment of that disease in its sub-acute or chronic form.

Ricini Communis. The Palmachristi, or Castor Oil Plant. This is an annual plant, and is classed as an exotic by botanists, though it grows in great abundance in old fields, and by the road sides everywhere in the South, and deserves, from its great efficacy and universal use, to be placed here. It grows sometimes as high as fifteen feet. The leaves are very large, peltate and palmate, lobed, lanceolate and serrate; stem smooth, but covered with a white powder easily rubbed off with the hand; the flowers are white, and the seeds on racemes. Castor oil is extracted from the seeds. It is a purgative, and in almost universal use as a gentle and effective laxative.

Datura Strammonium. Thorn Apple, Jamestown Weed. It is called Thorn Apple from the spinous character of the perianth. It is sometimes called Jamestown Weed from an incident in the early history of our common country, which occurred at Jamestown, in Virginia, when our forefathers made their first settlement at that place, which was named in honor of King James I of England and II of Scotland. The settlers concluded that they would gather a quantity of this weed and cook it for salad; it was done, and in a few hours afterwards an alarm was made that they were all poisoned. Those who had eaten of the new dish felt severe griping in the bowels, with other distressing symptoms; nor were their fears relieved until the morning which succeeded a

perturbed and restless night. So the plant was thenceforth called Jamestown Weed, and, I dare say, to the end of time the descendants of these hardy and virtuous pioneers will know it by this name. The plant grows in great abundance a few yards from where I now write, and the streets in the rear are, to the discredit somewhat of our enterprising citizens, filled with it. Its blossoms, which open as early as May, and continue to appear until October, are purple and white. The leaves are ovate, smooth, and angular-dentate. It grows about three feet high, and spreads out in branches upon all sides. The pericarp is ovate and spinous. The leaves are used in the form of a poultice for abraded and inflamed surfaces. A few of the leaves spread over a sore on the back of a horse, before saddling him, being repeated every morning, will effectually cure, in a few days. An ointment is made from a strong gummy decoction, which is much used in domestic practice for hæmorrhoids. The inspissated juice is said to be beneficial in epilepsy.

Eupatorium Perfoliatum. Boneset. This plant has a number of common names, but that of Boneset is the one by which it is best known. It grows abundantly in our marshes and meadows, and is perennial. It has a white blossom, which appears in July; the leaves are connate, perfoliate, acuminate, and serrated, rough on both sides. The stem, which is annual, and grows about thirty inches high, is round, solid, and tapering. It is used mostly in the form of decoction, which, when taken in small doses, is diaphoretic, and tonic; but, when taken in large doses, becomes powerfully cathartic and emetic. A few years since it had a considerable reputation amongst the botanical physicians as a cure for intermittent fever, but latterly it has fallen into discredit, and its use is almost entirely abandoned, except in domestic practice.

Eupatorium Teucrifolium. Wild Horehound. This is an idigenous perennial plant, with an annual stem about two feet high. It inhabits places wheresoever the *E. Perfoliatum* is found. The stem supports sessile, distinct, ovate, rough leaves; the flowers are small and white, and appear in July, August and September, in the form of a corymb.—Its therapeutic properties are tonic, diuretic, emetic and apperient.

Chenopodium Anthelminticum. Worm Seed. It is sometimes called Jerusalem Oak. This plant is much celebrated in the South for its anthelmintic properties. It is an indigenous perennial plant; blossoms in July; the leaves are lanceolate, oblong, and toothed on the margin. It grows abundantly about old waste places, and along road-sides. The seeds are used in domestic practice, for worms, by frying them with lard and molasses. Children are very fond of them prepared in this way. I

have frequently been highly amused at the avidity with which they consume this seemingly nauseous mess. The seeds contain the officinal "*Oleum Chenopodium*" of the Pharmacopœia which enters so largely into the numerous patent vermifuges which flood the country. All the parts of the plant possesses anthelmintic virtues, but the seeds alone are officinal.

Rhus Toxicodendron. Poison Oak. This is usually met with in the form of a shrub particularly on poor lands, but I think I have often seen it rising to a great height upon trees, and old stumps, though I might have mistaken for this other varieties, of which there are several. The leaflets are angularly indented, and pubescent beneath. Another variety of *Rhus*, (I have forgotten the specific name,) has a long footstalk for its leaf, with acute leaflets smooth and shiny on both sides; the flowers are small and greenish while growing in lateral axillary panicles, or compound racemes. The juice of either variety will poison wherever it comes in contact with the skin. The treatment of poison from this vine is very much like that for a burn. The leaves are said to be stimulating and narcotic. I do not know that it ever has been used in this country; I certainly do not desire to experiment with an article which poisons wherever it touches.

Asclepias Tuberosa. Butterfly Weed. Pleurisy Root. This is a very pretty flowering, indigenous, annual plant, with a perennial root. It grows about old fields principally, but may be found in piney woods and in meadow lands. The leaves are scattered, oblong-lanceolate, pubescent, and supported on long footstalks. The flowers, which are of a reddish orange color, and grow in bunches, like the fruit of the Black Haw, appear in June and July. The root alone is officinal, and possesses diuretic, diaphoretic, expectorant, and tonic properties, without stimulating. A decoction of the root is used by our farmers' wives in flatulency and colic. I have myself used it as a diaphoretic in inflammatory pulmonary complaints with good results; it has always in my hands proved eminently useful. I have never used it in powder.

Solidago Odora. Golden Rod. This species of the golden rod, the only one of the sixty varieties *that I know* of here found in the United States, is abundant both on our hills and plains. It grows about sixteen inches high, has golden yellow flowers, which appear in July, and disappear long after our earliest frosts. The leaves, which are without footstalks, are linear-lanceolate, acute, rough at the margin, and glabrous elsewhere. The flowers are in terminal lateral racemes; the leaves contain a volatile oil, and are used in decoction as a diaphoretic, and, by the country people, as an emmenagogue in the treatment of amenorrhœa,

though I doubt if it be more useful in that disease than any other diaphoretic tea.

Hedeoma Pulegioides. Penny Royal. This is an indigenous plant, found in abundance, growing sometimes one-and a-half feet high; the root is small, abundant, and yellowish when washed; the leaves are opposite, oblong, lanceolate, nearly acute, narrowed at the base, and veined on the under side. The flowers are small and blue, and arranged all along the branches at the junction of the stem and leaves or branches. It is used in decoction as a diaphoretic, emmenagogue and stimulant; for irritability of the stomach it has some reputation as an aromatic drink.

Iris Versicolor. Blue Flag. This plant is found sparsely growing near the edges of our ponds and river lakes. It has a perennial, horizontal, fleshy root, and a stem about two feet high, round on one side, acute on the other; the leaves are sheathed at the base, sword-shaped and striated; the flowers are from two to six, and are blue. It blooms all the season from May until August and September. The root possesses diuretic, cathartic, and emetic properties, but is only used in domestic practice. It has some reputation among the country people in what they term "*Gravel.*" It is always used in decoction.

Triosteum Perfoliatum. Feverwort. Wild Ipecac. This is an indigenous perennial plant found upon the valleys and plains. The root is horizontal and thickest near the stem. There are generally several stems growing out from the root, which are hairy, round, and pithy; it is about 2 feet high; the leaves are opposite, large, mostly connate entire, narrowed at the base, and hairy beneath; the flowers, which appear in May and June, are of a pale, purple color, being in axillary whorls. The berry is three-celled and three-seeded. The leaves are given in decoctions, and are cathartic and emetic. It is in high repute amongst botanical and eclectical practitioners.

Monarda Punctata. Horse Mint. This is an indigenous perennial plant growing abundantly in shady valley-lands all over the country. It has a square, whitish stalk with branching limbs; leaves are oblong, lanceolate, slightly serrate, and smooth; the flowers yellow and disposed in whorls; the branches and leaves are used as a stomachic and diaphoretic. It is used in domestic practice as a remedy for flatulency and colic.

Nepeta Cataria. Cat-nip, or Cat-mint. This aromatic plant, grows abundantly in our old fields and in the neighborhood of waste places. I cannot say that I ever saw it growing remote from settlements, and am rather disposed to believe that is was introduced by the

Indians. There is an admitted doubt as to its nativity. I shall place it amongst the indigenous plants. It is herbaceous and perennial, with quadrilateral hoary stem growing abundantly out from the root; the leaves opposite, cordate, dentate, green, hairy, and whitish beneath; the flowers purplish, arranged in whorled spikes, appear in June and July. The whole plant is pungent and aromatic. The leaves are used in infusion by the country people in the diseases of children and in all menstrual derangements. I have seen it used in the form of poultice on the abdomen in tenderness and irritability of the stomach and intestines.

Podopyhllum Peltatum. May Apple. Mandrake. This is an herbaceous plant with a perennial root, found in great abundance with us, generally preferring shady places; the stem grows about 12 inches high, bifurcates near the top, each branch bearing a large, palmate leaf with 6 or 7 wedge-shaped leaves irregularly incised at their extremities, yellowish green above, paler and slightly pubescent beneath. The flower is white and pendent, the fruit about the size of a guinea egg, of a lemon color when ripe, slightly spotted. It is much sought after as a luscious, pleasant fruit. The flowers appear about the beginning of May. The root, the only medicinal part, is actively cathartic. It is much used by the botanic and eclectic physicians. It nauseates, and sometimes vomits when given in large doses. The dose of the powdered root is about 20 grains. An extract called Podophyllin has been prepared from the root, the dose of which is about 6 grains. It is said to diminish the frequency of the pulse when given in minute doses. Its advocates claim for it a specific influence over the diseases of the liver.

Aristolochia Serpentaria. Virginia Snakeroot. This species of Serpentaria, may be found in great abundance in our valley lands. It is an herbaceous plant with a perennial root sending up a number of slender jointed blackish stems 8 or 10 inches high which support at the joints, on short petioles, oblong, cordate, acuminate leaves, roughish beneath.—The flowers which appear in April and May, and are purplish, proceed from the joints near the roots, and stand singly on long slender peduncles which bend under the weight of the flower nearly to the ground. The color of the root as it appears here, when gathered, is yellowish brown, and consists of numerous slender fibres attached to a short knotty head; the smell of the root is strongly aromatic, its taste bitter and pungent.—The root is used both by the regular practitioner and the country people, in decoction, as a diaphoretic and stimulant, in fevers and when added to rhubarb is much used for amenorrhœa. Added to the root of Phytolacca decandra and macerated in whiskey, it is used for the cure of rheumatism; if the root of the Podophyllum Peltatum is added to these, it may be used as a tonic, and cathartic in the treatment of anasarca.

(To be continued.)

REVIEWS.

Rev. I.—*Physiological Chemistry:* by Professor C. G. Lehmann. Translated by George E. Day, M.D., F.R.S.; edited by R. E. Rogers, M.D., Professor of Chemistry in the Medical Department of the University of Pennsylvania; with Illustrations. In two vols. 8vo. I. 648; II. 547. Philadelphia: Blanchard & Lea. 1855.

This work, published at Leipsic in the autumn of 1849, and translated into English in 1851, by Dr. Day, under the auspices of the Cavendish Society, of England, now appears *Americanized*, that is, *edited* by Prof. Rogers, of Philadelphia—a work rich in facts, speculations, suggestions, and original researches, which must prove very acceptable to physiological and pathological chemists.

Professor Lehmann, equalled by few, perhaps surpassed by none in his grand speciality, has labored with zeal and success to advance physiological chemistry, displaying its weak points and its strong, its achievments and its failures, always seeking as his stand-point or observatory, the pyramid of physical science—a lofty eminence which, alas! affords as yet, only a limited view and casual glimpses into the realms of physiology.

The science which Lehmann has illustrated with his genius, is comparatively new and necessarily cumulative, and withal difficult and imperfect. The Berzeliuses, the Simons, the Liebigs, the Lowigs, and the Lehmanns of each succeeding generation, will not only inherit and extend, but to a certain extent supersede the profoundest researches of their predecessors. It is not the instability of physiological chemistry, but its present imperfections and its future progress which will bring about these changes; its greatest luminosity originates with and emanates from the elevated intellects of the few, to the many, whereby new objects long concealed, appear as the darkness recedes.

From what is already known of physiological chemistry, although but little is yet available in practical medicine, there is good reason to expect that therapeutical improvements of great utility will reward continued patient investigations, soon or late.

It must not be concealed that the practice, that is to say the analytic processes, tests, and results of organic chemistry, in so far as they apply to medical practice, are too cumbrous, tedious, difficult and delicate even to adepts, and withal too expensive in many instances, to be carried into successful operation at the bedside where the impending issues of life and death meet face to face, admitting of no delay. It may, however, be affirmed *à priori* of physiologico-pathological chemistry that, in proportion as its principles and practical processes shall be fully developed, fixed, and known, its applications, in individual cases, will be characterized with a corresponding facility, celerity, simplicity, and certainty, now unknown in the practice of medicine.

If organic chemisty be considered solely in a practical point of view, it will be seen that its uses are either little appreciated, or little applied by the great body of the medical profession. There is in this behalf, a great difference between what *ought* to be and what *is*. In science enthusiasm is allowable, exaggeration never. In the actual condition of physiologico-pathological chemistry, the practitioner at the bedside, even though a Lehmann in knowledge, can seldom base a prescription upon a solid chemical platform, whether the indications call for venesection, opium, mercury, quinine, iodine, baths, or blisters. Nay more, when the chemical alteration from the normal to the pathological state is ascertained, it does not follow that the chemical agent which would out of the animal organism, restore the desiderated constituents, will upon purely physical grounds, under the complicated conditions of the animal economy, perform the same office in the cure of the sick.

Prof. Lehmann has very fully acknowledged these failures of physiological chemistry, which latter, nevertheless, he repeatedly urges as being a purely physical science, as if the physical and physiological were identical!

Prof. Lehmann's criticisms upon the unwarrantable pretensions and grave errors prevalent among physiological chemists, as set forth in his Methodological Introduction, are just, yet *not* at all flattering; he therein says: "It may not be unprofitable to begin by indicating the numerous errors into which those most zealous in their endeavors to elucidate physiology and medicine, have occasionally been led by chemical theories and inquiries. These errors appear to us to have diverged in three different directions. In the first place, too little attention has been directed to the laws of a true natural philosophy, whose simplest rules have in many cases been wholly disregarded; in the next place, the necessary *casual* connection existing between chemistry and physiology,

as well as between histology and pathological anatomy, has too often been entirely neglected; and lastly, much misconception has arisen from the assumption that chemistry afforded a satisfactory solution to many questions which it is either wholly incompetent to answer, or which must at all events remain undecided in the present state of our knowledge." ii. 17, 18.

In Physiology or "Metaphysiology" Prof. Lehmann is a materialist, utterly denying the existence of a vital force. The vital forces, he terms chemical, physical, or rather mechanical. Even if it should turn out to be true in the progress of physiology, that the so-called vital phenomena shall be reduced to the laws of mechanics, still in the present state of our knowledge, Prof. Lehmann's reasonings in this behalf, are inconclusive, while his assumptions and biases are unwarrantable dogmas, for even upon his own ground neither the chemical nor the mechanical philosophies will at all explain the so-called vital force, which, after all his denunciations, may exist—*does* exist—is known to exist by the strongest of all kinds of evidence, namely, intuition, thinking, feeling, voluntary motion, and the like, peculiar to living entities, which are entirely inexplicable by pure mechanics, not being, however, contrary to, but above the known laws of that science. In fact, all the fundamental ideas of Dynamics or Force are derived from the physiological, or subjective, self-conscious type, which is a strictly intuitive principle. All voluntary action in the universe, is only explicable by this intuitive type. The type of all involuntary action in terrestrial and celestial mechanics is derived thus from the subjective or self-conscious, and consequently, intuitive element; for by simple consciousness alone can the idea of a mechanical or involuntary action itself be construed; many involuntary actions are known to be going on in the body. The ideas thus acquired of involuntary, yet vital actions divested of both volition and vitality, though they cannot be defined, are readily transferred to inert matter, whether it roll in planetary masses, or float in motes in the sun-beam. Thus involuntary actions which control in crystalline forms, or chemical combinations, or immovable masses *in equilibrio*, have their fundamental types in the economy. And yet Prof. L. says—"The living body itself is not the place where we should seek to investigate the forces by which the movements of animal matter are controlled, and it is only when examined externally to the organism that we can make them subservient to the elucidation of the phenomena of life." Now this whole enumeration is essentially erroneous. The fundamental ideas of life, force, motion, etc., could not be even conceived except through the sub-

jective types of self-conscious intuitions, as already indicated, and as might be fully proved by an analysis of the fundamental principles of human knowledge.

While Prof. Lehmann repudiates all vital force, he freely and candidly admits that our knowledge of mechanical and chemical forces and their leading laws, is extremely limited, often absolutely null.

The pure physicist will never be able even to make himself or his followers comprehend, by mere external conditions, the meaning of the following and many other verbs, except through the internal or subjective element: To feel, to will, to see, to hear, to taste, to smell, to hunger, to thirst, to love, to hate, to feel sick, to feel well, to act. The same is true in regard to the investigation of "the forces, movements, and the phenomena of life," all of which ought, and necessarily must be studied "*in* the living body" and *not* "*externally* to the organism," as Prof. Lehmann directs, and insists that they should be; "the living body," says he, "is not the proper place to investigate the forces and phenomena of life!"

Prof. Lehmann, however, has taken a view of physiology from a physico-chemical platform which is much to be commended in a work on physiological chemistry. While he has conceded nothing to vitalism and has eulogized the advancement of physical science, he has also indicated great hiatuses in our knowledge of the latter as an expositor of the former.

Prof. Lehmann denounces Vitalism in the following language:—

"The principle of vitality has passed away—exploded—even a semblance of reality to this exploded notion would be at once to condemn the most brilliant discoveries of the last few years, and, indeed, the labors of half a century, as the manifestations of mere delusive chimeras." ii, 304.

"It would be far more conducive to the advancement of science, were we to direct our efforts to the task of referring vital phenomena to mechanical conditions, instead of resigning ourselves to the fiction of a general principle, which will never satisfy that natural striving of the human mind, which seeks to embrace all phenomena in one ideal connection." ii, 306. The reduction of all vital phenomena to mechanics, all phenomena "to one ideal connection," is but a *reductio ad absurdum*. This ideal can never be realized in nature, because it does not exist. All the hierarchies of the subjective and objective worlds, the realms of matter and of mind—all potentialities, ontologies, and entities, terrestrial and celestial, of the universe, cannot be reduced to "one ideal," because

such an ideal unity or oneness is fundamentally invalid. It is not possible to reduce all falsehoods to one ideal of truth, all vices to one ideal of virtue, all life to death, all mind to matter, all hopes, fears, consciousness, consciences, ratiocinations, sensations, voluntary motions, and psychological operations, to pure mechanics. Pantheism never went so far as this dogma.

There is neither necessity nor propriety in a vitalist's "resigning" physics. He should equally, with Prof. Lehmann, seek to explain by physics all that it can justly claim as truly belonging to its domain, but he will find a residuum not thus explicable, both in physiology and psychology. Nor is there any probability that thinking, feeling, voluntary locomotion, not to name many other attributes of a living entity, will ever be reduced to and solved by one ideal, theory, or formula, and that, too, a purely mechanical one.

That dogmatism which denounces, and that scepticism which doubts the validity of first principles or intuitive evidence, must ever be comparatively harmless, inasmuch as they must ever be inoperative in practical matters, as was the scepticism of David Hume and Bishop Berkeley. The fundamental principles of subjective and vital science being subjective cognitions, no words, formulas or sceptical proclamations can wholly destroy their force, when tested by actions. It is difficult to decide which is the greater absurdity—the attempt to prove, or disprove, the reality of one's existence, &c. Neither the Iliad nor the American Revolution—neither the understanding nor the will—neither the consciousness of pain nor of personal identity, is explicable in its origin or progress by any known chemical or physical formula. Indeed, a great deal of subjective knowledge, though self-evident, cannot be even defined only by means of the personal consciousness, sensation, &c.

Thus Prof. Lehmann, biased in favor of *physicism*, to the utter exclusion of vitalism, metaphysical, and psychological science, is sufficiently credulous in behalf of the hitherto incomplete solutions of many problems, offered or evaded by the former, though altogether too sceptical to the valid claims of the latter. Pantheistical in physiology, ignoring the psychical and subjective elements of knowledge, he views force, affinity, sensation, motion and vitalism as essentially materialistic, chemical or physical. His Ideal is grim Matter, the subjective, spiritualistic and vital, being but the antithesis of true philosophy, figments of the imagination. Chemistry, however, being a physical science, a bias, such as is here indicated, is not to be condemned

but commended, since it may lead to unexpected discoveries. Resignation is despair.

Pathological and physiological chemistries are, in Prof. Lehmann's philosophy, inseparable, being but expressions of one law. "Pathological phenomena," he argues, "can only be recognized when manifested preponderatingly in some one direction, but they, of necessity, obey one and the same law. As the result of indispensable conditions, we cannot regard them as anomalous or abnormal—independent of a law. The chemist is an investigator of nature, even when occupied in studying pathological processes, as the physiologist is still engaged in physiology, when turning his attention to the less frequent phenomena of the living body; for there is no special science for the exceptional phenomena of nature, but only one physiology, as there is one all-powerful law of nature."

To these doctrines the philosophical reader will find little cause for dissent. The assumed popular theory of a fundamental antithesis existing between physiological and pathological processes is more apparent than real, though, in a practical point of view, it is a convenient distinction.

Prof. Lehmann most zealously urges the importance of the statistical method of chemical investigation as a protection against erroneous hypotheses, as a check to, and confirmation of, other scientific methods, and as an aid in solving many interesting questions. "This statistical method," says he, "preserves us from setting up untenable hypotheses and prosecuting useless experiments. How long were the minds of natural philosophers haunted with the illusion that animal bodies possessed the power of generating mineral elements, as lime, iron, sulphur, &c., from other elements, or even from nothing! It was this method alone which exposed the perfect nullity of the obstinately defended dogma of the 'vital force.'"

Of the "*physiologico-experimental*" method of investigation, he says: "Chemistry, unfortunately, too often fails us to permit of our deriving from this method all the results which it appears to promise; it must, however, ultimately furnish the keystone to all physiologico-chemical inquiries, which, without its aid, would continue insoluble enigmas, and would admit of hypothetical, rather than actual, explanation. The theory of the metamorphosis of animal matter, without the support of such a physiologico-experimental foundation, must continue to be attended by no little risk."

Prof. Lehmann totally repudiates the humoral pathology. He

remarks,—"What we have already said in reference to the mode of treating pathological chemistry, sufficiently demonstrates how visionary are all anticipations of the formation of a perfect humoral pathology, which is indeed a science that has no existence except in the dreams of mere enthusiasts." ii. 411. In animadverting on "the false position assumed by pathological chemistry in reference to pathological anatomy," he asks, "Whence comes it that those who would set aside pathological anatomy, and who profess to limit their investigations to the actual facts of medicine, should threaten us with all the horrors of a transcendental humoral pathology?" * * *

Of the Rokitansky school he says, "Hence there has emanated from this school, notwithstanding the positive observation upon which it is based, a multitude of the most unsubstantial medical fictions which, for shallowness, yield to none of the earlier schools. Pathological views in reference to the nervous system, have been elevated to the prejudice of physical views. Ideas, or rather mere words, have been unscrupulously borrowed from organic chemistry (by those who were perfectly ignorant of this science) to explain complicated processes of which scarcely anything was known but the final results. Some adherents of the pathological-anatomical school have presented us with a theory of the *crases* of the blood in different diseases, although this is a view in which no chemist could at present seriously concur."

* * * "Have the numerous analyses of morbid blood fulfilled the expectations of physicians? Have the numerous analyses of the urine led to much more than the assumption of several new species of disease, or so-called diatheses? Animal chemistry is still wholly unable to afford us a precise, and at the same time practically useful method of investigating the blood; and how should it be otherwise, while we continue to be in doubt regarding the chemical nature of its ordinary constituents?"

"The surest supports of physiological chemistry are to be sought in general organic chemistry; while the study of the organic substrata of the animal body, or zoo-chemistry considered in the strict sense of the word, must necessarily constitute an integral part of physiological chemistry. If zoo-chemistry ever fulfill its object, it must be by the joint aid of chemistry and physiology. The physiological value of each substance should be considered in zoo-chemistry (the basis of physiological chemistry)."—EDITOR.

Rev. II.—*The Obstetric Memoirs and Contributions* of James Y. Simpson, M.D., F.R.S.E., Professor of Midwifery in the University of Edinburgh, etc.; edited by W. O. Priestly, M.D., Edinburgh; formerly Vice-President of the Parisian Medical Society, and Horatio R. Storer, M.D., Boston, U. S., one of the Physicians to the Boston Lying-in-Hospital, Member of the Medico-Chirurgical and Obstetric Societies of Edinburgh, etc. Vol. I, pp. 756; large 8vo., with Illustrations. Philadelphia: J. P. Lippincott & Co. 1855.

Prof. Simpson's adoption of anæsthetics in labor, together with his researches on the uterine sound, the intra-uterine pessaries, the exploring needle, &c., has made his name known in both hemispheres. A reputation, such as his, even when not well-founded, is available for many purposes. Papers, essays, and books, though intrinsically of small value, become, not only virtually valuable, at least to publishers and to booksellers, but also satisfactory to some critics, and acceptable to the reading multitude who always follow a great, or at all events, a celebrated leader. For the publisher and bookseller the reputation of an author is not only cash, but his work may be also a good advertising medium for annotators and parasites, never scarce in the literary community, who insert their names in the title page and append them to a hundred foot-notes, without, in many cases, contributing an original thought, observation, or experiment. It is this disgraceful conduct that brings contempt on the Medical Literature of the North American Republic. Had Franklin, Rush, Jonathan Edwards, Irving, Channing, Bancroft, Prescott, Cooper, Dewees, Meigs, Drake, and some others, adopted the annotating and compiling system, America would have acquired the unenviable claim to precedence in literary flunkyism, in the Republic of Letters.

It is evident that the editors of Dr. Simpson's work regard every scrap and fugitive paragraph from his pen, as good enough for republication; being doubtlessly of the opinion that the work, as a whole, would bear considerable dilution, as is practised upon concentrated brandy. As there is no index to this ponderous volume, the more extended and more deeply interesting papers which it contains ought to be prefaced by a copious analytic table of contents, which would serve to guide the practitioner who wishes to consult it in the critical hour of danger. Instead of this, all of the papers, though of but a single par-

agraph, are equally honored, having an equal amount of caption and large capital letters. Of these papers, eleven consist of a single paragraph each, sometimes less than a dozen of lines; about twenty fall short of one page, and not a few fail to reach 2, 3, and 4 pages, whilst three or four are very prolix, but would, nevertheless, be useful for reference, in a practical point of view, had tables of contents or an index been added. By omitting four papers which make nearly half of the volume, the remaining seventy-seven will average only five pages and a fraction for each. Such brevity, where there is little coherency among the numerous topics, is seldom edifying.

Dr. Simpson dedicates this big book to the distinguished Professor Magnus C. Retzius, of the University of Stockholm, informing him that the editors, Drs. Priestly and Storer, had "voluntarily assumed the task of urging the sheets through the press" with "annotations," and that, "if the author of these hurriedly written communications had attempted to re-model, extend, and correct them, they never would have been published in a collected form." Verily, these "voluntary annotators" have not overshadowed their principal, seeing that their annotations are few, short, and unimportant.

Dr. Simpson may have supposed, and, possibly correctly, that his reputation, which is deservedly great, would justify him in raking the medical journals for his articles, without the trouble of arranging, condensing, and re-writing them, as an author of a less available reputation would be compelled to do, before offering them to the great public, in their present fragmentary form. But the editors say "that Dr. Simpson is not responsible for the appearance of these volumes in their present form." "We have given all of Dr. Simpson's Obstetric writings, up to the present date (April, 1855), with but a single exception of little value."

The most novel and fundamental portion of this volume relates to the "uterine sound, the exploring needle," &c., to which allusion will be made. But in order to reach, though but incidentally, the polemics and merits of this department, it will be necessary to examine the issues which have been injudiciously revived, which can best be effected by falling back upon the preface to the American edition.

That a gentleman of Dr. Storer's character, distinguished abilities, and ardent love of his profession should have written the preface which appears in Dr. Simpson's book, is extraordinary, and requires an impartial examination in a moral* and scientific point of view—a self-imposed and

* The Code of Ethics adopted by the American Medical Association declares, (Chap. ii, Art. 1,) in relation to the "*Duties for the Support of Professional Character:*

unwelcome task. Those who believe that neither dissent nor approval—animadversion nor eulogy, can be disinterested, are welcome to apply their theory.

Others may think that Simpsonian "sounds, needles and intra-uterine pessaries," so vehemenently approved, endorsed and defended by the Boston editor, are not altogether safe, and that resistance thereto might possibly proceed entirely from a regard to the well-being of society, and not from a desire to deal, as Dr. Storer alleges, "unfairly with the intra-uterine pessary."

The warlike attitude, offensive and defensive, assumed by the Boston editor, is altogether *con amore*, free-fighting, being "entirely without Dr. Simpson's permission, which he utterly refused." This protectorship over Dr. Simpson, together with Dr. Storer's filibusterism against Dr. Simpson's enemies of the French Academy, and, more than all, against "the inveterate" Dr. Robert Lee, of London, as the sequel will show, is not only gratuitous and self-imposed, but altogether unwarrantable, and the more so because the reader is assured that "it will be painful to Dr. Simpson," as it is sure to be to all right-thinking readers of this volume. It is said by the editor that "Dr. Simpson had replied at length to several attacks. The remainder he has probably considered beneath his notice;"—"he is desirous that by-gones should be past and wrongs forgotten." Alas! had he been saved from his friends!

Dr. Storer, though he carries the war into London, (not, however, on his own account, nor by the permission of his "master,") assures Dr. Simpson, "whom he is proud to call master," that the "master" aforesaid "is better known throughout the United States" (thirty-one sovereign realms) "than any living obstetrician"—"promising him a hearty welcome among us"—"a man not yet forty-four years of age." Ye pupils of the Meigses, Bedfords, and others, what will ye say to the verity and adulation manifested in these attempts to disparage your

1. Every individual, on entering the profession, as he becomes thereby entitled to all its privileges and immunities, incurs an obligation to exert his best abilities to maintain its dignity and honor, to exalt its standing, and extend the bounds of its usefulness. He should, therefore, observe strictly such laws as are instituted for the government of its members; should avoid all contumelious and sarcastic remarks relative to the faculty, as a body; and while, by unwearied diligence, he resorts to every honorable means of enriching the science, he should entertain a due regard for his seniors, who have, by their labors, brought it to the elevated position in which he finds it.

2. There is no profession from the members of which greater purity of character and a higher standard of moral excellence are required than the medical; and to attain such eminence is the duty every physician owes alike to his profession and to his patients. It is due to the latter, as without it he cannot command their respect and confidence, and to both, because no scientific attainments can compensate for the want of correct and moral principle.

Art. VI. *Of differences between Physicians.*—1. Diversity of opinion, and opposition of interest, may, in the medical, as in other professions, sometimes occasion controversy, and even contention. Whenever such cases unfortunately occur, and cannot be immediately terminated, they should be referred to the arbitration of a sufficient number of physicians, or a *court-medical.*"

"living obstetricians"? Outside of Boston, is any citizen, not excepting the President, so great a potentate as to be able to promise and assure any one, at home or abroad, of "a hearty welcome" throughout these thirty-one realms? Not one! Dr. Simpson should waste neither his time nor sympathy on any nation so remote from Edinburgh as the United States, if it be so degraded as to have no obstetrician in it, "better known" than any foreigner, not excepting himself. When Dr. Simpson visits a country it will be one worthy of him, where he will have the pleasure of meeting his equals,as well as his admirers, and some parasites, it may be.

On the free-fighting, or *con amore* principle, "without Dr. Simpson's permission," and in opposition to his "utter refusal," Dr. Robert Lee, formerly competitor for "the chair Dr. Simpson now holds," is at a safe distance, charged "with having successively attacked every proposition of any importance which the latter has made." "Dr. Lee's chief works on obstetrics, (it is Dr. Storer who speaks,) which formerly gained for him such reputation as a practitioner and as a writer, are now becoming considered entirely unreliable. His famous system of uterine nerves has been proved by Dr. Snow Beck, from the same identical specimens, not to exist; and the honors conferred upon him by one of the highest societies in Great Britain [The Royal Society] have been formally and ignominiously cancelled. Objections to the intra-uterine pessary coming from such a source as this, and probably based on, not a single truthful observation, should certainly gain no credence. Again, a report has recently been made to the French Academy adverse to the employment of these pessaries. To this report, also, I must warn the profession against lending too ready an ear." The Academy is no better than Dr. Lee, being "unduly biased, unfair," &c. This Academy, so far from being unfriendly to Dr. Simpson, has recently elected him to membership, thereby conferring and receiving honor.

Without dwelling upon this course of reasoning as being a *non sequitur*, it may be remarked that the Simpsonian claim of priority in the use of uterine sounds is denied by the French, M. Récamier, and others, having previously used these instruments.

Of the preceding extraordinary statements concerning Dr. Lee, &c., it is intended, in the sequel, to say something, not solely through justice to him, but with a view to discountenance servility, "voluntary" partisanism and *con amore* warfare.

It may be remarked that Dr. Storer's gratitude is altogether exuberant, in a literary point of view, as he abdicates "the coldness of

the editor for the warmth of a friend," adding: "For one year I was admitted to close intimacy with him. I am proud to call him master. In selecting an American as one of his editors he testified his regard for our country. I could only promise him a hearty welcome among us." Dr. Simpson honors this Republic by selecting his editor!

"Vain men," says Dean Swift, "delight in telling what great company they have kept, and the like; by which they plainly confess that these honors are more than their due, and such as their friends would not believe, if they had not been told: whereas, a man truly proud thinks the greatest honors below his merit, and, consequently, scorns to boast."

Dr. Storer fortifies Dr. Simpson's superiority, not to say infallibility, by an assertion, and a prophecy, namely: that nearly all of Dr. Simpson's "points, suggestions and practice, once deemed doubtful, are already acknowledged," and that all not acknowledged "*will be.*"

Here let the reader pause, in order to examine the ground, unmask the batteries, and consider the "points" in this triangular war in Boston, London and Edinburgh — the "inveterate" enemy being Robert Lee, a Scotchman, now verging upon three score years—a graduate of the University of Edinburgh more than forty years ago—a traveller and student upon the Continent, physician to the Prince Woronzow, Russian Governor-General of the Crimea—personally received by the Emperor Alexander I, whose post-mortem examination Dr. L. has reported—the introducer of quinine into practice in the Crimea—the Crown nominee, or Regius Professor of Midwifery in the University of Glasgow—the member of many learned societies—the indefatigable lecturer, practitioner and voluminous writer upon Obstetrics—constantly resident in London for nearly thirty years—the authority upon his speciality quoted most generally in both hemispheres; yet, withal, "*Dr. Lee's works are entirely unreliable!*"

The Lancet says that Dr. Lee "has entertained a deep dislike to the mechanical doctrines which have prevailed on the Continent so extensively during the last fifty years, and which now begin to appear in this country. As an operator in midwifery, we question if whether, at the present time, there is one who possesses equal skill, decision and vigor, in cases of real difficulty. We have never heard that he was ever appalled by any dangers."

As to Dr. Lee's recent relations to the Royal Society (of which he has been a member for a quarter of a century) it is probable that the American medical community, even that of Boston, know too little to be able to give a safe judgment in the premises. Dr. Lee's immediate

neighbors who are best acquainted with these unfortunate misunderstandings, so far from considering him as covered with "infamy" or "ignominy," not only exonerate him, but defend him, and blame the Royal Society. This Journal, without assuming a partizan platform, may advert to the published opinions of the London medical press, seeing that Dr. Lee is thus bitterly assailed in America.

The Lancet says: "Dr. Lee's last paper in the *Philosophical Transactions*, 'on the Ganglia and Nerves of the Heart,' required an expenditure of about £100, less than £30 of which was defrayed by the Society. This he did for an institution, the council of which had endeavored, by the most malicious and illegal deeds, to rob him of the scientific reputation he had merited," &c.

The British and Foreign Medico-Chirurgical Review, says: "It is our decided opinion, of all the transactions that have occurred between them [the Society and Lee], Dr. Lee has fair grounds of complaint against the Society. We trust that the Physiological Committee will take warning and avoid even the appearance of favoritism and jobbery." Other references of like import might be given, were it necessary. Justice, not to say charity, requires, in this behalf, neutrality on the part of Boston, the Czar, the Allies, and "the rest of mankind."

Those who are acquainted with the history and statutes of this Society, know that it not only publishes the accepted papers of its members, but offers recompenses or prizes for the advancement of science. Its revenues derived from bequests, admission fees, taxes, contributions, &c., are said to be very large.

It does not follow that in a misunderstanding with this Society, Dr. Lee must necessarily be "*ignominious*" and "*entirely unreliable*," because the Society "cancelled the honors it had given." It is said in the public journals that when *Victoria Regina* went to war against the Emperor of all the Russias, she cancelled the honors of "knighthood" bestowed upon the late Czar; yet this cancellation did not render Nicholas "ignominious," nor "entirely unreliable." He descended to the realms of death, as he lived, the cynosure of the world in arms.

Dr. Storer offers the following argument for Dr. Simpson's practice with the internal uterine pessary: "Intra-uterine pessaries have, on the whole, been very unfairly dealt with. The very idea of manipulating an organ so important and apparently so sensitive as the uterus, with such seeming heroism, was of itself enough to alarm very many honest and brave men, and to create an almost invincible prejudice. Such objection, though the subject was one more difficult of investigation,

might yet have been answered by pointing to the successful and closely analogous use of the sound." Albeit much may be said in opposition to the cogency of this argument. The analogies drawn from less important, less complex, and less central organs, are not altogether conclusive, while the successes claimed have been denied by authorities equally competent to testify from actual observation. Indeed, the analogies derived from physiology, pathology, and anatomy, are altogether adverse to "the very idea of manipulating an organ so important" in the manner indicated. The anatomical conformation of the pelvic organs and passages in connection with the external and vaginal apparatus supporting an ivory or metallic stem, holding up the womb like a liberty-cap on a bayonet, is too "heroic," and withal too dangerous for "honest and brave men," whom Dr. Storer calls "prejudiced." A sudden jerk, fall, or careless manner of sitting down, might go far towards "impalement," as Dr. Lee thinks, while injury, as contusion and inflammation, ought to happen as in "analogous" cases.

The following is an example of this "heroic" practice taken from Braithwaite's Retrospect, quoted from the British and Foreign Medico-Chirurgical Review:

ON DR. SIMPSON'S UTERINE SUPPORTER.

Dr. Ashwell says:—Two cases have recently come under my care, and I have heard of more, where the results arising from the use of this instrument have been very serious. Looking at it pathologically, I can scarcely imagine anything better devised for inducing disease. According to this practice, a piece of ivory, two inches and a half long, is to be introduced into the uterine cavity, and its bearing must of necessity be on some part of the lining membrane, a surface ill adapted to support the pressure for two or three months together of such an instrument. The consequences may be supposed. One of the patients from whom, after a long and distressing journey, I removed this ivory one-pronged fork, told me she had never been from pain since its introduction. In addition, it had produced frequent and intense sexual excitement, preventing sleep for many nights together, and had kept up constant leucorrhœal discharge. In the other example, during the two months this instrument had been in use, the sufferer, in addition to the previous complaints, had never been free from sanguineous discharge, lumbar pain, and frequent desire to micturate. In both, the speculum showed that abrasion of the os and the ostium vaginæ had resulted from the use of the so-called uterine supporter.

[The reviewer of Dr. Ashwell's work also expresses an unfavorable opinion respecting the plan of introducing a stem into the uterus. Speaking of this, and other fashionable practices, he says:]

Is there anything so serious in a retroversion or retroflexion of the unimpregnated uterus, as to justify a practitioner in running the risk of

exciting peritonitis, cellular inflammation, and abscess,—injuring the structure of the womb,—and enkindling desires, or implanting habits, which destroy purity of feeling and physical health? Our own conviction is, that this supporter will be found to create more disease than it cures: and with the belief that the uterine sound will be extensively, because easily employed, the same observation will, we think, be verified in it. The habitual use of powerful escharotics in simple inflammatory hypertrophy of the cervix, cicatrizing and contracting the os and cervix, and frequently too the vagina, and risking deeper-seated pelvic inflammation, is open to a similar inquiry, and the same animadversion. May we not add, too, the practice, now becoming common, of opening and dilating the os uteri, whenever it happens to feel rather small, and smearing the uterine cavity with the solid nitrate of silver, to excite the menstrual flux; and, at last, to cover the spirit of obstetric adventure with the mantle of Quixotism, the announcement that the Fallopian tubes are to be explored to remove sterility? Surely, in all these, there is much that is visionary; more that is meddling; and in all there is the tendency to create more disease than they cure. It appears to us that much of what has been proposed and adopted in the treatment of uterine disease within the last six years, has been empirical, and rashly experimental; and that the evil results have been in a great measure concealed.

In the Lancet will be found a paper entitled, "A description and delineation of an uterine impaling machine, by Robert Lee, M.D., F. R.S."—a severe title truly, but not so severe as the case described. If Drs. Lee, Ashwell, and others, love the speculum, exploring needle, vaginal and intra-uterine pessaries too little, peradventure Dr. Simpson loves them too much for the public good. Both parties, without doubt, are laboring for the same noble purpose, the well-being of society, the prevention and cure of "ills which flesh is heir to."

It is these statements in which the name of Dr. Lee figures openly, honorably, fearlessly, and doubtlessly conscientiously—it is these dissents, caveats, and demurrers—not the "cancellation of honors"—that render him "entirely unreliable"; albeit, he is still approvingly quoted as authority far oftener than Dr. Storer's "master of whom he is proud," who, himself, quotes Dr. Lee, and cannot consistently wish his "friend" to discredit his own witness as being "*entirely* unreliable." "The warmth of a friend" and "the coldness of an editor" cannot reconcile such inconsistency.

As to Dr. Storer's assertion that Dr. Lee's "famous system of uterine nerves has been proved by Dr. Snow Beck, not to exist," it may be well to give Prof. Bedford's summary in this behalf, taken from his recent "Obstetric Clinique:"

"*Nerves of the Uterus.*—The uterus is supplied with nerves from the ganglionic and cerebro-spinal systems; the former, the ganglionic nerves, come from the renal and hypogastric plexuses, and are distributed freely throughout the structure. The cerebro-spinal nerves are furnished by the sacral plexus, and are distributed by anastamosis, and otherwise, with the ganglionic nerves, on the various portions of the uterus. It has been very positively denied that the uterus receives any nerves whatever from the cerebro-spinal axis, and one of the most formidable advocates of this opinion is M. Bouillaud: on the other hand, Jobert maintains that the projecting portion of the cervix uteri is entirely deprived of nerves, and is, under all circumstances, insensible. As to the complete insensibility of this part of the cervix in some cases, he is, perhaps, not altogether wrong; but to deny that it never becomes the seat of pain, is at variance with actual experience. To the opinions of Bouillaud and Jobert may be opposed the researches of Hunter, and, in our own times, of Tiedemann, Robert Lee, Muller, Herschfeld, and Boulan, who have positively recognized in the uterus, in the cervix, as well as in other portions of the organ, distributions of the cerebro-spinal nerves.

It is a great question, not yet decided, whether the nerves of the uterus become enlarged and more numerous during pregnancy, or whether they retain the peculiarities which marked them when the organ was in a state of vacuity. This question has given rise to rather a warm controversy between Dr. Robert Lee and Dr. Snow Beck. The former, after Tiedemann, endeavored to prove, that the increase, both in number and volume is considerable; whilst Dr. Beek, after J. Hunter, denies this altogether, and maintains that the increase is only in appearance, for the reason that the microscope reveals the fact, that the neurilema and certain fibrous bands connected with it have been mistaken for nerves. However this question may ultimately be decided, there is one circumstance which, from analogy, would seem to give strength to the views of Dr. Lee, and it is this, that in hypertrophy of the muscles of animal life—and the same thing is observed in hypertrophy of the heart—as first pointed out by Dr. Lee, and afterward completely proved by an able German micographer, Dr. Cloetta, there is an increase in the number and size of the nerve-fibres."

"Offences must come." The code of ethics of the American Medical Association cannot prevent them. Controversy in science upon unsettled, and therefore disputable points and practice," is often beneficial. Hostile demonstrations in self-defence are natural. But to revive "bygones, forgotten wrongs" voluntarily, is not the mission adapted to a dignified neutrality.

Having devoted so much space to collateral yet illustrative issues pertaining to Dr. Simpson's friends and enemies, little need be said upon the work under consideration, seeing that it is copied from the Medical Journals, and is, consequently, already known to the profession. His

most elaborate paper is, as already indicated, upon the uterine sound, in which he says that "no organ of the body is, in its normal and physiological state, more subject than the uterus to great and striking alterations of volume," assuming, as he does, that the average length of the uterine cavity is 2½ inches. This measurement, to which he attaches much importance, is ambiguous or uncertain, at least for the purpose of his argument, seeing that he wishes to prove diversities of a normal character in this organ, to be greater than in any other organ. If this be so, it virtually nullifies his differential diagnosis based on measurements of the uterine cavity, unless, in very extreme cases, when, indeed, other means of exploration, as that of touch, would be available.

It is true, that the womb, during and soon after gestation, as compared to its unimpregnated state, undergoes "striking alterations of volume," though normal. The post-mortem examinations of a great many dying of acute diseases, as cholera, yellow fever and the like, will convince any one that the uterus, in New Orleans at least, deviates less from the normal standard than almost any of the human viscera, except the pancreas. New Orleans cadavera include a greater proportional number of the races and the nationalities of the world, it interposes fewer obstacles to the making of autopsies soon after death, than perhaps any other city. Dr. Simpson assumes that there is an increased length of the cavity in metritis and hypertrophy of the body of the uterus. This may or may not happen. Inflammation and enlargement may perhaps obliterate the neck or diminish the longitudinal diameter, so as to reduce the organ from the pear shape to that of a globe, without causing the os to recede farther from the fundus, while at the same time the cavity, so far from becoming increased in any of its diameters, may not only be diminished, but closed, so as to prevent uterine catheterization. Indeed, in cancer of the rectum, vagina, bladder, and os tincæ, the womb sometimes undergoes no deviation from its normal size viewed externally, although the cervix may be scirrhous, the cavity being, if not absolutely obliterated, yet so reduced as to be almost indiscernible. There can be no need to introduce the sound, even were it practicable in such cases, in order to render the organ *fixed*, to facilitate examination, medication, and so-forth, inasmuch as its *immobility* long precedes actual ulceration, as may be very easily ascertained by the finger.

The wombs of those who have passed the meridian of life, the child-bearing period, undergo normal atrophy, as do the mammæ. The uterine cavity, no longer concerned in the menstrual and reproductive processes,

is much diminished, and soundings must be difficult, or impracticable, as well as dangerous, and even where hypertrophy may exist, it does not follow that the cavity is enlarged. Inflammatory engorgements of the open passages, closed tubes, and hollow viscera, would not increase, but diminish their internal area or "measurements." At this critical period of female life, irritation, engorgement and scirrhus of the womb might be developed by such forced manipulations with the "exploring needles" and sounds. This organ, if once implicated in such morbid changes, being now no longer depleted (so to speak) by the menstrual discharges, is little responsive to remedies, particularly to those of a mechanical character. If it be possible by artificial means to produce chronic engorgement, or scirrhous indurations of the os and cervix uteri, the three most likely agents and actions would be the repeated introduction of the uterine sound, caustic, and the wearing of an intra-uterine pessary for months.

In a paper "on the use of the exploring needle," it there is pictured, "grooved as a very slender trocar, tipped with a steel point like a graving instrument," with which Dr. Simpson proposes to diagnosticate "tumors about the cervix uteri, cases of extra-uterine pregnancy," &c. This paper, of little more than a page, opens with the assumption that needles, as in acupuncture, can be inserted with "impunity into even the viscera of the living body." It is well known that the criminal abortion-procurers, who, not possessing Dr. Simpson's skill, (it may be,) insert needles into the os tincæ, cervix uteri, &c., are apt to cause either two deaths or one, or dangerous inflammations of the uterus and its annexes.

Dr. Simpson says, rather too broadly, that "in uterine leucorrhœa, dysmenorrhœa connected with a morbidly sensitive state of *portions* of the *inner surface of the organ*, [*womb*,] with membraneous, sub-inflammatory effusions, chronic suppression of the menstrual discharge, &c., *direct* local applications, as the nitrate of silver, &c., can be made with *perfect ease and safety*."

If, as Dr. Storer predicts, *all of Dr. Simpson's "suggestions and practice will be adopted*," particularly his uterine sounds, intra-uterine pessaries, and intra-uterine manipulations, before a decennium will have passed, perhaps uterine hæmorrhages, leucorrhœas, engorgements, inflammations, hypertrophies, occlusions, ulcerations, cancers, and other direful evils, "*will be*" also augmented, including the prolapsus of the womb "*itself*," (to use a pronoun which Dr. Simpson appends to the uterus much oftener than the genius of the English language requires.) The sounding of the womb,

the turning of the sound from side to side, by means of a sound in the uterine cavity so to feel it through the parietes of the abdomen, and the wearing of the intra-uterine pessary for weeks and months would, in other hands than Dr. Simpson's seem well calculated to bring on inflammations, hæmorrhages, and so on, very damaging to the wombs of virgins, matrons, beyond the limits of Edinburgh, and contrary to the aims of that kind of therapeutics which rests on the moral platform, in the school primer, namely, "my son do no ill."

Even the vaginal, extra-uterine pessary, though far more plausible and practicable as a remedy than the "intra-uterine" apparatus, is, for the most part, a very suspicious machine, being liable to perpetual displacement, and well calculated to irritate, dilate, relax and denaturalize the vagina, and to produce inflammations and engorgements of not only that canal, but of the uterus, bladder, rectum, and urethra, as well. If prolapsus uteri be owing to morbid relaxation of the vagina, it is difficult to understand why the treatment adopted in *strictures* of the œsophagus, rectum, and urethra should cure a *contrary condition of the vaginal passage*. If the vagina were too narrow or strictured, mechanical dilators would be recommended. The cases are few in which even a temporary wearing of the pessary will be indispensable, but their inauguration within the womb "must give us pause."

"Call no man Master"—especially such as affirm that it is easy to cure prolapsus uteri, even in virgins, with pessaries placed within or without the womb. Few writers appear to give sufficient weight to the difficulties, often insuperable in these matters. The books, for example, give directions for the treatment of *procedentia uteri*, but seldom enumerate a case like the following:—

In the case of a young woman of good health, resident in New Orleans, whose womb for years had been as completely external as the male scrotum, (*procedentia uteri,*) the vagina having been inverted, it was possible to reduce the organ and to retain it, by means of the pessary, for a *few minutes*, but the viscera had invaded and long occupied the uterine region, and would not tolerate either the replaced womb or the pessary, both of which were now virtually outsiders and foreigners, so that a suspensory bandage was the only relief that could be afforded. It is believed that the descent of the superimposed viscera is sometimes the cause, as well as the effect, of prolapsus of the womb, and, also, one of the difficulties in retaining it in its normal position—potentialities, if not authenticated facts, which obstetrical writers have not duly considered, if at all, as having a constitutional or rather local origin.

While unsuccessful cases are seldom reported, successful and extraordinary operations have been too often exaggerated or falsely announced. Some of the most celebrated womb-doctors, who keep their own statistics to show how successfully and easily they excise, amputate and manipulate this organ, have not, in many cases, escaped suspicion. Who that has estimated the great reputation, or read that able work, "*Médecine Opératoire,*" of the late Lisfranc, would have anticipated the disclosures made by his daring ex-prosector, M. Pauly, in his 536 pages, showing the falsehood of his preceptor's pretended success: "*Chaque amputation du col,*" says M. Pauly, "*m'offrait une victime!*"

Dr. Simpson says that in eight instances he has excised the cervix uteri; four of these cases, one being unsuccessful, are reported in the volume mentioned at the head of this article. The marks of authenticity, internal and external, are altogether satisfactory.

The references in French, (much affected in this work,) are, comparatively speaking, unusually correct, the errors being probably not 20 per cent! A slight examination of the book, without regarding the obsolete French which is quoted, will show many errors beside the following:—"Demi-cintre," for demi-cienture; "considerablement," for "considérablement; "uterus," for utérus; "élemens and elemens," for élémens; "periodique," for périodique; "memoires," for mémoires; "fecundité," for fécondité; "neuvieme," for neuvième; "Accademie," for Académie; "medicale," for médicale; "legale," for légale; "depression," for dépression; "etait evalué," for était évalué; "caractére," for caractère; "preface," for préface; "memorial," for mémorial; "entirement," for entièrement; "prematuré," for prématuré; "decoller," for décoller, etc. Proper names fare still worse, as "Duges" and "Dugés," for Dugès, &c. The typography, paper and general appearance of this book are unusually good. The engravings in wood are few, small and rough.—Editor.

Rev. III.—*Report on the Diet of the Sick:* by Charles Hooker, M.D., of New Haven, Connecticut. Trans. Am. Med. Assoc., 1855. Pp. 47, 8vo. Philadelphia: printed for the Association.

This Report on the Diet of the Sick, by Dr. Hooker, is a valuable one, being practical in its aims, dealing with a question presented for solution in

every case of sickness, and being, withal, of paramount importance in a hygienic point of view: nevertheless, its fundamental idea is not established beyond all peradventure. The liberality with which he allows and ever forces a rich diet upon the sick, and the well, though suggestive of further inquiries in this direction, must, at present, be somewhat restricted. Its claim to universality is questionable. With or without appetite, both the sick and the well must eat the fat of the land, under pain of an untimely death from scrofula, consumption, or some other malady named in his nosology, ætiology, pathology, and therapeutics. His Materia Medica is fat. The taking of the revolting cod-liver oil is but a disgusting substitute for the more genial and palatable fats recommended as indispensable in Dr. Hooker's bill of fare. Indeed, Dr. H. indicates, as his opinion, that cod-liver oil and "fat meats," with other "oily nutriments," are equally medicinal, their efficacy consisting in their "calorific power."

Many practitioners, who had relied formerly on cod-liver oil, find equal advantages from other animal and some vegetable oils. Dr. T. Thompson, of London, in his late interesting work on Pulmonary Consumption, finds neat's-foot (heifer's-foot) oil, and cocoa-nut oil, sometimes better than that of cod-liver oil. (See Lindsay & Blackiston's edit., pp. 117, 128; *an.* 1854.)

Dr. Hooker is not, therefore, at all singular in the liberal extension and richness of his Materia Alimentaria. Many of the latter-day doctors coïncide with him.

Dr. Byford, in his elaborate Report on Scrofula, published in the Transactions of the American Medical Association for 1855, quotes Dr. Morgan, his fellow-townsman, of Evansville, as an authority, showing that "the drinking plentifully of good sweet cream and a free use of new fresh butter is better than cod-liver oil." Dr. Byford's scale of diet is likewise most delectable: "Good diet, and plenty of it," quoth he. Forasmuch as scrofula may be prevented or cured, while the palate of the most epicurean type is gratified, boardinghouse-keepers must be *de facto* physicians, and should they, in their charity, keep and prescribe this good medicine, "and plenty of it," their practice and popularity will be immense, without any other diploma, or nauseous cod-liver oil. But Drs. Byford and Morgan's Materia Alimentaria does not abound in such cities as New Orleans, and many other places.

"An insufficient use of oily food is," affirms Dr. Hooker, "a common and most injurious error. Cholera infantum often originates from this cause. Some isolated facts have been long noticed, as the exemption of

the oil-eating people of northern countries from phthisis, a similar common exemption of butchers, the efficacy of cod-liver oil."

"Of persons who, between the ages of 15 and 22, avoid fat meat, the great proportion die of phthisis before 45. Of persons dying with phthisis between the ages of 15 and 45, nine-tenths at least have never used fat meat. Most individuals who avoid fat meat also use little of butter and oily gravies; though many compensate for this want, in part at least, by a free use of those articles, and also of milk, eggs and various saccharine substances. But they constitute an imperfect substitute for fat meat, without which, sooner or later, the body is almost sure to show the effects of deficient calorification."

"In many cases of phthisis in its early stage, and in some cases far advanced, with unequivocal signs of tubercular excavation, the use of oily nutriment has caused a speedy amelioration and ultimate cure. But the great importance of oily food, in relation to this disease, consists in its preventive efficacy. The subjects of phthisis are, with few exceptions, those who avoid fat meat. All persons who avoid fat meat should fully understand their danger. Some young ladies, in compliance with an extorted promise to eat daily a small portion of fat meat, I have known to cover a morsel between two thin layers of bread, and thus swallow the nauseous dose (!). Not only in phthisis, but in various other diseases, imperfect calorification occurs in consequence of want of oily nutriment, as in cholera infantum, dyspepsia, protracted typhus."

Whether Dr. Hooker's facts and experiences have been arranged to suit his theory, or his theory to suit his facts, must be worthy of due consideretion, being of paramount importance in daily practice. To eat or not to eat; the quantity and quality of aliments, are questions of high import, constantly recurring to the busy practitioner.

Dr. Hooker's denunciations of water-drinking, to what he calls an excess, or virtually, as he deals with it, a most deadly species of intemperance, do not appear to be altogether well founded. Large potations of water, according to him, are the principal causes not only of dyspepsia, but of cholera infantum, bowel complaints, scrofula, dropsy, urinary disorders, diseased prostate, gravel, purpura hæmorrhagica, epistaxis, hæmorrhoidal discharges, uterine hæmorrhage, consumption, and soforth.

Dr. Hooker's animadversions against water-drinking are not based on the hydropathic platform, namely: the forced, unnatural drinking, not called for by a sensation of thirst, a question he does not at all entertain, but from the whole tenor of his essay it appears that the excessive drinking of water is always, in his philosophy, the drinking when the natural appetite demands it, both in disease and in health.

"A large proportion of the subjects of phthisis," says Dr. Hooker, "have been excessive water-drinkers. Dropsy, in many cases, at least,

is known to be caused chiefly by this injurious habit. In these, and in various other diseases, sometimes the most important indication is, to restrict the quantity of drink; and with this restriction many cases which present a most serious aspect will require but little or no medicine."

These statements, worthy of the prejudices of past centuries, are believed to be contrary to the experiences and opinions of both the professional and non-professional public of the present day.

Although water alone will not cure all maladies, and is not of itself a panacea sufficiently efficacious to constitute an exclusive system of treatment, as pretended in hydropathy, it is generally, perhaps always, when ardently desired by the sick, an useful auxiliary in almost every variety of diseased action. At the great watering places, where large quantities of water of various qualities are used with little or no discrimination, and without any appetite for the same, being, as it were, forced against nature, and yet these numerous and formidable maladies enumerated by Dr. H. have not resulted from these unintentional, but striking, anti-Hooker experiments in water-drinking. It is, doubtlessly, often the water, rather than any foreign constituent, which is curative at the springs, to which many resort with great advantage.

If the instinctive or natural appetite for water produces all the maladies enumerated by Dr. Hooker, how much more would the unnatural, revolting, indiscriminate and forced drinkings, bathings and packings in wet sheets for weeks and months, according to the hydropathic system, cause these maladies to become apparent, constant, fatal.

Hydropathy has proved at least that, (unless there be, as was the case with "poor Ophelia—drown'd, drown'd, by too much of water,") it is difficult to produce the diseases mentioned by Dr. Hooker, and still more to extinguish life by the revolting and unscientific applications to, and saturations of, the human body, externally and internally, by means of water, in almost all diseases as practised by hydropathists.

The very diseases, which, according to Dr. Hooker, are caused by drinking water in excess, that is, in accordance with the natural thirst, are cured, according to hydropathists, by forcing water upon patients against their natural instincts, even in the case of dropsy. In this latter malady, when not caused by incurable organic alterations, the hydropathist argues, a crisis must be effected through the cutaneous and urinary organs by means of wet sheets and copious drinks of cold water, whereupon sweating and urinary discharges take place, and the dropsical

fluid is, by these emunctories, eliminated from the system, as they pretend.

The inferior animals, agreeably to Dr. Hooker's ætiology, ought, upon analogical reasoning, to suffer a multitude of diseases, if permitted to drink water at pleasure, particularly fishes. Man and beast perish, as all know, speedily upon the desert, upon the sea, anywhere, when for a short time deprived of water. If Dr. Hooker's patients were able to reach to or get a pitcher or bucket of water in the night, when all were asleep, they doubtlessly drank freely in all cases, (and were the better for it at the next visit,) as thousands had done before, and will do again, contrary to medical advice. Men are still living who remember the time when cold water was considered fatal in fever, and who date their recovery from copious stolen draughts, of cold water, disallowed by the doctor.

But it is time to return from drink to diet. Dr. Hooker is no vegetarian—far from it. His carnivorous taste is more accurate, however, than his logic in this behalf. He says, "when observation is extended from individuals to nations, national imbecility is invariably found connected with an exclusive vegetable diet. The common diet of Ireland may be regarded as a chief cause for the frequent abortive efforts to free themselves, &c. Millions of the rice-eating inhabitants of the East are held in subjection by a handfull of British troops. The history of war, also, shows a remarkable correspondence, both in land and naval battles, between the comparative efficiency of forces, in equal numbers, and their diet scale—especially their meat rations." Now, if the most reliable French writers on vital statistics and political economy, can be believed, the rural population of France is the poorest in Europe, and withal eat the least animal food, and yet they are unsurpassed in war. Further, the Polar Indians who live almost exclusively on meat and oil, are not a warlike people any more than the rice-eaters of the East.

How great the contrast, or rather the contradiction, between "the diet for the sick" by Dr. Hooker, and that set forth by Broussais and his followers, even as to the treatment of consumption! Not that Broussais' treatment is better than Dr. Hooker's, though both alike diverge into ultraisms. Broussais* repeatedly advances the following therapeutic views as fundamental: Phthisis pulmonalis may be prevented by early removing the irritations of the respiratory organs by antiphlogistics and revulsives. "Scrofula may be removed by the free application of leeches." After recommending blood-lettings and other antiphlogistic means for the cure of consumption, he insists, "that all these must fail, without the *coöperation of regimen—strict diet;*—the fear of debilitating has cost numerous lives. Patients often have a *strong desire for food;* there is

no danger in absolutely depriving them of it. Those who clandestinely procured food, always retained the inflammatory symptoms a longer time. I would recommend a simple milk, vegetable and farinaceous diet;—without its coöperation very few cures will be obtained. I think *rice too nourishing.*" He disapproves of "*fat* soups, the wings of chickens, and good wine."

"As a general rule," says Dr. Hooker, "a generous diet is indispensable to a vigorous mental culture—to richness and variety of thought, and especially to a rational application of knowledge to useful purposes. It would be hard to raise [rear] a [an] 'universal Yankee nation,' or even one genuine Yankee, on a strict vegetable diet." Now Dr. Hooker, of the "universal Yankee nation," permit one who has never been North of "Mason and Dixon's line," and cannot, therefore, speak from special personal observation as to the *physique* and special *habitat* of the "genuine," to ask, how comes it to pass that travellers represent "the Yankee" as lank, lean, angular, and scraggy, as compared with the krout-eating Dutchman, or even the potato-eating Irishman? The latter, notwithstanding his lack of "fat meat," and his failures in rebellion, is, perhaps, the only variety of the human species who fights *con amore.*

Dr. Hooker is not alone in his high appreciation of diet: A recent French author, in his Physiology of Taste says, "la destinée, des nations dépend de la manière dont elles se nourrissent."

"A fact," says Dr. Hooker, "which gives support to the opinion that a generous and varied diet favors health and longevity may be noticed, that in every community, most persons who live to a very advanced age have been free, good livers." The slaves of the South must then be "*free,* good livers" to an extent beyond any other class, even the most favored under the sun, not excepting the "universal Yankee nation." The negroes exceed the latter in their ratio of increase, in good health, and more than all, in long life, and, probably, in abundance of good fat food, as well.

The fat-feeding of Dr. Hooker, whether good or bad for sick Yankees and other Caucasians, would seem, from Dr. Cartwright's large experiences among negroes, to be well adapted to the blacks, for whom Dr. Cartwright prescribes "fat bacon and greens," instead of slops, teas, &c., during convalescence. Dr. Cartwright, however, thus feeds his negroes, partly, because they like his "diet for the sick;" but Dr. Hooker does not allow the Yankees the water for which they thirst,

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*In the October number of the Glasgow Med. Jour., Dr. Hingston, in his account of "the Medical Institutions of Paris" says, of the distinguished M. Bouillaud, that "he still adheres to the severe antiphlogistic treatment."

but gives them fat meat which they do not want, and which, as he says, they "swallow as a nauseous dose between pieces of bread!"

The medical maxims of *savants* upon "the diet for the sick," are—"Starve! no! Eat! Nothing but water! No! Nothing like vegetable diet! No! Animal food! Drink when thirsty! No! Take "the nauseous dose of fat meat! Ptisan! No! Bacon and greens!"

Dr. Hooker's Report, however, contains much useful information concerning the physiology and hygiene (so to speak) of digestion, and the advantages of sustaining the appetite in sickness and during recovery; also, rules for regulating the digestive functions, for promoting the comfort of patients, and for guarding against the dangers of relapses.—Editor.

Rev. IV.—*An Introduction to Practical Pharmacy, designed as a Text-Book for the Student, and as a Guide to the Physician and Pharmaceutist; with many Formulas and Prescriptions:* by Edward Parrish, Graduate in Pharmacy, Member of the Philadelphia College of Pharmacy, and of the American Pharmaceutical Association, and Principal of the School of Practical Pharmacy, Philadelphia; with 243 illustrations. Pp. 544, 8vo. Philadelphia: Blanchard & Lea. 1856.

"As a teacher of Pharmacy," says Mr. Parrish, "I have long since experienced the want of a book which should contain the leading facts and principles of the science, arranged for study, and with special reference to those features of the subject which possess a practical interest to the physician; there are in the United States some thousands of practitioners of medicine to whom pharmacy is necessarily a collateral pursuit; to many of these, and to numerous students under their charge, an elementary work, designed as an introduction to pharmacy, has been felt to be a desideratum"—and this desideratum Mr. Parrish comes forward to supply in the work already named.

The first part of the work is devoted to the apparatus, weights, specific gravities, &c.; also, remarks upon the Pharmacopœia. The 2nd part, Galenical Pharmacy, includes the collection and desication of plants—solutions, filtrations, medicated waters, macerations, infusions, percolations, tinctures, medicated wines and vinegars;—generation and modes of applying heat in pharmacy, evaporation, extracts, syrups, distillations, &c. Part 3d, on the pharmacy of plants, their products,

&c. Part 4th relates to inorganic pharmaceutical preparations. Part 5th contains extemporaneous pharmacy; with an appendix upon physicians' outfit; a list of plants; the diet for the sick; patent medicines, &c.

The physicians and apothecaries, particularly those who live remote from large cities, will find in Mr. Parrish's work much practical information of great value, both as it regards the principles and manual operations of pharmacy, officinal and unofficinal preparations, prescriptions, the dispensing of medicines, &c. The mechanical execution of the work is creditable to the publishers. The repetition of, instead of the reference to, a considerable number of the pictorials, is a Philadelphia *peccadillo*. In this book, however, the repetition of the figures is not without use, but the same cannot be said of some Philadelphia books, in which the plates of one work are transferred to another, all duly numbered 1, 2, &c., while in the text there is not a single reference to these ornamental supernumeraries.

Mr. Parrish's useful work will probably reach a second edition, and, as it does not affect to be severely systematic, the author might enlarge its scope somewhat, so as to give the easiest and most certain tests by which the country doctor and apothecary can detect adulterations of medicine, also the kind of drugs and preparations which spoil by keeping, or will keep in all climates. How to guard against insects; rhubarb for example, becomes, after a time in the latitude of New Orleans, alive with these animals, though enclosed in jars.

Mr. Parrish does well in looking beyond the confines of his own parish, to the country doctor, who is not a specialist, but a walking encyclopædia of practical medicine in all its departments, including pharmacy, and is, withal, as dangerous as fire, thunder, gunpowder and great guns, unless well instructed in his complicated duties.—EDITOR.

REV. V.—*Clinical Lectures on Surgery:* by M. NÉLATON; from Notes taken by Walter F. Atlee, M.D. Philadelphia: J. B. Lippincott & Co. 1855. 8vo. Pp. xii. 755.

THE title of this book is suspicious. *Notes!* Notes on desultory, oral, occasional, emergent, miscellaneous, extemporaneous cases—notes upon lectures, in which the lecturer, in the hurry and flurry of the moment, forgets much of what he ought to say—in which the note-taker forgets much that was actually said—irresponsible notes, published without the

revision, approval, permission, or, perhaps, without the knowledge, or it may be against the wishes of the speaker—notes, in which it is not easy to distinguish whether it is M. Nélaton or Dr. Atlee who speaks. Is the nodding in Homer, or the readers? are the platitudes and tautologies, French, or American?

The title being suspicious, *prima facie*, is not, however, conclusive against the contents of so large a book, as may more fully appear in a ramble through its pages, after having first taken the parallax of the star in the Orient, whose light is now reflected upon the Occident by the Atleeän planet.

In a late number of the Glasgow Medical Journal Dr. Hingston gives an account* of the Medical Men and Institutions of Paris, in which he thus alludes to M. Nélaton, now an "ally:" "HÔPITAL DE LA FACULTÉ: Here we meet with the very essence of what is interesting, in surgery especially. The cases are by no means numerous, (not over eight hundred and fifty receiving surgical assistance during the year,) but are well selected. The surgical department is under the charge of M. Nélaton. Nélaton's surgical clinic is the most numerously attended in Paris. He lectures in an easy manner, without hesitation, yet seemingly without attaching much importance to oratorical display. He possesses wonderful acuteness of perception and faculty of observation; bold and energetic, yet, at the same time, cautious. To him is assigned by the profession, students, &c., the first rank in surgery, and wisely, too, I think; for Nélaton, in my opinion, is the very beau-ideal of a surgeon."

This volume, made from Dr. Atlee's Notes taken from M. Nélaton's remarks upon cases which occurred during the years 1851–2–3–4, comprises practical matter concerning burns, contusions, wounds, anthrax, malignant pustule, glanders, gangrene, tumors, cancer, abscesses, fractures, luxations, articular affections, necrosis, cancer of the bones, injuries of the head, affections of the eye, nose, tongue, lips, maxillary bones, mammary gland, anus, rectum, intestines, organs of generation and bladder, calculi, affections of the foot, &c.

M. Nélaton's remarks upon these topics, though devoid of novelty, are judicious, being illustrative of the ordinary rather than the extraordinary cases occurring in practice. He shows neither a bias for the picturesque nor a wish to be dramatic in his surgery, which latter is commendably conservative.

This work makes but little pretension to systematic arrangement, and, for aught that has appeared to the contrary, has received neither the revision nor the sanction of the author. Extemporaneous discourses,

* Dr. H.'s sketches of not a few of the celebrated medical "allies" of Paris are very far from being flattering.

as compared with written lectures and essays, are usually more or less imperfect, redundant and disconnected, and should not be judged by the severe standard which is applicable to deliberate composition. It is extremely difficult to report with accuracy the language, ideas, illustrations and reasonings of a lecturer, who passes rapidly from topic to topic, as suggested by numerous and dissimilar cases of sickness, surgical accidents, manual operations and results.

M. Nélaton gives the following *aperçu* of his views of Inflammation:

Inflammation is a complex morbid phenomenon, but it is most particularly connected with the function of the circulation; it is indeed rather a succession of phenomena taking place in the capillaries, and characterized as follows:—

First, By a diminution in diameter of the small arteries and veins, the capillaries properly so called, or the intermediary vessels, taking as yet a scarcely perceptible, though a very real part in the phenomenon.

Secondly. By a repletion or dilatation of the capillaries with greater slowness, oscillation of their circulation: this characterizes simple *congestion*. But their is *inflammation* when the phenomena are followed by complete arrest of circulation, with repletion and distension of the capillaries (from accumulated blood corpuscles,) and by degrees of the small veins and arteries of the part, above all of the small veins; for the capillaries, by which they are furnished with blood, ceasing to supply them, the current in them becomes very slow and finally ceases altogether; they only receive blood from the collateral capillaries, and that gradually, with a force gradually diminishing, so that the blood-corpuscles accumulate in them, without going further.

Thirdly. To these phenomena succeed the *resolution* of the inflammation, *induration*, *suppuration*, or *gangrene*.

The resolution of the inflammation is the separation of the accumulated blood-corpuscles, with re-establishment of the course of the blood, which takes place first at the periphery where the corpuscles are least pressed together, and have been so for the shortest space of time; the circulation is re-established last of all in the very small vessels, and the intermediary capillaries.

Induration is owing to the generation of solid or half-solid anatomical elements, either amorphous, or with the form of fibres, etc., among the normal elements.

Suppuration is the production of globules of pus, at the expense of the liquid exuded from the vessels, with separation and destruction of a part of the elements of the inflamed tissue, where the production of the pus is taking place.

Gangrene is mortification, cessation of the phenomena of nutrition, followed by the destruction of the elements of the tissue, generally by putrefaction. Mortification takes place when the arrest of the globules has taken place in so large a mass of tissue, and has lasted so long a

time, that the anatomical elements can no longer derive, one from the other, the materials of assimilation, and throw off those that have ceased to take part in the acts they accomplish, or those of dis-assimilation.—When nutrition, or this continual double movement of combination and de-combination, the most simple and most general of all vital properties, ceases, the part is dead, and becomes subjected to the conditions of destruction of organic substances, that is to say moisture and an elevated temperature.

The dilatation of the capillaries, the accumulation of the blood corpuscles, and the exudation from the vessels, are the three phenomena by which the redness, the swelling, and the pain of inflammation are caused; pain, so much the greater as the tumefaction caused by the dilatation and by the exudation leads to greater compression or *strangulation*, in consequence of the presence of aponeuroses, fibrous fasciculi, areolæ of bones, &c.

"In the treatment of contusions, M. Nélaton said that he had no great confidence in the effect of what are called *resolutives*, the ecchymosis, the pain, and the effusion, all disappear just as quickly without them."

The non-professional public, less sceptical than M. Nélaton, having strong faith in these remedies, should be indulged in this behalf upon the principle of expediency. It is probable that the popular opinion in this behalf is not without foundation in truth, though a prescription often gets the credit due solely to nature.

M. Nélaton maintains that, for prolapsus of the rectum there is but one successful mode of treatment, namely, the actual cautery:

"At present there is but one mode of treating these cases, and that is by cauterization. It can be done now perfectly well; though it is so very painful, that before the introduction of anæsthetic means, it had been almost entirely renounced; he could not tell how many cases he had treated by this method, and all cured."

Celsus was of M. Nélaton's way of thinking, for after recommending some milder means to be tried, he directed that if they failed, the strongest caustics, or the actual cautery should be applied: "*Si hac oratione non tollitur, vel medicamentis vehementioribus, vel ferro adurendum est.*" (L. vi. c. 18.)

M. Nélaton treats Hæmorrhoids in the same way, under the use of chloroform, which latter, he says, "*is indispensable,*" owing to the severe pain of the operation.

M. Nélaton says, "that in a view purely anatomical, concussion of the brain ought to be considered as a feeble degree of contusion, diffused contusion of the whole encephalic mass. A sudden and violent contusion, without fracturing the cranium, can be communicated to its contents, and cause it to undergo a sort of circumscribed attrition which corresponds to the part of the cranium that has been struck, sometimes to a

point more or less removed, sometimes to a point that is diametrically opposite."

"The point directly opposite" receives, so to speak, the converging rays of force, as may very often be seen in the usual but very harsh mode of opening the cranium with a hatchet or hammer. If the incipient blows, for example, be directed to the right parietal or other bone, it will often be seen that "directly opposite" there will be an ecchymosed spot, and even effusions of blood in the subarachnoid tissue from the *contre-coup*, while the texture of the brain escapes any alterations visible to the naked eye. It is important to bear this fact in mind, not only as an illustration of contusion, but as a possible source of error in making post-mortem examinations for pathological or medico-legal purposes. In fact the usual methods of opening the brain, without great care, are liable, in the recently dead subject, to lead to error in some cases. If the saw be used, the blood-vessels in the bones of the cranium, in the dura mater and the pia mater, may be divided whereby post-mortem sanguineous effusions may occur; if the hammer be used with violence, the same may happen together with contusion, simulating morbid alterations.

M. Nélaton says: "Contusion [of the brain], is characterized by extreme agitation, disorderly movements, contraction of the muscles, partial paralysis, convulsions, and delirium; concussion, on the contrary, produces drowsiness. At the expiration of a few days, the occurrence of symptoms indicating encephalitis, will be the almost certain index of the existence of contusion,—almost certain, for this encephalitis can show itself equally after a concussion, although much more rarely, while after contusion, it is almost inevitable."

M. Nélaton says, that in the treatment of cerebral effusions, there are two indications:—to favor the absorption,—or the exit of the blood. Of trepanning, he gives a most discouraging account:

The operation of trepanning appears to be rationally indicated only in those cases where there is fracture of the bone and wound of the integuments, and where the hemiphlegia permits us to consider as very probable the existence of the effusion at the seat of fracture. Except in such cases, it appears to be contra-indicated, for the following reasons:

1st. The dangers of compression have been much exaggerated; a traumatic effusion of blood in the interior of the cranium has very little to do with the production of the cerebral symptoms; almost always, in fact, it is accompanied by grave disorders of the substance of the brain or of its membranes.

2nd. The trepan is then almost useless; and it always adds the dangers of the operation to those of the primitive lesion. It never offer, the surgeon more than a very uncertain chance of effecting his objects

for it can very rarely be applied with a knowledge of the cause, on the spot itself where the effusion exists, and again the effusion may be multiple.

3d. In many cases, the effusion has been seen to disappear, being absorbed by the forces of the organism, or after the treatment of the accompanying encephalitis.

4th. To the preceding reasons, that drawn from the want of success of the trepan must be added; all the operations for the relief of traumatic effusions, practised in Paris, for more than fifteen years, have, without a single exception, been followed by the death of the patient.

Except, then, under the circumstances mentioned above, the surgeon must limit himself to treatment purely medical; blood-lettings, leeches behind the ear, purgatives (which, it should be remarked, must be given in very large doses, owing to the diminished sensibility of the intestines,) in a word, the treatment proper to inflammation of the brain. In this way, also, the accomplishment of the second indication to be fulfilled—the absorption of the blood—will be favored.

Messieurs Nélaton and Atlee! *Salutem in Æsculapio!* Your book should be consigned to the libraries of the readers of the New Orleans Medical and Surgical Journal. *Vale.*—Editor.

Rev. VI.—*On the Organic Diseases and Functional Disorders of the Stomach:* by George Budd, M.D., F.R.S., Professor of Medicine in King's College, London; late Fellow of Caius College, Cambridge; Author of a "Treatise on Diseases of the Liver," &c. Pp. 252, 8vo. Philadelphia: Blanchard & Lea. 1856.

Nearly all of the papers in this volume had already appeared in the Medical Times, and Medical Gazette, before Professor Budd, during the last autumn, undertook to augment, correct and reproduce them in a series of lectures, in their present form, making a comparatively thin yet instructive volume, in which the diseases of the stomach are discussed with much ability.

Although the therapeutic department of this work presents little novelty, yet the broad and secure basis upon which it rests, namely, physiology and pathological anatomy, will insure for it a ready reception among physicians, who regard the science of physic as something more than a vast aggregation of empirical prescriptions for the administration

of drugs with all the routinism of the Arabian doctors, who give texts from the Koran in pill, powder, or potion, and trust in fatalism and Allah.

These lectures contain many fundamental principles in regard to the pathological anatomy of the stomach, deserving to be well considered by the student who desires to form sound opinions concerning the structural alterations found in that organ, whether they be morbid, ante-mortem changes, as in inflammation, &c., or post-mortem changes, as self-digestion, softening, and congestion of the stomach. Although it might be shown that Prof. Budd's enumeration, anatomical, functional, and organic, is incomplete, it would be difficult to find a better one without going directly to the Book of Nature, and even then Budd's book should be at hand. The unbiased student will not have dissected many hundred bodies before he will see the truthfulness and importance of the facts and reasonings which Dr. Budd has gathered from various sources concerning softening the stomach after death, together with other changes which have "served to bewilder—have dazzled but to blind" theoretical writers.—EDITOR.

REV. VII.—*Report of the Board of Administrators of the Charity Hospital to the Legislature of Louisiana, for the Year* 1855. New Orleans: 1856. Pp. 24.

THE receipts in round numbers for the year 1855, including a balance of the previous year, exceeds ninety-seven thousand dollars, leaving, after deducting all the disbursements, nearly twenty thousand dollars on hand in favor of the year 1856.

The passenger tax is the principal source of the hospital revenue, but for the year 1855 it is only forty-one thousand five hundred and sixty-seven dollars, which is little more than half of that of the year 1854, owing to a diminished immigration.

The number of patients admitted into the hospital in 1855 amounts to 12,192; 2,786 were females. Of the whole number, but 1,288 were natives of the United States; 10,861 were born in foreign lands; the nativity of 38 was unknown; 5 were children of the sea.

The births in the hospital—59 males, 62 females, and 15 still-born—amounted to 136.

Among 9,406 male patients admitted, 1,849 died; among 2,786 females, 542 died—giving an aggregate mortality of 2,391, being not quite one death to five admissions, (1 in 5.098.) The ratio of mortality to the admissions is almost precisely the same in both sexes.

The number of yellow fever patients discharged, and interred, is exactly the same, namely, 1,099 in each class! The mortality of yellow fever is to the total mortality nearly half, or 1 in 2.17. Among the yellow fever admissions, less than 1 in 300 were blacks; but it does not appear in the report whether the negroes recovered or died.

Next to yellow fever stands cholera in the mortuary tableau, the latter disease having carried off 225 persons. Other intestinal affections produced a mortality of 205; ulceration 4; gastritis 4; enteritis 9; cholera infantum 5; dysentery 61; diarrhœa 122. Thus cholera and other intestinal diseases give a mortality of 430.

Consumption gives the next highest mortuary figure, namely, 190. The next below this is typhoid, 103. Thus yellow fever, bowel complaints, consumption and typhoid give an aggregate mortality of 1,822, reducing the mortality from all other causes to 569, or a little over 1 in 5 for all the latter.

Of apoplexy, 18 out of 19 died; of abdominal dropsy, 37 out of 77; of erysipelas, 6 out of 38; of epilepsy, 7 out of 22; of scarlatina, 7 out of 16; of pernicious intermittent, 18 out of 31; of typhoid, about 1 in 3; of typhus, more than half; of pneumonia, about 1 in 4; of pleurisy, 1 in 5; and of tetanus, all died.—Editor.

Rev. VIII.—*Mortality Statistics of the Seventh Census of the United States* (1850), *embracing the cause of death, the age and sex, the color and condition, the nativity, the season of decease, the duration af illness, the occupation of the persons reported to have died in the twelve months preceding the 1st of June*, 1850, *with sundry illustrative tables:* by J. D. B. DeBow, Superintendent U. S. Census. Pp. 303; royal 8vo. Washington: 1855.

"The Federal Census of 1850," says Prof. DeBow, "furnishes the first instance of an attempt to obtain the mortality during one year [ending June 1, 1850], in all the States of the Union, and had there been as much care observed in the execution of the law as was taken in framing

it, a mass of information must have resulted relating to the sanitary condition of the country, attained as yet in no other part of the world." Prof. DeBow maintains, on the supposition that if even one-fourth of the actual deaths has not been reported, still, "the United States would appear to be one of the healthiest countries of which there is any record. I believe the errors, however, will not be found more numerous nor important than are to be met with in similar statistical works generally." "The value of such a multitude of facts," he continues, "cannot but be very great, even although they do not constitute the whole of them. We are every day accustomed to draw deductions for the whole from a part, and to argue out the true and complete from the approximate and uncertain."

The restricted limits of this journal, will not permit, at least for the present, a review of this important work at all commensurate with its merits.

The United States, beyond all other countries, is a dynamical nation in regard to the science of population; its inherent ratio of increase, its immigration, its internal emigration, are great, and cannot be restrained. Neither the equilibrium of inertia nor the statics of sociology is characteristic of its population. Motion, constantly accelerating motion, whether for good or evil, is like the law of gravity, universal, and is withal unfavorable to researches into many fundamental principles of vital statistics not included in mere increase or the official numbering of the people.

As Prof. DeBow's work consists of numerical tableaux, with but little numerical reasoning, or special analysis, it may not be unacceptable to the reader to analize a slight portion of its valuable data in relation to Louisiana, chiefly.

The aggregate mortality in the whole State is 11,956. Of this number, cholera destroyed in Northern Louisiana, 815 — in Southern Louisiana, 1205, and in the parishes of Orleans and Jefferson, the city section of the State, 920, so that cholera caused 2,940 deaths in one year, being about one-fourth of the total mortality (1 in 4.06+), exceeding from four to five times any other figure in the mortuary catalogue. "Fevers not specified," afford an aggregate next to cholera, namely, 748; consumption is the next, 641; yellow fever 575, follows in the descending scale.

The following additional data taken from Prof. DeBow's tables, enumerate the causes and the number of deaths from each cause, where the aggregate mortality reached or exceeded 100: Dropsy 319; diarrhœa 296; typhus 290; worms 287; pneumonia 268; dysentery 226; lockjaw 200; congestive fever 186; teething 178; hooping-cough

176; old age 170; convulsions 165; drowned 165; accidents not specified 158; croup 142; inflammation of the brain 126; inflammation of the bowels 105.

But it must not be forgotten that there are no less than 1567 deaths reported, the causes of which were unknown! To these must be added 156 deaths from unspecified accidents. Hence it would seem, that more than one-seventh die in Louisiana from unknown causes! Is this statement erroneous? or do the people die like cattle without consulting doctors? Are their memories for a single year at fault?

Among 11,956 deaths, no less than 27 persons (13 males and 14 females) were aged 100 and over, or 1 in every 427 — a proportion 544 times greater than in France.

The slave-holding and non-slaveholding States of the Union constitute with sufficient geographical accuracy the South and the North, as to climate.

The mor'ality in each of the non-slaveholding States, for the year ending June 1, 1850, will now be given, the number of centenarians will follow in parentheses: Maine 7,585 (0); Massachusetts 19,404 (7); New Hampshire 4,231 (2); Vermont 3,129 (2); Connecticut 5,781 (3); Rhode Island 2,241 (0); New-York 45,600 (16); New Jersey 6,445 (0); Pennsylvania 28,551 (7); Delaware 1,209 (2); Ohio 28,957 (9); Michigan 4,515 (2); Indiana 12708 (0); Illinois 11,759 (3); Wisconsin 2,903(0); Iowa 2,044 (0). Total deaths for this division 187,261; total centenarians 53—one centenarian to 3,533.24+. Louisiana has more than half as many of this class as all the 16 States mentioned above; having 1 centenarian in 427, against 1 in 3,533.

Virginia with less than twenty thousand deaths, has nearly one-third more centenarians than all the non-slaveholding States, which have nearly 200,000 deaths; Alabama in 9,091 deaths, has about half — Maryland in 9,621 has about half — Mississippi in 8,721 has about half as many centenarians as in all the non-slaveholding States enumerated, while North Carolina in 10,165 deaths, only lacks 8, and South Carolina in 8,047 deaths only 19, to equal the entire number in the States aforesaid.

In all the slaveholding States, the deaths were 132,735, the centenarians being 307, or 1 in 432, against 1 in 3,533 deaths in the Northern division.

By another route, that is to say by every Census in the United States, the superior longevity, or at least the superior proportion of centenarians in the South is clearly established. Thus, by the last Census,

scarcely one-seventh of this class was found in the non-slaveholding States, which contain a much greater number of souls than the South. Of 2,555 centenarians, in 1850 in the entire Republic, all were found in the South except 356. The same fact has been found to hold good in South-western France, at least in the valley of the Garonne. Although the maximum mean duration of life and the maximum of centenarianism are not necessarily connected, yet, they are not at all antagonistic. The valley of the Seine has the shortest mean life and the fewest centenarians, while that of the Garonne far exceeds all the residue of France in centenarians, but, nevertheless, falls short of the department of Orne in the mean duration of life; the latter is, in this respect, the most favored department in the Empire, though the cause does not appear to be obvious.

Prof. DeBow's work offers to the lover of vital arithmetic a body of facts worthy of analysis. Thus the average ages at death, in all classes, in the different geographical districts, might afford a solution of the climatic influences as to the duration of life, &c., North and South.

The Mortality Statistics of the Seventh Census (1850) show a much higher ratio of mortality in the entire population beyond the limits of the slaveholding States. But time will not permit of further analysis. The facts already eliminated in this notice, have cost much labor, as the work is a sad *mélange* in its plan, all geographical arrangement and unity being ignored. There is not even an index. California has Columbia on one arm and Arkansas on the other; Georgia has Florida in the front and Illinois in the rear; Louisiana has Kentucky on one side — Maine on the other; Maine, Maryland, Massachusetts, Michigan, Mississippi, and Missouri are conjoined, forming, at least, a good alliteration.

The typography, paper, and general appearance of this work are little creditable to the Government which has an overflowing treasury, and has sometimes paid for a work of inconsiderable literary merit nearly a hundred thousand dollars. Allusion is here made neither to the Exploring Expedition, nor to the Census.

The typography is bad, positively and comparatively — positively, because, being a work of numerical tables, it is so crowded, the type being so small that it is almost impossible for the best eyes to trace with accuracy a line of the long crowded series of figures; it is comparatively bad when judged of by French or English government reports and books. The work ought to have been printed in quarto, if not folio, instead of being as it is, octavo. The tables are sometimes vertical,

sometimes lateral, as it regards the page, in order to economize space, and conform to the Act of Congress of Dec. 13, 1854, which "provides that the work shall be printed in royal octavo form, and not to exceed three hundred pages." Prof. DeBow, the superintendent, having no authority to exceed 300 pages 8vo., has made good use of the space allowed him, and must be exonerated from all blame.

The perpendicular columns of a table exceed 50, not to mention the names or text; the transverse lines of figures are 75, not including the printed classification or terms at the side and the top of the page. Each table from page 50 to 300, occupies the whole or parts of two pages at once.

It appears from a letter in this volume addressed to the Hon. the Secretary of the Interior, that Prof. DeBow's labors at Washington have impaired his health. But as he has completed his mission as Superintendent of the Census, so honorably to himself and usefully to the public, it is reasonable to hope that a relaxation from his arduous labors, being now *de*Bowed after extreme tension for years, his health will be restored, whereby he may be able to complete many decennial censuses before he shall be classed *in propria persona* as a subject of the "*Mortality* Statistics of the United States."

The work is done! A prolonged attack of "the Mortality Statistics of the United States," and the assisting (to use a Gillicism) at the interment of several hundred thousand compatriots, might make any one sick, *désolé*, or at least, *triste*, melancholy as the moon-beam which strays through the crevice of a delapidated tomb into the eye-less sockets of a death's head.—Editor.

PROGRESS OF MEDICINE.

ART. I.—*Rademacher, the Empirical Reformer in Germany; his Doctrine and Therapeutics:* Translated from the "*Revue de Thérapeutique Médico-Chirurgicales,*" of October 15th and Nov. 1st, 1855: by M. MORTON DOWLER, M, D., of New Orleans.

[Continued from page 507.]

UNIVERSAL REMEDIES.

First Universal Remedy.—The Nitrate of Soda. (*Natron Nitricum, Natron Cubicum.*)—From ʒj to ℥j of this salt may be given in 24 hours. The nitrate of soda is to be administered in cases in which *the seat of the disease is in the intestinal canal,* and it must not only be administered in moderate doses, but it is necessary to incorporate it in an oleaginous or mucilaginous potion, which must be taken in broken doses—say from ʒj ss. to ʒij, in 24 hours. This salt renders highly important services in the general affection of the organism, having its predominant seat in the intestinal canal, and which manifests itself by diarrhœa. The following are the morbid conditions in which it may be employed with advantage:

In Hysteria.—It is often observed that the nitrate of soda is very efficacious in this affection; and especially when the stomach and intestines abound in acidity. Even in cases in which hysteria puts on the character of an idiopathic disease of an organ, in which the nitrate of potassa is of no avail, there sometimes occurs a transient illness of the organism, which may be combatted by the nitrate of soda.

In Odontalgia.—There is an affection of the teeth, which is a predominant disease of the organism, and which shows itself in a metamorphosis of the roots of the teeth. The internal employment of the nitrate of soda in large doses, (℥ss. daily,) and the application of the zinc pomatum on the cheek, are frequently quite successful in these cases.

Erysipelas of the Head.—The nitrate of soda is administered with the greatest and most surprising success, when this disease is not an idiopathic affection of this region, and when it is not of gastric origin, nor a symptom of an affection of the whole organism.

Angina yields readily to the use of the nitrate of soda. If the practitioner be called the first day, he may administer ʒij in 24 hours, which will suffice. But when called on the third day, or when the disease has attained a high degree of intensity, it is good to prescribe from ʒss. to ʒj. When the inflammation is very far advanced, the medicine must be administered even during the night, and the patient must be allowed to sleep as little as possible, in order to preserve facility of deglutition, and thus await the efforts of nature which manifest themselves by cough. In angina we can also make use of a pomatum of zinc, or of calamine, spread on linen, and applied to the neck ; but the ointment of digitalis is preferable. Inflammation here, which has so great a tendency to pass into suppuration, is the kind of inflammation which is best resolved by the nitrate of soda.

In Glossitis, the nitrate of soda is equally as efficacious as in angina. It often cures the disease in three or four days, without either blood-letting or scarifications.

The painful condition of the Larynx which is often met with in pulmonary affections, readily yields to the nitrate of soda. The same may be said in relation to the croup, which manifests itself very frequently in the same class of affections. The nitrate of soda is also employed with great advantage in ophthalmiæ. The same salt very often protects drunkards from very serious symptoms. If the affection of the organism predominates in the stomach, we combine stomachic remedies with it. The best stomach-remedy, in such case, is the acetate of soda. There are certain coughs, the character of which cannot be described, which yield to the nitrate of soda. In these cases we must be guided by the epidemic constitution.

Some persons are seriously ill when they are attacked by *the periodical asthma;* the pulse is full and frequent, and the urine brownish red. In cases such as these, the affection of the organism belongs to that class which we denominate nitre-diseases. Here the nitrate of soda is employed with the greatest success; the patients experience an immediate relief, the excitement of the organism is calmed, and the urine from being deeply red, becomes of a paler color.

In *Hæmoptysis*, the nitrate of soda is a most precious remedy, when a nitre disease of the organism shows itself by a pulmonary hæmorrhage. This condition is met with often in young persons, and especially in young females who have no organic lesions of the lungs.

Sometimes a nitre-affection co-exists with *phthisis pulmonalis*. This condition shows itself by a frequent sense of uneasiness on the part of the

patient, by increased fulness of the pulse, and by a deep redness of the urine. The nitrate of soda most happily removes this condition.

Pains in the Intestinal Canal, which manifest themselves often in cardialgic pains, and often as colic, are sometimes nitre affections.

During the employment of the nitrate of soda, the number of stools is quickly diminished; but so soon as this constriction of the rectum ceases, and an alvine evacuation takes place, there occurs in many persons, a free diarrhœa. If the medicine has not been taken in too free doses, the dose of the potion need not be changed, as the diarrhœa ceases by the continued use of this potion. But when badly digested and vitiated stools are evacuated, and the diarrhœa is augmented so as to be unceasing for many hours, it is a proof that the doses of the nitrate have been too free relatively to the degree of morbid irritability of the intestines. What is better to be done, if the nitrate has been prescribed in too strong doses, is to give daily a dose of ʒjss.; and to combine it, according to the circumstances, with gum or oil. The *vomitings*, which often attend dysentery, when they are not too violent, and when they do not persist for a long time, are successfully treated by the addition of the magistery of bismuth to the nitrate of soda, under the following form: ℞. *Bismuthi Subnitratis*, gr. xij; *Gummi Arabici*, ʒss.; *Sodæ Nitratis*, ʒjss.; *Aquæ*, ʒviij *M. ft. mist.*, of which take a tablespoonful every hour. When the vomitings are obstinate, the following potion is given with great advantage: ℞. *Sodæ Acetatis*, ʒij; *Gummi Arabici*, ʒss.; *Aquæ*, ʒviij; to be taken in doses of a tablespoonful every hour. When the vomitings have ceased, we return to the nitrate of soda.

Special rules to be observed in the Treatment of Persons attacked with Dysentery.—The unhealthy state of an organ, which manifests itself in that organ as a predominant affection of the whole system, may, when the affection of the organism disappears, continue in the same, as a simple idiopathic affection of the organ, but ordinarily in a less degree.

This law is confirmed in dysentery, in particular cases. We are then forced to seek out a good intestinal remedy. Here the acetate of zinc acts in a very remarkable manner. Beyond this we need not often have recourse to such intestinal remedies, for these cases are an exception to the general rule. A sympathetic attack of the organ may, in some persons, become a primary affection of that organ, and continue after the cure of the affection of the whole organism.

There are especially two *organs* of the body which may become sympathetically attacked in dysentery; the liver and its biliary conduits, and the kidneys.

All the *affections sympathetic* with *diarrhœa*, ought to be treated with hæmatic medicines, employed in small doses.

If it be observed, that after taking a spoonful of the nitrous potion, the patient experiences either abdominal pains or tenesmus, the medicine ought to be given warm.

When a renal affection becomes a primary one, which may be recognized when there are the remains of a diarrhœa, and when frequent scanty micturition or urinary disturbance, or all these symptoms exist at the same time, there are three admirable means of combatting this condition:

1. *The tincture of opium*, given in doses of from gtt. iij to iv, in ʒxxxij of warm water, and taken by cupfuls in 24 hours.

2. *Cochineal in powder*, in doses of ij ʒ in 24 hours.

3. Golden rod, (solidago virga aurea,) in the quantity of ʒss., to be infused for half an hour in five or six cups of boiling water.

As soon as by the employment of one of these remedies, the urine becomes clear instead of the straw color it exhibited, and it is excreted in large quantities, the diarrhœa ceases almost invariably.

Employment of Nitrate of Soda in Dysentery.—There is no need, in this disease, of administering the nitrate of soda in either a mucilaginous or oleaginous vehicle, with a view of protecting the intestines against its local action. The best mode of administration is in solution; say ʒj, in ʒviij of water; which is to be taken in doses of a spoonful every hour; but if the disease has been improperly treated, or has been left to itself, there afterwards remains a prolonged indisposition, a chronic diarrhœa, a mixture of catechu and sal ammoniac, acts better than any other of the intestinal remedies.

The Affection of the Rectum, in some rare cases, may be a special disease of that organ, which manifests itself, from time to time, by tenesmus. The external employment of belladonna, in the form of ointment, is in such case, the best application. This ointment must be made in the following manner: ℞. *Extracti Belladonnæ*, ʒss.—ʒj; *Adipis Suillæ*, ʒij. *M. ft. ungt.*, to be applied to the anal aperture, five or six times a day.

In *Epidemics* of dysentery, supposing the affection of the organism to be a nitre affection, we give at first each day, and during four consecutive hours, ʒj of the nitrate of soda; and we take the precaution to apply frictions to the anus, with the ointment of belladonna. On the fifth day we give again ʒj of the nitrate of soda, and rub the belly of the patient every time for half an hour with the following compound: ℞. *Spirit. Saponis*, ʒjss.; *Tincturæ Nucis Vomicæ*, ʒvj.

When we find that the constriction of the rectum does not cease by this treatment, we employ then, on the sixth day, a laxative. This acts with great success, even though the nitrate had not been previously employed. We must, nevertheless, bear well in mind, that dysentery, regarded as a disease of the entire organism predominating in the intestinal canal, is not always necessarily a nitre disease; but that it may also be either an iron or a copper affection.

DISEASES OF WOMEN.

In the false Pains of Women in Labor, the employment of the nitrate of soda is of great utility, and renders remarkable services. Ordinarily the puerperal woman finds herself more at her ease when the false pains are relieved by the nitrate, than by opium. The latter is good, but has also its inconveniences. In the *milk fever*, the nitrate of soda produces all that could be reasonably looked for. We have already said that during pregnancy numerous chronic superinduced diseases of the abdominal organs, are excited by the *milk fever;* but especially hepatic and splenic fevers. Here the nitrate of soda has no effect.

It is often observed that various difficulties against which young plethoric girls have to struggle at the period of puberty, are much more easily cured by the nitrate of soda than by any other remedy.

If the nitrate of soda cannot be considered as a specific in *the small pox*, it is, nevertheless, a universal remedy against the affection of the organism which often precedes the variolous poison.

Scarlatina is obviously one of those affections of the organism having its predominant seat in the skin, and which in many cases yields to the power of the nitrate of soda.

In all cases in which scarlatina is at all affected by the nitrate, it renders signal services. Thus it calms the pains, renders the disease less malignant, not only to the view of the physician, but to the feelings of the patient; and it shortens the duration of the disease. Nevertheless, the whole depends on the period at which the physician is called to the case. We can arrest the onward march as far as at the end of the sixth day; but if, however, we commence the treatment from the beginning of the fever, we are enabled to reduce it to a state in which it is completely benign and insignificant.

Acute rheumatism, in some special cases, is as a predominant affection of the organism, which manifests itself specially in the muscles, and probably in the articular ligaments, and which yields to the nitrate of soda.

Acute rheumatism may be cured by this single agent, if it be an affection of the organism, having its true seat in the muscles and ligaments, and if this affection be a nitre affection. Blood-letting is not necessary when the nitrate of soda is employed, though a single and copious blood-letting, in young and plethoric persons, especially if the disease has been aggravated by a heating treatment, may hasten the cure. In this affection the nitrate of soda ought to be administered to the extent of ʒj daily. Further, we ought to take well into account, the kind of diseases which are prevailing at the time in the treatment of acute rheumatism.

In Local Inflammation of the Glands, if we make use of the calamine ointment or of the *oxyd of zinc*, we will obtain a more sure and more prompt resolution than by any other means; and if this resolution be not possible, suppuration will take place with much less pain, or it will indeed form a simple abscess, which will discharge itself without the aid of the scalpel; and it will thus cure without the aid of any other medication. The *onguent de la mère*, useful in other affections, is, nevertheless, inferior to these pomatums.

Inflammatory Nodosities of the Breast, are to be treated with digitalis ointment, spread on linen, and applied to the nodosities. The digitalis ointment is to be prepared according to the following formula: ℞. *Extract. Digital.*, gr. xv; *Cerati Simplicis*, ʒij.

In swelling of the parotid gland, we use frictions with the ointment of digitalis. The swelling disappears rapidly, and after a prolonged use of this pomatum, we obtain a cure without there remaining any trace of the disease. In case of tumefaction of the axillary glands, the ointment of digitalis is equally efficacious. In the last stage of croup, the disease ought to be treated with the digitalis ointment, in the following manner: We cover the whole neck of the child, from the larynx to the sternum, with the digitalis ointment, taking care to renew often the coating of ointment which cover the clothes. The cure will be complete in a few days, and the sharp sound in respiration will soon cease to be heard during the child's sleep. There only remains a cough for a few days; but it rapidly disappears without medication, as it is merely one of the sequelæ of croup*.

The digitalis ointment produces not only the same effects as the antiphlogistic remedies, in favoring the passage into suppuration those inflammations which are not removable by resolution, but it acts in the same manner, and with more energy, than these remedies.

* Note of the French Editor. I have this year treated with success, two cases of croup, by the employment of the digitalis ointment alone.

External employment of the Nitrate of Soda.—Doses: ℞. Sodæ Nitratis, ʒjss.; Aquæ, ʒiij; filter.

Frictions with this solution determine,

1. A cure—and often very rapid—of local rheumatism.
2. The resolution of swelled glands, when susceptible of resolution.
3. A free and complete suppuration of cold abscesses.

SECOND UNIVERSAL REMEDY.—IRON.

We employ the following ferruginous preparations:—

Sesquioxide of Iron, red oxide of iron, (ferrum oxydatum rubrum.)—Internally given in doses of ʒij in the course of a day.

Carbonate of Iron, safran de mars apératif, (ferrum carbonicum.)—This compound is preferable to the preceding, from its being more powerful; meanwhile, it is not always easily borne by very irritable intestines.

Tincture of the Acetate of the Peroxide of Iron, (tinctura ferri acetica)—This tincture is a preparation eminently easy to be borne. It is given in acute fevers in the quantity of ʒj daily, in the following form: ℞. *Tincturæ Ferri Acetatis Rademacheri*, ʒj; *Gummi Arabici*, ʒj; *Aquæ*, ʒvij. Take every hour a table-spoonful. Most patients very willingly take this potion, not only temporarily, but for a great length of time.

[The tincture of the acetate of iron, prepared according to the process of Rademacher, is made in the following manner: Take of sulphate of iron, purified, ʒxxij; acetate of lead, ʒxxvss.; triturate together in an iron mortar, until the whole forms a homogeneous mass; dissolve in ʒjvss. of distilled water, and ʒxj of good Burgundy vinegar; heat to ebullition in an iron vessel; cool the liquid, and add of rectified alcohol ʒix. This liquor is left for several months, and agitated from time to time; and it is not to be filtered till the tincture has taken the color of red wine. The older this tincture is, the more agreeable and milder does its flavor and odor become; and it is not unlike Malaga wine.]

Styptic Liquor, or *solution of the perchloride of iron, liquor ferri muriatici oxydati, liquor stypticus.*—This preparation is confessedly the most active of the ferruginous preparations. As it is necessary to exercise a circumspection in its employment, it is indispensable that we should essay its use, in small doses, before administering it in large ones. In giving it in doses of only six drops daily, after long-continued use, we experience its salutary effects in a marked manner. In cases in which a more energetic action of the medicine is desired, the dose must be augmented daily one drop, till it is increased to ten drops; and then let this quantity be

continued till the cure is effected; for it is rarely necessary to augment further the dose. Should it, however, be necessary, the medicine may be taken at two or three distinct times.

All the ferruginous preparations have the same action on the organism; they differ only in their relative energy, and in the rapidity of their effect.

Iron is a medicine as precious in acute, as in chronic diseases.

In acute, or in iron-diseases, this medicine exercises the same effect in calming the heart and arterial trunks that is exhibited by the nitrate of soda in nitre-diseases. Meanwhile, it does not act directly on the organs as a calmative, but probably indirectly. A certain degree of amelioration that the patient experiences, even before the yielding of the pulse, is a conclusive proof.

The symptoms by the aid of which we are enabled to recognize an iron-affection of the system, like those which characterize a nitre-affection, are attended with great incertitude. A very important sign of an iron-affection, at all times, is the absence of *uric acid;* and a still more important one is *an alkalinity* of the urine—though this latter is not a constant sign; for the absence of this characteristic does not prove conclusively that an iron-affection exists.

A variability of the urine leaves us in doubt; but if from that we are not able to make out with certainty an iron-affection, it is nevertheless more probable that we have, under such circumstances, an iron-affection to deal with, than a nitre-disease.

A visible diminution of muscular power, especially in acute diseases, affords a probable sign that we are dealing with an iron-affection, on the supposition always, that the patient has not been attacked with an idiopathic cerebral affection, nor with one of the affections of the organism that we indicate as amenable to the medicating power of copper.

If the throat and the veil of the palate be pale, or of a dirty white color, it is more probable that the patient suffers from an iron, than from a nitre-disease. Nevertheless, this sign also is not certain.

In fine, *if there be deep black or violet spots situated on the skin*, especially if they are neatly circumscribed, and are frequently manifested—the same if the whole number become black—we have here sufficiently certain signs that there exists an iron-affection, and even a high degree of this affection.

Blue spots on one or more members of the body prove nothing.

Certain fevers, formerly called *putrid fevers*, are nothing other than idiopathic iron-diseases of the organism.

The iron-affections of the organism readily ally themselves to other existing primitive affections that may be reigning in the several organs of the body.

Cases of this kind cannot be cured otherwise than by combining the universal remedy, which is iron, with the remedy which is appropriate to the organ affected. Often in the absence of every other sign, the absence of action in the remedies appropriate to the organ affected, becomes an indication for the administration of iron.

Inflammation of the Eyes, especially that form which complicates itself with swelling of the eyelids, is often the effect of an iron-affection of the organism.

Chronic inflammation of the eyelids, of a very disagreeable appearance, is often cured by the employment, internally, of the solution of the perchloride of iron.

In *Angina*, we often see iron remove the inflammation, as we also see nitre produce the same effect, which prove that the inflammation is a symptom of a pathological condition, which is capable of varying itself greatly.

Chronic Inflammation of the Amygdalæ, Palate, and Œsophagus, is often a symptom of an iron-disease, and it is readily cured by the liquor of the perchloride of iron. But we must look well to the case before the administration of iron.

Scarlet Fever is visibly a disease of the organism which predominates in the skin and throat: it can be very well combated by the acetate of iron. Its effects are the same as the nitrate of soda in cases of nitre-scarlatina. If the physician is called in due time, he can, by the administration of the acetate of iron, change the disease into a mild affection, and if even called a little late in the case, if he do not succeed in repelling the malady, he can at least hold it in check.

Glossitis.—This is a rather rare affection. If it shows itself at periods in which iron affections of the organism present themselves, iron renders very great service.

Swellings and Inflammation of the Submaxillary and Sublingual Glands, which manifest themselves as symptoms of an acute fever, are successfully treated by iron.

The Cough which is cured by Iron, has ordinarily the appearance of a common catarrhal one. It does not yield, however, to the pectoral remedies, at the head of which we may place the antimonials.

Pleurisy.—This form of disease is often an iron affection of the whole organism, which predominates in the lungs, in the pleura costalis, and in

the intercostal muscles. Iron here produces so rapidly favorable an effect, that it is impossible not to recognize it.

If the pleurisy be of a nitrous nature, it will be seen after the use of iron for 24 hours, or perhaps sooner, that the general condition becomes worse, as well as the pains in the breast. By this aggravation of the symptoms, we are warned, and we must immediately take another direction, by prescribing the cubic nitre in large doses.

In the treatment of an iron-pleurisy, we use, as in other acute iron affections, the acetic tincture under the following form: R. *Tincturæ Ferri Aceticæ Rademacheri*, ʒj; *Potionis Gummosi*, ʃʒviij. Take every hour a tablespoonful. The effect is the same as that of the nitrate of soda. The patient realizes from the beginning, that the medicine has done him good; afterwards the expectoration, which is at first sanguinolent or chocolate colored, becomes non-sanguinolent, mucous, and more or less thick. At the same time, the pain, and distressing feeling of oppression in the breast, diminish, and disappear at last completely. Sometimes the disease disappears from the very first day, and at other times only on the second or third. In the frequent cough, which ordinarily precedes consecutive mucous expectoration, we continue the iron, and cause the patient to drink at the same time an infusion of the root of marsh-mallows; for the patient is completely cured by the continued administration of iron.

In the first period, in which the fever and the affection of the breast are strong, the external means which strongly act on the skin, are not indicated. If we would avail ourselves of external means, we apply the zinc or calamine ointment over the seat of the pain. The iodine or pyroligneous acid ointment, may also be employed.

In the treatment of pleurisy, it is of essential importance that no trace of fever or pulmonary affection be allowed to remain, even if after various pectoral affections, the pulse becomes calm, and the patient apparently cured, feels himself completely restored to health, we ought to continue the administration of iron until the patient is well assured of his restoration.

We have *a presumption* that the sympathetic-pleuritic cough tends to become a primary affection of the lungs, when, after having got rid of the fever and the pleuritic symptoms, and after the return of the feeling of health, we do not see the last trace of the cough disappear. We give here ¾ to gr. jss. of the extract of the green nicotiana, and the cough very soon disappears by this treatment. But we ought not to abandon too soon the universal remedy; but we must, on the contrary, in these

cases, administer it at the same time that we administer the pulmonary remedy.

When in *purulent phthisis*, the sympathetic affection of the organism, under the form of fever, occurs and becomes idiopathic, it can be as well a nitre as an iron disease. If the urine becomes red, which is not constant, or indeed alkaline or neutral, the expectoration is augmented, and the patient is visibly prostrated, we must, in such case, have recourse to iron, and continue it so long as it produces good effects. Catarrhal phthisis is precisely the disease in which iron appears to produce its most marvellous effects. Whatever may be its origin, it is almost always curable, so long as it has not engendered ulcers on the internal surface of the lungs. We administer in such case, the acetic ferraginous tincture, at the rate of ʒj daily, and give also the solution of the muriate of iron. It is desirable, and tends to a rapid cure, that the urine in cases in which it is deep colored, should become rapidly clear and straw colored, by the single agency of iron. In cases in which it is alkaline, we can only be confident of cure when it becomes acid.

In cases in which the lungs are already a little affected with ulceration, we will always find that the last traces of cough will not disappear, but that the nocturnal sweats reäppear; that the pulse has really lost its frequency, but remains, nevertheless, always a little irritated.

We recognize the fact that diarrhœa is often an iron affection, which predominates in the intestinal canal, and that iron readily cures. In iron affections which manifest themselves in the form of acute fevers, diarrhœa is a symptom which is not unfrequent. The cessation of the diarrhœa by the employment of iron, is full proof that a rational treatment has been pursued.

Acute Hepatic Fever is often complicated with a primitive iron affection of the organism. The use of the peroxide of iron in such case, is sufficient. If we give in the first stage of hepatic fever, soda, in the quantity of ʒss. daily, with a view to neutralize the acridity of the bile, in cases in which this acridity exists, and if we observe that the next day after using the ʒss. of soda, that the urine is already either neutral or alkaline, it is a phenomenon which, in the absence of all the signs of iron disease, leaves us to suppose—and it is not to be neglected—the existence of such disease.

Hypochondria and Hysteria have often for their origin a primary affection of some one of the organs of the body, and often cannot be cured excepting by establishing the health of the organ affected.

But it is impossible to deny that hypochondria makes its appearance, in many individuals, as an iron affection of the organism, without any idiopathic affection of any organ whatever. It is certain that in chronic hypochondria, which predominates in the belly as an iron affection, the digestion is seen to be deranged without any idiopathic affection of any organ; without constipation, and without the production of any acid. If there be constipation, the physician, in the first place, ought to satisfy himself whether the cause resides in the rectum, or in the jejunum. If in the first, the patient must daily have recourse at the same hour, to saline enemata, or enemata of simple water; if the latter, the patient must resort to Glauber or Rochelle salts. This treatment relieves the patients, and the effects of the iron is not arrested. We need not, however, resort to these accessory means, when the necessity is not absolutely recognized.

Many patients experience four, five, or six hours after dinner, attacks of various kinds of spasmodic symptoms in the intestines. These symptoms owe their origin to acid fermentation, which take place in the aliments taken during the meal. These symptoms are calmed by the following solution: ℞. *Sodæ Carbonatis*, ʒss.—ʒj; *Aquæ*, ʒviij. Take immediately after dinner a tablespoonful every hour for five or six hours.

It is proper here to remark, that in many patients who are curable by iron, in whom an iron affection of the organism, predominant in the belly, manifests itself by an affection of the intestines, no acid formation is found to exist.

If we would be sure on this point, we should order the patient to fast before dinner; and administer soda to him after dinner, in the manner we have pointed out. We will then see if it is an acid fermentation of the aliments which occasions the abdominal pains. In such case, the soda relieves so promptly, that it is impossible to mistake the character of the case.

Hæmorrhoids.—Abdominal plethora is often complicated with an iron-affection. If, after the use of iron, tumors appear at the anus, which did not before exist, it is a good sign, and we may try the application of leeches, of which, at first, only two are to be applied.

Chronic Primitive Affections of the Abdominal Organs, complicate themselves also with an iron affection. If the patient be already advanced in life, and if he has not previously been subject to hæmorrhoids, we would do well to procure a sanguineous evacuation by the application of leeches to the anus, even if tumors are present; for generally these

tumors, accompanied by notable derangements of the abdominal organs, are very probably rather the consequences of these derangements, than symptoms of abdominal plethora.

Amenorrhœa of young Girls, may become sometimes an iron affection, and the menses may be recalled by the use of iron filings, or the ferrum carbonicum, for several months. We see, in those cases, that these young patients recover their health; and that the catamenia does not fail to reäppear.

Uterine Hæmorrhage.—The best remedy against metrorrhagia is the following mixture: ℞. *Liquoris ferri perchloridi*, gtt. xxx; *Aquæ*, ℥vj; *Gummi Arabici*, ℥ij; *Tincturæ Opii*, gtt. xv. Take a table-spoonful every hour.

It must be borne in mind that metrorrhagia is often sympathetic of a primitive affection of the abdominal organs, in which case iron is not indicated.

In *Abortions*, in which the placenta, partly detached, produces formidable hæmorrhage, the solution of the perchloride of iron surpasses in efficacy every other medicine recommended in such cases. It is evident that, in such cases, we cannot count on a cessation of the hæmorrhage until the womb has completely expelled the placenta.

The solution of the perchloride of iron is employed in *nocturnal seminal emissions*, with the greatest success. But we apprehend that these emissions do not always depend on an iron affection of the organism, predominating in the genitals; but that they are sometimes sympathetic of an affection of other organs.

Rheumatism and *Gout* are in many instances iron affections predominating in the muscles and articulations. In order to cure these diseases, we use the salts of iron, the muriate, the sulphate, and the acetate.

In *Acute Rheumatism*, iron is a medicine which acts so quickly that the cure seems to the patient to resemble a miracle, and even astonishes the physician who has never before witnessed the effect. In many cases which are not rare ones, gout is an iron affection of the organism, which predominates in the articulations, and which is cured by this agent.

Sciatica is often an iron affection of the organism predominating in the sciatic nerves. We give in these cases the liquor stypticus. If sciatica exists at the point at which it takes the name of lumbago, and at the point from which the pain is transmitted to the sciatic nerves, it may have sympathetic contact with the abdominal organs, and the patients may complain of bitterness in the mouth, and flatuosities and

belching. In these cases we administer, with great advantage, and sometimes with complete success, the following mixture: ℞ *Magnesiæ Calcinat.*, ʒss.; *Zinci Oxydi*, gr. vii.—gr. xv. Take a table-spoonful every hour. When the rigidity of the dorsal muscles ceases, iron is to be employed.

True Scorbutus, which we recognize by depression, pains in the legs, large blue spots not neatly circumscribed, fœtid breath, bluish swelled singuinolent gums, urine more or less deep-colored, and alkaline, is cured more rapidly by the acetic tincture of iron, or by the liquor stypticus, than by all other remedies known by the name of anti-scorbutic. The blackish color of some members of the body appears to hold an analogy to scorbutus.

Dropsy, is in many cases, purely an iron affection of the organism, which predominates in the kidneys, o. which it deranges the eliminatory functions.

The diagnosis of iron dropsy is sometimes easy, when the alkalinity of the urine reveals the character of the malady.

In cases in which the secretion of urine is feeble, diminished, brown, and flocculent, we ought to administer first what is an excellent renal remedy, either the *golden rod* or *cochineal*. The latter often augments the secretion of urine, which on examination at first, will be found alkaline. By this proof we have the advantage of being convinced, at the same time, of the existence of a primary affection of the kidneys, and we know that in an idiopathic affection of these organs, the renal remedies alone are sufficient. It is right here, to bear in mind, that it is equally well to try the effects of *soda* and *ammonia*.

In the cure of dropsy we resort to the use of the *liquor stypticus*, or the acetic tincture of iron. When the urine is greatly alkaline, a considerable time often passes before it resumes its acidity. As long as this state continues, we cannot be sure of a radical cure, even when the whole of the watery effusion has disappeared. We must, therefore, continue the iron until this change takes place. Experience in general does not teach us if the iron affection is stronger here, when the urine becomes clearer. But there are times in which the primitive epidemic affections of organs unite themselves with an idiopathic iron affection of the organism. But when a primitive iron affection depends on the presence of one of these epidemics, or on the presence of an inexplicable peculiarity, what is best to be done is to to give the iron, sometimes alone, and sometimes with the appropriate organic remedy.

Dropsy, which is complicated with an iron affection of the organism,

and from chronic organic disease, is sometimes very difficult to cure. This state may exist a long time without producing the disease. We believe that such cases may be cured with iron.

In cases where the organic vice has produced dropsy, and where this state is complicated with an idiopathic iron affection, it is quite difficult to give sound advice.

We cannot view the operation of *paracentesis abdominis*, as an auxillary means in the cure of dropsy. It is to be employed only with a view to palliate, when we have no other means in view.

We may, in cases of *incurable dropsy*, depending on chronic affections of the organs, prescribe the following friction to the inferior extremities which has often been found to give great relief: ℞. *Olei Terebinth.* ʒj; *Adipis Suillæ*, ʒij. Rub the inferior extremities twice a day.

In place of *incisions*, which are often resorted to in incurable dropsy, it is better to make use of the scarificator used in cupping, pushing successively with greater and greater force the hydropic swelling in the calf of each leg, and when the water yields no longer to pressure, springing the instrument.

Remedies which are the analogues of iron.—Acids have a great analogy in their action to iron, especially the mineral acids. It is quite possible that in many cases they surpass in curative power this iatrochemical universal remedy.

The Petechial Fevers are often cured by sulphuric acid in large doses. We may give it in such manner, that the patient shall take ʒ ss.* of the concentrated acid in a day. If we administer the acid in these cases abundantly, a liquid deep green diarrhœa appears, ordinarily at the fourth, and rarely at the third day. The evacuations are ordinarily fœtid in this fever; but they soon become inodorous. We then, in this diarrhœa, use only half doses, and if it be too free, quarter doses.

If the patients have vomitings after the use of sulphuric acid, we give tartaric acid in place of it, as much as they are able to support. But when the vomiting does not proceed from a real aversion, from a disgust of the taste of sulphuric acid, but from a particular morbid state of the stomach itself, we give then, every hour, or every two hours, a table-spoonful of ordinary brandy at the same time with the acid.

* We suppose that there must be a mistake here in the dose; for, in order to take this quantity, it would require at least 7 or 8 pints of water, in order that it might be taken safely.—[Note of the (French) translator.]

ART. II.—*On Fever:* by Dr. E. PARKES, Professor of Clinical Medicine in University College, and Physician to University College Hospital.

WE can no longer rest satisfied with localizing fever in the blood; true the blood is affected, but it is in common with all other parts of the body; its molecular currents undergo alterations, but so do those of all organs; perhaps everywhere in fever the nutritive changes are impaired, and perhaps every organ is both more rapidly changed than usual and is less perfectly repaired. Such is the harmony of the parts of the body that this is indeed inevitable; the rapid interchanges of the molecular circulation either in the blood or in organs, render it impossible that any disease shall remain isolated. As to the correct working of one organ, the correct working of all other organs is necessary, a disease of the blood as a thing separate and peculiar is evidently impossible; from that blood torrents of fluid pass in inconceivable rapidity into all organs, and as rapidly are again gathered up. What was solid is now fluid; what is now fluid is speedily to become, if not solid, yet a constituent of what we call a solid organ. Into that organ the altered fluid carries its own imperfect constitution, and injures at once the function of the structure of which for the time it forms a part.

The definition of fever, which I have taken from the masterly pages of Virchow, I shall beg leave to note. "Fever," says Virchow, "consists essentially in elevation of the temperature, which must arise from increased tissue-change, and have its immediate cause in changes of the nervous system."

Why "must have?" Is it so certain that the very basis of the febrile state is to be located in the nerves, and are all the phenomena of fever to be comprehended in the concise, though very vague phrase, of "perverted elimination?"

We enter here upon a very different kind of argument from that to which I have hitherto referred. If many things are obscure in the chemistry of the excretions or of the blood, we yet have a definite, and up to a certain point, an accurate mode of investigation. Chemical analysis isolates the elements of the problem, and the balance at every step corrects our inferences, or confirms our deductions. But in the case of the nervous system there are no such certain tests, there is no such infallible corrective. The mode of investigation is vague, uncertain, unsatisfactory.

The tests we have to employ are the symptoms of the diseased body, and the only corrective is our physiological knowledge of the healthy working of the nerves. But the meaning of symptoms is often hard to understand, and the physiology of the nerves is yet almost a virgin soil, bearing often only enigmatical fruit.

The most striking phenomena of fever are the augmented metamorphosis and the preternatural heat. * * *

Among the very earliest symptoms of febrile affections are the remarkable depression, apathy, exhaustion, and debility which were much

and justly insisted on by Cullen. It is indeed possible that these may be the effects of a general nutritive failure, in which the nervous system merely participates in an equal, but in no higher a degree, than other parts. If there were no other evidence of nervous affection, this argument might be a good one, although the nervous symptoms are certainly unusually prominent; but these acquire significance from being placed in juxtaposition with others.

Another very early symptom of fever is one which seems to indicate most decidedly a more than simple co-affection of the nervous system with other parts. I allude, of course, to the shiverings, the contraction of the superficial vessels, and of the skin. At this time, if not before, the tissue metamorphosis is most decidedly augmenting, for the heat of the blood is rising, as shown by these observations. We have at this time the remarkable subjective sensation of cold, and the rigors, which stand in such striking contrast to the augmenting heat. The explanation of this has been already alluded to, as being given probably by the nerves of the skin and cutaneous vessels, which transmit to the sensorium the condition of the peripheral parts. If this be the case, we have the anomaly, pointed out by some German writer—Henle, I think—of the impressions of cold being transmitted from distant nerves along the trunks of nerves, which, lying deeply, and being fed by vessels which are not contracted, must be hotter than usual, although they thus transmit the sensation of cold.

The *treatment* of fever may be summed up as being a combination of measures *to reduce excessive heat, to insure proper excretion,* and *to act on the semi-paralyzed nerves.*

The application of cold, as practised by Currie, and lately re-investigated by Traube and Armitage, has a great effect in bringing down the temperature of the body. It probably does so simply by extracting heat; whether it delays metamorphosis is uncertain. In health the application of cold appears from Lehmann's experiments even to increase metamorphosis.

Bloodletting or hemorrhage often reduces the febrile heat greatly, and, if not carried to the point of exhausting the nerves, bloodletting in many fevers towards the early period, is decidedly useful. In typhoid fever I have seen intestinal hæmorrhage reduce the temperature several degrees, and when patients are not too weak, it has even appeared to do good. In typhus the paralysis of the nerves seems more marked than in typhoid, and bloodletting and similar measures seem less admissible.

Purgatives and emetics have, in less degree, the same effect as bloodletting. Artificial diarrhœa will reduce the temperature one or two degrees; the spontaneous diarrhœa of typhoid has the same effect; the temperature, however, soon rises again.

To insure proper excretion in fevers is a much more difficult thing than to reduce temperature. It is, perhaps, best performed by constantly supplying to the system a due supply of alkaline salts, which are not now given in the food. The chloride of sodium, we know from the experiments of Bischoff, aids the formation and the elimination of urea.

Whether it has the same effect in fevers has yet to be determined. The alkaline salts of potash, and probably those of soda, do certainly aid the elimination of urea and sulphuric acid in some febrile cases, in pneumonia, rheumatism, variola, and typhoid fever. Perhaps they so act in all cases. The nitrate of potash seems also to aid elimination in some febrile cases, though it does not necessarily do so in health.

I have observed a singular fact in several febrile diseases, viz: that, at the first employment of a saline remedy, such as nitrate of potash, which is not a natural constituent of the frame, or iodide of potassium, there is sometimes for a day or two a marked lessening of excretion, as if the system had accommodated itself, so to speak, to the remedy.

Purgatives probably act by removing from the blood some of those abnormal products which are formed in fevers. At any rate the great relief which follows their use, as well as the fall of temperature, seem to show this. As we know that urea passes off sometimes, both by the membrane of the stomach and of the intestines, it does not seem an unlikely conjecture, that the action of purgatives may aid this elimination in those febrile cases in which there is retention of this substance in the blood. In some febrile cases, as in typhoid, the use of purgatives is of course rendered impossible, on account of the special condition of the iliac mucous membrane. The whole treatment of fever is not, however, summed up in these two indications, to reduce heat and to secure elimination. Many fevers, indeed, will run their course regularly and excellently under such treatment; but these are cases in which their nervous implication is not of grave character.

One of the great objects of therapeutics at the present time, is to find substances which may act on the nerves, and restore them in some way to their normal action.

Thus, the administration of food, and of stimulants, must act, among other ways, by giving nutriment and strength to the nerves. Often it is perfectly good practice to stimulate with wine, and to assist elimination by purgatives, at the same time. That alcohol acts in part upon the nerves, seems proved by the way in which it will reduce the frequent pulse, and the respirations in various specific fevers, and in some local inflammations. The influence of this powerful stimulant requires, however, to be carefully watched; for the overloading the blood with its products must lead to increased contamination.

Quinine has been largely employed in many fevers, and its action in ague, in which disease it seems to render the nerves proof to a certain extent, against the cause, has excited great hopes of its utility in other fevers. The researches of Briquet have clearly proved that in very large doses (60 grains to twenty-four hours), it will reduce the action of the heart in acute rheumatism, and in typhoid fever by twenty to thirty beats. This must decidedly be useful, since one of the accessory causes of the augmented metamorphosis must be removed; and to this effect is, perhaps, to be ascribed the good effects of quinine noted by Dr. Dundas in some febrile cases. But these large doses have apparently a disadvantage, as they produce the poisonous effects of quinine.

The influence of quinine on the febrile heat is not much marked; in large doses it lowers temperature by one or two degrees, but it afterwards augments again.

In small doses, such as are given in this country (grs. iij to v every four or six hours), for myself, I have not been able to see any effect produced on the heart or the temperature. In one case of rheumatic fever I examined the urine, and found that quinine in these doses caused no diminution of metamorphosis.—*Braithwaite's Retrospect for Jan.*, 1856. *From Med. Times.*

ART. III.—*The Treatment of Yellow Fever:* by Professor L. SHANKS, M. D.

[PROF. SHANKS, in his history of the Yellow Fever Epidemic of 1855, (pp. 41) as it appeared in Memphis, Tennessee, gives the following account of the mode of treatment adopted in that disease, the whole of which is subjoined without abridgement:]

Treatment.—The brief and imperfect, but faithful, account, I have endeavored to give of the symptoms and character of the disease, from my own observations, and the results, not only of my own treatment, but of every different mode of treatment, and of no treatment, so far as I could ascertain them, by careful inquiry, indicate so clearly the course of practice which I endeavored to carry out, that it may be briefly given, though somewhat in detail. Many years' experience, and careful observation, in all zymotic fevers, tending to the disturbance and suspension of the functions of the important organs of secretion, of the benefit not only of producing and keeping up for a time their functional action, but in the commencement of the treatment to evacuate the stomach and bowels thoroughly, induced me to adopt the same course in the commencement of the treatment of the yellow fever. Cautiously feeling my way, watching its symptoms and progress, and the effect of the remedies which my pathological views of the disease indicated, and contrasting them with the effects and results of the various other modes of treatment, I settled upon the following course of practice, which was continued, with such modification as particular cases and the course of the epidemic required.

As early as possible after the attack—the commencement of the stage of reäction, five to ten grains of ipecac, with five to twenty grains of calomel, were given, to produce nausea and vomiting; cold water to be drank as freely as desired; the feet to be bathed in a hot mustard bath, and kept warm by hot applications, if necessary; cold applications to the head; the body and arms sponged with cold or tepid water, if there was much complaint of heat, and positive warmth of the skin; the room

to be well ventilated, and the temperature agreeable. If the first dose of ipecac and calomel produced full emesis, which was generally the case, the ipecac to be diminished in the second and third doses, to the quantity necessary to produce decided nausea—say two to four grains, combined with five to twenty grains of calomel, enough to secure an impression upon the liver; these second and third doses to be given at intervals of an hour and a half to two hours. In one and a half to two hours after the last dose, a seidlitz powder, or its equivalent of salts, to be given, and repeated every one or two hours, until free purging was produced, which consisted generally of the fecal contents of the bowels, mingled with or followed by copious discharges of bilious matter; this purging to be kept up, through the evening and night, by repeating the saline cathartics, until the bilious matter was worked off, and the discharges became decidedly watery, showing that depletion from the bowels and the portal system was effected; then the saline purgatives to be suspended. During this time, the hot foot-bath to be occasionally used, and the feet kept warm; the cold water as a drink, iced, if desired, to be freely allowed; ice, or ice-water, in napkins, applied to the head, and the cold or tepid sponging, as most agreeable, to the body, to be continued as required, to relieve the morbid, sensible heat, and the bed-clothing to be regulated by the feeling of comfort; when the pain in the head and back was severe, six to ten ounces of blood to be abstracted from the back and mastoid regions of the head, by cups. So soon as the necessary emetico-cathartic evacuations were accomplished, say about two o'clock A. M., the second morning, three doses of six to ten, or two doses of ten to fifteen grains of quinine to be given at intervals between two and eight o'clock A. M.; the foot-baths, cold to the head, sponging if necessary, and the free use of cold drinks — water or lemonade — to be continued the second day, and only enough covering to be comfortable. If there was high fever, and distressing headache, the seidlitz powders to be repeated through the evening, every two hours, until free purging was again produced; if the bowels were free, soda powders to be used. The next morning, about the same time, half the quantity of quinine to be given; the cold to the head; sponging the body, if the heat required it; cold drinks, and hot foot-baths, to be continued the third day; and seidlitz, or soda powders, if the bowels were, or were not open, and the fever was not subsiding, in the evening.

With these means, in this succession, proportioned to the age, constitution, and violence of the symptoms of the case, the active treatment ceased. The fourth morning, and in some cases, especially in negroes, the third, the fever and pain had subsided, or nearly so. In the stadium, or stage of prostration, always following the paroxysm, the critical struggle between life and death required careful watching and guidance. The use of stimulants, from this period in the disease, was almost indispensable to the recovery of all cases, of a well-developed attack. The stomach was too weak to receive much cold drink, or indeed much of anything, without producing nausea, oppression, and vomiting. The taste and appetite of the patient was then consulted, and brandy, wine,

or porter, whichever was preferred, was given at regular intervals of one to two hours, in such form — mint julip, sangaree, mulled wine, panada, etc. — as was most agreeable, in small quantities, one to two or three spoonfuls at a time; and a like amount of barley or rice-water, or, if the stomach would bear it, chicken-water or beef tea. If the stomach was very weak and nauseated, or irritable, whichever of these kinds of stimulants and nourishment agreed best, were given in the smallest quantities, and but little or no water was allowed as a drink, but pulverized ice in lieu of it. If vomiting of acid occurred, carbonate of ammonia, or soda, or lime-water and milk in equal quantities, succeeded best in removing it. This course of stimulants and nourishment — the nourishment, and the stimulants, if necessary, gradually increased in quantity, from day to day, and changed as desired by the patient, together with perfect quietude in bed, and not rising out of bed; comfortable covering, so as to promote the action of the skin, from the time of the subsidence of the feverish heat; the bowels not to be disturbed, if easy, for two or three days, and then moved by enemas — enabled the exhausted and prostrated system to rally, and gradually restore itself to health, if not imprudently prevented by excess in eating, or by exposure, and sitting up too soon.

In addition to these means, in the stage of prostration and of functional derangement, a blister over the stomach was useful in relieving irritability and vomiting. Of the various tonics resorted to, the only one agreeable to the stomach was muriated tincture of iron, and in some cases it was very useful, especially where the general debility was attended with continuous oozing of blood from the gums and nose, which continued in a few cases several days, after black vomit, and still they recovered, by the use of the other means stated, and the tincture of iron, in addition, in doses of fifteen to twenty drops every two to four hours.

This is a brief outline of the course of treatment pursued during the epidemic. The object of the external appliances was to control and relieve the general, morbid and exhausting excitement, and thereby to reserve some of the nerve force, misdirected and spent in that way, to be appropaiated to the important organs of digestion, secretion and excretion, which were in a dormant and inefficient state. The ipecac and calomel, followed by the salts, not only thoroughly evacuated the stomach and bowels of their contents, which they neither had the power to digest nor expel, but by the combined influence of the nauseating effect of the ipecac upon the stomach, and the special effect of the calomel upon the liver, and subsequently the effect of the salts upon the kidneys, the necessary innervation was invited and secured to those organs, to relieve them from their surprised and inefficient condition, and to restore their wonted functional action; thus to eliminate from the system the poison producing so much disturbance, disorganization, and tendency to death. The effect of this impression made upon, and the evacuation of the stomach, bowels, and the liver, was to relieve measurably the morbid condition of the brain, and increase its inervative ener-

gies, and thereby not only lessen and relieve the sympathetic oppression and nausea of the stomach, but to promote the action of the liver. The result of these sympathetic and reflex influences, was not only the lessening the general exhausting excitment, the relief of the cerebral and gastric distress, but the early promotion of the wonted secretions, by which the poison was eliminated from the system. Subsequent, and, auxiliary to these means, the quinine was given, as the safest and most efficient sedative and febrifuge, to relieve the morbid irritation, excitement and pain; and thus to assist in promoting secretion, and especially perspiration. For whatever theorizing there may be about the effect of quinine, we who have long used it, in small doses and large doses, and carefully watched its effects, know that it is not only febrifuge, but certainly, powerfully, and more safely and permanently sedative in its effects than opiates. It was not desirable, or useful, to produce more than a moderate impression, sufficient to control and partially relieve the morbid sensibility, pain, and excitement, by the quinine; and for this purpose, twenty to thirty grains the second morning, and half as much the third, seemed sufficient. A greater degree of quininism obviously obtunded the nervous sensibility, and depressed the system too much. Quinine seemed to act, also, in a good degree, as an antidote to the poison; for those who had taken the proper quantity, at the proper time, had a better chance for, and a more favorable, recovery. Though quinine manifestly produced these favorable effects, when given, as soon as the system was prepared for it, in the paroxysm; at the close of the stage of excitement, and during the stage of prostration, it was not only very repugnant and nauseating to the stomach, but in small doses, in that way, and in large doses, by its depressing effects, did harm. Except in a very few protracted cases, calomel was never given, after the first day of treatment, though in some cases the disease was permitted to progress one or two days before the physician was called in, and then it proved to be the most successful to commence the treatment in that way.

During the stage of prostration, and functional suspension and derangement, the treatment was assistant and expectant; carefully avoiding everything that was repugnant, or nauseating to the stomach, in the use of stimulants and nourishment, and the little medicine, in the way of antacids and tonics, that were indicated.

After the thorough evacuation of the stomach and bowels, at the start, and the decided and somewhat continuous impression by the ipecac and calomel on the stomach and liver, it was important to avoid the use of anything that was repugnant or nauseating to the stomach, in the first stage. On this account the seidlitz powders were resorted to, and were soon found not only agreeable and soothing to the stomach, but efficient and peculiarly useful in their purgative and diuretic effects. The encouragement or production of perspiration, during the stage of heat and excitement, by hot diaphoretic drinks, wrapping up in blankets, and keeping the room heated and confined, was soon found to be most decidedly injurious. The morbid heat was thus retained, and the excitement, restlessness, pain and exhaustion, greatly increased, without any

compensating benefit. Some of the most favorable recoveries occurred, when the liver and kidneys acted well, without any greater action of the skin, than the insensible perspiration and a gentle moisture. As the heat and excitement subsided, however, it was favorable to have moderate perspiration, and useful to encourage it by gentle means, especially the moderate increase of bed-clothing. In the course of the epidemic, the only case that I saw in which this treatment was properly instituted and carried out, that proved fatal, demonstrated the inefficiency of the skin, in eliminating the posion from the system. He had a high degree of heat and excitement, attended with profuse perspiration, from the evening of the first day, throughout the paroxysm, without any special means being used to produce it, but the heat and excitement were not relieved by the perspiration, and the second day the secretion of urine failed, and could not be re-established. The fluids ingested seemed to pass off rapidly by the skin, thus depriving the kidneys of their proper stimulas to action. He died on the fifth day of copious black vomit and hemorrhage. Careful observation, as to the effect of the different excretions, lead to the belief that moderate perspiration, at the waning of the paroxysm, was beneficial in relieving the subsiding heat and excitement; but that little benefit was derived from it as a carrier of the morbific poision out of the system. These observations and deductions, made at the bedside, are sustained by the researches and experiments of the ablest pathologists, who have demonstrated that but little of anything, but the watery fluid of perspiration, can be made to pass out of the system through the pores of the skin; while the liver and kidneys are the great emunctories of the effete and poisonous matter in the system; and that the skin cannot be made, to any salutary extent, the substitute for these organs in the performance of their offices.

In connection with this account of our mode of treating this epidemic, it is proper to notice some of the various modes of treatment, adopted by the people and by different physicians. The panic produced by the yellow fever originating in our midst, and soon heightened by the daily accounts of its pestilential fatality in Norfolk and Portsmouth, induced not only the sick, and their friends, to resort to those—whether physicians or not—who had seen the disease, and professed to know its treatment, but the conductors of newspapers caught up and published the fugitive and domestic accounts from abroad of the treatment of yellow fever. These published modes of treatment, of course, being the simple and domestic practice, understood by laymen and nurses. Unfortunately, most of this public information, which was sought after and adopted with so much avidity, was derived from the creole practice in New Orleans, and but ill adapted to this latitude and to our Northern population. Nevertheless, it took so strong a hold upon the public mind, that its influence for a time was seen and felt, in the domestic treatment and in the nursing of almost every case of the disease. This was so much the case, that it was difficult to resist and overcome the influence of the popular prejudice in favor of the newspaper and nurse

practice, sufficiently, to have a proper and scientific course of treatment carried out.

This newspaper practice, which was published as the way to cure yellow fever, because the creoles in New Orleans, or on the coast, are said to cure themselves and their negroes, who rarely have the disease badly, in that way, consisted of a dose of oil, wrapping up in blankets, after a hot mustard foot-bath; closing up the room, so as to exclude the fresh, pure air, and keep it warm, and by drinking plentifully of hot diaphoretic teas, to sweat off and cure the fever. Acting upon this opinion, like that avowed by Dr. Stone, that yellow fever is "the same in all latitudes and longitudes, unmodified by topographical causes or changes of climate, but under all circumstances the same, identical and unchanged," some physicians inclined to, and perhaps adopted this practice. But it was soon found, whether the disease was the same here—"*unmodified*," that the practice, that was said to cure it in New Orleans and on the coast, failed in producing that result here. From careful inquiry, I feel authorized to state that, if every case, of or above the medium grade of violence, of the disease that was treated in that way did not prove fatal, I have been misinformed. On the 5th of October I addressed a short communication to the press, inveighing against the evils and fatality they were producing, in that way, and also gave an outline of the treatment which I found almost uniformly successful.

As to the practice of physicians generally, the difference consisted chiefly in the time of administering, the quantity, the repetition, the continued use, &c., of the leading remedies. Some continued the use of calomel in full doses, even after the subsidence of the paroxysm, to keep up bilious secretion, and to produce constant bilious stools, and even to produce ptyalism. Some deferred the use of quinine until the subsiding of the paroxysm, and then used it as a tonic febrifuge. Others, at least for a time, proscribed both calomel and quinine as not being adapted to the disease. All these different modes of treatment, being proposed and sustained by high authority, and adopted here, in accordance with the pathological views, and the judgment of different physicians.

General bleeding was resorted to, in a few cases, but though seeming to be temporarily beneficial, its results were not such as to encourage its continued or general use; while local bleeding with cups was much more generally approved of, and decidedly salutary in its effects.

ART. IV.—*On the Action of Quinine:* by Dr. H. BENCE JONES, F. R. S.

THE physiological and pathological action of quinine, in its passage through the system, is given by M. Briquet to the following effect:—In from $2\frac{1}{2}$ to $4\frac{1}{2}$ grain doses, it stimulates the circulation, respiration, and

nutrition. It may, in such doses, be said to elevate the principal vital actions. In doses of 9 grains and upwards, this effect is completely changed. In a few hours it produces general debility of the nervous system. For the first hour or two, there is excitement of the brain: congestion of the veins of the pia mater; a feeling of tension and pulsation in the head; sensitiveness to light; beating of the ears, vertigo, tremor of the limbs, palpitation of the heart; internal agitation and general excitement; heat of the skin, frequency of the pulse, and perspiration. After a single very large dose, these symptoms acquire great intensity. Then the most intense agitation, delirium, and even convulsions, are caused by diminution of the nervous power, and cerebral congestion. These symptoms last only for a short period; they are followed by those of the second period, in which there is feebleness and slowness of motion, prostration of strength, total loss of voluntary movements, dulness of sight, of hearing, double vision, amaurosis, aphonia from want of muscular action of the larynx; dyspnœa from paralysis of the eighth pair, and then paralysis of the limbs; diminution of force in the heart and vessels; feebleness of the pulse; more or less sudden stoppage of the heart's action, with loss of heating power. In small doses in health, quinine causes irritation of the mucous membrane of the stomach. In diseases, it may cause inflammation of the stomach. On an ulcerated surface, it causes pain, inflammation, ulceration, and gangrene. It may cause irritation of the urinary organs, and pain and inflammation, like the balsams.

With regard to the pathological action of quinine, M. Briquet considers that it does not act directly on the marsh poison. It does not act on the general state of the organs, or on the blood; but it has especial action on the nervous system, c'est la médecine du quitte ou double, celle que les militaires emploient quand pour couper la fièvre ils avalent une double ration d'eau de vie chaude mêlée de poudre à canon. It does not act by increasing the vital forces or by sustaining them. It is not by a tonic action, or by an astringent action, but by a sedative stupifiant action. The other remedies for intermittents show the same sedative action; thus Sydenham cured intermittents with opium. Arsenic also, he thinks, acts on the nervous system, depressing the action of the heart, stopping the production of heat, and the functions of life. In small doses it may stimulate; in large doses it distresses. The same double action is perceptible with many medicines, as alcohol, æther, chloroform, nitre, digitalis, opium, and even in the action of heat, cold, light, and electricity, the same double action is observable. The first action, when not excessive, is stimulating. The full force kills. Quinine cures neuralgia as it cures ague, by subduing the action of the nerves, not by any tonic action; opium acts more on the brain than quinine does, and it acts less on the ganglionic nerves than quinine; opium soothes and calms; quinine prostrates and destroys; this is its specific action. It is a palliative remedy, neither acting on the cause of ague nor on the structures generally, but as opium cures delirium tremens, so quinine cures ague.

In the treatment of typhoid fever, when there is excessive prostra-

tion, tendency to sleep, or coma, quinine should be avoided. It is most useful when there is excitement, agitation, excited eye and manner, and delirium.

In rheumatic fever, quinine succeeds much better when many joints are affected, rather than when the disease is limited to a single joint; from 15 to 75 grains were given daily to 250 cases. This treatment, with bark instead of quinine, was long since used and disused. To test the effect, I have given 100 grains of quinine in 24 hours to a patient in St. George's Hospital, with rheumatic fever. No alteration was made in the pulse, no effect was produced on the pain, nor on the swelling of the joints, and on the third day I was obliged to omit the treatment on account of the sickness which ensued.

The following are the general rules established by M. Briquet, for giving quinine in fever:—

First, give each hour or second hour the sixth or the twelfth part of the quantity to be taken daily, and leave ten hours' interval without any quinine.

Secondly, gradully increase the dose, until head symptoms, vertigo, and pain, are produced.

In ague, give the quinine so as to produce the maximum effect at the commencement of the febrile action, so as, if possible, to stop the access.

In typhoid fever, give quinine during the night, for the access comes on in the afternoon. Quinine, when given in pills, is, in three hours, only one-sixth as active as when given in solution; in five hours, it is four-fifths as active as in solution. 30 grains in pills do not appear in the urine until six or seven hours after they are taken, while 4½ grains, when taken in solution, are detectible in the urine in from three to four hours; 15 grains used as an enema, appear in the urine in twelve hours. To produce any effect, the injection must be repeated many times daily.

Lastly, the absorption of quinine by the sound skin is very doubtful.—*Braithwaite's Retros., Jan.* '56.

Art. V.—*Placenta Prævia. In an Elaborate Essay,* (of 96 pages,) *on the Statistics of Placenta Prævia,* by James D. Trask, M. D., (of White Plains, New-York,) to whom was awarded the Prize of the American Medical Association at its last meeting, the author arrives at the following general results:

GENERAL REVIEW OF THE SUBJECT.

From what has preceded, we deduce the following as the course which the experience of the profession has shown to be the most likely to be attended with success in the management of this accident.

1. We have shown that, as a general rule, cases in which delivery takes place prematurely are attended with greater risk to the mother than those occurring at the full time, with the exception of those before the seventh month, which rarely prove fatal, in consequence of the undeveloped condition of the bloodvessels of the womb at that early period. The probabilities of the child being saved are probably better at full term, though this is not so distinctly shown by our statistics. Hence, if it be possible, cases in which premature delivery is threatened ought to be conducted to the full period.

This was the advice of Mr. Kinder Wood, a successful obstetrical teacher, who was in the habit of detaching the placenta in cases of dangerous hemorrhage from its presentation. When hemorrhage comes on before the completion of the term of pregnancy, absolute rest and cold, with, in some cases, opium, should be resorted to for the purpose of restraining hemorrhage, *avoiding* the use of the *tampon* until the progress of the case indicates that extreme measures must be resorted to; for the introduction of the tampon in cases in which it is noted was, in certain instances, soon followed by labor pains more or less effective. But, when its use is determined upon, a suppression of the hemorrhage may be quite confidently relied upon for a time, at least, provided its introduction be skilfully effected. In many instances, however, at this early period, the hemorrhage continues, and artificial delivery is the only resource.

2. Most cases of *partial* placental presentation require only rupture of the membranes. By this simple expedient, the uterus is brought into active contractions, and hemorrhage restrained within moderate limits, or entirely suppressed, until delivery takes place spontaneously, as occurs in a large proportion of cases, or is accomplished by art. But hemorrhage, in cases of partial presentation, is not always thus controlled, and our first table furnishes not a few which were attended by most alarming loss of blood.*

3. In cases of complete presentation, if hemorrhage does not yield to simple measures, and in dangerous cases of partial presentation, early delivery is of the first importance. To select the most favorable opportunity for this is often one of the most critical tests of the physician's skill. To do this before the os has become dilatable is to incur the risk of inflicting serious lesions upon the uterine neck, and a difficult and protracted withdrawal of the child; while, to wait unnecessarily long, is to expose the patient to great hazard from unnecessary loss of blood. The rule should be to wait not for a dilated, but a dilatable condition of the os. The great source of danger in the conduct of cases of placenta prævia is the delay required to permit the necessary dilatation of the mouth of the womb; while waiting for this necessary prerequisite to delivery, exhausting hemorrhage has often taken place, from the effects of which the patient has never recovered.

With the hope of keeping the bleeding in check during this necessary

* Of the eight cases lost among Dr. Lever's cases, *four* were complete and *four* partial presentations.

delay, the membranes may be advantageously ruptured; for we need not, in these cases, fear any embarrassment to delivery from this cause, inasmuch as the uterus is almost invariably relaxed after severe hemorrhage. The administration of ergot, under such circumstances, in the manner already described, with the view of keeping up a pressure upon the mouths of the bleeding vessels until the os should dilate, is sanctioned by the results of some of our cases in which it was employed; and although not often given, as we judge, with this particular view, it promises to be, in many cases, a valuable resource. In Dr. Fountain's two cases of complete presentation, rapid dilatation took place under its repeated administration; a compression of the placenta was kept up until the os permitted the introduction of the hand for turning, and both mothers and children were saved. In this way we imitate, to a certain extent, the course pursued by nature in spontaneous expulsion of the child.

The inhalation of *ether*, in one instance, quickened labor, and chloroform, in another, seemed to favor relaxation of the uterus. How far these agents, especially the latter, may prove subservient to this important object, experience has not yet determined.

4. But whatever means may be resorted to for keeping in check the flow of blood while the os is undergoing dilatation, the physician should not leave his patient after that process has begun. Dangerous, and even fatal flooding sometimes takes place even when the os is yet undilated, as happened in a case recorded by Dr. Smellie. Dr. Rigby laid down the rule, that the patient should not be left by her physician after the placenta was discovered to be presenting. This rule he afterwards modified, as the interval in such cases is too long to justify the sacrifice of time. But the physician should remain beside his patient until active hemorrhage has ceased; and if dilatation is in progress, it is imprudent to leave the bedside until delivery has been effected. It has occurred in the experience of every physician to be surprised by the unexpectedly sudden dilatation of the os in some cases of ordinary labor. On reading several of our cases, it is very apparent that from a neglect of the precaution here urged, the physician failed to be at hand when sudden and fearful hemorrhage took place, followed by perilous and even fatal exhaustion. Such sudden losses of blood are not uncommonly accompanied by a degree of dilatation of the os uteri that would render immediate delivery admissible, as in case 69, from Rigby.

It corresponds with the experience of those who have had the largest opportunities for observation, and is an inference certainly warranted by a general survey of our cases, that of patients who enjoy intelligent and active medical assistance from the commencement of hemorrhage until the termination of labor, a very large proportion are conducted through their perils in safety, and no inconsiderable proportion of the children are saved. An early delivery by turning has been sanctioned by long experience, as the best general mode of treatment for securing safety to mother and child.

5. But in some instances, hemorrhage will not yield to the means

thus far recommended, and the os continues unprepared for artificial delivery. In these cases we may separate the placenta, with the confidence of almost certainly putting an end to the hemorrhage, and with an almost equal certainty of destroying the child; unless the os should permit artificial delivery within a short time after the separation is effected. The urgency of the symptoms in such instances, is sometimes very great, and it must be left to the judgment of the practitioner, in each individual instance, to determine whether to separate the placenta or to wait still longer.

6. The os may be dilated or dilatable, and the patient in a state of extreme exhaustion. Here, turning could be performed with facility, but delivery would be hazardous. In these cases the placenta may be detached with much less disturbance to the mother than would occur in turning under such circumstances, and an opportunity afforded for the patient to rally before she should be delivered. Table III. affords several instances in which spontaneous delivery took place, after such separation, and the patient recovered. Yet even in these cases, we must bear in mind that children are by no means necessarily destroyed by excessive loss of blood by the mother; and a resort to the stethoscope would doubtless often prove of great assistance, where in doubt as to the propriety of detaching the placenta. When we have satisfactory evidence that the child is dead, there can be no objection to an early resort to the separation of the placenta.

We have not entered into the controversy respecting the source of hemorrhage in placenta prævia, because our statistics furnish but little, and that contradictory, evidence on the subject. In case 332, Dr. Bland felt the hemorrhage proceeding from the uterus, and in another case it was felt to come from the placenta. Those interested in investigating this point, will find in Dr. Murphy's *Lectures* an interesting *résumé* of the arguments drawn from the structure of the placenta, and its connection with the uterus, by which its placental origin is advocated; and in the communications of Drs. Lee, Chowne, and Ashwell, in vol. ii. of the London *Lancet* for 1847, the considerations in favor of the belief that it proceeds from the mouths of the exposed uterine vessels. Our own opinion is that it proceeds from both these sources, but mainly from the womb. Borrowing the language of another, the unequal separation of the uterus and placenta prevents regular uterine contractions; hence, the large vessels of the exposed uterine surface pour out their blood, and relief is effected by a total separation, and a consequent regular and general contraction of the organ closing up their bleeding mouths.

In conclusion, it is proper to remark that, in the preparation of this paper, we have been influenced by no partialities in favor of any particular measures, but have sought to give a faithful and honest interpretation of the facts presented. Some errors of reference to particular cases may have crept in, but the numerical results are believed to be correct.

A portion of the *results* of the tables may be regarded by some as more curious than practical; but the object in presenting such has been to afford a test of the correctness of others which are of practical value,

inasmuch as the greater the number of instances in which we can show a correspondence of particular statement with general experience, or with other statistics, the greater the confidence we may place in the results as a whole, or on points upon which there has hitherto been a difference of opinion. It has probably suprised the reader, as well as ourselves, that cases collected from such a variety of sources, many of them very imperfect in detail, some supplying a fact under one head and some under another, should show a harmony of result as a whole. It is in accordance with the constancy which we look for in the general history of diseases and accidents, as well as in the other operations of nature, which, however irregular and uncertain they may appear, are regulated by laws which, unseen in the case of individuals, become more or less apparent when we consider large numbers. Upon our confidence in this uniformity the whole fabric of vital statistics is based. In not a single instance have our cases yielded to our queries an answer contrary to experience, though doubtless not always affording the exact numerical proportions between groups or classes which probably exist.

We have sought, by a thorough analysis of all the important circumstances connected with this accident, under ordinary modes of delivery, to establish a standard by which the results of other methods of treatment may be compared. We have tested by it the results of spontaneous and of artificial separation of the placenta, and have exhibited the different conditions under which the separation is effected in these two classes. Imperfect as the knowledge thus obtained must confessedly be, the results of our inquiries are submitted to the profession, with the belief that they are a step towards obtaining a more intimate acquaintance with the natural history of the accident, and with the effects of treatment.

ART. VI.—*The Progress of Discovery in the Nervous System and in Medical Ethics.*

"FOREIGN.—*Functions of the Spinal Cord.*—Experiments made by Dr. Brown-Séquard during the past summer, and presented to the Biological Society of Paris,—a report upon which has been made by a commission appointed for the purpose,—threaten to overthrow the present received notions of the functions of the spinal cord, as they are taught in our books. One experiment made in July last, according to M. Broca, the reporter of the commission, establishes beyond doubt the following points: 1. That the laying bare of the dura mater, and of the spinal cord itself, leaves the sensibility and motion of the posterior column unaffected. 2. That the sensibility persists even after the section of the posterior columns, called the sensative columns, of the spinal marrow, and that, consequently, these columns are not indispensable to the transmission of sensitive impressions. 3. That, far from abolishing the sensibility, the section of these pretended sensitive

columns is accompanied by hyperæsthesia of the lower extremities. 4. That after such a section, the caudal extremity of the spinal cord is more sensitive than the cephalic, which reverses all of our present knowledge of the direction of nervous currents. 5. Finally, the gray portion of the cord is itself insensible."—*L'Ab. Méd.*, Sept. 5, 1855.—*New-York Med. Times*, Feb. 1856.

The Boston Medical and Surgical Journal for Feb. 1856, hails with pleasure M. Brown-Séquard's researches, thus: "M. Brown-Séquard's discoveries of the functions of the spinal marrow: seldom has the scientific would been taken more by surprise than when M. Brown-Séquard announced his recent discoveries relative to the functions of the spinal marrow. Whatever may be wanting to complete our knowledge of the action of this portion of the nervous system, the brilliant investigations of Sir C. Bell, seemed to have set at rest forever the question as to the particular fibres which communicate motion to the muscles, and sensation to the brain. * * * M. Brown-Séquard ascertained that the nervous disturbance following the opening of the spinal canal was caused by the loss of blood and by the pain and shock consequent upon the operation. By operating in such a manner as to prevent a great flow of blood, and by allowing the animal time to recover from the depressing effects of the operation, he found that both sensation and motion returned to the posterior extremities in almost, if not quite, their original degree.

"Thus enabled to experiment upon the cord in a normal state (as far as its functions were concerned,) he proceeded to isolate various portions of the different columns by sections made with extreme care, and demonstrated a series of laws relative to the spinal functions, the principal of which are the following:

1. The posterior columns may be divided without destruction either of sensation or motion.

2. Sensation and motion are destroyed when the grey substance is cut across.

3. Integrity of the antero-lateral columns does not interfere with the loss of motion, nor does integrity of the posterior columns prevent loss of sensation.

4. Division of the posterior fibres of the cord, so far from abolishing sensation in the parts to which these fibres are distributed, appears, on the contrary, greatly to increase it.

5. When the posterior columns are divided, sensation continues to be transmitted between the lower portion and the grey substance, which transmits the impression to the sensorium by means of fibres descending from the upper portion, and joining obliquely the grey substance below the point where the section is made.

"Our limits forbid us to detail the experiments upon which the above conclusions are founded. They have been repeated over and over again with the same results, in the presence of a committee appointed by the *Société de Biologie*, consisting of MM. Claude Bernard, Bouley, Broca, Giraldès, Goubaux and Vulpian, to whom was referred M. Brown-

Séquard's memoir, and who were entirely satisfied with his conclusions. The interesting report which they made to the Society is the most convincing evidence of M. Brown-Séquard's skill as an experimenter and his eminence as a physiologist."

At present, neither time, nor the limits of this Journal will permit the editor to translate and copy from the French journals the reported researches above alluded to, yet, a few general remarks in relation to the same, may not, it is hoped, prove unacceptable to the right-thinking reader.

Sir C. Bell repudiated experimental vivisections and electrical excitations, declaring he had performed but few experiments, and did not rely on them to prove his (pretended) discovery in the nervous system. The foundation of his theory rests upon the assumption that, it is impossible for one set of nerves to perform two functions, that is to say, sensation and voluntary motion, as if the same nerve might not, for all that is known to the contrary, perform two, three, or many functions as readily as one. Yet it is neither philosophically nor physiologically correct to assume for any single isolated tissue of the human body an independent and exclusive power of acting apart from its associated tissues and fluids, unless, indeed, it be the muscular tissue which, contrary to the doctrine of Bell, possesses the inherent power of contractility exclusive of the nerves, &c. This theory assumes as a fundamental maxim, that sensation and motion are due to the nerves, to separate and distinct nerves; that is to say, the sensiferous and the motiferous. Hence, the functions being assumed, the anatomy is also assumed, which serves to pave the way for other assumptions still more extraordinary. Thus the sensational nerves have no sensation, being mere conductors. Nothing more! The motiferous nerves possess no force, no motion, being mere conductors. Nothing more! It is further assumed that there is a spot, never seen, either by the eye, or the microscope, somewhere in the brain, which is called the *sensorium—a terra incognita*, not *a terra innominata*, and being wholly unknown, theorists may predicate a thousand things of it which cannot be disproved, such as that, this sensorium which is neither known by intuition, nor by anatomy, receives by one set of nerves certain impressions, and transmits by another set, volitions, &c. Thus the word sensorium is an admirable thing where all knowledge fails.

This system of physiology is not only unsupported by anatomy, (yet, it was anatomy alone Bell relied on), but it is directly contradicted in conduct, if not in books, by the intuition of every sane man. A whitlow in the hand, a corn on the toe, or a boil on the surface, does not pro-

duce a pain in the unknown spot in the brain, but in the known spot on the surface.

To cap the climax of all these assumptions, the brain or sensorium is said to be wholly insensible, which, indeed, is not very far from the truth: for, in vivisecting an animal, it shows comparatively little sign of pain until the knife approaches the origin of the nerves arising from the brain. This insensibility of the brain or sensorium, exceeding by far that in the spinal cord, is very unfortunate for the central sensationalists, because the sensiferous nerve is, according to them, but an insensible conductor to an insensible sensorium, sensation being thereby rendered impossible, unless *the-is-not*, is more potent than the *is*. They dethrone entities in order to inaugurate nonentities.

The assumption of Bell,* Magendie, and all the world, that, because the nerves have double roots they must consequently have double functions entirely distinct, is just as convincing an argument for double functions in a tooth having two roots, or in the biceps muscle having two heads, not to name many organs more distinctly duplex, as double eyes, ears, lungs, kidneys, testes, ovaries, &c.

The two separate and wholly distinct sets of nerves said to be distributed to the organism, cannot be discovered even by the microscope, as the fanatical propagandists of this school themselves admit. Yet they found their books of physiology, pathology, and therapeutics upon this system, and fight for it with the zeal of martyrs.

It is now more than a dozen of years since the writer of these lines began to publish his experimental researches and inquiries concerning this system. Hundreds of human beings were submitted to experiment immediately after death; many vivisections of animals were performed before numerous medical witnesses competent to judge of their validity and fairness—witnesses who agreed in their testimony, and had no rational motives to deceive. Animals were decapitated, their spinal cords divided transversely and longitudinally, without destroying sensation and voluntary motion; the posterior and anterior roots of the spinal cord were irritated, divided, and destroyed; the nerves were followed to their distributions, and dissected away, as the readers of this journal and other journals know, showing that all of the fundamental principles of Bell and Magendie, concerning the *two* sets, as well as Hall's *four* sets of nerves, were erroneous,—that the muscles possess an inherent power of contraction; that both the posterior and anterior nerve-roots give indifferently the signs of motion and sensation; that

* Both Bell and Magendie were later by several years, than Walker, in the assumption of u ble nerves and functions.

the twitching motions described by Bell and Magendie as exclusively pertaining to the anterior root, can always, contrary to their theory, be more fully produced after separation from the cord than before, by following the nerve towards its distribution; that the spinal cord can be divided in three or four places, and that the head may be removed without destroying sensation and voluntary motion, and that sometimes, in the alligator at least, the head on the one hand, and the separated body on the other, act in a voluntary manner each for itself, giving all the rational indications that could be expected of an animal, as purpose, feeling, &c.

It is however in the decapitated body that all the concievable phenomena characterising sensation and voluntary motions are the most strikingly manifested, often for hours, with the exception of such phenomena as appertain exclusively to the special senses, as hearing, seeing, &c., the body acting of course like a blind animal until informed by touch.

Pamphlets, though few in number, describing these experiments, and announcing the deductions drawn from them were sent without delay to the principal capitals of christendom. And now, anno 1856, the latest mails bring the *unexpected news*, chiefly from *Paris*, showing that within the *last six months* experiments have been made, and pathological cases have been observed, which, though less striking, and less varied than the old New Orleans experiments, are received with loud acclaim in America, as overthrowing Bell's theory, and forming a new æra in physiology. Royalty inaugurated Bell with knighthood and a pension, and now, the Imperial Academy of Medicine inaugurates M. Brown-Séquard as a discoverer without recognizing in the remotest degree, the *priority* of New Orleans. (See *L'Union Méd.* Oct. 6, '55; Sept. 8th, '55; Oct. 6, '55; *Gaz. Hebdom. de Méd.*, Sept. 14th; Oct. 5th; Nov. 2nd, 1855; also, the case, and post-mortem examination reported in *L'Union Méd.*, by M. Laboulbène, which occupies nearly the entire number of the Journal for Dec. 15th, 1855.

M. Brown-Séquard is a distinguished French physiologist, who of late years lectured in Boston, New-York, and in other parts, and who, for a few weeks during last year, occupied the chair of physiology in the Medical College of Richmond, Virginia. His compatriots of the Imperial Academy of Medicine reported without delay*—without waiting or wishing to hear from Trans-Atlantic realms; they gave him their cordial approval, as independent philosophers always should do, however humble may be the laborer in the field of science. The Academy had,

* In Paris the rule seems to be that whatever claims to be an original contribution to, or discovery in, science, is examined into, reported upon, and adopted if found true at the weekly sitting of the Academy, without delay. Has the ethical law which, as it were, obliges one to accept the truth in Imperial France, a velocity and force 624 times greater than in Republican America? or is Ethical arithmetic in different places as 1 week to 12 years=624 weeks?

as yet, scarcely ceased to insist on Magendie's claims to priority of discovery over Bell—the members of that learned body, perhaps, had not pronounced the funeral oration upon the former, their illustrious defunct associate, when they pronounced upon M. Brown-Séquard's important researches, as overthrowing Bell and Magendie's theory—researches which, though but confirmations, not to say plagiarisms of another (so far as the nervous system is concerned), will inaugurate fundamental principles, of high importance in physiology, not to say psychology.

NEW ORLEANS, *March* 1, 1856. BENNET DOWLER, M. D.

ART. VII.—*Inflammation of the Os and Cervix Uteri:* by Dr. E. RIGBY, Senior Physician to the General Lying-In Hospital.

IN treating the subject of inflammation of the os and cervix uteri, I must beg it to be remembered that I do not feel justified in looking upon it commonly as a primary idiopathic complaint; but rather as one which is of a secondary character, or, in other words, symptomatic of some cause, the presence of which has induced it. I can no more look upon the inflammation of the os and cervix uteri as a primary disease, causing derangement of the general health, &c., than I can upon a gouty toe, a rheumatic knee-joint, or enlarged strumous gland. Most of these uterine affections are the local manifestations of some general derangement, but which, in their turn, reäct as causes producing their own set of sympathies and effects. The female generative organs, situate at the lower part of the trunk, supporting the chief weight and pressure of the intestines, and subject to great periodic alternations of vascularity, not to mention the wonderful changes they undergo during pregnancy and parturition, are rendered peculiarly disposed to be affected by any morbid action which may occur, especially in the great machinery of the chylopoietic system, and liable to be fixed upon in the various blood diseases, to localize their energy and expend their virulence upon. It will therefore be seen, that there are a few affections of the general health in a female in which the generative system is not more or less affected or involved; and, although these local affections which in the first instance are mostly effects of deranged health, reäct, and produce in their turn considerable sympathetic derangement; yet it must ever be borne in mind that, unless a distinct local cause be present, they must be looked upon as "the local manifestations of a general derangement," in order that we may form correct and rational ideas respecting their nature and treatment.

I cannot understand on what grounds it can be justifiably asserted that the uterine organs follow a different law in this respect to any other organ or parts of the body. If we take the various morbid appearances which the mouth presents, as regards the tongue, fauces, tonsils, &c., we do not usually look upon these as purely local affections producing symptomatic derangement, but as the local effects and evidences of a

general condition of health, and should condemn the treatment which advocates mere local applications in these affections as highly empirical and unscientific.

Inflammation of the os and cervix rarely occurs as an acute affection, but, in by far the majority of cases, in a subacute or chronic form. It is marked by continued aching pain about the lower part of the pelvis, extending to the back, and much increased by the erect posture and by exercise, and especially aggravated by sitting down suddenly on a hard seat, by the passage of a hardened fæces, and particularly by sexual intercourse. It is usually attended with a sense of heat, weight, and throbbing, with more or less irritability of the bladder. At first, the pain is not constant, but is allayed by rest; so that she is perfectly easy in the recumbent posture, but by degrees it scarcely ever leaves her, and she gradually becomes aware of sharp darting pains, like a sudden prick or stab, flying through the pelvis from time to time.

A white creamy discharge from the vagina accompanies this affection, and was first pointed out by Sir C. M. Clarke as diagonistic of inflammation of the cervix uteri. It "is opaque, of a perfectly white color; it resembles in consistence a mixture of starch and water made without heat, or thin cream. It is easily washed from the finger after examination, and is capable of being diffused through water, rendering it turbid."

Inflammation of the cervix uteri is mostly accompanied by considerable derangement of the digestive organs, and by an atonic state of the system generally. The face is pale, or perhaps sallow, the pulse is feeble and irritable, the tongue pale and flabby, or red, dry, and rough, from the presence of uterine irritation; and the vital powers are depressed.

It is caused by whatever tends to produce or keep up uterine congestion. Constipated bowels and torpid liver are decidedly two of the most frequent general causes of this affection. An intestinal canal, loaded with large fæcal accumulations, not only obstructs the returning circulation from the pelvic viscera, as is so commonly seen by its effects in producing an hemorrhoidal habit, but by pushing down the uterus into the pelvis lower than is natural for it, its venous circulation becomes also impeded, and considerable engorgement of the organ is produced. Thus it will be intelligible how, in atonic habits, a slight degree of prolapsus uteri will frequently produce this condition of the cervix; and hence it is that inflammation of the cervix often follows an abortion, especially if she has got up too soon after its occurrence. The patient, weakened by the loss, has risen from the recumbent posture while the uterus was still large and heavy, and the soft parts too relaxed to give it the proper amount of support.

As in dysmenorrhœa the local congestions, whether uterine or ovarian, are sometimes a result of an impure or morbid condition of the circulation, so here also we occasionally meet with inflammation of the cervix as the local manifestation of a general cause, resisting ordinary treatment, although fairly amenable to such as is indicated by the nature of the general affection.

Considering the amount of general derangement of health which attends a case of ordinary inflammation of the os and cervix uteri, it is highly desirable to premise some doses of alterative and laxative medicine, and thus to clear out the bowels, &c., before proceeding to any special local treatment. A dose of blue pill for two or three successive nights, and a brisk laxative the following morning, frequently produce such a change in the general symptoms as to materially alter the severity of the uterine affection. By restoring the liver to healthy action, and cleaning the intestines of a large quantity of fæculent matter, the abdominal circulation becomes greatly relieved, and local congestion proportionably diminished. Indeed, we can scarcely be said to have ascertained the real extent of the local affection, until this treatment has been premised. If the os uteri still remains much congested and swollen, and, upon examination with the speculum, appears of a dark red color, it is better at once to scarify the part, as being the quickest and most effective mode of relieving the patient. The blood starts at the slightest touch of the scarifying lancet, and two or more ounces are quickly taken away, with immediate diminution of her symptoms. The horizontal position must be strictly enforced, so as to give the empty vessels time to lose their dilated condition.

If the disease has assumed more of the chronic character, and therefore the glandular tissue of the cervix more involved, leeches are generally preferable. After the bleeding has ceased, the vagina should be repeatedly washed out with a warm decoction of poppies.

Besides the alterative and laxative medicines to which I alluded, she should take some alkaline mixture to improve the state of the urine, which is usually very acid under these circumstances, and thus allay any disposition to irritation of the bladder. No combination is better than small doses of the bicarbonate and nitrate of potass, and she may continue to use this after meals, even when she has commenced the use of mineral acids and tonics. The nature of the constitutional symptoms will point out how far the alterative and tonic plan of treatment must be modified; but the general indications are to restore the digestive organs to a healthy condition; to relieve local congestion, and invigorate the system.

If the glandular tissue of the cervix be much implicated, the induration of the part very considerable, and the lancinating pains frequent and severe, the above treatment must be more or less modified. It is generally preferable to apply leeches to the anus, not only to relieve hemorrhoidal congestion, which is usually present, but in order to avoid irritation and even slight inflammatory action, which the bites are apt to produce.

A suppository of diacetate of lead and conium is a useful application in these cases; and, where the patient is too much reduced to bear leeches, becomes a valuable substitute for them. For the same reason, the well-known lotion of Goulard and decoction of poppyheads is useful in these cases, and, when retained in the vagina for some minutes, produces much relief to the patient's suffering. *Retros.* 1856

Art. VIII.—*Electrical Experiment.*

The undersigned would respectfully invite the attention of experimenters to the following interesting electrical experiment. From the conductor of an electrical machine suspended by a wire, or chain, a small metallic ball, (one of wood covered with tin-foil,) and under the ball place a rather wide metallic basin, containing some oil of turpentine at the distance of about $\frac{3}{4}$ inch. If the handle of the machine be now turned slowly, the liquid in the basin will begin to move in different directions, and form whirlpools. As the electricity on the conductor accumulates, the troubled liquid will elevate itself in the centre, and, at last, become attached to the ball. Draw off the electricity from the conductor to let the liquid resume its position: a portion of the turpentine remains attached to the ball. Turn the handle again very slowly, and observe now the few drops adhering to the ball assume a conical shape with the apex downwards, while the liquid under it assumes also a conical shape, the apex upwards, until both meet. As the liquid does not accumulate on the ball, there must necessarily be as great a current downwards as upwards, giving the column of liquid a rapid circular motion, which continues until the electricity from the conductor is nearly all discharged, silently, or until it is discharged by a spark descending into the liquid. The same phenomena takes place with oil or water. Using the later liquid, the ball must be brought much nearer, or a much greater quantity of electricity is necessary to raise it.

Those who had occasion to observe the sublime phenomenon of a water-spout, will at once perceive in this experiment a faithful miniature representation of the gradual formation, progress, and breaking up of that grand phenomenon.

If, in this experiment, we let the ball swing to and fro, the little water-spout will travel over its miniature sea, carrying its whirlpools along with it. When it breaks up, a portion of the liquid, and with it anything it may contain, remains attached to the ball. The fish, seeds, leaves, &c., &c., that have fallen to the earth in rain squalls, may have owed their elevation to the clouds to the same cause that attaches a few drops of the liquid, with its particles of impurities, to the ball.

It is well known that water-spouts generally form on hot summer days in southern climates, and in the so-called, dead-calms; they never form on rainy days, nor in windy weather. If, in our experiment we blow upon the surface of the liquid, the discharge of the electricity from the ball is thereby so much facilitated, as to prevent the elevation of the liquid entirely, or, at least, to retard it very much. By holding a pointed conductor near the liquid, the elevation of it is entirely prevented. It seems not a forced deduction that lightning rods, and not the firing of cannon are the proper safeguards against the formation and the disastrous effects of water-spouts. When we contemplate the effects of electrical attraction on liquids, our attention is naturally drawn to its effects with regard to gases, and especially atmospheric air. The non-conducting air will, like other fluids, be attracted, electrified, and re-

pelled to seek its dissimilar electricity, giving rise to currents and counter-currents, and at the electrical machine, to the phenomenon known as the electrical wind, whilst by the operation of the grand electrical machine of the clouds, it produces those fearful and destructive currents known as whirlwinds and tornadoes.

The table lands of Mexico are never wetted by rain, and but very sparingly by dew. It is in these elevated and dry regions that whirlwinds are most frequent. Water-spouts and whirlwinds seem to be the lightning rods that nature constructs to afford to the electricity of the clouds a passage to the earth.

DR. M. F. BONZANO.

NEW ORLEANS, *February 16th*, 1856.

ART. IX.—*Physical Diagnosis.*

THE Supplement to the present number will, it is confidently believed, be acceptable to the patrons of the New Orleans Medical and Surgical Journal, inasmuch as it gives in a few words, if not an exhaustive analysis, yet a summary of the fundamental principles of Percussion and Auscultation. By pasting this table on muslin, it may be folded and carried like a map, by the the country Physician, as a remembrancer in practice, and as a substitute for more elaborate works, being a kind of grammar of the language of Physical Diagnosis.

Addendum to ART. VI., *on Discoveries in the Nervous System:*

NUMEROUS and extended papers detailing my experiments illustration of the physiology of the nervous system, will be found in this Journal from vol. iv, 1847, to vol. xii, 1856, not to name earlier dates and documents. Much unpublished matter on this subject remains in MS. volumes. The undersigned, on becoming the Editor of this Journal, felt a reluctance to occupy its columns with formal and extended papers upon this department of research to the exclusion of other topics of a less special and personal character, and the more so, as the question of priority could in no way be prejudiced by their suppression for the present. Although, of late, incidental remarks have been made yet no one can say that they have occupied much space in this Journal.

In October, 1851, The British and Foreign Medico-Chirurgical Review, in a critical notice of a pamphlet of 30 pages entitled "Experimental Researches on the Nervous System, by B. Dowler, M. D.," says, "We do not quarrel with him [Dr. D.] *for declining to accept the double system of excito-motor and of sensori-volitional nerves, such having, as we now believe, no real existence in Nature.*" B. D.

Editor's Office.—Notices.

MARCH 1, 1856.

COMMUNICATIONS RECEIVED.

Drs. Gammage, De Graffenreid, Anderson, Cowling & Translations from Dr. M. Morton Dowler

NEW MEDICAL JOURNALS.

L'Union Médicale de la Gironde; Méran, D. M. P., *le Rédacteur en chef*: Bordeaux: Rue des Remparts 64.

Virginia Medical Journal: Edited by Drs. McCaw and Otis. Richmond, Va. Monthly.

The Cincinnati Medical Observer: Edited by Professors Mendenhall and Murphy, and Dr. E. L. Stephens. Monthly.

El Siglo Médico, (Madrid,) has not reached this office regularly; from No. 88 to 100 there are missing, 93, 94, 95, 96 and 97.

The Monthly Stethoscope and Medical Reporter: Drs. G. A. Wilson & R. A. Lewis, Editors, Richmond, Va.

BOOKS AND PAMPHLETS RECEIVED.

From the Royal Society of Northern Antiquaries (under the Presidency of His Majesty, Frederick VII, King of Denmark): *Mémoires de la Société Royale des Antiquaries du Nord.* 1845—1849. Pp. 438, with Plates; 8vo. Copenhagen: M DCCCII. Published by the Society: *The Discovery of America by the Northmen:* Copies in English, French and German. Also, the following: *Cabinet D'Antiquités Américaines; Aperçu du fonds permanent de la Société Royale des Antiquaires du Nord avec la liste de ses Membres Fondateurs, etc.:* Through the Smithsonian Institution, and the Department of State at Washington.

Monthly Statistics of the Seventh Census of the United States (1850): by J. D. B. DeBow, Superintendent U. S. Census. Pp. 304; 8vo. From Hon. James L. Orr, House of Rep., U. S.

Directions for Collecting, Preserving, and Transporting Specimens of Natural History: Prepared for the Smithsonian Institution. Washington: 1854. Pp. 28; 8vo. From the Institution.

A complete Pronouncing Gazetteer, or Geographical Dictionary of the World: Edited by J. Thomas, M. D., and T. Baldwin, and others. Pp. 2182; royal 8vo., double columns. Philadelphia: J. B. Lippincott & Co. 1855. From Mr. B. M. Norman, bookseller, 14 Camp street, New Orleans.

Commerce and Navigation of the United States. Pp. 381; 8vo. Washington: 1855. From Hon. J. P. Benjamin, U. S. Senate.

Constitution of the American Medical Society in Paris. Pp. 16.

Transactions of the New-Hampshire Medical Society. 1855. Pp. 54; 8vo.

Braithwaite's Half-Yearly Retrospect of Practical Medicine and Surgery: Part XXXII, Jan. 1856. American Edition, Pp. 350; 8vo. New-York: Stringer & Townsend. 1856. (Mr. J. C. Morgan, bookseller, Exchange Place, agent for New Orleans.) From the Publishers.

Cohen's New-Orleans and Southern Directory, for 1856: Two vols. in one; with Portraits, &c. From the compiler, B. W. Cohen.

Clinical Lectures on Surgery: by M. Nélaton. From Notes taken by Walter F. Atlee, M.D. Pp. xii, 755; 8vo. Philadelphia: 1855. J. B. Lippincott & Co. From Mr. T. L. White, bookseller, 105 Canal street, New Orleans.

A Treatise on Medical Jurisprudence: by Francis Wharton, Author of a "Treatise on American Criminal Law," "Precedents of Indictments," "American Law of Homicide," etc.; and Moreton Stillé, M.D., Lecturer on the Principles and Practice of Medicine in the Philadelphia Association for Medical Instruction. Pp. xxvii, 815; 8vo. Philadelphia: Kay & Brother. 1855. From Mr. T. L. White, bookseller, 105 Canal street, New Orleans.

The Anatomical Remembrancer; or, Complete Pocket Anatomist, containing a concise description of the Struc ure of the Human Body; 2nd Am. ed.; from the 4th London ed.; with corrections and additions: by C. E. Isaacs, M.D., Demonstrator of Anatomy in the University of New-York. New-York: Samuel S. & William Wood. 1855. Pp. 265, 12mo. From Mr. T. L. White, bookseller, 105 Canal street, New Orleans.

How to Nurse Sick Children; intended especially as a help to the nurses at the hospital, &c., &c. New-York: Samuel S. & William Wood. 1855. Pp. 69, 24mo. From Mr. T. L. White, bookseller, 105 Canal street, New Orleans.

The Practitioner's Pharmacopœia and Universal Formulary; containing 2000 classified prescriptions, selected from the practice of the most eminent British and Foreign medical authorities; with an abstract of the three British Pharmacopœias, and much other useful information for the practitioner and student: by John Foote, M.R.C.S, Lond.; formerly Surgeon to the Chelsea Hospital, St. Heliers, Jersey; with corrections and additions, by an American Physician. New-York: Samuel S. & William Wood. 1855. Pp. 390; large 12mo. From Mr. Thos. L. White, bookseller, 105 Canal street, New Orleans.

A Manual of the Practice of Medicine: by George H. Barlow, M.A. and M.D, Cantab., F.R.C.P.; Physician to Guy's Hospital, to the Magdalen Hospital, &c., &c.; with additions, by D. F. Condie, M.D., Fellow of the Coll. Physicians, Author of "A Practical Treatise on the Diseases of Children," &c. Pp. 607, 8vo. Phila.: Blanchard & Lea. 1856. From Mr. J. C. Morgan, bookseller, Exchange place, New Orleans.

Clinical Lectures on Surgery: by M. Nélaton; from Notes taken by Walter F. Atlee, M.D. Pp. 755, 8vo. Phila.: J. B. Lippincott & Co. 1855. From Mr. T. L. White, bookseller, 105 Canal street, New Orleans.

Clinical Lectures on the Diseases of Women and Children: by Gunning S. Bedford, A.M., M.D., Professor of Obstetrics, Diseases of Women and Children, and Clinical Midwifery in the University of New-York. New-York: Samuel S. & W. Wood. 1855. Pp. 563, 8vo. From Mr. T. L. White, bookseller, 105 Canal street, New Orleans.

Elm Tents for the Dilatation of the Cervix Uteri: by HORATIO R. STORER, M.D., one of the physicians of the Boston Lying-in Hospital. Pp. 8.

Union of Scientific Medicine: by J. W. SINGLETON, M.D. Pp. 16. Louisville, Ky. 1856.

Epidemic Yellow Fever in Memphis, Tenn., in 1855*; with some Account of its Symptoms, Character, Treatment and Fatality:* by L. SHANKS, M.D., Professor of Obstetrics and Diseases of Females in the Memphis Medical College. Pp. 41.

An Address on the Life and Character of the late Dr. Coleman Rogers, M.D.: by HENRY M. BULLITT, M.D. Pp. 36. Louisville: 1855.

Introductory Lecture delivered before the Class of the Philadelphia College of Medicine, October 8, 1855: by JAMES BRYAN, A.M., M.D., &c., Professor of Surgery. Pp. 16. Philadelphia.

Second Annual Report of the Legislature of South Carolina relating to the Registration of Births, Deaths and Marriages for the Year ending December 31, 1854. Columbia, S. C. From Dr. R. W. Gibbes. 1855. Pp. 37.

Essay on Cholera Infantum: by M. L. KNAPP, M.D. Pp. 96. Cincinnati: H. W. Derby. 1855.

Report of the Superintendent (PROF. A. D. BACHE) *of the Coast Survey, showing the progress of the Survey during the year* 1854. Pp xcii, 288; 4to; with 58 Maps or Sketches and numerous sub-Sketches. Washington: 1855. From the U. S. Treasury Department.

Half-Yearly Abstract of the Medical Sciences: by Drs. RANKING AND RADCLIFFE, 1856, Philadelphia, Lindsay & Blakiston; from J. C. Morgan, bookseller, New Orleans.

ATLANTA MEDICAL COLLEGE.

The Second Course of Lectures in this Institution, will commence on the first day of May next, and continue four months.

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THE NEW ORLEANS

MEDICAL AND SURGICAL JOURNAL

FOR MAY, 1856.

ORIGINAL COMMUNICATIONS.

ART. I.—*Topography, Settlement, Climate, Population, Botany, and Diseases of Cherokee County, Texas:* by W. L. GAMMAGE, M. D., Rusk, Texas.

(*Concluded from page* 645.)

Aristolochia Reticulata. I found a specimen of this plant a few days since. It was pointed out to me by the name of Black Snake-Root, but, to my great joy, found it, upon comparison, to present marked differences; the leaves and their stems are densely pubescent; the petioles are shorter than the *A. Serpentaria,* and the leaves are rounder, larger, more obtused, and more distinctly veined. The flower stem was dead, but the flowers are said to be densely hairy and of a purple color. I presume it to be possessed of the same medicinal virtues with the Virginia Snake-Root, as the roots are very much alike, and have a similar smell and taste. This variety must be scarce here, as this was the only one found, whilst there is a great deal of the other variety.

Polygala Senega. Seneca Snake-Root. I can only find this plant on the waters of the Angelina, on the eastern border of the county, though I have made dilligent inquiries for it. It has a perennial branching root, from which several erect smooth leafy stems arise annually from nine to twelve inches high. The leaves are alternate or

scattered, lanceolate and smooth, of a bright green on the upper side, and pale beneath; its flowers are small, white, and arranged in a spike at the end of the stalk. I had occasion to use some Seneca a few days since, and, upon complaining to the family where I was in attendance, that I regretted the necessity of sending all the way to town for it, the father of the young lady whom I was prescribing for said a neighbor of his knew where an abundance of it grew. I asked him to go and get some. He returned in a little while with it, and, upon trial, I found it to answer an admirable purpose. This incident taught me very forcibly the necessity of knowing, at least, the sensible properties of such indigenous plants as the beneficence of nature supplied us with, as it were, at our own doors. The roots of this plant are expectorant, diuretic, and, in my hands, emmenagogue. It is generally used in decoction, and is said, when given in large doses, to be emetic and cathartic. I cannot pass this article by without adding my testimony and unqualified admiration of its use in the treatment of amenorrhœa, when given in tincture, in combination with peruvian bark, rhubarb and an aromatic spice. Dose three times a day, to be continued for several weeks, beginning two or more weeks before the menstrual period.

Cassia Marilandica. American Senna. I have a specimen of this plant before me as I now write. It grows abundantly in our alleys and back lots, and near old fields. It is an indigenous plant, with perennial roots, which send up annually, early in the spring, numerous erect, smooth cylindrical stems, that grow to the height of four or five feet. The leaves appear alternate, and are composed of from six to eight pairs, of opposite, oblong, lanceolate, smooth-pointed leaflets, which are connected to the common footstalk by short petioles; the footstalk is channeled above, and furnished at its junction to the stem with a small ovate, glabrous gland. The flowers, which appear in June and last until frost, are small and yellow, growing in axillary racemes at the end of the stem. The calyx is five-leaved, yellowish, and smaller than the others; corollæ 5; stamens 10, with the germ enclosed. The fruit is about three inches long, curved upon itself, swelling at the seeds, and of a dark brownish color. The leaves of this plant are cathartic, though milder than the Alex. Senna. I do not think the virtues of the plant are known to the country people here.

Baptisea Tinctoria. Wild Indigo. This plant certainly grows wild in our country, whether it is indigenous or not, though I believe it is. A specimen brought to me a few days since from the woods, presents the following appearances: Plant about two and a half feet high, stem

smooth and branching, small, wedge-like obovate leaves, of a dark brownish green color, and 3 together; small yellow flowers; fruit a dark pendulous pod, or bean, containing 5 or 6 small seeds, curved upwards, and arranged in axillary whorls towards the ends of the branches. It is used in decoctions by the country people for croup, for which disease it has great reputation; when given in quantities it vomits; in small doses repeated often, it is a gentle and pleasant cathartic; a poultice of the leaves is used for chafed and irritable sores.

Sanguinaria Canadensis. Blood-Root. Puccoon Root. This grows in swamps, preferring shady places. The root is 2 or 3 inches long, tortuous and rough, generally found lying horizontally in the ground, being of a dark reddish brown color, but bright-red when broken, containing a bright-red juice which exudes freely and stains the fingers; the leaves, which stand upon a long channelled footstalk, springing directly from the root, are heart-shaped, deeply lobed, smooth and distinctly marked by orange-colored veins, on the under side. The flowers, which appear early in March, are mostly white, tinged with red or purple. The root is the most active part of the plant, and is said to be emetic in large doses, but sudorific and expectorant in small quantities. It is in high repute in domestic practice as an emmenagogue. I have found a saturated tincture useful in jaundice when given in doses of 20 drops 3 times a day, and persevered in. It is said to be useful in diminishing the heart's action. Its advocates claim for it as much virtue for this purpose as the veratrum viride, but for myself, I do not know that either is better or safer than small doses of ipecac, persevered in.

Leontodon Taraxacum. Dandelion. This is an herbaceous plant, with a perennial spindle-shaped root; the leaves, which spring immediately from the radix, are long, pinnatified and deeply toothed, the main stems, two or more in number, arise from the root, and are erect, simple, smooth and hollow, and terminate by a large golden-colored flower which opens in the morning and closes at night. The seeds, when mature, are armed with a downy or feathery end, which makes them easily blown away by the wind. This plant is not abundant with us, but I have seen several specimens. It blooms early in the Spring, and by August the flowers disappear. The plant contains a milky juice; the root is the most active part, and is said to be tonic, diuretic, and apperient; it is mostly used in decoction, though there is an officinal extract which may be found in the shops. Eclectic works speak highly of its efficacy and usefulness in hepatic derangements.

Lobelia Inflata. Lobelia. Wild Tobacco. This plant, which is

indigenous, growing wild in old fields and near roadsides, is a biennial, with an herbaceous angularly hairy stem, about 12 or 18 inches high, branching from about mid-way upwards; the top rises pyramidally above the branches; the leaves are scattered, oval, acute, serrated and hairy. The flowers appear in July and August, and are purple, numerous, and small, disposed in leafy terminal racemes and supported on short axillary foot-stalks; the seeds, which are small and brown, are contained in an oval two-celled capsule. All parts of the plant possess medicinal properties, but the seeds are the most active. Lobelia is emetic, and in small doses diaphoretic, and expectorant. In combination with syrup of squills, it forms an excellent remedy in croup and asthma.

Verbascum Thapsus. Mullein. There is some doubt in the minds of botanists as to whether this is an indigenous, or naturalized plant. Be that as it may, it answers so many useful and valuable purposes, and grows so abundantly in uncultivated places, that it deserves at least a passing notice. Mullein is an annual plant with us, with an erect rough, hairy, round rigid stem, growing about 4 feet high; it is irregularly beset towards the base, with large, oval, oblong pointed, woolly leaves, which are indented at the margin, and decurrent at the base. Its flowers, which are yellow and disposed in a long cylindrical spike, appear from May to September. The leaves are used in a variety of ways by the country people, and possess discutient, demulcent, emollient, and narcotic properties. A decoction made with a pint of water and 2 ounces of the leaves boiled down to a half-pint and strained, is sometimes used in teaspoonful doses for the cure of mucous diarrhœa coughs, menorrhagia, hæmoptysis, &c. The leaves steeped plentifully in warm water and applied whilst warm, in articular rheumatism, deep-seated abscesses, painful luxations of the ankle; toe-itch, onychia maligna, &c; they are very useful in relieving pain, and reducing swelling of the limbs. It is in deservedly high repute as a remedy in that disease of the bowels amongst cattle called "*Murrain.*" I have frequently seen a quart of the infusion check the disease in a few hours, and with perfect safety to the animal.

Spigelia Marilandica. Pink Root. It is an herbaceous plant, with a perennial root which consists of numerous dark brown fibres, the stems of which (there are generally several) are simple, erect, four-sided, smooth, and grow from 12 to 15 inches high. The leaves are opposite, ovate, lanceolate, entire, and smooth, with the veins and margin slightly pubescent. The flowers, which appear in May and June, grow upon spikes, at the termination of the stems, are funnel

shaped, and of a carmine color outside, yellowish orange within. The seeds are contained in a two-celled capsule. This plant grows wherever the Serpentaria is found; the root is the only part used as a medicine, and possesses in an eminent degree anthelmintic properties. In overdoses it is said to produce vertigo, dimness of vision, and even convulsions. These symptoms, however, have been ascribed by some writers to the presence of some other root in the drug, which they say may be distinguished by its being blacker than the genuine Spigelia; however true this may be, though it rather tastes of the speculative, I doubt not that an overdose of the Pink-root would produce all the above symptoms.

Rumex Acetosella. Field Sorrel. This plant has obtained the common name of *Sheep Sorrel*, probably, from the fact of its being a favorite food of that animal. It is a low herbaceous plant, with annual stems and a perennial root; the stems grow from 6 to 8 inches high; the leaves are lanceolate, halberd-like, and spreading or reversed. The flowers are yellow, somewhat funnel-shaped, and appear in April and May; the leaves are sour and inodorous; they are refrigerant, diuretic, and anti-scorbutic; the inspissated juice is escharotic, and has some reputation with the eclectic school of medicine, as a remedy for indolent ulcers, and incipient cancers, used by applying in the form of a plaster directly to the inflamed parts.

Rubus Villosus. Black-Berry. This is a perennial, prickly, trailing shrub, growing in old fields and marshes; the stem is furrowed and angular, and when finding nothing to climb upon, generally about 3 or 4 feet high. The leaves are generally in threes or fours; the leaflets are ovate, unequally and sharply toothed, slightly hairy on both sides, and armed on the mid-rib, underneath, with recurved prickles, or thorns. The flowers appear in April and May, growing on a raceme, with a hairy prickly stalk. The fruit, which at first is green, then red, and lastly black, is shaped somewhat like a mulberry, and is much prized as an esculent food; a cordial made of black-berries, sugar and wine, or brandy, forms a pleasant, stimulating beverage, which, amongst the more comfortable class of farmers of this country, is the pride of the housewife, and is the universal accompaniment of a hearty welcome to the weary traveller, where he stops to escape the dust and heat of summer, or rain and cold of bleak and dreary winter. The root of the *R. Villosus* is diuretic, astringent, and tonic, and is much used in domestic practice in diarrhœa and simple dysentery. The usual mode of administering it, is in decoction.

Rubus Trivialis. Dewberry. This has a slender creeping stem, armed with numerous prickles, or thorns, and grows abundantly on hill and valley. The leaves are petioled and composed of several oval, acute unequally notched leaflets; the foot-stalks and mid-ribs are armed with short recurved thorns. The flowers, which appear in March and April, are large, white, usually solitary and at the end of elongated peduncles, which, like the leaf-stalks, are thorny. The fruit is very much like the black-berry, only a little larger, much sweeter, and ripens earlier. The medical properties and uses are much the same as in the former variety.

Asclepias Incarnata. Silk Weed. It has an erect, downy stalk, branched above, some two or three feet high; leaves opposite, nearly sessile, oval, lanceolate, oblong and downy beneath; flowers are of a red color, fragrant, and in numerous, nodding umbels; the pods which contain the seed-down are entire. It grows abundantly in the South, near low wet fields, and by-road sides; it is very scarce here. The plant contains a milky fluid, which exudes wherever broken. The root of the plant is emetic, cathartic, and expectorant; it has been used by infusion for the cure of asthma, with marked benefit.

Portulacca Oleracea. Garden Purslane. This is known amongst the country people by the common name of "*Pursley*," most likely an abbreviation of the word purslane. It is an annual succulent creeping plant, with a slightly saline taste. The early tender stems are sometimes boiled with turnip-salad, or mustard-salad and bacon for the table. It has small yellow flowers, which are succeeded by an oval, two-celled pericarp full of very small seeds. Purslane is diuretic, apperient, and eminently anti-scorbutic.

Arum Triphyllum. Indian Turnip. Wake Robin. This plant has a bulbous perennial root, which sends up every Spring, a large ovate, accuminate, various colored spathe or sheath, enclosing a club-shaped receptacle. The spathe and upper portions of the receptacle decay, whilst the germs are converted into a bunch of bright red or scarlet berries. The leaves, of which there are three, one on each plant, are oval, and nerved beneath. The whole plant, but the root in particular, is possessed of violent, pungent, acrid properties, as can be easily, though painfully demonstrated, by touching a part of the bulb to the tongue. The acrid principle may be driven off by heat. The root when dried, is said to be useful in asthma, pertussis, and chronic rheumatism; it is conveniently administered by suspending the powder in gum arabic, slippery elm, or cactus opuntia mucilage.

Cactus Opuntia. Prickly Pear. We have but this one variety of the cactus in the country, and that is small and scarce, growing upon sandy and rocky plains, or in saline regions. It appears like a series of thick succulent leaves growing one upon another. The articulations are flat-like and compressed. The flowers, which appear in July and August, are of an orange yellow color, and grow at the end of an oval, elongated fruit which is tender, mucilaginous, and sweet; the outer side is dotted with extremely delicate bearded prickles, as are the branches or leaves. The whole plant is full of mucilage. It posesses diuretic properties in an eminent degree; when pared and steeped in water, it forms a pleasant and valuable drink in irritable stomach, and as a substitute for slippery elm, or gum arabic, being exceedingly useful, and quite equal to either.

Aralia Medicaulis. Wild Sarsaparilla. I have not been able to find this plant, but Dr. Johnson, of our town informs me that the plant certainly grows in the country. It has a perennial root, from which springs a flower-stalk, and a single leaf-stalk. The leaflets are rounded at the base, serrated on the edges, and smooth on both sides. The flower stem is shorter than the leaf, and terminates in three short umbels, each consisting of 20 or 30 small yellowish flowers. The fruit consists of small round berries, about the size of those of the *Aralia Spinosa.* The root is used in tincture and infusion; it is stimulating, and diaphoretic, and by some supposed to possess alterative properties similar to those ascribed to the Honduras Sarsaparilla. I am half inclined to the belief that neither are of much value in this respect.

Viscum Verticillatum. Mistletoe. This is a parasitic growth, generally found with us on the limbs and branches of the *Juglans Nigra,* and the *Quercus Obtusifolia.* It is sometimes seen on other trees. It is an evergreen. The whole plant, leaves and stem, are of a glossy, smooth dark-green color. It is usually found pendent on the boughs of trees. The fresh bark and leaves have a nauseous sweetish slightly bitter taste when chewed. The berries are of a yellowish white color and contain a viscid juice, something like gum arabic mucilage. It had in earlier times, great reputation as a remedy in epilepsy, and some other nervous diseases, but has now fallen into disuse. It is associated with some of the most pleasing recollections of my boyhood, and some of those who read this paper will not regret that I have alluded to facts, which may bring to mind, if their boyhood was spent in the backwoods as mine has been, some almost forgotten Christmas or other holiday scene, when they with other young and blitheful hearts sat anxiously around the gener-

ous crackling hearth, secure from the winter's wind, as it whistled under the leaves, and watched the "*crisped mistletoe bough*," as it turned towards her,—the "*fairest, loveliest of them all*," even though the fond retrospection brings (as it does with me) a sigh for those who have gone before:

"*The bright, the beautiful, the lost.*"

Ceanothus Americanus. Red Root. This is a small indigenous shrub, with a perennial root. The stems are several in number, and grow 12 or 15 inches high, having an obovate, lanceolate, serrate, slightly scabrous leaf. The root is about an inch in diameter, and 3 or 4 inches long, tapering at the extremity, of a reddish brown color externally, very brittle, and very red within, and imparting a bright red color to water when steeped in it. We, in our school-boy days, used this root, which we called redshank, for our Scotch ball, and even now, I never see it, but

"My thoughts run back to early boyhood,
The airy swing, and flow'ring wildwood,
The bounding ball."

The root is supposed to be an anti-syphilitic, and is made use of by the country people in the treatment of venereal diseases. It is recommended in apthous sore mouth, the sore throat of scarlatina, and as an internal remedy in diarrhœa.

Nymphæa Odorata. Sweet-scented Water Lilly.—The above is an herbaceous, perennial plant, growing in our river edges, and lakes. Its root, when fresh, is large and fleshy, but becomes spongy when dried; it has generally several large, palmate, heart-shaped, obtuse, fleshy leaves, which are attached to the ends of long foot-stalks, and float on the surface of the water. The flowers are large, white, and odorous. The root is said to be astringent and bitter, and is only used in the form of poultice as a dissentient agent. It was formerly in great repute as a remedy for leucorrhœa, dysentery, &c., but has fallen into discredit. The flower is most beautiful; I have seen a lake so completely studded with them that it would require no sketch of fancy, if seen by moonlight, to suppose the stars which "fret the blue vault of heaven" had arrayed themselves in their most gorgeous brightness, and were "mirrored there."

Having concluded this imperfect history of the indigenous botany of my own district, I cannot close my remarks upon the subject, and engage in the discussion of other themes, without making an appeal to my co-laborers in the science of medicine and its collaterals, in behalf of this most useful, instructive, and beautiful study. It is not expected that

any one man shall be able to collect in his literary herbary all the distinct species of useful plants which grow even in his own vicinity; for, if the celebrated Linnæus, during a whole life only collected *seven or eight thousand distinct species of plants*, where even at a very low estimate, there are as many as *one hundred and fifty thousand*, then what a task would it be, to write the history of even a little space, as perfect and complete as it might be; but it would be an easy, as well as pleasureable task for the physicians of our country, to study the sensible, as well as the medical properties of their own *native plants*, and not rely, as we all do, too much, upon those of foreign climates, which, when procured, are often worthless; or if even pure, may not be so well adapted to our purposes as some humble shrub which we trample every day upon in our daily rounds:—and more than this, he, whose study is nature, and nature's varied treasures, will find happiness in the pursuit. St. Pierre has most beautifully said that there is nothing which is so calculated to strengthen and increase man's perfect reliance in the promise of Him who made him, and to develop those sublime emotions of his heart, as a study of natural history. "A tree under the shade of which the true botanist is reclined to rest, suggests to him sublime recollections;—the poplar in the forest recalls to his mind the "*combats of Hercules;*" and the foliage of the oak reminds him of the "*crowning garlands of the capitol;*" then steal a few hours from "busy care" and seek quiet and content in the study of nature's varied charms, for a new beauty which is said to be a joy forever, presents itself everywhere, whether in the odorous winds which welcome you, or the pencilled leaves of flowers; if sorrowful and grieved, it will lead you away from the paths of disappointment, bind up your spirit-wounds, and in harmony with a spirit of love point out the way to that home where *decay and death comes not.*

> "Nature never betrayed—
> The heart that loved her. but so imbues
> The mind. and so feeds with lofty thoughts,
> That neither evil tongues nor judgments rash—
> Nor sneers of selfish men—
> No greetings where no kindness is,
> Shall e'er prevail, to shake our cheerful faith
> That all which we behold *is full of blessings.*"

We have now arrived at that part of our subject which is designated in the caption "*a summary history of the diseases incident to the immediate locality of our shire-town,*" embracing "*a history of several cases of individual practice,*" &c.; and I shall endeavour in the treatment of this subject, to deal in *facts.*

It may be safely assumed that those localities in the South and

South-West, which are most exempt during the summer months from miasmatic emanations, and other deleterious agencies which arise from the decay of animal and vegetable matter, are, all other things being equal, less liable to the diseases of this season, than other countries of like latitude. There are other causes operating to increase the *mortuary* statistics of a country, which, for all present purposes may be enumerated as follows: Density of population; this we are exempt from; our villages being small, and our streets clean, broad, and airy; our farms separated by woodlands, and supplied with comparatively comfortable house-room. *Impurities*, or great scarcity of food; this again need only be casually alluded to; the fact that this is a *productive cereal country*, and possessing abundant facilities for the growth of hogs and cattle, establishes its exemption from this cause of disease. Intemperance; taking into consideration the natural tendency of a people who enjoy comparatively few social advantages, and who find in villages the greatest inducements for going astray from the paths of "*strict moral rectitude*," we are peculiarly exempt from this besetting sin. This happy exemption, I am proud to believe, has been the result of a rapidly spreading temperance reform, which goes hand-in-hand with the teachings of the Bible, and to the credit of our "*glorious young State*," finds as many, perhaps more adherents and advocates than many older countries. *Mental and moral degradation:* It is said that misery and ignorance go hand-in-hand, and certainly no evil is so powerful an agent in entailing upon "flesh" the diseases to which it is "heir," as misery. This is beautifully illustrated by that "*greatest of dramatic poets*," where he makes Macbeth ask,

> "Canst thou not minister to a mind diseased?
> Pluck from the memory a rooted sorrow?
> Raze out the written troubles of the brain?
> And with some sweet oblivious antidote,
> Cleanse the stuffed bosom of that perilous stuff
> Which weighs upon the heart?"

Our people are, as I have already made mention in an early part of this article, "*distinguished for their patriotism and virtue*," and I may be allowed to add for general intelligence, which is so eminently calculated to produce "*contentment and tranquillity of mind*, which is said to be the real "elixir of life."

But to return to the first proposition,—assuming which to be true, I predicate the opinion that, the immediate locality of Cherokee county is more exempt from diseases than any other counties in the same latitude. Let us examine the facts.

The Sabine River, in an air-line, is about 60 miles East of us, and the Trinity River on the West, is about 45 miles distant. The county of Cherokee forms the dividing ridge between these two great water courses, being far enough from either river to exempt it from malarial influences arising from the valleys of their tributaries. It is true that we have the Angelina River for our eastern boundary, and the Neches River for our western boundary, but it has already been shown that their valleys are narrow and elevated; their channels deep and narrow; and their currents, it might have been added, are rapid, and their banks, for the most part, sandy and gravelly. But I shall close these remarks, and hasten on to the immediate subject before me.

The shire-town of this county is Rusk, so named in honor of our distinguished senator in the Congress of the United States, of that name. It is situated on a level plain, which, upon the south-eastern side, extends in one unbroken surface for many miles, but upon the northern, eastern, and western boundaries is suddenly interrupted by a range of hills, which, for natural picturesque beauty, stand unrivalled. There are several points of land from the tops of which, when the "sere and yellow leaf of autumn," or the "gloomy mantle of winter" is upon the trees, may be seen, quietly nestled in the valley below, our romantic and beautiful little village. To the north, after reaching the tops of the mountains, there begins a broad strip of table-land covered with forest trees and carpeted with luxuriant grass, where repose the "*beasts that chew the cud*," and where, till within a few short years, the graceful deer browsed the grass, and the wild turkey picked the acorn and the hawthorn berry in peace; but now, the scene is changed; around, upon all sides, may be heard the cheerful ploughboy's whistle or the farmer's axe, and now and then, may be seen rearing its humble roof towards the blue sky, "*the cotter's home.*"

Rusk, was laid out in August, 1847, and in the short space of eight years and a few months has grown to its present respectable size, containing about 1200 inhabitants, 8 physicians (2 eclectic). The inhabitants of our town and vicinity, were originally from the southern and western states, and are an active, energetic, and temperate people.

During the past season, we have been more than ordinarily exempt from sickness; in fact it has been reckoned the healthiest season that we have had for many a year. In the vernal season we generally have intermittent fever, though never abundantly: the summer months bring us a remittent type of fever, commonly known as "*bilious fever.*" The first cases generally appear upon the mountains, and towards the autumn

we have the "same fevers," with a general tendency to a depressed condition of the body,—which is called "typhoid," and requires a modification of the usual treatment for summer remittents, as milder evacuants and more general stimulants. The abortive treatment has received more general approval amongst us than the heroic treatment recommended by Dr. *Fenner*, but of this "*more anon.*"

In the winter months, we have Pneumonia, Bronchitis, Pleuritis, &c. My views upon these special diseases will be given more at length, either in this article, or at a subsequent time. Now and then we are visited with some one or other of the epidemic "Exanthemata" one of which I shall speak of at some length just here: During the months of February and March, there appeared in a neighborhood north of the town, and ranging from 4 to 12 miles of us, an epidemic Scarlatina; it was of that form denominated Scarlatina Anginosa, being characterized by rigors and chilly sensations, followed immediately by high fever and irritable stomach; red and tender tongue along the edges, with brown crust in the centre, and here and there projections of red papillæ; about the second day the characteristic eruptions generally appeared, and seemed so intimately blended, as to give a scarlet tinge to the whole surface, sometimes covering only the face, neck, and arms, and at others the whole body. There was always more or less inflammation of the tonsils and palate, with redness, and not unfrequently difficulty of breathing. The milder cases, generally ran their course in a few days, and subsided, leaving a desquamated cuticle upon the surface of the body, which, if not washed off with warm water and soap, tended greatly to retard the healthy action of the emunctories of the skin. The ravages of the epidemic were in proportion to the alarm it produced, but notwithstanding the skill of physicians, and watchfulness of parents, it stole the brightness from many a sparkling eye, and the roses from many a cherub cheek, and left not a few tiny cradles *tenantless*, and affectionate hearts gloomy and sorrowful.

I cannot reprobate, too severely, the off-hand, somewhat formularly treatment adopted by some otherwise learned and skilful men, in this disease, I mean the indiscriminate use of mercurial purges; I have met with no cases in my practice where there was a single indication justifying their use. Let us see why mercurials are objectionable. It has been generally conceded that there is a very intimate sympathetic connection between the skin and the mucous lining of the bowels, and it has been generally observed that whenever eruptions appear upon the surface, the primitive cause is seated in the alimentary canal. Now *bile*

is known to be a mechanical irritant, and it follows as a natural consequence that, if we promote an active discharge of bile into the alimentary canal, during an irritable condition, we increase *the irritability.* Again, calomel or mercury in any form, is a *cathartic*, and my observations lead me to the conclusion that this class of remedies are highly objectionable, as they, by emptying the bowels suddenly, remove from the support of the system the *stimulus of distention*, which it so much needs in all diseases of "*depression,*" as I consider all of the *Exanthemata* to be.

But it will be asked, what treatment do you recommend? I will answer, by giving a condensed report from my "*case book*" of a patient laboring under an attack of scarlatina, during this epidemic in the month of March.

Was called to see a child of John P. G., *æt.* 6 years, on the 6th day of the month, in the morning, I found him with high fever, great restlessness; dry and red tongue, with a whitish coating along the centre; cold feet, and some headache; prescribed sponging the face, arms, and body with hot vinegar; feet and legs to be immersed in a mustard pediluvium, to be continued until the fever abated; made a gargle of diluted acetic acid 4oz., schlor. odium, cayenne, āā. 3 oz., mixed, and warmed, to be used every 4 hours until the pain, swelling, and soreness of the throat (which were considerable) had abated; left sulphur and cream tartar, āā. 2 oz., to be divided into 4 portions, one every 4 hours.

7th, 9 o'clock, A. M., child comparatively cool; recommended brandy stew, repeatedly; gave draught of senna and manna.

8th, 10 o'clock, A. M., called, found fever returning, recommended same treatment as on the 6th; if vomiting commenced, mustard and mush poultice to the stomach.

Evening, 6 o'clock; found tonsils highly inflamed; applied solid nit. silver immediately to the parts; gave minute doses of Dover's powders to promote rest.

9th, 11 o'clock; no fever to day: gave sulphur and cream tartar, same as on the 6th day, with the addition of one gr. quinine with every powder; eruption complete; stew continued.

9th, 12 o'clock, P. M.; was called in haste from my bed; found patient with high fever, dry and hot skin; eruption almost disappeared; stomach naus ated; feet cold; upon inquiry found that the child refused to drink the stew, and the mother too timid to enforce the prescription; immediately immersed the feet in a mustard bath; gave stew of brandy

and spice freely; applied mustard and mush poultice over the stomach, and gave a senna and manna draught; at the end of an hour patient sweating and quiet; gave Hoffmann's anodyne, and left.

10th, morning; found patient greatly improved, and the fever never returning, he got well rapidly. There was complete desquamation of the cuticle, for the removal of which I ordered a warm bath, strongly saturated with common ley-soap, in which he was bathed over the whole body, wiped with a coarse crash towel; prescribed as a final remedy, to be continued for several weeks, Tincture Peruvian Bark and Rhei. āā. 4 oz.; teaspoonful every night and morning. The cure was effectual.

In several cases of this epidemic, where Iodine or some equally effectual counter-irritant was not used freely to the throat externally, I observed that the inflammatory action in the submaxillary glands progressed to suppuration, and the use of the knife was required; a few dressings of yeast poultice with occasional ablutions of soap and water generally finished the cure. Some few cases resulted in dropsical effusions into the limbs, this was treated with bitter tonics, catharties, and the salt-bath, sometimes the bandage was necessary to complete the cure.

After this epidemic passed away, we had but little sickness, until about the beginning of July, at which time I was attacked with inflammatory bilious fever which incapacitated me from engaging in my professional labors, until about the first of September, when we had a few cases of fever of a variety of types, mostly intermittents; indeed, it seemed that all diseases manifested a marked tendency to run into that special form; for instance, a case of erysipelas: Ada M., aged 3 years, living 10 miles west of town, when I first saw her, had high fever, dry, clean tongue, and erysipelatous inflammation of the right foot and leg, as high up as the end of middle third; the limb was very much swollen, and of a deep scarlet color. She had wounded the great toe, whilst playing in the yard, and in 12 hours a blister appeared; the leg and foot became swollen and very painful. I prescribed calomel 2 grs., ipecac pulv. $\frac{1}{4}$ gr., every 4 hours; made a distinct and decided line of demarcation with solid nit. silver between the healthy and diseased parts; applied every few minutes a saturated solution of nit. potash in sweet milk, and directed sol. nit. silver 4 grs. to the ounce, to be applied with a mop to the inflamed surface every 4 hours. Next morning, fever gone, erysipelatous inflammation subsiding, and completely checked in its progress upwards; commenced use of quinine 1 gr. and $\frac{1}{4}$ gr. ipecac every 4 hours.

Next day erysipelas nearly well, but marked intermittent fever supervened, ushered in with a chill; prescribed 2 grs. quinine, and $\frac{1}{4}$ gr. ipecac

every 4 hours; ordered manna and senna to open the bowels, at night; two days after, child dismissed cured; recommended the frequent use of the salt-bath to the limb to promote absorption, and remove any tendency to inflammation again. *Query.* Might not nit. silver be more useful, if brought into more general use and persevered with in this and other superficial inflammations?

To illustrate this tendency of the diseases of this season, to run into an intermittent type, I will give briefly one more case. Willie H., *æt.* 2 years, child of same parents; had fever two days before I saw him. I found him in complete coma, skin hot and dry, pulse 140, tongue dry and cupped, yet clean, with enlarged papillæ, bowels tense and engorged, tenderness along the dorsal vertebræ, feet cold, and head immoderately hot. Treatment, cups and scarificator to the spine; drew 2 oz. blood; put the feet into a hot bath, and poured cold water on the head; gave 1½ gr. calomel, ¼ gr. ipecac, every 2 hours, until 6 grs. had been taken: in twelve hours gave senna and manna; medicine operated finely; fever subsided and skin became moist; in 12 hours more little Willie was playing about the floor; but by noon the next day he had a severe chill, followed by fever, which lasted until 4 o'clock p. m.; prescribed quinine 1 gr., pulv. Doveri ½ gr., every 2 hours; at 12 o'clock at night he had another severe chill, with fever. I then doubled the dose of quinine for 6 hours; then gave it at greater intervals for twelve hours more, and he had no more chills.

About the first of November there seemed to be a decided tendency to congestion in many of our cases of sickness, and frequently two or more cases of a like kind in the same family, and at the same time. This, however, may be accounted for upon the same basis, that the same local causes operate to produce, at the same time, *similar effects;* and those who are most susceptible, or who are most exposed to the influences which produce the disease, are the victims. Let us illustrate by practical reports: George S., *æt.* 30: I was sent for about daylight, found him with but little fever, exceedingly languid circulation, and constantly complaining that he could not get warm; he, to use his own language, had been "*shaking and chattering his teeth and freezing all night,*" which had up to that time been 12 hours from the time the chill came on. Treatment: prescribed immediately 10 grs. quinine, 60 drops of paregoric, in half a cup of strong coffee; placed his feet and legs in a hot mustard bath, and in a few minutes he was in a sleep, which lasted for an hour; gave him 6 grs. calomel, 4 grs. blue mass, 1 gr. ipecac, every 4 hours, until 3 portions were taken; continued quinine in 4 gr. doses, every 4 hours, for 12 hours; prescribed manna and senna draughts at

night; medicine did well; continued the quinine the next day. He had no more chills, but strange to say, I found the patient at the end of 36 hours, from the first chill, sorely afflicted with *inflammatory rheumatism;* this with proper treatment subsided in a few days. Another report and I am done with summer diseases: to John S., son of former patient, *æt.* 10 years, I was called at night, on the 4th Nov.; found patient comatose, cold, and clammy at the extremities; hot and dry about the head; pulse 134; I had the feet put into a hot mustard bath, applied sinapisms to the arms, and one to the abdomen; gave him 10 grs. calomel, 3 grs. ipecac; poured a stream of cold water from a pitcher upon his head; whilst resting from this labor, dried his feet, and applied mustard-plasters to the ankles; continued the water pouring from time to time, until he was aroused; cupped him in the region of the liver, where was discovered great tenderness; prescribed 6 grs. calomel and 2 of ipecac, and directing 3 grs. quinine every 3 hours; left. 5th, 12 o'clock, a. m., returned; found pulse 100; skin gently moist; bowels evacuated, stools dark and bilious; continued quinine for 36 hours. Patient convalesced rapidly.

We come now to speak of a character of fever which prevails amongst us, usually in the autumn months, but sporadic cases may be met with at all seasons of the year.

Typhoid Fever. There is no disease, perhaps, in the whole catalogue which meets such varied treatment, with us, and I might have added, "*such bad treatment sometimes.*" It is not my purpose here, nor indeed would the length to which this article has already unavoidably grown permit me to enter into a lengthy disquisition, upon the merits of the various plans pursued. I shall only give the generally received treatment employed, and which, I think, perhaps, the safest and most scientific.

This fever is ushered in very insidiously; it is sometimes several days before the patient can be prevailed upon to resort to any treatment, or even *take to the bed.* The prominent characters, in the early stages, are slow and continued fever; headache; tympanitic symptoms about the bowels; heavily coated tongue, with slight redness of the tip and edges; pulse quick and compressed; skin dry and crusty, and sometimes great tenderness of the stomach, with wakefulness and loss of appetite. As the disease progresses the redness of the tongue increases, the pulse becomes accelerated, the bowels more tympanitic and painful; bowels irritable, and diarrhœa supervening, the patient falls into low muttering *delirium* and dies in collapse. The characteristic petechiæ of other countries seldom manifest themselves. A general expectant plan of treat-

ment has been most successful in my hands. Bloodletting is decidedly contra-indicated; indeed, no one who has any experience in the diseases of this country, would risk his reputation by the use of the lancet, in this or any disease of *depressed action.* Mild avacuants, occasional interference with alterative doses of mercury, (particularly in the early stages,) tonics, diaphoretics, anodynes, and cataplasms of mustard, or blisters to the abdomen, form the general means resorted to in the progress of the treatment. To empty the bowels, which should be done in the commencement of the disease, I know of nothing safer than the compound extract of colocynth and blue mass in *equal parts.* To excite diaphoresis, I use the spts. mindereri. The heat of the surface should be relieved by frequent sponging with warm vinegar, or which is perhaps better still, warm brandy. Blisters we consider only useful in the latter stages of the disease, for their stimulating effects, as well as any control that they may be thought to possess over the ulceration of the bowels. Small doses of quinine, and Dover's powders, or, quinine, ipecac, and morphine are sometimes very useful. I have used Huxham's tinc. bark, and the red peruv. bark with considerable success as tonics, and consider the latter especially serviceable. It is indispensable that strict regard be paid to the diet, as the neglect of this is undoubtedly the chief cause of relapses which are so frequent in convalescence. For the early stages I allow diluted buttermilk to be taken freely, and never have seen any harm grow out of the indulgence; animal broths, beef-tea, arrow-root, &c., are necessary in protracted cases to sustain the sinking energies of the system. Solid food should be most scrupulously avoided at all stages, and should be indulged in with great caution, even, after recovery, as it is a pregnant cause of evil. The average duration of this fever, with us, is from 15 to 30 days, though many linger longer even than this, and get well. I have given Dr. Fenner's "heroic *quinine* practice" what I conceive to be a fair trial, and am disposed to believe that it will fail to break up the disease in the great majority of cases, though I do not wish what I have here stated to be construed into an implied doubt of its efficacy. I would say to others: Try it!—Many of our practitioners speak in high praise of the use of nitrate of silver in this disease, for the successful control of the diarrhœa, which is an almost invariable symptom, and usually difficult to control. I have no knowledge of its use.—In my hands sugar of lead, tannin, and laudanum, have been the chief remedies used, and with considerable efficacy. I am happy to state, however, in the conclusion of my remarks upon this disease, that we have had but few cases this fall, and it is to be hoped that our coun-

try will continue to be as exempt from the ravages of this fell destroyer, as it has been during the last season. I shall take occasion, hereafter, in a subsequent article, to enter more at length into the history of this disease, as it appears amongst us, than I have felt myself authorized to do in this paper.

Our winter months with their cold, bleak northers, bring with them class of inflammatory pulmonary diseases, the most prominent of which is "pneumonia," and the one to which I will devote my immediate attention: of this disease we have two varieties, the sthenic or acute inflammatory, and the asthenic, or typhoid pneumonia; the latter of which not unfrequently supervenes upon the former, resulting either from improper treatment, or natural tendency to a depressed action. The sthenic variety commonly called acute inflammatory pneumonia, is generally ushered in by rigors or chilly sensations, followed by high fever, pain in the side, dry tongue, red and cupped at the end; short, quick respiration, sometimes increased to 50 or 60 in the minute, coldness of the extremities, and severe headache. Upon examining with the naked ear, or the stethoscope, at first, may be discovered diminished respiratory murmur, crepitant ronchus, and sometimes slight bronchial respiration; percussion reveals dulness immediately over the seat of the disease. As the disease progresses the dulness increases, and when it enters the stages of hepatization the resonance of that part diseased disappears entirely; at the same time from the increased labor performed by the healthy lungs, the respiration becomes louder than usual, which, from its real or fancied resemblance to infantile respiration, is called "*puer le.*" The respiration assumes in the diseased lungs a new character, which is called bronchial ronchus, or râle: but it is unnecessary to pursue this part of the history of pneumonia farther, as it is supposed that all intelligent physicians are acquainted with the physical signs, which indicate the different stages of the diseases.

The *Typhoid Pneumonia* differs from the above mainly in being characterized by depressed action, and a great tendency to sinking, which must be guarded against by a stimulating and a tonic course of treatment. The main indications in the treatment of the acute form are to diminish arterial action, keep the bowels evacuated, promote expectoration, and subdue the aggravated inflammatory symptoms, by the judicious use of local depletion, counter irritants and anodynes.

Bloodletting, in the early stage of the disease, is a safe and speedy means of producing the first-named effect; if the disease has progressed, I have found nauseating doses of ipecac and tart. emetic in equal quan-

tities the safest means; a favorite remedy with me as a cathartic is, calomel 6 grs., blue mass 4 grs., ipecac 1 gr., morphine ½ gr., made into one pill and given every 4 hours until 3 are given, to be followed in 16 hours with a draught of senna and manna, or castor oil and turpentine. To promote expectoration I use, and with great success, a cough syrup made of equal parts of comp. syrup of squills, spts. nitre and paregoric, with ipecac added in the proportion of 4 grains to the ounce; to be given every 4 hours, or to complete nausea; then to be resorted to whenever the nausea ceases; if the fever intermits, I use quinine 4 grains, Dover's powders 4 grains, every 4 hours until the fever ceases to return. In the typhoid form, mild evacuants, nauseants, tonics, and above all, blisters, are the means to be resorted to.

These two varieties of pneumonia have been difficult to cure, but I have reason to believe that our physicians have met with great success in their treatment. It may be that the types are milder here than in most countries. Bronchitis, as a disease, "*sui generis*," is comparatively rare, save in its milder form, in which local bleeding counter irritants, and expectorants generally fulfil all the indications, and effect speedy cures.

Pleurisy. This readily succumbs to the lancet. Counter-irritants and evacuants do the rest.

I have been necessarily forced to hurry over these subjects as the great length of my article warns me that it should come to a conclusion. There are many important matters necessarily left unnoticed, which might have added to the interest as well as completeness of the remarks upon diseases, but I cannot stop now to consider them.

We have now arrived, in the course of our labors, to "*remarks upon the claims and special character of the medical profession of the town and vicinity.* It is no less a pleasure than a duty that I owe to my *confrères* in the profession, to bear testimony to the general intelligence and profound scientific and professional skill of those of the profession of medicine with whom I affiliate every day in our "labor of love."

Comparing the mortality of our range of practice with that of neighboring villages, I have no hesitation in saying, and in challenging successful contradiction, that the results pay a deservedly high compliment to the professional skill and ability of our physicians. I do not wish to be understood as implying a doubt of the attainments of the physicians of other towns in this and neighboring counties; so far from it, that I shall ever be found ready to mete out to them their measure of praise, and I now, just here, for fear that my remarks my be misunderstood, am

proud to say that it would be no vain boast for the legitimate members of the medical profession of Eastern Texas to challenge the country practitioners of any other country, in point of success, in their practice and skill.

The facilities for surgical practice are so poor in our country, that but little eminence has been attained by the majority of the profession. We have, however, one physician whose reputation in this branch of the profession is co-extensive with his name. I have been familiar with his surgical practice for the past two years; in fact have been present at all of his operations, and have been familiar with the history of his labors for the past twelve years, and feel assured that some of his surgical triumphs have never been equalled by *any other country surgeon;* and in skill, success, neatness, and dispatch, would have done honor to those who *sit in high places,* and whose names are indelibly inscribed upon the hearts of their countrymen, and in the historic pages of the profession, as public benefac'ors, and whose brilliant achievements in this noble profession will stand as beacon lights to animate and cheer the plodding book-worm students of medicine through weary days and sleepless nights, and kindle in their hearts a spirit of emulation which shall carry them on, on, on, through "ponderous tomes" and "thankless labors," to the topmost round of the ladder in the profession. I have referred in these remarks to *Dr. C. B. Raines*, and though I am well aware that his *native* modesty would shrink from the publicity which my complimentary notice of him would produce, yet I feel that it is only a just tribute to a man whose whole life has been spent in the "service of humanity."

But there is a class of men in our community who, to the no small annoyance and injury of our people, style themselves doctors, and pretend to practice medicine. They place their claims to the title of physicians upon the possession of a written certificate which emanates from an original vendor of the "right to practise," all however acknowledging a species of allegiance to one Abraham Conner, who flourished in the Pine-hills of Mississippi only a few years since. These "vampires" have a book which contains the whole system of their practice, embodied in about eighteen pages. Whenever a man, ignorant and unprincipled enough to engage in the business is found, they sell him a "right," as they call it, and a parcel of the books, swearing him to hold inviolate whatever "*secrets of the trade*" they may communicate to him, save when disposing of a new "*right*" to a "purchaser." It might be interesting to members of the medical profession, who have never had to contend with this "*monstrous iniquity*," to have a complete history of their plans

and professional government, but I have no time nor inclination to dwell upon the subject, nor to discuss farther the "*unprincipled tribe.*" There have already been sent out upon the world from this county, a number of illiterate, uninformed, and not over scrupulous men, who are located in populous districts, and are making the cheat pay, at least a "*bloody living.*" This species of quackery has grown to be an intolerable nuisance, and one which calls loudly for redress. Let me ask of a candid public, what, in comparison, are the evils of intemperance? what the ravages of war? of contagion? and of pestilence? to the evils of this shameful and barefaced traffic in human lives, to say nothing of the knavish swindle which they perpetrate upon the pockets of their poor deluded victims?

> "There are among them those who cannot read,
> And yet they'll '*buy a patent*' and succeed,
> Will dare to promise dying sufferers aid,
> For who, when dead, can threaten or upbraid?
> With cruel avarice, still they recommend
> More draughts and pills to the journey's end!"

It does seem to me that it is the duty of every legislator, who holds himself responsible in his legislative capacity, for the well-being of his constituency, to exert his influence to crush in its very budding this "monstrous iniquity," and, if not to make it penal offence, at least, to throw around these men such legal restraints as will drive them from a calling which they disgrace, and thus protect the interests as well as credit of those honorable members of the profession of medicine who have devoted the best years of their early manhood to the acquisition of the knowledge, which will enable them to practise physic with usefulness to the people, and credit to the "*intelligence of their heads,*" as well as the "*generosity of their hearts.*"

Rusk, *Dec.* 16*th*, 1855.

Art. II.—*On Brotherly Love in the Medical Profession:* by W. G. de Graffenried, M.D., La Grange, Texas.

Dear Brethren: I wish to address you on a topic about which very little has been said or written, and one which is of vital importance to every member of the profession, inasmuch as it involves interests of no

small magnitude. It is an important principle of action which should govern men in their intercourse with each other, for it is that invisible chord which brings about that intimate connection between mankind, which may be very properly and appropriately denominated the chord of *brotherly love, id est*, that kind and affectionate regard which should exist between us as members of the same profession.

That there is a great deficiency of that true courtesy and respect, which should ever exist between individuals of the same vocation, is abundantly evident to the most casual observer. That there is a greater want of a proper degree of esteem among us than among those of other callings, is manifest to common observation. Why is this the case, my brethren? Does not the fault lie with us? Is it the case with men of other professions or occupations? Do they not show due regard and respect for those of their particular callings?

I have heard farmers, for instance, express their views on agriculture to each other freely and without reserve, and have known them to become so much interested and absorbed in the communication of their ideas, that it seemed they were unconscious of the passing away of time; and it appeared, from the fruitfulness of their conversation, that they could talk almost *ad infinitum*. Has any person ever heard of two medical gentlemen, residing in the same community, carrying on such a friendly and interesting conversation on the subject of MEDICINE? If he has, he has heard more than I ever have.

This want of unanimity of feeling and sentiment, my brethren, is a disgrace to our noble profession. I will admit that there are some unworthy members among our fraternity; some not worthy to take upon themselves the name of M.D. But shall we, because there are *quacks*, excommunicate all, or at least a greater portion of those who are well qualified? Are they not our brethren? Let us then treat them as such.

It becomes one's duty as a citizen, to have kind feelings towards his fellow-men, and to feel a deep interest in their welfare; and I conceive we are under special obligation to those of the same profession, in consequence of the greater ability and facility we possess of communicating our ideas to those of like vocations, and from the fact that we belong to the same great brotherhood. But it is to be regretted that there are some so self-conceited, penurious, and illiberal in their views, that they seem to think of the promotion of the welfare of every other person more than those of their own particular calling.

This want of courtesy, kind feeling and liberality, is more particularly

observable among the members of the medical, than those of any other fraternity, as I have already indicated. They, instead of giving a hearty welcome to all who come into the ranks of the profession, *well qualified* for the practice of medicine, look but too often upon them with an eye of suspicion and disrespect, and show by their actions, if not by their words, that they are opposed to them, and that they intend to use their influence against these *upstarts* in "the healing art."

When the young physician, with buoyant hopes and a brilliant intellect, settles in their vicinity, they will converse with themselves as follows: "This *fellow* has come here no doubt with great expectations, thinking to get some of my practice, a part of Dr. B.'s, and a great portion of Dr. C.'s." "So far as the others are concerned I care but little, but I will try to take care of No. 1." "I will see that the *upstart* does not get any of my practice." "I have been here for some time, and have gained the confidence of the people, and I am under the impression that they will not only believe, but do, everything I say. The confidence of some who patronize me is so great, that I believe they would even put their arm into the fire and suffer it to be burnt off, were I to direct them to do so. This being my standing in the community, I, therefore apprehend no danger; but for fear he might become popular, I will, by my ingenuity and cunning, use secret influence against him, of which neither he nor my patrons will ever have sagacity enough to suspect me guilty, and by this means I can keep the *fellow* where I wish him to remain, and at the same time preserve an unblemished character. I must observe a great deal of caution in speaking about his character in public; I must neither speak too favorably nor too unfavorably. Should I speak in too complimentary terms, I shall be accused of irony, and should I say too much in derogation of his character, there will arise in the minds of some a prejudice in his favor, thinking that I was not actuated by proper motives in the expression of my sentiments, and, therefore, they were without foundation. But in speaking to my *staunch* friends privately, I can say a great many things against him which they can report as their opinion, and, in this way, I shall be free of the imputation of improper motives, and how the young doctor will suffer from this secret attack of mine! I intend treating him politely when I meet him in company with others, and will even invite him to my house rather than incur the disapprobation of any of my friends by failing to do so. But when I meet with him alone I can be as 'stiff as a poker' towards him, and in this way can keep him from asking me any questions on medicine, and deprive him of the knowledge I have acquired by *many years*

of tedious practice and close application. Furthermore, he is a pretty clever fellow, and no doubt understands well the theory of medicine, and all the late improvements in the medical science, on which I am not very well posted, and, therefore, might show my ignorance by conversing with him, and lose in some measure my long-standing reputation, to the great joy and consolation of the young aspirant. This being my impression, I will give the young doctor no chance to expose my ignorance, by avoiding all medical topics, thereby showing to him as well as those present, that I should consider it a condescension on my part to converse on medicine with such a comparatively *ignorant* fellow. But should I have an opportunity to expose any of his mal-practice, or any of his erroneous views on any medical subject, I will take special delight in so doing, for this will be the most effectual way in which I can undermine his growing reputation, and upon the ruin of which I can erect an edifice, which, when 'the rain descends, and the floods came, and the winds blow, and beat upon' it, will remain as firm and immoveable as the rock of Gibraltar, and will bid defiance to the skill and ingenuity of my professional brethren."

But it is quite different with the truly dignified and manly physician, who is governed, in his actions, by the law of kindness and by moral principle. He would suffer his right arm to be cut off, or a right eye to be plucked out, sooner than he would be guilty of a dishonorable action, or in any way injure the character of even the most ignorant of his professional brethren. Such an individual puts a proper estimate upon character, because he has some character himself. Such will endeavor to *encourage*, *enlighten*, and *instruct* his less-informed brethren, whenever an opportunity presents itself; and should they be cognizant of any error in their practice, he will inform them of it in the kindest and most friendly manner, and not publish it to the world, recollecting that none of us are infallible, but the wisest and best are liable to err.

It is a source of considerable gratification to me, my brethren, that there are some of this character—some who would look upon an underhanded and unjust act with horror and detestation. Such will look back upon their past life with unspeakable joy and felicity, and when they shall have arrived at the gate of death they will have a pleasing consciousness of a well-spent life, and not be inclined to curse the day that gave them birth.

In conclusion, my brethren, may unanimity, peace and good-will characterize the members of our noble profession; and let each of us use his influence against every unkind and ungenerous action on the part of

its members, and then our profession will shake off the shackles by which it has been so long fettered, and will rise to meridian greatness and excellency.

Yours, fraternally,

W. G. de Graffenried, M.D.

La Grange, Texas, *Jan.*, 1856.

Art. III.—*Ethics, Medical and non-Medical,* (being an *Addendum* to the preceding article on "Brotherly Love;") by Bennet Dowler, M. D.

Seeing that very many of the medical journals, and the reports of the various medical associations have republished, and continue to republish, the entire code of medical ethics originally compiled by Percival, and adopted by the American Medical Association, it cannot be deemed amiss to devote a few pages of this journal to the consideration of this subject. Although the shoemaker ought to stick to his last, the doctor to his pills, and so on; yet this restricted view will not apply to moral science. Hence this article need not be restricted in its scope to any one profession, trade, or shop.

A celebrated jurist in Virginia, now no more, after his elevation from the bar to the bench of the U. S. Court, remarked to the writer that his practice at the bar had caused him to form an unfavorable estimate of human nature.

Bentham, the great codifier, jurisconsult, and the most voluminous writer on modern law, seems to have regarded lawyers themselves as not being over-righteous; for, according to him, "an advocate is one whose power is in his tongue, and who sells that power to the first comer—to the right or the wrong side, as may be; to advocate justice or to defeat justice." (Deontology, 239.) This is quoted not to endorse it—not to show that lawyers lack "brotherly love" as much as doctors, but to show that physicians, as well as lawyers, must often see human nature under unfavorable aspects; neither sickness nor crime, neither danger to life, nor to property, will be apt to add amiability to the temper or a charitable estimate of the moral excellence of mankind.

Whether professional malevolence be greater among physicians than among the rivals in the several other professions, as lawyers, politicians

writers, theologians, warriors, merchants, mechanics, and tradesmen, is doubtful, though the daily obvious occasions for the manifestation of departures from the law of kindness may preponderate, apparently rather than really, in the medical profession. Such aberrations from "brotherly love" may, to a physician, seem in a greater ratio in the latter profession, simply because he is from the nature of the case more observant, better informed, and more directly interested. If "doctors differ," so do lawyers, politicians, statesmen, and clergymen. Of the scientific claims of physicians the public is, unfortunately, incompetent to judge, and the judges best qualified to decide are interested rivals, and will scarcely recuse themselves, as judges sometimes do, in order to proclaim the superiority of others—until the millenium shall take place. In this case silence is a weakness, but detraction a crime.

Moral philosophers who have speculated on what *is*, or what *ought to be*, have said as severe things against humanity in general, as the writer on "brotherly love" has said against doctors in particular, as the following pages will show: "Often should we be ashamed of our best actions," says Rochefaucauld, "were the world to witness the motives which produced them."

The Code of Medical Ethics prescribes the obligations of the public to the physician:

"The public ought to entertain a just appreciation of medical qualifications; to make a proper discrimination between true science and the assumptions of ignorance and empiricism; to afford every encouragement, &c.

The first duty of a patient is, to select as his medical adviser one who has received a regular professional education. In no trade or occupation do mankind rely on the skill of an untaught artist; and in medicine, confessedly the most difficult and intricate of the sciences, the world ought not to suppose that knowledge is intuitive. Patients should prefer a physician whose habits of life are regular, and who is not devoted to company, pleasure, &c."

While many of the causes of differences among doctors arise from ignorance and defective education, others arise from the public, which unfortunately is incompetent to judge of the scientific claims of the physician as set forth in the Code. The following illustration of the actual, as compared with the ideal, may not be out of place here. In the London Quarterly, in a review of the Anatomy bill, the writer says:

"It is of *little* consequence to medical men, but of *vital* consequence to the public, that the former should be well instructed in their profession. Skilful or ignorant, they are equally sure, as a class, of employment and maintenance. The public cannot tell the difference. The

public have no notion of the power of medical men in families where sickness is going on: the monks had less in the plenitude of their influence. An ignorant man to whom a family have given possession of their confidence, (a mistake which people with all their sagacity are continually committing,) may not only fail to do good, and inflict irreparable mischief, but may occasion unnecessary alarm, expense, &c., which amount to as great an evil as sickness itself. If he prononnces some hidden part to be diseased, which requires a long, troublesome and expensive mode of treatment, who is to gainsay him? The patient scarcely knows that he has such a part, or where it is placed, much less its healthy or diseased condition. The doctor only possesses the means of reconnoitering its state; whatever he reports, however false, is believed; whatever he directs must be done. He may tell his patient that his liver is too large, that his brain s soft, (*ramollissement de cerveau:* in pathology this does not mean foolishness,) or that disease has fixed on some organ of which he never heard before, as his *mucous membrane;* and it is wonderful how the news will affect him. Give a disease a local habitation and a name, and though it may neither be visible nor tangible, nor perceptible by any of his senses, it will fasten on his imagination, influence his feelings, and make him as docile as a lamb: the doctor may do anything with him. Of what importance it is that persons possessed of so much power should have the knowledge necessary to use it properly! To relate all the blunders we have seen committed by ill-informed practitioners of medicine and surgery, lives lost, health ruined, limbs sacrificed, trifles mistaken for dangerous cases, and dangerous cases mistaken for trifles, &c.; to relate all these would require a thousand and one nights, and days besides.

"Those who are behind the scenes, who have sense enough to perceive the truth, and candor enough to confess it, will acknowledge that this statement is not overcharged. Not that medical men are more wrong-headed than others—one-third of the affairs of life are done wrong. The errors of medical men are only the extraordinary errors of the human mind exemplified on a subject of extraordinary importance."

Abernethy's notion of medical education, as expressed after having examined a student whose attainments he greatly approved, was on this wise:

"Not an ass, like all the world, but a sensible shrewd fellow, who, instead of muddling his head with books, had passed his days, very properly, where real life was only to be met with—*videlicet*, in the dead-house."

It has been said above, that the public is incompetent to judge accurately of the scientific claims of the physician, how learned soever he may be. The late M. Arago, one of the greatest lights of the nineteenth century, goes still farther: he maintained that in England the physician who occupies himself in scientific researches will lose the confidence of the public, as regards the healing art:

"En Angleterre, un médecin, s'il ne veut pas perdre la confiance du public, doit s'abstenir de s'occuper de toute recherche scientifique ou littéraire qui semble étrangère à l'art de guérir."—(Pettigrew's Life of Dr. Young, the great Egyptian scholar.)

Goethe says: "The great, the wise, are always in the minority. Let us not dream that reason can ever be popular. Passions, emotions, may be made popular; but reason remains ever the property of an elect few."

Mr. Johnson, surgeon, who wrote, for the good of mankind, a very large octavo a few years ago, called *Nuces Philosophicæ*, intended to prove the supreme advantages of non-progress, or things as they are, holds that it is impossible, or if possible, injurious, for the public to be educated and enlightened in medicine or in any of the sciences: "The fundamental cause of all evil is," quoth he, "the insane cry for human improvement, for an impossible perfection, for human elevation. Every man is toiling to elevate himself above his condition—while the intellectual pedagogues stand by clapping their hands and shouting in the ears of all, Rush on! elevate yourselves! To acquire knowledge, leisure is necessary—and the many have no leisure. Knowledge is not happiness, nor necessary to happiness, nor is ignorance misery. In all essential knowledge, the great mass are as ignorant now as they were three hundred years ago, though they no longer believe in ghosts and witches."

If there be any foundation for Mr. Surgeon Johnson's theory—if there be good reason to distrust the competency of the public to judge of the learning and qualifications of medical men, the ethical rule in the Code, which requires the patient to prefer the skilful doctor, is therefore very difficult, if not impossible. Happy the patient who carries this command into successful operation! Happy for the patient who "entertains a just appreciation of medical qualifications, and makes a proper discrimination between true science and the assumptions of ignorant empiricism," as the Code doth command! Thrice happy he!

The Code of Medical Ethics says that

"It is not enough, however, that the members of the medical profession be zealous, well-informed and self-denying, unless the social principle be cultivated by their seeking frequent intercourse with each other, and cultivating, reciprocally, friendly habits of acting in common."

This implies, of course, that physicians should not be envious. Archbishop Whately says upon this subject, that

"Of all hostile feelings, *envy* is perhaps the hardest to be subdued; because hardly any one owns it even to himself, but looks out for one pretext after another to justify his hostility."

In both theory and practice doctors are liable to fall into disputes which must prevail until medicine shall advance to mathematical certainty. Here Bentham's reasoning is worthy of regard, since it applies

to all the inexact or non-mathematical sciences. He says:—

"The tranquillity and good temper of a disputant is in proportion to the inward consciousness of the aptitude of his arguments to produce conviction. Accordingly, mathematicians, so long as they confine themselves within the province of their science, cannot be, and accordingly never have been, otherwise than tranquil."—(Deontology, 26.)

The satires of Molière and others upon the medical profession, its theories, its characteristics, and its quarrels, have caused the world, including the doctors themselves, a great deal of merriment, ridicule being often more successful than reason, even in the weightiest affairs of mankind:

"Let an ambassador," says Pope, "speak the best sense in the world, and deport himself in the most graceful manner before a prince; yet if the tail of his shirt happen, as I have known it happen to a very wise man, to hang out behind, more people will laugh at that than attend to the other."

An old English writer, Goodman, thus speaks of the medical faculty:

"In prescribing their physic, observe how curious they are! It appears by their doses, their weights, ounces, drachms, scruples, grains, as if they were able to square out and proportion nature to a just rule and level, to poise and to balance her to the inch. Wherefore, I pray, serves so great a variety? I had thought that it had been to hide and cover the mysteries and secrets of their art; to make it seem wonderful and incomprehensible; or else to raise the price of their physic: to make their own wares saleable. But shall I tell you the reason? In truth I fear they do but guess at their physic: therefore every physician is an empiric; his learning is gotten by experience, and not by reason, or discourse."

The Medical Code requires a physician to be a good man; in fact, a very loving and lovable man:

"There is no profession, from the member of which greater purity of character, and a higher standard of moral excellence are required, than the medical; and to attain such eminence, is a duty every physician owes alike to his profession and to his patients. It is due to the latter, as without it he cannot command their respect and confidence, and to both, because no scientific attainments can compensate for the want of correct moral principles."

It would be easy to love, if people were only lovable. The purest and most rational standard of brotherly love or esteem is that founded on the moral excellence of its object. But is this actually practised, as society now exists, by husband, wife, parent, child, lover, patriot, sect, soldier, or party? Is every one, or any one, loved, or loving, in this disinterested manner, solely in reference and in proportion to moral excellence, independently of the basis of family, nationality, party, interest,

and such other accidental circumstances, which of themselves can have no necessary, intrinsic virtue, or moral quality? The patriot, warrior, and statesman adopt in deed, if not in word, the sentiment given in a toast by Commodore Bainbridge: "My country—may she be always right; but my country, right or wrong." "England," said a premier, "and nothing but England, forms any portion of my care or concern."

The grand ethic of Christian philosophy, "Thou shalt love thy neighbor as thyself," as expounded by actual practice, amounts to this result, namely, one half of the Christian world calls the other "Anti-Christ," and is, in return, called "Heretic," while its subdivisions number several thousand sects, each calling itself the true Church.

Were each member of the codifying American Medical Association now assembling at Detroit, informed that on the morrow an earthquake would swallow up all China, (one-third of the human race,) and that the armies in the Crimea would slaughter each other to the last man, he would sleep much better than if he were assured that he must have his own little finger amputated next day to prevent all these dire calamities. Again, should either the Russian, or Allied generals, think, in all sincerity, after due examination, that the opposing army and its cause had a preponderating amount of moral excellence, would they be justified in going over to the enemy? It may be hazardous for human beings to affirm what *is*, or what *is not* the rule of action adopted by the Most High; yet from all which can be known of His character, it is most reasonable to conclude that he approves or disapproves solely on the principle of moral excellence. And, although this ethical theory *ought* to prevail between man and man, every day's experience shows that the exception, not the rule, predominates. Even in matters of science, prejudice, selfishness, envy, hatred, aggression, and violence, prevail almost as much as in trade, politics, war, and sectarianism. These evils are not the less real because they are generally masked or concealed from open view.

"In our judgment of men," says Taylor, "we are to beware of giving any great importance to occasional acts. By occasional acts of virtue weak men endeavor to redeem themselves in their own estimation—vain men to exalt themselves in that of mankind." Rochefaucauld maintains that "we often err by contemplating an individual solely in his relation and behaviour to us;" that when "we talk of prejudices, we only mean the prejudices of others;" that we "love to contradict our general character; dislike being thoroughly understood; we will not be a thing whose behavior on any occasion the most careless prophet can with certainty foretell;" that "we need not be much concerned about such faults as we have the courage to own;" that "we confess small faults by insinuating that we have no great ones;" and that "when we seem to blame ourselves we mean only to extort praise."

But Lady Blessington has with a single stroke of the pencil delineated human nature with more truth than charity: "Persons who display the greatest frankness in acknowledging their errors, are precisely those who most warmly resent their detection by another."

The Code of Medical Ethics not only points out the theory of "brotherly love," but bases it upon the highest possible platform, namely:

"Medical ethics, as a branch of general ethics, must rest on the bases of religion and morality. They comprise not only the duties, but also the rights of a physician; and in this sense they are identical with Medical Deontology—a term introduced by a late writer, who has taken the most comprehensive view of the subject."

The technical term "Deontology," here alluded to, was planted in the English vocabulary by Bentham, who wrote a large treatise bearing that title.

The greatest metaphysician of Germany defines "brotherly love" as follows:

"*Love of our neighbour.* Love is an affair of sentiment, not of will; and I cannot love *when I will*, and still less *when I ought.* A duty to love is therefore chimerical. Benevolence, however, considered as practical, may very well stand under a law of duty. Sometimes disinterested wishes for the good of our neighbour is called love; but this is improper." Kant. Metaphysic of Ethics, 236.

Bias, one of the seven sages of Greece, gives the following odious hint on "brotherly love": "Love your friends, as if they might one day become your enemies."

Helvetius says of brotherly love: "In order to love mankind we ought to expect little from them;" but Rochefaucauld avers that "the more you love, the easier it is to hate;" that "a small unkindness is a great offence;" that "we are angry with those who trick us, because they appear to have more cunning than ourselves;" that "there is always something in the misfortunes of others which doth not displease us;" and that "you may expect 'brotherly love' and forgiveness upon the following platform, namely, 'you may be forgiven for an injury which, when made known to the world, will render you alone the object of its ridicule'"

Goldsmith has a bitter maxim on "brotherly love;" that is, "Friends always advise when they begin to despise us."

Dean Swift, of all great men, has given the least flattering account of human nature in general, and of "brotherly love" in particular, as the following specimens will show: "It is a short way to obtain the reputation of a wise and reasonable man, whenever any one tells you his opinion, to agree with him." "Praise is the daughter of present power." "If a man maketh me keep my distance, the comfort is, he keepeth his at the same time." "If you do anything for the advantage of the world, it will take good care that you shall not do it a second time." "The

power of fortune is confessed only by the miserable, for the happy impute all their success to prudence and merit." "Next to hating their enemies," says M. Tocqueville, "men are most inclined to flatter them." Rochefaucauld says, "we love those much better who imitate us, than those who endeavor to equal us. Imitation arises from esteem, competition from envy;" and that "we usually praise with a view to be praised."

The ethics of the physician are merged in those of humanity in general; and if the preceding pages give too dark a picture of human nature, it may be well to look on its bright side for a moment.

The celebrated John Howard, the philanthropist, who devoted nearly a quarter of the last century to the amelioration of the prison discipline of Europe, and who died in the Crimea in 1790, arrived at the most favorable conclusion as it regards the moral nature of humanity—a conclusion drawn from the worst of its varieties, that is, criminals—namely, that all men can be swayed most certainly by the law of kindness or "brotherly love;" that the most criminal, from the moment he is convinced of your kindness in his behalf, becomes subject to your control.

Bentham says: "The cheapest mode of requital, and considering its extreme facility, not the least efficacious, is on all occasions to give to the benevolent affections an outward expression, to bring into conversation as frequently as practicable the language of goodwill. To praise the virtuous doings of another man is to dispense a positive recompense to virtue, and at the same time to direct the popular sanction to the encouragement of similar acts; and thus does the principle of self produce the social affection, and the social in its turn the popular; and all combine together to increase the general good."—Deontology, 172.

"There is no man who doeth wrong for wrong's sake; but thereby to purchase himself profit or pleasure."—Ib. 164.

It has been well said by Goethe of satirists, "When I have called the bad, *bad*—how much is gained by that? The man who would work aright must not deal in censure—must not trouble himself about what is *bad*, but show and do what is *good*." He adds, "Everywhere, men learn only from men and things which they love."

In view of the relative place of physicians in the moral world, it may be successfully affirmed that, as a class, they are distinguished for benevolence, inasmuch as they devote themselves to attendance upon the sick, without, in many cases, expecting fee or reward, their charity being not like that of most other classes, occasional, but habitual. The all-atoning efficacy of their daily deeds is a full satisfaction for their supposed lack of love for each other. Unity and fraternity in a profession may be, and indeed often is, based on sordid interest; at least it is no certain criterion of virtue. Milton represents the infernals as being united among themselves:

"——Devil with devil damn'd
Firm concord holds."

ART. IV.—*Case of Punctured Fracture of the Cranium, and Wound of the Brain, with loss of Cerebral Matter, without the occurrence of corresponding serious symptoms:* by M. MORTON DOWLER, M. D., of New Orleans.

INSTANCES of recovery after the most formidable injuries of the brain are not unfrequently recorded, and have, in some cases, not a little contributed to overthrow the theories of physiologists and psychologists, demolishing, at once, as with a "knock-down argument," the scull-bump psychology. The crowning case of Gage, related in the July 1850 number of the "*American Journal of the Medical Sciences*," affords an exemplification, which, coming from a less reliable source, would be regarded as almost incredible. It has been seen in this case that a tapering iron bar, of the length of three feet seven inches, and of the diameter of one inch and a quarter, may enter beneath the zygoma, and pass out at the junction of the sagittal with the coronal suture, passing through the anterior lobe of the left cerebral hemisphere, and that the subsequent report may be, as in this case, that "the patient has quite recovered his faculties of body and mind, with the loss only of the sight of the injured eye." Nevertheless, whatever may be the deductions afforded by exceptional and extraordinary cases such as this, all surgery gives us emphatic warning that in cases attended with any manner of lesion of the brain, its blood-vessels, its meninges, or its bony protection, the gravest and most serious results should always be apprehended and guarded against, on the part of the attendant. A patient whose brain has been laid open, and the proper substance of the same wounded, should be considered as being in both immediate and ultimate peril, and should no urgent or alarming symptoms whatever occur during the treatment of such case, it must be considered as a remarkable exception, and the more especially where the patient is of tender age, and has received a severe punctured wound. Of such exceptional kind is the following case, which is not like the case of Gage, given as an extraordinary case of mere recovery, but as exemplifying recovery without any symptom corresponding to the gravity of the injury sustained, being in this respect the most remarkable I have ever witnessed.

On the 3rd day of September last, a little boy, Louis, son of Mr. R. D. Maclin, of the Fourth District of this city, received a punctured fracture of the skull, and penetrating wound of the brain, under the following circumstances: a negro servant girl ascended a shed, about 12 feet from the ground, for the purpose of driving a nail, using, in place

of a hammer, a large male hinge, weighing nearly two pounds, which had been drawn from the post of a wide gateway; and after effecting her object, without taking the precaution to look downwards, she threw forcibly from her hand the hinge, which descending, struck the child on the parietal bone of the left side, an inch and three-fourths from the coronal, and one inch from the sagittal suture, the post-spike of the hinge presenting, and entering the brain. The child was at the time sitting with the head erect, and the iron entered in nearly a perpendicular direction. The spike of this formidable iron is a four-sided body, six inches long, gradually tapering on all sides, but so flattened laterally as to triple the width of the horizontal surfaces, thus terminating in a wedge, the edge of which is half an inch long, and which is dull and battered. The iron penetrated about an inch, passing into the medullary matter of the brain, making by the tapering spike, an external opening three-fourths of an inch long, and one-fourth of an inch wide. The great weight of the butt end of the hinge, and its slight deviation from the perpendicular direction of the spike, caused it to be swayed over across the sagittal suture, the thin parietal bone affording no other resistance than as a fulcrum on which the whole iron became a lever of the first kind, to injure the brain in the direction of the parietal protuberance, and the child's body was thereby drawn over to the right, and he was found with the right side of his head on the ground. Mrs. Maclin ran to the child's relief, and drew out the huge spike from his head, and she saw particles of cerebral matter adhering to the rough, rusty iron, and also escape from the wound. The blood at first escaped pretty freely, but soon ceased to flow. The force and weight of the iron was such, that it produced a simple oblong opening the exact shape of the spike, without there occurring any surrounding depression, or radiating fracture, the displaced bone being comminuted into small particles, as is believed. But few of these latter were ever found, and must have cleared the wound during suppuration, otherwise they involve a mystery. After the transient primary shock had subsided, none of the symptoms of concussion or compression of the brain manifested themselves; nor did they subsequently, the child relating to his father, in an hour afterwards, how the accident happened, and inquiring "if he must die" from the injury.

Dr. W. P. Sunderland, the family physician, was sent for, and was soon in attendance. Very reasonably regarding the case as one likely to be attended with the gravest consequences, it resulted that I met him in consultation, and was fully impressed with the justice of his apprehensions. He had sponged the wound, and made the only topical applica-

tion subsequently resorted to—a simple compress saturated with cold water. We engaged to meet twice a day and watch the progress of the case. The patient never at any time labored under any apparent urgent symptoms, excepting during the second and third days; nor was any medical treatment found necessary, or resorted to, excepting the administration of an occasional saline aperient. Excepting during these two days, there was but little febrile irritation or pain: there was freedom from delirium, from coma, and the intellectual manifestations were unchanged, the wound soon beginning to suppurate, and to rapidly heal.

During the second and third days there was considerable nausea and uneasiness of the stomach. The patient was kept for many days strictly in the recumbent position. I discontinued visiting him at the end of ten days, and he was subsequently under the care of Dr. Sunderland. Towards the close of December the wound completely healed, and a firm membranous cicatrix now shows the seat of the injury. The patient is a child of great intelligence, and his faculties have in no way suffered from a wound in which there has been a loss of cerebral matter amounting, as Dr. Sunderland and myself both estimate, to at least a drachm in weight.

In neither the effects of injuries nor from the effects of remedies can we calculate on uniform results. The most inexplicable peculiarities and individualities interpose themselves, so as to render an ordinarily salutary remedy pernicious and an ordinarily fatal injury a thing of ready cure. Much here remains to be elucidated before the depths of pathology and therapeutics can be considered as explored.

Art. V.—*On the Removal of Foreign Bodies from the Nostrils:* by M. Morton Dowler, M. D., New Orleans.

There is no practitioner who is not frequently called on to extract foreign bodies, as peas, beans, grains of corn, water-melon seeds, pieces of pencil, pebbles, &c., in cases of children who have thoughtlessly thrust such bodies into the nostril. The child soon perceives its error in tampering with itself, becomes alarmed, and pushing in a finger to withdraw the body thus introduced, thrusts it fairly backward quite into the lower meatus of the nose. The friends now discover the occurrence, and the result generally is, that in their efforts to disembarrass the nostril,

the intruded body is forced backwards to the extreme point of vision, or into the region of utter darkness itself. Surgical aid is called, and a case of *minor surgery* is presented in the form of a *botheration*. The family are in breathless alarm, which is increased by the deportment of the little innocent, that in the hands of the surgeon is heard, *a tutta voce e staccata*, as though a murder were going forward in the family circle. Even the surgeon has his difficulties in such case. In none of the books on surgery that we have examined, do we find any ready and facile means prescribed for the removal of the foreign body, a system of probing and fishing being recommended, which is extremely slow, goading to the super-sensitive membrane, and is even unsuccessful. Dupuytren recommends that in some instances the foreign body be pushed backwards, so that it may fall into, and be ejected from, the mouth, from the posterior nares—a method which is scarcely advisable in cases of children. The following simple method we have adopted for many years, and we have never failed to clear the nostril of the foreign body, without the least difficulty or delay:

Take a straight silver probe of a small size, and beginning within an eighth of an inch of the blunt point, make seven or eight superficial cuts with a sharp pen-knife straight across the instrument, on a right line with each other, taking care to incline the edge of the knife to an angle of about 45 degrees in the direction of the opposite end of the probe. These cuts will constitute a barbed surface, the points of which are inclined forward when the probe is introduced into the nostril. The cuts should occupy about an inch of the probe's length. The instrument is now introduced, and pushed along with its smooth side gliding on the floor of the nostril, till it passes behind the foreign body, which can always be readily effected, though the latter may be rolled a little backwards in the movement. If then the probe be gently pushed backwards and forwards, so as to keep its rough surface in contact with the foreign body, withdrawing the instrument only *pari passu* with the movement of that body, the intruded substance will travel directly forward out of the nostril with a rolling motion. The least attention will prevent any scratching of the schneiderian membrane. In like manner when foreign bodies are transported upwards into the middle meatus of the nose, either by the act of inspiration or by awkward attempts to remove them, if on allowing the sun to shine into the dilated nostril the foreign body can be seen, it can readily be made to pass out in like manner, by the rolling motion imparted to it by the roughened surface of the probe properly applied.

It happens occasionally that children get foreign bodies into the nostril, and the occurrence is not discovered till the treatment of superinduced disease discloses the fact. Fergusson says, "He has known a cherry-stone remain for years, and the case supposed to be one of diseased bone."* We were a few years ago called on to prescribe for the little daughter of Mr. H., aged 6 years, (residing in First-street in this city,) on account of an offensive running from the left nostril, resembling that of ozæna, accompanied by an obstructed state of the upper olfactory chambers, exhibiting at the presenting point of the inferior turbinated bone, a spongy polypoid appearance. She had fallen on the ground about ten months before, and hurt her nostril with a dried blade of the coarse reed-grass of the marsh. It was never suspected, however, that any foreign body remained in the nostril. Nevertheless, on probing, there was found presenting a splinter of this gigantic grass; which, on being withdrawn with the forceps, was found to be one-eighth of an inch wide and two inches long. The disease of the nostril rapidly disappeared.

Used with proper precaution, the probe, thus prepared, is generally completely successful in removing foreign bodies from the external meatus of the ear.

Art. VI.—*Experimental Researches into Animal Heat in the Living and in the Dead Body:* by Bennet Dowler, M. D.

(*Continued from page* 626.)

POST-MORTEM HEAT.—YELLOW FEVER.

1843; Aug. 8th; air of the room 84°. J. K., aged 25; sick 5 days, (cold for two days before death as in congestive;) dead 20 minutes; weather rainy, breezy; body resting on a stone floor, freely ventilated; experiments with Réaumur's thermometer (now expressed by Fah.'s;) lasted 3 hours and 40 minutes, that is, 4 hours after death, having been noted every 5 or 10 minutes in the order of time, as follows: axilla 108°; mouth 103°; epigast. 108°, 108°; perineum, without incision, 104°; centre of the thigh 108½°; mouth 99¾°; epigast. 108°; thigh 106°; axilla 104°; epigast. 107°, 106½°, 106½°, 106½°. Experiments now ceased for 1*h.* 35*m.*, during which time the mercury had fallen 5¾°. It rained also. Epigast. now 104°; circumference of the lungs (pleuræ) 103°; concave surface of the liver and base of the right lung 104°; hypogastric

* Practical Surgery, p. 488.

103°; concave surface of the liver and base of the right lung 104°, when the experiments ceased.

1843; Aug. 26th; air about 81°. Miss * * *, aged 26; sick 10 days; dead 30 minutes; experiments lasted for 4 hours after death; noted every 5 minutes, more or less, in the regions and order as follows: axilla 102°; vagina 107°, 107°, 107°; axilla 103°, 103°, 103°, 103½°; vagina 107°, 107°; axilla 104½°; groin 104°, 104°; axilla 104°; vagina 107°, 106½°, 105°; rectum 104°, 104°; groin 103½°; axilla 103½°. Dissection now began. The various exposed organs, as the stomach, intestines, liver, and pericardium, gave 105° each; the centre of the thigh 100°.

1843; Sept. 13th; air of the room 86°. F. L., a Frenchman, aged 58; sick 11 days; dead 5 minutes; experiments noted consecutively about once in 5 minutes: axilla 102°; knees brought into contact 102°; rectum 104°; axilla (after free exposure) 104°; thigh 105°, 107°, 107°; epigastric 107°; thigh 108°, 108°, 104°, 104°; left lung 104°, right 103½°; thigh 104°, 104°, 104°; right lung (base) 103°, left 102°; thigh 103°; epigastric 103°. 14th, 17 hours after death; room 86°; epigastric 88½°; thigh 88½°; left chest 88°; calf of the leg 86°; middle of the arm 88½°; epigastric 88½°; thigh in 1 hour 86°.

1843; Sept. 28th; air 82°. N. E., an Italian, aged 25; sick 6 days; dead 20 minutes; axilla 8*m*. 106°; perineum 5*m*. 104°; axilla 5*m*. 106°, 6*m*. 106½°, 3*m* 106°; epigast. 6*m* 106½°; left chest 3*m*. 106°, 3*m*. 105°; high 9*m*. 106½°; left chest 5*m*. 104°; epigast. 5*m*. 106°; thigh 3*m*. 106°, 3*m*. 106°, when the experiments ended.

1847; Aug. 21st; air 88°. E J., Englishman, aged 45; resident 9 months; dead 45 minutes; experiments, in the following order, closed at 3 hours after death: axilla at intervals 104°, 104½°, 104¾°, 105°, 105° nearly; rectum 102½,° 102½°; axilla 104½°, 104¼°, 104°.

1848; Sept. 12th; air estimated at 82°. G. W., born in Philadelphia, aged 43; resident 2 months; sick 4 days; dead 30 minutes; experiments 1 hour; axilla 5*m* 103°, 5*m*. 103½°, 5*m*. 104°; rectum 3*m*. 107½°, 2*m*. 107¾°, 5*m* 108° nearly; axilla, again, 5*m*. 104°, 5*m*. 104°, 5*m*. 103¾°; rectum 5*m*. 107°.

1847; Oct. 7th; room 84°. J. Q., aged 24; sick 4 days; dead 15 minutes; axilla 15*m*. 107°; 12*m*. epigast. 108½°; thigh 5*m*. 107°; epigast. 2½ hours after death 107°. At 14 hours after death, room 80°; left chest and thigh each 81°; epigast. 83°; heart 84°; brain, through the orbit, 78°; right chest 81°.

Same date: J. M., born in Virginia, aged 31; sick 4 days; dead

from 10 to 20 minutes; rainy, chilly weather; in 4 hours the mercury fell 10°; axilla 7*m.* 102°, 5*m.* 103½°; epigast. 10*m.* 102°; thigh 5*m.* 104°. An hour and a half after death: left chest 9*m.* 102°.

Same date; C. L., aged 31: experiments repeated from 5*m.* to 1 hour after death: axilla 5*m.* 107°; thigh 7*m.* 107°; left chest 5*m.* 102°.

1843; Sept. 25th; air 84°. Q., dead about 5 minutes; axilla 9*m.* 105°; rectum 3*m.* 106½°; experiment abandoned.

1843, Sept. 25th; air 84°. J. G., born in Baltimore, aged 24; U. S. A.; sick 7 days; dead about 30 minutes; axilla 8*m.* 106½°, 2*m.* 107°, 4*m.* 108°, 5*m.* 108°; perineum 106½°.

1843; Sept. 28th; air 82°. A. T., a Swede, aged 29, sick 9 days; dead 30 minutes; axilla 10*m.* 103°; thigh 5*m.* 100°; epigast. 30*m.* 105°, when the experiment was discontinued.

1848; Sept. 10th. J. Z., German, aged 22; resident 5 months; dead 30 minutes; axilla 5*m.* 99°; 30*m.* 100°; stationary.

1843; Oct. 7th; room 84°. S. G., born in New York, aged 22; sick 7 days; dead 10 minutes; axilla 10*m.* 106½°; thigh 10*m.* 106½°; axilla 5*m.* 106½°, 2*m.* 107°; 1½ hour after death; epigast. 106½°; chest 5*m.* 102°; 2 hours after death, chest 102°; 3 hours, thigh 100°.

1847; Aug. 8th. J F., born in Ireland; aged 29; resident 15 days; sick 9 days; dead 30 minutes; experiments for 30 min.; axilla 101°, and stationary.

1847; Aug. 3d; noon. M. F., aged 20; sick 6 days; dead 45 minutes; experiments for 30 minutes; axilla 101°; perineum 103½°, and stationary; rectum 105°, 105½°, 105¾°, and stationary; axilla 102¾°, and falling.

1848; Sept. 8th; house 82°. F S., Irishman, aged 31; resident 9 months; sick 9 days; dead half an hour; experiments finished 2 hours after death: axilla 5*m.* 106°, 5*m.* 107°, 5*m.* 107°; rectum 5*m.* 107°; axilla at the end of an hour 107°; brain (through the orbit) 104½°, and falling.

1843; Aug. 23d; room estimated 85°. M. B., a Pole, aged 29; sick (first with intermittent, and then with yellow fever) 15 days; dead 15 minutes; experiments for about two hours, noted at irregular intervals of from 2 to 10 minutes; axilla 102°; rectum 101½°; the thigh after cooling the instrument) 104°, 103½°; left hypochondriac 105¼°; right 105¼°; right chest, upper lobe of the lung 102½°; left 98½°; thigh 100½°; right hypochondriac 104° nearly; thigh 100½°; heart 99°; right hypochondriac 102°, left 103½°; hypogast. 102°; thigh 100½°.

Aug. 24th; 27 hours after death: room 86°; epigast. 86°; left hypochondriac 85°; thigh 83°.

1843; Sept. 10th; room about 88°. C. S., born in Germany; aged 50, sick 7 days; dead 15 minutes; experiments lasted 2½ hours; noted at irregular intervals of 10 or more minutes consecutively: axilla 104°; rectum 109°; epigast. 108°; left lung 104°; heart 102°; right lung 102°; rectum 109°; thigh 107°; epigast. 107°; heart 103°; thigh 102°.

1843; Oct. 16th; room 80°, 82°. J. H., born in Ireland; aged 36; sick 11 days; dead 10 minutes; axilla 6*m*. 104°, 5*m*. 105°, 5*m*. 106½°. An hour after death axilla 8*m*. 104°; thigh 5*m*. 106½°, 10*m*. 107°; epigast. 5*m*. 106½°; brain (through the orbit) 5*m*. 101°. Experiments abandoned.

1847; Aug. 11th. J. H., Irishman, aged 18; dead about 25 minutes; experiments every 2 minutes, for 6 minutes: axilla 104°, 105½°, 106°, and stationary.

1843; Aug. 23d; air estimated at 85°. D. H., German, aged 22; sick 10 days; dead 15 minutes; experiments for two hours, in the following order: axilla 5*m*. 104°, 5*m*. 104°; rectum 5*m*. 106½°, 10*m*. 106½°. Instrument removed and cooled in water (an improper proceeding); right thigh 5*m*. 107°; rectum 10*m*. 107°; (cooling the instrument as before) right thigh 5*m*. 108°; epigast. 25*m*. 110°; about 50 minutes later, thigh 103°; epigast. 106°.

1843; Oct. 26. P. B., aged 39; born in France; resident 2 years; dead 1 hour: air 80°, and growing colder; rain falling; body freely exposed; axilla 8*m*. 102½°; left hypochondriac 8*m*. 103½°, right 103¾°; centre of the liver 2*m*. 107°, 1*m*. 108°, and still rising; brain (through the orbit) 4*m*. 100°, 2*m*. 99°. Thigh 2 hours after death, 8*m*. 104°; left chest 5*m*. 100°, 4*m*. 97½°.

1343; Sept. 12th; room about 91°. M. H., aged 32; sick 7 days; dead 15 minutes; axilla 15*m*. 104°; thigh 10*m*. 107°; axilla 10*m*. 104°. Two hours after death: axilla 104°; thigh 10*m*. later 105°, 20*m*. 104°. About three hours after death, epigast. 109°; heart 107°; thigh 104°; thigh next observation 104° nearly; when the experiments ceased.

1847; Aug. 8th; room 86½°. J. E., a German, aged 30; resident 18 months; sick 10 days; dead 30 minutes; experiments 48 minutes; axilla 102°, 103°; rectum 104½°; axilla 102½°, 102°; rectum 104°.

1847; Aug. 8th; air of room 86½°. J. W., born in Boston; aged 34; resident 9 months; dead about 2 hours; experiments 1 hour and 45 minutes; axilla 102°, 102½°, 102½°; rectum 105°, 105¼°, 105½°, stationary; axilla 101°.

1847; Aug. 6th; air of the room 87°. W. K., aged 38; a German; resident 6 months; dead 2 hours; axilla 99°; rectum 103°.

1848; Sept. 10th; air of the house 85°. G. W., aged 19; born in

France; resident 18 months; dead 1¼ hour; axilla 10*m.* 102½°, 5*m.* 102¾°; rectum 103°: 2½ hours after death, axilla 100½°; rectum 102¾°; left hypochond. 101°, right 100°: left chest 101°, right 101½°; thigh 99°.

1847; Aug. 23d; air estimated at 88°. C. F., Pennsylvanian, aged 21; dead about 1 hour; axilla 101°, 101½°, stationary.

1847; Aug. 28th. O. K., Irishman, aged 25; dead 1 hour; experiments for 13 minutes: axilla 104°, 104½°, 104¾°.

Same date; A. R., Frenchman, aged 23; dead 30 minutes; experiments ended 2½ hours after death; axilla 106°, 107¾°, 108° nearly. Same day S. R., suffering from a wound, took the yellow fever and died: 30 minutes after death, axilla 100°.

1847; Aug. 12th. E. A., a German woman, aged 23; dead 4 hours; experiments for 10 minutes; axilla 102°, 102°, nearly.

1847; Aug. 11th. A man, dead 2 hours, gave the following results during 9 minutes: axilla 102°, 102½°, 102°, and falling; rectum 104°, and falling.

1847; Aug. 20th; air of the room 88°. J. F., Irishman, aged 19; resident 2 months; sick 8 days; dead 1 hour and 30 minutes; experiments at intervals for 3 hours; axilla 103°, 103°, 103½°, 103¼°; rectum 103¾°, 103½°, 103¼°; axilla 103°, 103°, 103¼°, 103°, 103¼°, 101½°, 101¾°, and stationary at 4½ hours after death.

1847; Aug 3d. A man, dead 2 hours, gave for 17 minutes the following results: axilla 104°, 104½°, 103⅓°, 103°, falling.

1848; Aug. 29th. C. H., born in Pennsylvania; aged 39; one week from Brazos St. Jago; sick 3 days; dead 1¼ hour; axilla 102°.

1848; Aug. 30th. C. F., German, aged 56; resident 1 year; dead 1 hour; axilla 104°, falling.

1848; Sept. 1st; air of the room 85°. Mrs. ***, born in Ireland, aged 22; dead 2½ hours; experiments 45 minutes; axilla 100°; vagina 104½°; epigastrium 103°; left chest 102½°, vagina 103¾°, falling.

1848; Sept. 3d; air 91°, fell to 80° during the experiments. J. B., born in New Hampshire; aged 22; resident 2 years; sick 6 days; dead 2 hours; axilla 5*m.* 102°, 10*m.* 102½°, 5*m.* 102¾°, stationary; rectum 5*m.* 106°, 5*m.* 106½°, 5*m.* 106¼°; epigast. 5*m* 105½°, stationary; left chest 5*m.* 103°; axilla 106¼°, 5*m.* 106¼°. The epigastrium at 4 hours after death, gave for 5 minutes 104¾°; left chest 5*m.* 103°; pelvic centre (all the cavities having been exposed in dissection) gave for 5*m.* 105¼°; under the stomach near the spine 104°, under the liver 106°; pericardial sack 103°; right ventricle 5*m.* 104°, left 5*m.* 104¾°; centre of the liver 105½°, 25 minutes later 106° in the latter.

1848; Sept. 12th; room about 86°. J. M., a Scotchman, aged 29; resident 2 months; 7 days sick; dead 4½ hours; axilla 101°; rectum 103½°.

1847; Aug. 20th; air of the room 88°. N. B., a Frenchman, aged 45; resident 18 months; sick 8 days; dead 1 hour. Experiments at intervals for nearly two hours: axilla 102½°, 102½°, 103°, 103°; rectum 103½°; stationary; half an hour later 102°, 102¼°, apparently stationary again.

1847; Aug. 21st; air 88°. J. P., Canadian, aged 23; dead 1 hour; axilla 99°, and falling.

1843; Sept. 25th; air 84°. A man dead 4 hours: left chest 93°; epigast. 100°; thigh 99°.

1843; Oct. 7th; room 84°. A man dead 8 or more hours and becoming putrid: axilla 86°; room nearly the same.

1843; Oct. 28th. G. T., aged 33; late from St. Louis; resident 4 weeks; sick 6 days; dead 3½ hours; minimum air in the room 61°, but the temperature rose somewhat before the experiments ended: brain (through the orbit) 5*m.* 80°; epigast. 5*m.* 84°, 3*m.* 83°; left chest 5*m.* 80°; thigh 5*m.* 84°; brain 80°; left hypochon. 5*m.* 81°; thigh 84°; left lobe of the liver 5*m.* 86°, 5*m.* 86½°. Experiments discontinued.

1843; Sept. 16th; room 91°. C. B., born in New-York; aged 23; sick 3 days; dead 2 hours: Experiments for 2 or 3 hours; thigh 103°; rectum 102°; epigast. 103°, 103°, 103½°; right thigh 103½°; left 104°; epigast. 102°; left chest 101½°; hypogast. 102°; heart 102°; thigh 102°. The experiments ceased for one hour: thigh 100°; epigast. 100°.

Same date: A gray-headed old man, dead 6 hours: epigast. 102°; thigh 100°, and falling.

Same date: A young man dead about 10 hours: epigast. 93°; thigh 89°.

1843; Sept. 28th; air about 82°. W., a female, aged 30; dead 30 minutes; (had enormous intermuscular hæmorrhage under the pectoral muscles and mamma;) axilla and vagina, each 100°. Experiments abandoned.

1843; Sept. 9th; air of the room 86°. J. C., Englishman, aged 22; sick 6 days; dead 3 hours; axilla 100°; epigast. 104°; thigh 100°.

1843; Oct. 13th; room 70°. U. O., aged 27, born in England, late from Cincinnati; resident 13 days; sick 9 days; dead 4½ hours; brain (through the orbit) 93°; epigast. 100°; thigh 99°; left chest 98°, 97° (falling).

1848; Sept. 7th; house 84½°. M. L., Irishman, aged 33; resident 6 years; sick 7 days; dead 2½ hours; axilla 96°; rectum 100½°; left hypogast. 99¾°, right 100°; left chest 97½°, right 97°, falling in all regions.

1848; Sept. 10th; house 85°. G. W., Frenchman, aged 19; resident 18 months; dead 1¼ hours; axilla 10*m.* 102½°, 5*m.* 102¾°; rectum 5*m.* 103°. At 2½ hours after death, axilla 100½°; 5*m.* 102¾°; rectum 102¾°; left hypogast. 101°, right 100°; left chest 101°, right 101½°; thigh 99°.

1848: Sept. 6th; air of the house 87°. Mrs. * * *., widow; born in Georgia; aged 33; resident 6 months; dead 8 hours; axilla 94°; vagina 100½°; left hypogast. 99°, right 100°; left chest 99°, right 99°; centre of the thigh 98°; under the liver 100°.

1843; Aug. 13th; air of the house 86°. L. S., a Swede, aged 48; resident 8 months; dead 2½ hours; experiments for 3 hours noted about every 10 minutes, more or less, in the order following: axilla 109°; perineum 109°; mouth 103°; rectum 106½°; axilla 102°; rectum 106½°; axilla 102°; rectum 106½°; left hypochondriac 105°, right 106½°; concave surface of the liver 106½°; left side of the chest near the heart and diaphragm 102°, same 102°; lumbar regions 103 each; rectum 102°.

1843; Aug. 14th; room 91°. * * *, dead 6 hours, gave in the axilla 102°.

1843; Aug. 18th; air of the house 86°. Mrs. C. Q., aged 22; sick 4 days; after dissection and 2¼ hours after death, gave the following results: right lung 15*m* 100°, 15*m.* 99°; right thigh 102°; under the scapula 99½°; left thigh 101½°; base of the lungs 100°; right thigh 100°.

1843; Aug. 24th; room 86°. J. P., a Scotchman, aged 22; sick 9 days; dead about 2 hours; rectum for 20 minutes, as long as observed, 104°; stationary.

1843; Sept. 28th; air about 82°. J., a female, aged 23; dead 2 hours; axilla 5*m.* 102°; vagina 5*m.* 104°; axilla 5*m.* 103°; vagina 10m. 103½°, 3 hours after death 104°; epigast. 105°; vagina 104° as before; rectum 104; 4 hours after death epigast. 104°; vagina 104°; 6th hour axilla 100°; epigast. 102½; thigh 100°.

1843; Oct. 2nd; room 84°, (rainy.) J S., aged 29; sick 9 days; dead 1 hour; axilla 20*m.* 106½°; left chest 15*m.* 106½°; epigast. 10*m.* 106°, 5*m.* 105°; thigh 10*m.* 104°, 10m. 106½°, 5*m.* 106°, 5*m.* 105°. Experiments abandoned.

1843; Sept. 28th; air 82°. J. A., aged 39; sick 4 days; dead 3 hours; rectum 5*m*. 105°; epigast. 5*m*. 106½°. Thigh, after dissection and 7 hours after death, 100°.

1843; Sept. 30th; room 85°. G. L., aged 23; sick 5 days; dead 2 hours; axilla 10*m*. 102°; epigast. 10*m*. 104°; thigh 5*m*. 103°; axilla 5*m*. 102°; left hypochon. 5*m*. 106°, right 8*m*. 106°; left chest 6*m*. 103°, 3*m*. 102½°, 3*m*. 102°; right chest 5*m*. 102° and falling; when the experiments ended.

Same date: a man aged about 30; dead 3 hours; thigh 5*m*. 105°, 5*m*. 105°; left hypochon. 5*m*. 108°; thigh 6*m*. 102°; left hypochon. 5*m*. 109°, 15*m*. 106½°; left chest 5*m*. 106½°, 6*m*. 106½°; when the experiments ceased.

YELLOW FEVER; BEFORE AND AFTER DEATH.

1853; July 23d. J. G. R., aged 46; sick about 10 days; bend of the arm 100½°; axilla 102½°. Died 29½ hours afterwards.

Same time: M., aged about 30; totally insensible; calves of the legs and popliteus each 98°; bend of the arm 99½°; axilla 101°. Died 26 hours after.—Same day: C. S., aged 28; hands 100°; bend of the arm 102°; axilla 104°. Died at night.

1853; Sept. 18th; room 85°. J. H., Irishman, aged 22; resident 18 months; sick 4 days; palms 105°; axilla 105½°; bend of the arm 105°; calves 103½°; result not noted.

1853; July 23d. M. F.: dead one hour; axilla 101½°; half an hour later, 101°, and stationary.

1853; Sept. 18th; room 85°. S. E., born in Germany; last from Texas; resident one month; aged 33; sick 5 days; occasionally delirious; became comatose last night; now dying. Axilla 104°; bend of the arm 102½°; palms 98½°. Died at 16 minutes before 11 a. m.; 6 minutes after death: axilla 106°, 8*m*. 107°, in 2 minutes later 107°, 1*m*. 107¼°; bend of the arm 3 minutes later (11 A. M.) 104°, 1*m*. 104°; palms 2*m*. 98½°.

At five minutes past noon, resumed the experiments in the dead-house, the temperature of which was about 88°. The experiments were made successively in the following order until 1 p. m.: Axilla 107°, and stationary; epigastrium 107°, 107½°; right and left hypochond. 107½°, 107½°; centre of the upper third of the thigh 107½°, 108°; axilla 105°; brain, in the centre 105°; heart 107°; hypogast. 106½°; brain 104¾°; heart 107°; brain 104¾, when (owing to urgent circumstances) the experiments ceased. [During the agony, and even after respiration ceased,

an universal tremor, with strong tension of the muscular system took place, while the fingers and fore-arms were firmly flexed, having been for a time very rigid. The treatment consisted of 2 doses of castor oil; a mixture of magnesia and charcoal in peppermint water, and, at the close, brandy.]

ART. VII.—*Puerperal Convulsions.—Case of Eclampsia Parturientium, successfully treated by Inhalation of Chloroform during eight hours; with some general remarks:* by M. MORTON DOWLER, M. D., New Orleans.

ON the 8th of March last I was called to visit Mrs. C., *æt.* 19, residing on St. Mary-street. The patient who is stout, muscular, robust and plethoric primipara, 12 months married—was in labor at full term. Her health has been good from her childhood, never having previously had any spasmodic or nervous symptoms. For the twenty-four hours previous to the commencement of labor, she has complained of a dull pain, and sense of fulness in the head; and she has had slight pinching pains in the back during the night, at intervals. During the last two hours the uterine contractions have become stronger; but, unfortunately, in the midst of each throe resulting in the most intense epileptic convulsions, the patient having already had, on my arrival, seven distinct paroxysms, and lain unconscious, with loud stertorous breathing during the aparoxysmal intervals. The pulse, which in the course of the fit, became irregular, tremulous, and weak, became rapid and bounding in the absence of the paroxysm. The pupil was dilated, the skin dry and slightly feverish, the child's head pressing into the superior strait in the first presentation; the os tincæ thin, rigid, and dilated only to the size of a quarter of a dollar. Each paroxysm lasted four or five minutes, being attended with so rigid a state of the muscles of respiration, that there was almost complete apnœa during the fits; the face becoming deeply livid, and the eyes prominent, staring, and distorted as though the patient were undergoing strangulation. Flakes of froth were blown from the mouth, red with blood from the tongue which had been severely bitten. She was in charge of Mrs. C., a prudent midwife.

The books in such case order free blood-letting, and the friends expect it; and yielding to these, rather than to my own appreciation of the

practice, I opened a large orifice in the well developed vein of the arm, and bled the patient, *pleno rivo*, till a decided impression was produced on the pulse. The paroxysms now became more frequent, and if possible more violent; and the insensibility more alarming, the state of the os uteri appearing to be but little affected by the convulsions.

At this alarming conjuncture I resorted to chloroform, pouring about a drachm and a half, on a thin cambric handkerchief, and allowing her to breathe it freely by close application to the nostrils after the paroxysm. The jactitation, stertor, and oppressed respiration, were speedily relieved, and the patient was soon seen lying in a state of anæsthesia, as in a tranquil and quiet slumber. The chloroform was then discontinued, and the patient lay in this state for more than half an hour, leading me to apprehend that she had been too strongly affected by the agent. At the end of this time she opened her eyes in a kind of mystified consciousness, and soon appeared to measurably recall her faculties, recognizing the by-standers.

Here was presented a case, complicating itself, in the very first stage, with one of the most formidable evils that can imperil the parturient woman—an evil which, if left to itself, must not only continue, should the patient survive, to the termination of the labor, but even after its completion.

Though totally disapproving of the use of chloroform in all ordinary cases of labor, as a practice meriting the severest condemnation, and one which must necessarily fall into complete disuse, I found myself here justifiable in further testing its efficacy in this most perilous case. I concluded to resume its use, not as an anæsthetic, but with the hope, by a more sparing application, necessarily protracted—not rendering the patient insensible to the pains of labor—to so modify the innervation of the patient as to keep at bay the epileptic susceptibility. For the succeeding four hour she was kept under the light influence of this agent, her consciousness in the meantime greatly returning. Normal labour pains coming on at long intervals, no epileptic symptoms in the meantime occurring. The os uteri being now dilated to the size of a dollar, I ruptured the membranes, after which the pains were more frequent. On venturing, however, to lay aside the chloroform for half an hour, the convulsions came on again with great violence, three severe paroxysms appearing in rapid succession, followed by stupor, stertor, and jactitation. From that time forward to the completion of the labor, the remedy was applied as before, and till after delivery. There were no further attacks, though the uterine contractions were now vigorous. The rigid state of

the os uteri greatly retarded the progress of the case, and it was obvious that the chloroform alone prevented the constant recurrence of convulsions. At 4 p. m., the child's head had cleared the os, and was in contact with the perinæum, presenting at the inferior strait, with a cessation of the pains, and a restless and excited condition on the part of the patient. After a delay of half an hour, awaiting the natural efforts, fearing further delay, I was about to apply the forceps, when the uterine contractions returning, she was quickly delivered of a living female child, the placenta rapidly following. The delivery completed, the patient appeared to be composed and rational; and having been detained for nine hours with the case, I left the patient in charge of the midwife. In about an hour and a half, I was again summoned to the bedside of the patient, three distinct paroxysms of the convulsions having seized her, in rapid succession, with the former supervening symptoms. Chloroform was again resorted to, with the former effect. I then ordered the following mixture: ℞. *Pulveris Camphoræ*, gr. xvj ; *Liquoris Opii Sedativi*, ʒjss; *Aq. Destillat.* ʒjv; *Syrupi Simplicis*, ʒij; *Ammon. Sesquicarbonatis*, ʒjss; *Pulveris Acaciæ*, q. s. *Tere optime simul.* S. Take a tablespoonful every two hours till sleep is obtained. The patient slept well, and the convulsions took their final leave. During the first five days she was flighty and tremulous, with a feeling of intoxication and nausea, and was at times delirious. She took of the above mixture to procure sleep at night. At present, being the 13th day, both the mother and child are doing well; nor does the former appear to be laboring under any of the morbid effects of chloroform, the impression of which was kept up in her case for eight hours.

Puerperal convulsions have been discussed by Dr. Dewees, with a view to their therapeutic relations, as appearing in three distinct forms, namely, the *hysteric*, *epileptic*, and the *apoplectic*. Though the absolute pathology of this formidable affection must be considered as quite unsettled, nevertheless the differential symptoms which manifest themselves are such as to render the above distinction of cases to a great degree strikingly just. This classification, however, is but another mode of saying that pregnancy may in one case give rise to hysteria, in another to epilepsy, and in a third to apoplexy; as there is no general symptomatic or pathological distinctions can be drawn between these diseases as influenced by pregnancy, and the hysterias, epilepsies and apoplexies excited by other transient causes capable of producing them. Epilepsy, for instance, must be considered as either *idiopathic* or *symptomatic;* the idiopathic owing its existence to some inherent vice of that portion of the

organism constituting the proper seat of the disease; while the symptomatic is dependent on incidental conditions capable of influencing that portion of the organism. The very different conditions constituting dysmenorrhœa and pregnancy, may each give rise to symptomatic epilepsy, which shall have, so far as is known, the same essential character. Utero-gestation, parturition, and delivery, are, in certain constitutions, capable of exciting what is neither more nor less than symptomatic epilepsy, constituting all that can be admitted under the name of puerperal convulsions of the epileptic kind, as designated by Dr. Dewees. Post-partem hæmorrhage, as well as an ordinary blood-letting, may, in certain cases, produce genuine symptomatic epilepsy. Though puerperal convulsions have been distinguished by others into the symptomatic divisions of *tetanic, cataleptic, hysteric, epileptic, apoplectic, choräic,* &c., upon the whole I am inclined to think that the views of Dr. Merriman, who refers the whole to the epileptic basis under the name of dystocia epileptica, are the least exceptionable of any other writer. Epilepsy is the hideous type, impressing itself in a greater or less degree in all these affections, and by far the most frequent and most dreadful of them all, are undisguised symptomatic epilepsies.

I have memoranda of seven cases of puerperal epilepsy, in my own practice, all primiparæ; all natural presentations; there being two craniotomy cases, with recovery of the mother; one forceps case, the child living, and the mother recovering; one delivery by version, the child surviving and the mother dying; three deliveries by the natural efforts; all of the mothers recovering, and two of the children still-born. Four of the children were males. In two cases the fits occurred both before and after delivery. My own observation, without exception, verifies the language of Dr. Collins, in his admirable statistical work on midwifery, that "puerperal convulsions almost invariably occur in *strong, plethoric young women, with their first children;* more especially in such as are of a coarse make, with short, thick necks." Fifteen months since I was called to see a stout, robust young negress, *æt.* 19, primipara, slave of Mr. H., in her seventh month of pregnancy, who, after having been engaged during a very cold day in washing, was attacked with epileptic convulsions, as she was warming herself at the fire, and fell heavily on the floor. Venesection, cupping, sinapisms, cold to the head, and strong anti-spasmodic enemata, failed to relieve, death rapidly ensuing, the patient becoming at last apoplectic, never recovering consciousness.

Epilepsy, puerperal and otherwise, is a very common malady *among*

negroes, rendering the disease one of the greatest interest in its medico-legal relations, in what the lawyers call "redhibitory actions," in regard to slaves. The Civil Code of Louisiana tells us, (art. 2496,) that

"Redhibition is called the avoidance of a sale, on account of some vice or defect in the thing sold, which renders it either absolutely useless, or its use so inconvenient or imperfect, that it must be supposed that the buyer would not have purchased it, had he known of the vice."

Again, (art. 2501,) "The vices of body are distinguished into absolute and relative.

"Absolute vices are those of which the bare existence gives rise to the redhibitory action.

"Relative vices are those which give rise to it only in proportion to the degree in which they disable the object sold."

And further, (art. 2502,) "The absolute vices of slaves are leprosy, madness, and EPILEPSY."

No reference is here made to the curability or incurability of the epilepsy; whether it be idiopathic or symptomatic; puerperal or constitutional; but its "bare existence,"—the existence of a constitution in which it has manifested itself, or in which it may be excited, is in law an absolute vice, giving rise, not to the action *in quanti minoris*—an abatement of price, but to an absolute rescision and avoidance of sale. It is plain, therefore, that an absolute vice *in law* is by no means necessarily an absolute vice *in fact*, either as relates to madness or epilepsy; for "madness" itself may often be a mere transient and ephemeral affection. When counsel for plaintiff are in diligent search of an absolute vice, the medical witness may find the war carried into the parturient room. The verification of a single epileptic fit, covers the ground of the "bare existence," and is a regular god-send to the champion of the redhibitory party. Every pathologist knows that there are scores of vices of body far more absolute—more "redhibitory," in *point of fact*, on the "bare existence," than the three absolute ailments of the Code, not excepting the hideous lepra Mosaica itself. Upon the whole, the distinction into absolute and relative vices of body might well be wiped from the Code, and the whole catalogue of ills that flesh is heir to, be regarded as "relative," and "giving rise to redhibition in slaves, only in proportion to the degree in which they disable [or affect the value of] the object sold." There is an issue arising between law and fact, giving rise to a good deal of quibbling litigation, in which the physician is always called to the stand.

But to avoid digression, we close this article. On the medico-legal questions and interests growing out of the special and important relation

of master and slave—a subject entirely ignored by systematic writers, including the eminent Dr. T. R. Beek himself, I propose in a future number of this journal to offer some remarks. It will form a fruitful theme for abler pens in time to come, and it is one which is calculated to call forth the highest powers of the medical philosopher, in the new problems to be solved.

ART. VIII.—*Adherent Placenta.*

JULY 16th 1855; three o'clock p. m., was called to see Mrs. H., whom I found in labor; the pains having commenced about eight hours before; found presentation natural, pelvis normal. In about an hour the child was born; a fine full size boy, the birth having been an easy one. After waiting about half an hour, the placenta not having been detached, traction was made on the umbilical cord, with as much force as prudence allowed, but without effect; there was, at the same time, some slight contractions of the uterus with occasional pains; also some slight hæmorrhage. Shortly after profuse hæmorrhage occurred; when cold to the abdomen astringents and other measures usually employed were resorted to with the effect of causing some slight contractions. Believing, however, that the case would prove a troublesome one, I proposed a consultation, and called in Dr. Donnaud.

Here I may be allowed to digress for a moment, to answer what may be very naturally asked,—why I did not act according to or in conformity with the stereotyped views of medical writers, that is, introduce the hand and remove the placenta? My reasons for not doing so, are, that I have on two occasions seen patients die within a few minutes after the hand had been introduced into the uterus for the purpose of removing adhering placentæ. Other cases have been reported to me, and no doubt but most medical men are aware of instances of the same kind. On the other hand, my success in pursuing a different course from that usually recommended has been such in cases which will be mentioned, as to give me confidence in departing from printed rules.

To resume: In consultation it was agreed to give half drachm doses of ergot, with acet. plumb., &c.; friction over the abdomen with iced-water; injections through the umbilical cord into the placenta, and other measures usually resorted to. By these means the uterus contracted firmly, but high up in the abdomen, yet being very large, so much so,

that any one seeing the patient at that time, without being aware of what had taken place; would at once have supposed that a fœtus was in the womb. No doubt but this enlargement was caused by exudation of blood, aided by the water which had been injected into the placenta, and, which, I consider, served a very excellent purpose, by distending the uterus, its contracting power being at the same time in full vigour, thereby causing pressure on the bleeding vessels and checking to a great extent the hæmorrhage.

I watched my patient during the night, which she passed very comfortably; the only change that took place, was the discharge, occasionally, of clots.

17th, at eight a. m.; it was thought advisable to give small doses of *chlorid. hyd. et opii*, as a precaution against inflammation. Injections into the vagina of *lac et aqua*, tepid. Traction was made on the cord with as much force as prudence justified.

I may here state that the patient some five months before her confinement had an attack of enteritis, and I have no doubt there was connected with that a degree of metritis, and in consequence an exudation took place between the walls of the uterus and placenta ultimately forming a fibrous connection. This of course could not have been to any great extent.

The patient passed the day comfortably, the placenta still remaining firmly attached.

18th; the patient had passed a good night; placenta still adhering; tongue clean; pulse natural; appetite good. Continue treatment as before. During the afternoon the placenta became detached, the patient having experienced one or two sharp pains. In the evening I removed the mass which had become very offensive. Free injections of *lac et aqua* into the vagina were ordered, from this time. The treatment was simple, there not having occurred one bad symptom. In a few days the patient was up and is to this day quite well.

In reference to cases before mentioned. I would state that about three years ago, I was called to see a woman whom they told me was dying On my arrival I found her with a cold clammy sweat, and a scarcely distinguishable pulse, and to all appearance about to breathe her last. On inquiry I found she had been delivered about four hours before; that after waiting sometime the midwife had pulled at the cord till she ruptured it. By the aid of cold, *ergot, acet. plumb.*, in injections, &c, I succeeded in getting the uterus to contract. From this time the patient did well, and two days after

the placenta began to be thrown off in small pieces. There was some degree of metritis, but not severe, and the patient recovered in a short time. A case of a somewhat similar nature occurred in my practice about seven years ago, the placenta having been retained between three and four days. The patient recovered without having experienced any bad effects from the retention, excepting a slight degree of fever.

The treatment pursued in the three cases mentioned, although contrary to that usually recommended, has nevertheless, as seen by the results, been eminently successful, and I cannot think unworthy of consideration.

I have heard of many instances independent of those before mentioned, whose fatal results took place shortly after the introduction of the hand into the uterus. These facts have made an impression on me, so that I am extremely loath to such a proceeding as that of tearing away a placenta by main force.

JAS. COWLING.

Feb. 26th, 1856.

ART. IX.—*Removal of two pieces of a large Sewing Needle from the Thigh, after remaining there forty-five years:* by JOSEPH R. SMITH, M. D., of Elgton, Alabama.

ON the 9th of Feb. 1856, Mr. Ebenezer Byram, aged 53 years, presented himself at my office for the purpose of having his thigh examined, which, he said, was swollen, as his physician told him, from the "fever settling in it," he having had a spell of typhoid fever some twelve months previous. On exposing the limb, I found the thigh on its external side, much swollen, red, and inflamed; the surrounding parts being quite hard, and about the centre of the thigh on its external side was a small soft space about the size of a silver dollar, which fluctuated on percussion, showing that a quantity of matter was contained within. I plunged a large abscess lancet into this soft space, and discharged about a gill of thin yellowish fluid. I then introduced the probe, and after searching for some time, felt the probe grate against some foreign body. I immediately withdrew the probe and introduced a small pair of forceps and laid hold of the substance, and withdrew two bits of what appeared to have been a large sewing needle; each piece was near three-fourths of an inch in length. After introducing a tent, and dressing the wound, I

made inquiry concerning his previous history. He informed me that, when about eight years of age, he had what his parents called white swelling; the symptoms then were great swelling, pain, and redness of the thigh which continued to trouble and pain him for twelve months; but at no time did it ever discharge matter, but gradually subsided, and at the end of twelve months he suffered little or no inconvenience from it, except on sitting in "a certain manner" in a chair, or in riding on horse-back, if he pressed the parts, "a certain way," they would feel as though something were sticking in him; these continued to be his symptoms up to September, 1855, when the pain, redness, and swelling increased and gave him so much trouble, as to induce him te seek advice; and the above is the history and the result.

ART. X.—*Tracheotomy in a Mule:* by WM. D. ANDERSON, M. D.

IT is now more than twelve months since the following novel, rather amusing, as well as interesting incident, occurred:

Called to a patient, an overseer on an adjoining plantation, my attention, as I entered the gate, was arrested by the extreme suffering and dying agonies of a mule, large and fine, still upon his feet, staggering and reeling as he endeavored to keep the company of others, in the same small lot, which were so frightened by the mixed and unnatural screaming and roaring of the beast, that they fled in terror to avoid him. Every hair on him wet, his mouth elevated, jaws open wide, and gasping for breath, his condition, and attitude, and struggles, were articulate in imploring aid. I believed it could be given, if done instantly. At that moment the proprietor of the plantation rode up, and with intense earnestness ordered a *drench* quickly. I told him that a drench would be useless, but that if a man were the subject, I thought he might be relieved. He replied, that what was good for man, was also for the horse. I proceeded quickly, (the mule being down,) to cut down upon the trachea, at about its upper two-thirds, opened it by a longitudinal incision of some three or four inches. This was done in less than five minutes from my first sight of him; but the mule was already dead. "You are too late," remarked the owner. With regret, I replied, "So it seems." Having my fingers in, and spreading the trachea, removing the coagula of blood, I imagined that I felt a gentle rustling of air, and

in a minute more the most rapid and violent ingress and egress of air through the artificial opening was going on, like an engine working off steam. The mule was directly upon his feet. A section of a cow's horn answered as a tube, and in less than thirty minutes from the operation, the mule was eating, breathing, and apparently doing as well as ever. He made a quick and perfect recovery.

His disease was Distemper, affecting the throat, and closing it either by effusion in the submucous cellular tissue lining the larynx (œdema glottidis,) or by the faucial and pharyngeal tumefaction; or possibly all existed together.

I am aware that your excellent journal is not precisely the medium for such a paper. I know, however, of none other, except it be the popular, and as the article claims neither to be professional nor popular, and more especially as no serious loss can result to the world of either men or mules, from its suppression, I cheerfully submit it to your discretion.

WM. D. ANDERSON, M. D.

TENSAS PARISH, LA., *Jan.* 28, 1856.

Addendum by the Editor.

Veterinary colleges scarcely exist in the United States; though it appears that laudable efforts are now directed towards the establishment of these institutions in Philadelphia and Boston. In France there are several, and in other parts of Europe there are many veterinary schools, thoroughly organized and wisely supported by the different governments, thereby affording the cultivators of veterinary medicine the means of a complete education, without which the cattle-doctor can no more than the human-doctor practise successfully his very difficult and most useful vocation. Until veterinary practitioners duly qualified shall be established in every town, the physician should not think it beneath his dignity to afford surgical and medical relief to the inferior animals, in so far as he may be qualified in this behalf.

Whether the human race be regarded as consisting of one or several species, its differentiæ are quite restricted as compared with the inferior animals; yet, nevertheless, these latter illustrate human anatomy, physiology, and pathology.

The diseases and the post-mortem examination of animals, afford the country physician advantages inferior only to those of city hospitals.

Human physiology has been to a great extent founded upon observations and experiments upon the inferior animals. Comparative physiology, anatomy, therapeutics, surgery, and pathological anatomy, thus developed, are of great value to the physician.

The hygiene, food, drink, lodging, crowding, ventilation, exposure to heat, cold, and humidity; the acclimation, health, diseases, and remedies of cattle, all contribute to illustrate the science of medicine.

The pneumonia of hogs, for example, I have found to correspond with that of man in pathological anatomy. Perhaps the best specimen of anæmia I have met with, was in the vivisection of an alligator, in which the entire tongue and all the soft parts of the inferior jaw had been, probably many years before, cut away. The animal, thin, and weak, had scarcely a tinge of redness in the blood, doubtlessly because he had not been able to procure and swallow a sufficiency of food in a mutilated condition.

Cattle epidemics (epizoötics) deserve to be carefully recorded for their intrinsic importance, as well as for their possible value in illustrating endemics and epidemics proper.

In January, 1845, the public journals recorded an extensive and very fatal epidemic among fishes upon the Atlantic coast, from New England to the Southern States, extending over a belt of water from one to three miles broad. In April of the same year the fish died in great numbers in the Lake Pontchartrain, and in the canals connecting it with New Orleans. The stench from these decomposing fishes was deemed a nuisance and dangerous to health; whereupon the municipal government ordered that these dead fish should be interred. Hydropathy, or the water-cure, cannot, as it seems, always cure fishes of fevers or other diseases. Two or three years before this great mortality among fishes, a similar mortality was reported as having been very fatal to the red-fish upon the coast of Texas, particularly at Galveston. In May and June of the year 1851, great sickness and mortality prevailed among the fishes of the Lower Mississippi, particularly among the cat fish family, many of which were found dead with upturned sides and abdomens, floating; others feebly swimming at or near the surface of the river in a dying condition.

The ætiology of epidemics termed epizoötics among animals presents problems in the history of morbid causation, the solution of which is hoped for, rather than found. The epidemics which affect man, do not always simultaneously affect beasts, except in rare instances, though both classes suffer from diseases which, to a considerable extent, are identical;

as affections of the throat, lungs, brain, bowels, skin, eyes, &c., including inflammations, fevers, dropsies, anæmia. debility, hypertrophy, atrophy, palsy, spasms, plagues, and the like. It may, therefore, be repeated, that it is the duty of humane physician, particularly in the country remote from veterinary surgeons, to pay strict attention to such diseases and surgical accidents as may fall under his observation among animals. Physiologists have availed themselves of the highly important scientific advantages derived from experiments and vivisections; while from the same source pathologists, therapeutists, and pathological anatomists may learn much as to hygiene, sanitary regulations, diseases, treatment, and post-mortem examination—which must also be useful in the ordinary course of daily practice.

PROGRESS OF MEDICINE.

ART. I.—*Rademacher, the Empirical Reformer in Germany; his Doctrine and Therapeutics*: Translated from the "*Revue de Thérapeutique Médico-Chirurgicales*," of October 15th and Nov. 1st, 1855: by M. MORTON DOWLER, M. D., of New Orleans.

[Concluded from page 698.]

THIRD UNIVERSAL REMEDY.—COPPER.—CUPRUM.

IT is a fact which is incontestible, that copper possesses an ulcerating virtue (*vim ulcerativam*). If it be applied in the form of ointment to phlegmons, they soon fall into suppuration, and even when that metal is given internally, it produces suppuration of inflamed parts, which are not disposed to the process of resolution. Its effects on warts and other excrescences are well known. Combination with canella corrects the injurious effects of copper. The following preparations are used in medicine:

The Oxide of Copper.—If we deprive the nitrate of copper of its nitric acid by heat, we obtain a *black oxide*, which is an excellent medicine, from its producing but little nausea. It is especially applicable when we would introduce a considerable quantity of copper into the intestinal canal.

This universal remedy is given in doses of gr. $\frac{3}{4}$, gr., jss. and even gr. iij daily, the dose of from gr. $\frac{1}{2}$ to gr. $\frac{3}{4}$, producing all the energy of effect desired.

Tincture of the Acetate of Copper. Tinctura Cupri Acetica Rademacheri. This tincture is prepared as follows: R. *Cupri Sulphatis*, ʒiij; *Plumbi Acetatis*, ʒiijss.; *triturate together to liquefaction;* then add ʒvij of distilled water, and heat to boiling; add then to the mixture ʒxij of alcohol, and leave the mixture standing for four weeks, stirring it often. The tincture is thus produced by double decomposition.

The following is the best mode of administering it in acute fevers: R. *Tincturæ Cupri Aceticæ*, ʒjss.; *Gummi Tragacanth.*, ʒj; *Aquæ Cannellæ*, ʒj; *Aqua Destillatæ*, ʒvij. Take every hour a tablespoonful. This mixture produces neither nausea nor vomiting. If we administer copper in

proper doses, so as not to attack the intestinal canal, it acts in a very peculiar manner, very mildly, which is very different from the action of any other medicine. It is a substance which allies itself very well to the human organism, and which acts even miraculously. Copper is equally advantageous in chronic, as in acute maladies, as well in those which consist simply in an affection of the entire organism, as in those which have their origin in an entire combination of a primitive affection of the organism with an idiopathic affection of an organ.

The nitre affections, as well as those of iron, are themselves very difficult of recognition; but the copper affections are still more difficult.

Alkalinity is generally a negative sign of a copper affection. To weigh the matter well, we can only know a copper affection after the method of the chemists, namely, by aid of the method of test.

The *effect of this universal remedy* is so constant, so favorable, so rapid, that being employed as a test for disease, it soon declares the condition of the organism.

We find that by its use muscular debility becomes greatly ameliorated, almost in the course of a day, oppression disappearing, and the urine from being brownish and flocculent becomes clear and limpid. This last sign must especially attract the attention of the physician whilst testing the system with copper.

If before the use of copper the urine has been limpid and pale, and as a consequence of the remedy it has become of a deeper color, we may conclude that the urine is not in a healthy condition. It is necessary to examine the urine daily.

The copper diseases assume more particularly the following forms:

Cephalalgies.—We have many times cured very violent forms of these affections, continued and periodic, and with irregular exacerbations.

Prosopalgia is also cured by copper, but we must, above all, inquire whether or not it be sympathetic. Should it be so, it can only be combated by the cure of the organ sympathetically affected.

Chronic inflammation of the tongue may be successfully treated by copper.

Apoplexy.—In most cases we can cure this affection by ether, wine, and other excitant means; but it can be also cured by copper.

The Paralyses are sometimes only a simple predominance of an affection of the whole organism in the parts paralyzed, and in such cases may be cured by the appropriate universal remedies.

We may administer copper with great success in *angina* and *scarlatina*, because scarlatina is sometimes a copper affection. *Paraplegia*

has often been cured by copper; but it is necessary to persist in its use for three months.

If muscular weaknes be found to exist in the form of a copper disease, we may use with advantage the following mixture: ℞. *Gummi Tragacanth.* gr. xv; *Aquæ*, ʒvij; *misce: Adde Aquæ Cannellæ*, ʒj; *Tinct. Cupri Acetatæ Rademacheri*, ʒij; *M. ft. mist.* Take a tablespoonful night and morning. Often *the march of scarlatina* may be arrested by the employment of copper. If in a copper scarlatina there be diarrhœa, it is well to give the tincture of copper in an oleaginous mixture.

Mercurial Salivation.—If in a nitre disease salivation manifest itself from the internal employment of mercury, it is rapidly cured by the internal administration of copper. But if mercury be administered to the point of salivation in an iron affection, we cannot cure it by copper. If the mercury has produced salivation as a result of mercurial frictions made over the belly, the cure by copper is not so certain as that which is produced by the employment of mercury internally.

Cough is very rarely a copper affection of the organism.

Paralysis of the Lungs.—In aged, and even young persons, under certain circumstances there manifests itself, sometimes, during the progress of acute fevers, a very dangerous state, a difficulty of respiration, which is very sudden. It disappears in a very short time, and then suddenly returns with greater force. In cases such as these, copper produces excellent effects, and it should be administered for the space of several days. It is moreover necessary here that attention should be directed to other pathological conditions.

Pleurisy.—This disease is frequently a sign of a copper affection of the organism. A light delirium, and the loss of muscular power, are the signs of a copper affection.

In copper pleurisies, the pleurodynia and dyspnœa, the sense of oppression, and the constriction in the centre of the thorax, the cough and sanguinolent expectoration, are never absent.

Jaundice presents itself, though rarely, as a complication of an idiopathic disease of the liver, and a copper affection of the organism. In such cases, we give the following mixture: ℞. *Aquæ Nucis Vomicæ*, ʒij; *Tincturæ Cupri Aceticæ Rademacheri*, ʒiss.; *Aquæ*, ʒviij; *Gum. Arabici*, ʒj. A tablespoonful every hour.

Diarrhœa, Dysentery.—Certain diarrhœas are affections of the organism predominant in the intestines, and are under the curative capability of copper. The tincture is to be given here in a gum mixture, or if there be intestinal irritation, in an oleaginous emulsion.

Copper dropsy is comparatively rare in comparison to the other dropsies. If we would employ copper with success in this disease, we must be sure that we are dealing with an idiopathic affection, which depends on the derangement of the urinary secretion.

Nitre dropsy presenting itself as a general affection, is not near so common as iron and copper dropsies.

If the urine is found to be alkaline, we ought not to administer copper; if it be acid, this medicine produces the happiest effects. The tincture of the acetate is to be used in small and repeated doses, gtt. xv every hour, or gtt. xxx in water, every two hours.

In cases in which the secretion of urine is greatly diminished, and is neither brown nor muddy, it should, by the employment of copper, become, at the end of three days, clear and straw-colored. If, however, it does not, and it becomes deeper in color, we may conclude that this dropsy does not depend on a copper affection of the organism.

When the copper relieves the patient from the beginning of its administration, the secretion of urine is augmented, indicating amelioration; the cessation of this improvement in the case, denotes generally a complicated state of the disease. We must then seek out with what organ the copper affection of the organism is allied.

Copper dropsy can be cured by copper alone, and not by medicines the action of which are analogous to copper.

Diuretics do not cure copper dropsy no more than paracentesis; and purgatives quickly lead the patient to the tomb.

Ascitis and *Anasarca* may be cured by copper; but *Hydrothorax* cannot.

Hæmaturia.—If the hæmorrhage proceed from the kidneys, the disease sometimes owes its existence to a copper affection of the organism.

Renal Hæmorrhage, which is occasioned by a high state of a copper affection of the organism, (in petechial fever, or in the *morbus maculosus hæmorrhagicus*,) is rather aggravated than cured by copper.

Rheumatism is often, and especially in certain seasons of the year, a copper affection.

Arthritis, or chronic gout, may also be a copper affection of the organism, and it cannot be cured but with great difficulty, by any other means than copper.

Chronic Cutaneous Eruptions, are often a local manifestation of a copper affection of the organism.

An insupportable burning of the skin can often be successfully treated only by the internal employment of copper.

Humid herpetic eruptions, which occupy frequently a considerable portion of the skin, are cured by copper; meanwhile, these herpetic eruptions are not unfrequently a manifestation of a copper affection of the organism.

In cases in which the eruption is truly a copper affection of the organism, sulphur and other agents are not without effect; but copper alone can cure them. The salutary effect of copper manifests itself, not only in the diseases already mentioned, but manifests itself in many others equally decided.

COPPER AS A VERMIFUGE.

Copper kills worms; it does not, like other remedies, merely expel them from the body.

Copper is especially fatal to lumbrici, and in this view it may be given in various forms. The mixture of the acetic tincture, or the black oxide of copper, with oil of poppy, is a good preparation. We must often use the tincture alone, every hour, in doses which do not excite vomiting; or we may administer the copper in the form of the black oxide, made into pills or powders.

To kill tænia, there is no better remedy than copper; and in this case we must give the black oxide in doses of from gr. $\frac{3}{4}$, gr. jss., gr. ijss., up to gr. iij, four times a day; and the worm will be killed; after which a laxative must be given to expel the dead worm.

CONCLUSIONS ON THE UNIVERSAL REMEDIES.

Nitre diseases may transform themselves into *copper diseases*, under the following circumstances:

a. In young persons, debauchees, and drunkards.

b. In persons, young or old, feeble or strong, when the nitre diseases continue a long time, or when they have been combatted by blood-letting, which has not been indicated, or by mercury.

Nitre diseases may be transformed into iron diseases, under the same circumstances which favor the transformation into copper diseases.

Iron and copper are in relation to their curative action, remedies the opposite of nitre.

The universal remedies have rendered eminent services as *diagnostic medicines*, especially in obscure diseases of the liver, spleen, and pancreas; but we should not resort to them for this purpose, save only in cases in which it has been found impossible to arrive at the diagnosis by any other means.

Of the Universal Remedies as a means of prolonging life in acute fevers, in which the affections of the organs are not known.—Iron and copper are here the best auxiliaries, and by the employment of these universal remedies, we procure to nature time for her secret cures.

When in children an organic disturbance, which proceeds sometimes from growing, and in which we are not able to detect the least impediment in the functions of any of the organs, a disturbance which throws children into a languid condition, sometimes iron, and at other times copper is administered with the greatest efficacy.

We see in cases of the loss of flesh, to which persons whose constitutions are already developed, are sometimes subjected without any visible derangement of the functions of any organ, nutrition becomes renewed, and normal, by the employment of iron or copper. Lean persons become more robust, and their languishing visages resume the bloom of health.

Copper produces a rapid and favorable suppuration in non-resolutive inflammation. Iron and copper arrest gangrene, and the destruction of the gangrenous parts. In many malignant ulcers, which are very difficult of cure, iron and copper produce remarkable effects.

COMBINATIONS.

We recommend the following combinations of medicines:

1, Mixture of nux vomica and assafœtida; 2, sal ammoniac and catechu; 3, juice of the chelidonium and muriate of lime; 4, distilled water of nicotiana and the acetate of soda (against cholera.)

The following is the formula for this combination: ℞. *Sodæ acetatis* ʒij; *gummi arabici*, ʒss.; *aquæ*, ʒvij; *aquæ nicotiana*, ʒss.; every hour a tablespoonful.

Medicines which sooner or later exercise a deleterious action, as well on the sick as on the healthy person:

1. Mercury, lead, digitalis, and opium, are especially of this character.

2. Emetics, especially the antimonials, which render well persons diseased. Their effect is equally injurious on the system of the diseased.

3. Drastic purgatives act very disadvantageously on both sick and healthy persons; the same may be said of rhubarb and senna.

4. Blood-letting.

THE PRACTICAL CONCLUSIONS ARE THE FOLLOWING:

1. Avoid the employment of medicines which render the sound body sick.

2. Do not administer medicines in such doses that an individual in health could not support them.

3. The medicines which do not produce notable changes in the sound body, ought not to be administered to a sick person in over doses.

Art. II.—*On Malaria, as the cause of Periodical Fevers.*

Charles E. Johnson, M. D., in his paper, published in the Transactions of the Medical Society of the State of North Carolina, denies the reality of Malaria as the cause of Periodical Fevers. He says:

To the term malaria there can be no particular objection, when used merely to convey an impression of the *morbific state* of the atmosphere of certain localities. But it is a different thing when employed by the school-men as a familiar expression, representing a distinct gaseous entity, possessing essential properties, specifically poisonous in their nature, since neither the existence of the gas, nor its composition, nor qualities, can be appreciated by our senses in their natural state, nor aided by all the contrivances which science and ingenuity can suggest, nor traced even by the presence of those agencies which are said to be capable of generating it.

Having discussed the question at length, he sums up the contradictory opinions of the most eminent writers upon this branch of ætiology:

SUPPOSED ORIGIN OF PERIODICAL FEVERS.

Lancisi, in 1695, ascribed the origin of periodical fevers to *marsh miasm*, which he affirmed, consisted of effluvia of inorganic and animalcular constitution.

Richter, a distinguished German writer, speaks of them as caused by worms and other sources of intestinal irritation; by suppression of the catamenia and other habitual discharges.

Henry Holland and others believe that these fevers are produced by a distinct host of animalcules which float about in the air.

J. K. Mitchell thinks them owing to the injurious and poisonous action of the sporules of fungi, which are disseminated through the air.

Elliotson says that an exhalation from decaying vegetable matter is the true indispensable and exciting cause of ague and fever.

Ferguson denies the necessity of *vegetable decomposition* to produce these diseases, but attributes them to the rapid evaporation of water in an arid soil.

Annesley, a writer on the diseases of British India, concludes that the cause is the product of the different elements which are found in the rich soils, when acted on by heat, the air and moisture.

Dr. Watson declares that the primary exciting cause of intermittent and remittent fevers, without which ague would never occur, is a specific poison, producing specific effects on the human body.

Armstrong rejects altogether, the doctrine of a specific poison in accounting for their origin.

Tulloch thinks there does not exist any relationship whatever, as cause and effect, between marsh exhalations and ague and fever.

Dr. Wood admits that periodical fevers may originate without any emanation from vegetable decomposition to poison the atmosphere.

Sir James Murray contends that the true malarious agents are electro-galvanic currents and accumulations.

Dr. Bell of Philadelphia, and Pritchett, in his account of the African remittent fever, think that the known and appreciable states of the earth's surface, superincumbent atmosphere, and modes of life, will account for the origin of these fevers.

Professor Daniells, and the Drs. Gardner, of Loudon and Hampden, Sidney College, Va., think that the active agent which produces fever in malarious situations is the *sulphureted hydrogen* to be found in their waters.

The celebrated Roman physician, Folchi, who had bestowed much time and attention upon this subject, thought that moisture, dampness, and the chilling effects of the dews of night, and not miasmata, produced these diseases.

Murray, British Inspector General of Hospitals, avers that fevers, every way analogous to those to be found on marshy plains, frequently result from the application of intense solar or atmospheric heat.

Lancisi states that the purest breezes, *tametsi saluberimus* — no matter from what quarter they may blow, are adequate to produce an attack of periodical fever.

Wortabet, in his fevers of Syria, says that inattention to personal cleanliness, filth, and poverty, independent of any marsh effluvia, will produce intermittent fever.

Dr. Heyne accounts for the occurrence of these diseases amongst the rocky, wooded hills of the Madras Presidency, by supposing them to be owing to some magnetic influence dependent upon the ferruginous character of the rocks.

Von Aurvaule, a celebrated Netherlander, accounts for their prevalence in argillaceous soils, by supposing that clay possessed the property of absorbing oxygen from the atmospheric air, and thus impairing its purity.

The celebrated Linnæus contended, in his Inaugural Essay, that periodical fevers originated in all those places where the soil abounds in clay, and only in such places; whilst Fodere, in his classification of insalubrious localities, places the clayey soil next to that of marshes and turbaries.

Dunglison, contesting the views of Fodere, says: "It certainly cannot be maintained by any one who has inspected the soils of malarious regions, that the clayey soil is most insalubrious next to the marshy and turfy. Some of the most healthy districts are found of this soil, and on the other hand, as we have previously seen, some of the most unhealthy are sandy."

Fourcault thinks these fevers depend on the occurrence of three essential conditions, moisture of the air, elevation of temperature, and atmospheric vicissitudes.

Dr. Foster is of opinion that it is not the heat, nor cold, nor dampness, nor drought of the air, nor sudden change, which is chiefly concerned in producing disorder, but the inexplicable peculiarity of its electrical state.

"We believe," says the British and Foreign Medico-Chirurgical Review, "that we are as yet *in utter ignorance* of the agent or agencies represented by the conventional term, *malaria*, or marsh poison.

"The doctrine of a specific poison," says the American Journal of Medical Sciences, "generated during the slow decomposition of vegetable matter, as a cause of fever, is fast losing ground—as the etiology of endemic and epidemic diseases is more closely and systematically investigated."

I shall now mention some of the opinions of different authors as to the causes and conditions which are said to affect and control this supposed poison, marsh miasm, and I think we shall find here as many discrepancies as were exhibited on the subject of the origin of periodical fevers.

CHARACTERISTICS OF MARSH MIASM.

Sir Gilbert Blane states that the people in the villages *in the midst of the fens*, were in general healthy, at a time when the fever was prevailing in the more elevated situations of Lincolnshire.

Ferguson says the troops were sickly "whenever, during the hot season, any portion of the army was obliged to occupy the arid encampments of the level country, which at all other times were healthy, or at least unproductive of endemic fever.

Monfalcon states that miasmata, during the warmer and more heated

Ferguson alleges that it is heavier than air, has a peculiar attraction

hours, are elevated to great heights in the atmosphere, and may thus be carried to and deposited on distant hills and mountain ridges.

for the soil, and therefore cannot mount upwards, but creeps along the ground, whenever it strays away from the source of its origin.

According to the opinions of Tourmon, Carrière, and others, an elevation of from five to seven hundred feet will place one beyond the influence of miasmata, no matter what may be the nature of the localities at the base of such situations.

Major Tulloch does not believe that an elevation of six or seven hundred feet will ensure one against the assaults of the cause of periodical fever, whatever it is, but goes far beyond that, and thinks an elevation of not less than 2,000 or 3,000 feet will do it.

On the coast of Batavia, according to Sir John Lind, so little attraction had water for it, the malaria was wafted out to vessels riding at anchor some five or six miles from the shore.

In the narrow straits of Holland, only a few yards from the shore, Sir Gilbert Blane says none of the seamen were affected by the disease which was so fatal to the land forces, so great is the attraction of water for malaria.

Sir John Pringle affirms that the ground-floors of the houses where the malaria is disengaged, are most sickly; and Ferguson and others agree with him that it is less deadly, as it is more distant from the source of its origin.

Monfalcon declares that as the malaria is carried upwards it becomes more energetic, and McCulloch agrees with him and says, that the source of its origin is frequently left perfectly salubrious, whilst distant hills and situations are rendered pestilential by it.

Parent Duchatelet, a celebrated physician, of Lyons, after several years of investigation, came to the conclusion that water in which hemp or flax had been rotted, was not injurious to the health of those who drank it, and that the emanations from it were not unhealthy.

Brachet, another distinguished physician, of Lyons, gives it as his decided opinion that the readiest and most certain method of converting a healthy village into a hot-bed of intermittent fevers, is to furnish it with ponds and steep hemp in them.

According to the prevailing opinion, it is only to be found where there are marshes, stagnant pools, swamps, or wet rich grounds.

Dr. MacMichael says, Frichori, in the Gulf of Valo, in Greece, a dry limestone rock, is notorious for its malaria; which is likewise true of one of the Isles de Loss, according to Boyle.

Dr. James Johnson says that the

McCulloch asserts, that in every

same malaria arises from the summits of the mountains in Ceylon, which is found on the marshy plains of Bengal.

Dr. Dickson, of Charleston, S. C., a popular writer of this country, says: "A very dry summer and spring are apt to be healthy;" and Folchi and others agree with him.

Robert Jackson says: "The usual endemic of warm climates is less frequent and formidable on the banks of rivers, after their waters become mixed with those of the sea, than before this has happened."

Folchi thinks a hot, dry summer must exempt from fevers; and the most sickly one is when falls of rain alternate with atmospherical vicissitudes of temperature.

M. Julia ascribes it to a union of animal and vegetable putrefaction, and Dr. James Johnson thinks, generally speaking, it is the product of animal and vegetable decomposition by means of heat and moisture.

Copland, in his Dictionary of Practical Medicine, says: "In warm countries, or in hot seasons in temperate climates, the places which are most productive of malaria generally, also abound the most in animal substances undergoing decomposition." Again: "I have always considered the number of insects and reptiles with which a place abounds, as more indicative of its insalubrity than almost any other circumstance."

instance where it is found on the hills and mountain ridges, it always arises from the wet ground at their base, or at no very great distance off.

Ferguson says: "A year of stinted vegetation, through dry seasons and uncommon drought, is infallibly a year of pestilence to the greater part of the West India Islands."

Fodere, speaking of this matter, says: "The shores and vicinity of large rivers, lakes, and the sea are generally healthy," unless where there is an admixture of salt with fresh water.

Dr. Joseph Brown asserts he has seen plenty of ague and fever in parts of Estramadura, when everything was parched up for want of rain, and where no visible dampness could be supposed to have a share in their production.

Dr. Joseph Brown says: "Malaria is generated in so many instances in which animal matter does not exist, that we must conclude that the presence of such matter is not essential to the formation of the poison." Dunglison, and others, agree with him in this opinion.

Armstrong says: Kingston, in the Island of St. Vincent, having all the elements for the production of this poison, for it abounds in as much vegetable matter, and "reptiles, and insects, and other animal matter, as is found in other tropical countries, is yet as healthy as the most favorable spot in England." New Amsterdam, Berbice, and other places in the West Indies, are similarly situated, according to Ferguson; while Dundas informs us that such is the case with Bahia, Bonefine and other places in Brazil.

Forsyth, Ferguson, Sir John Pringle, Sir Charles Morgan, and others, contend that a dry road, or a wall, or a belt of trees, will arrest the progress of this poison.

Monfalcon, McCulloch, Brown, and others say, it will mount into the higher regions of the air and be disseminated over the adjacent country, despite the intervention of walls, cliffs, woods, and secondary ridges.

Sir John Pringle, Fordyce, and Ferguson, declare that the dry, sandy plains of South Holland, Dutch Brabant, and Flanders, without trees, were pestilential to the British forces.

Heber says, the wood tracts of Nepaul and Malwa, having neither swamps nor perceptible moisture, are uninhabitable in summer and autumn by man, beasts, or birds, from their pestilential character.

The miasmatists, generally, believe that the dews of insalubrious localities are loaded with the miasmatic principle, which has been brought down and precipitated with the aqueous vapor of the atmosphere.

Dr. Minzi, of the Central Hospital, Temaciva, with the view of testing this matter, together with others, drank freely of the dews of such localities, besides washing abraded surfaces, and the sores of peasants with it, without evil effects.

Sir John Pringle and others assert that this poison is connected with a most noisome and dreadful smell.

Furguson says, a most noisome and disgusting odor, arising from the decomposition of vegetable matter, pervades the town of New Amsterdam, Berbice, but it does not produce disease.

The prevailing opinion among the miasmatists is, that it is not contagious.

Bailly and Audonard, in France, and Cleghorn, Fordyce and Brown, in Great Britain, think that it is communicated by contagion.

Fordyce, Sir John Lind, Dr. Dundas, the French Algerian Surgeons, and others, contend that fever and ague is convertible into common continued fever, and vice versa.

Those who advocate the abstract theory that marsh miasm is the cause of periodical fevers, deny that ague and fever and continued fever are mutually convertible.

These are some of the varying features and contradictory statements, which are furnished by the medical history of this imp of the marshes. I shall not attempt to reconcile such discordant elements—it would be worse than useless.

ART. III.—*The Effects of "Sub-Marine Descent" upon the Nervous System;* by DR. LITTLETON.

(Assoc. Med. Journal, Feb. 9, 1855.)

DURING the construction of the iron bridge over the river Tamar, at Saltash, in Cornwall. Dr. Littleton has had an opportunity of observing the injurious effects of working in deep water, and some of these are hitherto undescribed. He writes:

There are accounts given of several of the inconveniences which attend on the descent in a diving bell, at p. 492, No. 349, and p. 177, No. 368, of the Philosophical Transactions, by Dr. Edm. Halley; at p. 377, No. 444, by Martin Triewald; and in Dr. Olinthus Gregory's translation of Abbé Haüy's Natural Philosophy, vol. 1, p. 224. Such are the following: a painful sensation of pressure on the membrana tympani, which soon subsides, the ready communication by the Eustachian tube establishing an equilibrium of pressure on that part; spitting of blood; bleeding at the nose and ears; bloodshotten state of the eyes; and the oppressive sensation attendant on a confined atmosphere, by which, if the means of constant renewal are not applied, life would be speedily destroyed.

But no allusion is made to one source of danger, that has demanded most attention here; and which, from the suddenness of the attack, and apprehensions of fatal results attending it, more especially deserves notice.

Some reasons for this omission are here supplied by the difference which the apparatus used here presents from a diving bell, and the less liability to danger which exists in the latter, from the *gradual* manner in which it is lowered and raised, and the consequently slow increase and diminution of pressure to which its inmates are subjected. Were this, which is so rightly insisted on by Dr. Halley, not observed, the same consequences would follow the rapid drawing up of the bell to the surface of the water as attend the working in this cylinder, and from the same cause, *the sudden removal of pressure.*

Considering the effects produced on some few by this change, from a pressure of three and a half atmospheres (the depth at high spring tide being eighty-five feet) to the normal pressure of fifteen pounds, it is a matter of surprise that more do not suffer them. There have not occurred, so far as I am aware, more than half a dozen severe cases, in a work which has occupied daily twenty-five men over a period of many months.

In the severe forms of the attack, the man is taken, within a few minutes after coming out of the cylinder, somewhat as in an apoplectic seizure, with a loss of power, preceded by pains, in the lower limbs (paraplegia), as I have seen in two cases, or of one half of the body (hemiplegia); another, the only one I have seen so affected, was wholly unconscious, remaining in that state many hours. In those who escape with less injury, their sufferings are in some instances very severe, from pains in the limbs and joints; and few, if any, have wholly escaped these effects at some time or other during the progress of the work.—*Ranking.*

ART. IV.—*Experiments on the Operation of Loss of Blood upon the Course of Poisoning by Strychnine:* by W. KAUPP. (Vierordt's Archiv. fur Phys. Heilk., Heft. 1, p. 145. 1855.)

THE object of these experiments was to test the doctrine which, since the known experiments of Magendie, has been universally held, that the rapidity of absorption, and thus of the operation of poisons, was lessened by a full condition of the vascular system, and increased by loss of blood. The method of experiment adopted was the introduction of a solution of nitrate of strychnine ($\frac{1}{3}\frac{1}{2}$ of a grain he found best adapted for the purpose) beneath the integument in the back of rabbits. Dr. Kaupp compares the rapidity of poisoning in those animals which were not bled, and in those which were bled from the jugular vein before and after the application of the poison. He furnishes the result in some tables, of which the following may be regarded as a *résumé:*

In the case of those rabbits which were not bled, the tetanus set in earlier than in those which were bled—viz. in a mean period of 4 mins. 30 secs.; while in those which were bled, in an average time of 5m. 13s., giving thus a difference of 43s. The weight of the animal seemed to exert a marked influence upon the early or late occurrence of the tetanus. Comparing the results in the six heavier and six lighter unbled animals, the average time of occurrence of the tetanus in the former was 5m. 45s., and in the latter 3m. 36s. This result is much more striking in the instances of those animals which were bled, in which the tetanus on the average occurred in the heavier after 36m. 48s., but in the lighter after 4m. 18s. Much more striking even than the time of occurrence of tetanus, was the difference between the appearance of death in the bled and unbled animals The average time which elapsed before death in those not bled was 9m. 39s., while in those which were bled it was 27m. 56s. The weight of the animals here also exerted an influence—the mean period of death (taking the bled and unbled together) was 23m. 12s., after application of the poison, for the heavier, and 13m. 56s for the lighter animals. The sex of the animals also seemed to exert an influence, the males dying on an average in 15m., and the females in 25m. The amount of the venesection exerted an influence, the proportion of the duration of poisoning after a large and small bloodletting being as $4 : 2\frac{1}{2}$. It was further observed, that when the animal was placed in a small basket, and thus hindered from springing about, both the occurrence of the poisoning and death were delayed.

The results of these experiments are thus directly opposed to the doctrine generally accepted, and show that both the occurrence of the symptoms of poisoning and the death (using these as the measure of the rapidity of absorption) are really delayed by loss of blood.

This is a very important paper, and the subject well deserves following up, since the conclusions of this experimenter, if confirmed and extended, must lead to therapeutical reform.—*Br. & For. Med. Ch. Review*, Jan. '56.

Art. V.—*The Mortality in London in* 1854.

Analogous to the results observed throughout England and Wales generally during the past year, the mortality recorded in London during 1854, exceeded that met with in any former period, since a correct registration of deaths was established. The only approach in point of numbers being 1849, when cholera likewise prevailed epidemically in the metropolis. During 1854, 73,699 persons died from all causes; whereas, in the first-named year, the numbers amounted to 68,432; thus making an increase of 5,267 in the last year's mortality. Compared with 1853, the excess was 12,495 deaths; 61,202 fatal cases of every description having been then registered. * * * With reference to violent deaths, some curious and interesting facts may be quoted, which are also satisfactory in regard to numbers. Thus, fewer persons lost their lives from burns and scalds, than in 1853; the respective amount by such accidents being 274 cases, instead of 309 in the previous year. By hanging and suffocation, 234 against 279. By drowning, 344 in place of 355; and lastly, 655 unfortunate human beings had their mortal existence brought to a premature close, in 1854. by fractures, against 738 similarly killed during the twelve months preceding. In connection with the subject now under investigation, viz., deaths caused by violence, it is a true, however much to be deplored fact, that, last year, 1789 inhabitants of London lost their lives by accident, or in a violent manner; therefore making a greater number than have often died in battles reported great or glorious; and which frequently occasioned much public sympathy, nay, even unbounded gratulation for the truly brave soldiers who then bit the dust, whilst fiercely engaged in mortal combat with their fellow-creatures. Take the most recent example—the Crimea; where, since the English army first landed, up to the 15th of last month, or after about six months severe fighting with their opponents, the total persons killed during that period, as stated in official returns, amounted to 1360 men and officers included; which gives 429 fewer fatal casualities, than all the violent deaths registered in London the past year. But such is hero-worship! and although many of the 1789 human beings, recorded to have perished in the metropolis, through violent means, were perhaps, fathers of families, or industrious workmen supporting themselves and dependents by their honest labor; numbers being likely also well behaved Christian men; nevertheless, these numerous deaths by violence excited, in all probability, very little public notice, or had no sooner occurred, than the individuals were wholly forgotten, unless by immediate relatives, to whom the loss was irreparable.

Notwithstanding the large number of deaths, and varied diseases which produce every year in London extensive mortality, it is remarkable that by many maladies the fatal cases annually recorded are very often uniform in amount. This coincidence becomes the more interesting, taking into account the immense metropolitan population, and varied occupations, with numerous other circumstances characterizing its inhabitants. Amongst the chief affections exhibiting this peculiar feature, occurs scurvy; whereby 54 persons died in 1854, instead of 55 in the

year before. Ague, 24 in both years; typhus, 2669, against 2649; mortification, 189, to 186; scrofula, 446, to 443; apoplexy, 1323, to 1339; pneumonia, 3976, to 3938; quinsy, 56, in each year; gastritis, 76, to 79; ulceration of intestines, 144, to 140; hernia, 148, to 149; ileus, 162, to 161; intussusception, 47, to 46; hepatitis, 213, to 215; ischuria, 10, in both periods; cystitis, 37, to 36; and stricture of urethra, 63, to 65. Lastly, omitting several other illustrations which might be included in the same category, intemperance deserves special notice, seeing 83 persons fell victims to this detestable habit, against 88 in the previous year; thereby proving that, even from vicious propensities causing death, and after living in a state of degradation, among such inveterate criminal votaries, there reigned a singular uniformity.—*Ranking's Abstract.*

ART. VI.—*Mortality in England and the United States.*

THE deaths in England and Wales, in 1854 amounted to 438,329, an increase of nearly 4 per cent. over the mortality of the previous year, though less than in 1849 (440,853). Now at the period first named (1854) the population of England and Wales fell short of the total population of the United States by about eight and a half millions. Yet, if the Mortality Statistics of the United States, as taken at the last census for the year ending, June 1st, 1850, amounting to 323,023, be assumed as approximating that of the year 1854, in this country, it follows that England and Wales with almost one third less of population, lost 115,306 more than this Republic. But on the supposition that, as the population had increased, and that the census mortality did not represent the entire mortality, and that there were 115,000 added to the mortality of 1854, so as to equal the mortality of England and Wales, still the proportional deaths in the latter, would by this calculation be nearly one third greater! The superior sanitary condition of the United States is thus apparent, if these data be correct.

ART. VII.—*Chloroform.*

THE untoward accidents which occasionally occur from the *inhalation* of chloroform, will, doubtlessly tend to restrict its use, particularly in surgical operations of a slight character, while in all cases greater caution

and watchfulness will be observed for the same reasons. In the meantime it is probable that the therapeutic use of chloroform in its liquid state taken by the stomach, not by inhalation, will be greatly extended in medical practice. In order to bring the most recent observations upon this subject before the readers of this Journal, the following data have been collected, showing some of the accidents, applications, and extended uses of chloroform.

Dr. C Happoldt, editor of the Charleston Medical Journal, in a paper on some of the remote effects of chloroform hitherto unnoticed, says,—the dose of chloroform for inhalation has usually been from one to three fluid drachms, but occasionally several ounces have been administered without any injurious consequences ensuing. In Dunglison's "New Remedies," p. 205, it is stated that Dr. Simpson has used eight fluid ounces in thirteen hours in a case of labor. Dr. S. Jackson relates the case of a lady suffering from stricture of the rectum, who took five ounces in 15 hours. Her pulse became much enfeebled, the temperature of the body was diminished, and there was considerable mental excitement. She remained cold and nearly pulseless for forty-eight hours, when the effects disappeared.

Besides showing the large quantity of chloroform which may be introduced into the system without producing death, I am desirous of calling attention, in the following remarks, to some of its local effects on the nerves of special sense—whose seat of function is located in the passages through which the vapor passes on its way to the lungs—and to its remote effects produced on the organs supplied by the nerves which proceed from the lower segment of the spinal column.

Two cases recently came under my observation, which are interesting for the exhibition of these phenomena. The subjects of both were of the nervo-lymphatic temperament, and of sedentary habits. They had, during several months, resorted to the inhalation of chloroform for the purpose of procuring sleep, when this desired condition did not naturally occur at a seasonable hour. One or two ounces generally induced tranquil slumber, without being followed by any unpleasant consequence, except slight nausea, which usually disappeared after the morning meal.

One of these patients had an attack of asthma, to which he had been previously subject; and being aware of the anti-spasmodic and anæsthetic properties of chloroform, he unadvisably put himself under its influence, and continued the inhalation for for y hours; during which time he inhaled *twenty ounces of the fluid.* The asthma was relieved, and has not since returned – nine months having now elapsed—but he was left in an uncomfortable condition: The sense of smell was abolished, and that of taste perverted. The bladder and rectum lost their tonicity and excitability. When the former became distended, a concentrated effort of the will was necessary to effect urination. The latter remained for several months in a torpid condition, requiring the constant use of cathartics to effect the evacuation of its contents. The sexual appetite was, for many

weeks, abolished, and the restoration of the functions of these organs was slowly accomplished. Saline substances were urgently craved, and freely taken. Brandy was not disagreeable, and appeared to be of use in restoring the healthy conditions of the organs involved.

The other patient supposed that he inhaled four fluid ounces without interruption, from the fact that the phial which had contained that quantity was empty on the following morning. He remained unconscious ten hours, and on awakening, experienced no unpleasant symptoms. While breakfasting, he noticed the strange taste of the various dishes of which he partook; but the taste of coffee was peculiarly unpleasant; and it was with difficulty that he could be persuaded that it was not the substances which he ate, but his sense of taste, which was at fault. During the day, whatever he ate appeared perverted in flavor, he became convinced that the cause of his altered sensations lay in his organ of taste. For more than a month neither fruits, wines, tea, nor coffee could be taken with relish, and it was not until the expiration of two months that the sense of taste was restored.

The sense of smell was, for nearly the same length of time, almost abolished. The nostrils were nearly closed by the swelling of the mucous membrane. The tongue became pale in color; and the mucous membrane of the mouth and throat was flaccid and swollen, as was that of the nares.

Coïncident with these phenomena, the penis was felt to be unusually flaccid; and there was no inclination to urinate. It was only after the bladder became considerably distended that urination was possible. There was no pain but a strange sensation along the urethra while the urine was passing out. The specific gravity of this excretion was somewhat below the normal standard, and it contained a large proportion of the triple phosphates, and a trace of the crystals of uric acid. During two months there was no erection of the penis. The patient believed that the secretion of semen was not interfered with, from the sensation referred to the testes, and the desire which existed for sexual indulgence. The inability to perform the act he attributed solely to the paralysis of the perineal muscles.

The rectum and intestines partook of a similar torpidity with the urinary organs; but the sphincter ani retained its contractile power. For a week there was no evacuation from the bowels, and no uneasiness was felt therefrom. The saline cathartics had very little effect. Calomel, rhubarb, aloes, and other more drastic substances, were found most efficacious. Nux vomica and strychnine, arnica, and iron were resorted to, with no perceptible effect over the paralyzed organs. Brandy, which was most agreeable to the taste as a beverage, appeared to mitigate the symptoms, and was freely taken during their continuance.

After the expiration of two months, the only remaining effect of the chloroform was constipation, which remains until this time, (December 20th,) five months since the last inhalation. This patient had never before suffered from constipation; now defecation seldom occurs without the aid of a cathartic.

Opium and its preparations have been known to produce impairment

of the functions of the genital organs and bladder, as well as of the rectum and bowels; but its effects have not been so marked, or of so long duration after the discontinuance of its exhibition, as the effects which resulted from chloroform in these two cases. As some idiosyncrasies are more easily and differently impressed by this and other medical agents, chloroform may not produce the effects I have recorded, on all persons who may habitually use it in such large quantities.

The statement of the facts observed in these two cases are submitted for perusal, in order that other observers, who may not have noticed similar effects, may be prepared to counteract them should they occur; and also to warn those who may resort to this agent, for the purpose of allaying irritative pain, or for producing sleep, of the dangerous consequences which way ensue from its use.—*Charleston Med. Jour.*

Death from Inhalation of Chloroform in Edinburgh.—As Edinburgh has so long enjoyed an almost complete immunity from accidents resulting from the use of chloroform, the following case, which is reported in the *Edinburgh Medical Journal*, is worthy of attention. A lady, aged 36 years called on Dr. W. A. Roberts, in order to have some teeth extracted. As she had inhaled chloroform once, during an accouchement, and as Dr. R. had also administered it to her on *four* previous occasions during the past year, he consented to employ it. She had only taken about nine or ten inspirations, when, in less than a minute from the time she began to inhale, *and while speaking*, she gave a convulsive start, and with a stertorous inspiration, and the eyes and mouth wide open, sunk to the floor. Dr. Simpson, being near at hand, was sent for, and arrived in less than five minutes, with Dr. Priestley. The means employed for relief were artificial respiration, galvanism, and bleeding, though only a few ounces of blood could be obtained. After artificial respiration had been carried on for some time, spontaneous inspiration took place, the pulse became distinct, and the lividity of the face in a great measure disappeared. But these favorable indications ultimately declined, and after one hour and a quarter of the most energetic exertions (especially on the part of Dr Simpson), the case was reluctantly abandoned as hopeless, life being manifestly extinct.

At the *post-mortem* examination the chief morbid appearances were found in the heart. This organ was very small, the right side flaccid and full of blood, the left firm and contracted. The walls of the right side were unusually thin, and their tissue was soft and lacerable. Under the microscope, the muscular fibres of the right ventricle were much altered in appearance, the transverse striæ were indistinct, or had entirely disappeared in some portions, while fatty granules were everywhere observeable, arranged in lines along the direction of the fibres.

The father of the patient had died of disease of the heart, being found dead in his chair.—*Boston Med. Jour., Feb.*, '56.

The same Journal gives a report by Dr. Emery of a fatal case of chloroformization which occurred in Boston, Jan. 5th, '56. Dr. E. says:

Between the hours of 1 and 2 o'clock on the 5th inst., I commenced to administer chloroform to Mrs. P. A. Morgan, at her request, for the

purpose of removing some teeth. I commenced with a small quantity—should think from two to three drachms, on a sponge. She inhaled it without difficulty for a minute or two. Her pulse was not strong, but uniform. She then commenced to be excited, and said that I was going to extract her teeth, and she should know all about it. She said that Mrs. Paige (the lady who accompanied her) was getting the forceps to extract them with. I think about one minute had passed during this conversation and excitement. I then removed the sponge from her mouth, and in a few moments she became quiet, and satisfied that there had been no attempt made to remove her teeth. In a few moments I commenced the operation again with the same amount of chloroform. She inhaled it without difficulty about as long as she did before, and became so much excited that she got up out of the chair and insisted that I had extracted her teeth. She spit on the floor and looked to see if it was blood, and she insisted that some one was coming into the room whom she did not want to see. I sat her down in the chair again, and she then went into a spasm, closed her teeth and breathed with difficulty. I sprinkled water on her face, and the muscles relaxed, and I asked her to get up and we would place her on the lounge. She made an effort to rise, and with my assistance stood on her feet, and then instantly sank to the floor. With the assistance of Mrs. Paige, I placed her on the lounge, and then there was a rush of blood to the brain. I sprinkled water in her face again, but she showed no signs of being conscious. Mrs. Paige went for assistance, and I immediately commenced artificial respiration by insufflation, and kept it up until Dr. Stedman came in, which was but a few minutes. To this account by Dr. E., the Journal adds—

"As was stated in our paper yesterday, the inquest was held by Dr. C. H. Stedman, and the jury returned the verdict 'that the deceased came to her death from the effects of the chloroform, and that the chloroform was a pure article, and was given at the urgent solicitation of the deceased, and with all proper care and discretion.' They further say, 'from the testimony and opinion of medical experts in this case, the jury feel compelled to caution the public against the use of chloroform, as being a dangerous anæsthetic agent.'"

With this recommendation we entirely agree, and we have before urged, not the necessity of caution (for caution seems to be of no avail in these cases), but the abandonment of chloroform and concentrated chloric ether, as anæsthetic agents, in ordinary cases; the more especially since we have the original article used for producing insensibility to pain, sulphuric ether, which is efficient, cheap, and above all, safe. We are not aware that any case of death has occurred from the direct effect of the inhalation of ether, and although it is possible that such an event may take place, the article is beyond all question more safe than chloroform, the number of deaths from which now amounts, we fear, to thousands.

We cannot help thinking that the amount of chloroform used in this case was very large. It appears that from "two to three drachms" were first inhaled and that the same amount was repeated. We believe that

the most approved practice in England is to pour a few drops (twenty minims, Druitt) on a handkerchief folded into a hollow cone, or into an apparatus specially designed for the purpose, and held at the distance of a few inches from the patient's nose. This is to be repeated occasionally until anæsthesia is produced; in many cases a single drachm is sufficient.

Death from Chloroform.—We are informed by Dr. Rutherford that a death took place in the town of Kelso, on the afternoon of Monday, the 14th Jan., 1856, after the administration of chloroform to a patient whose leg it was found necessary to amputate.—*Med. Times, Jan.* 26.—*Med. News.*

Dr. Fleetwood Churchhill in his review of Dr. Hohl's new work on obstetrics quotes from the latter the following opinion upon the use of chloroform in midwifery *Brit. & For. Med. Chir. Rev., Jan.*, '56.

If we compare, Dr. Hohl's remarks, the great number of cases which have been communicated, and which, according to the reports, have passed over without any injurious results, with the smaller number which have had an unfavorable termination in consequence of the employment of chloroform, some might be inclined to record an unqualified verdict in favor of this anæsthetic. But we are not of this opinion, for the fatal termination of a *single* case, in which the remedy was used neither in excessive quantity nor incautiously, is sufficient to deter us from its use if it can be dispensed with, and if it is not required for the attainment of a definite object. In surgery such an object exists, but not in midwifery, in regular natural labor. Here chloroformization is an invasion of a normal function, which is attended with pain, which latter cannot be considered as pathological. While, therefore, for our own part, we repudiate the employment of this means, in healthy parturition, we do not mean to exclude its use in some obstetrical operations. To the beginner we would give the following advice, if he determines to employ chloroform in natural labor:—Let him not make use of the vapor when the patient has eaten shortly before; when the labor is an easy one, and the woman has on all former occasions had easy and favorable labors; or if she be prejudiced against its employment, or suffer from an organic affection of the heart or lungs. Let him avoid its use in all cases where the undisturbed action of the uterus, and the uniform power of the organ, are necessary for the completion of labor. It will be wrong, therefore, to employ chloroform when the pelvis is narrow or when the head is impacted. If the patient be much agitated in the first or second stage of labor, in consequence of severe and rapid pains; and if it be desirable to procure her some rest; or if it be wished to moderate the expulsive force when the vulva is narrow and the perineum unyielding, chloroform may come into operation. Let the practitioner, however, take care that atmospheric air be inhaled at the same time; let him not continue the inhalation uninterruptedly, in order that the patient may not be permanently in a state of total unconsciousness. We have also made use of chloroform with some unruly patients who were not amenable to entreaty, who unnecessarily flung themselves about, or were unmanageable during an operation: for such, chloroform is an efficacious means of quietness.

A notice of, and the quotation from, Dr. P. Black's essay on chloroform is given entire from the same Journal, as follows: Dr. Black investigates the grounds upon which, in cases of death resulting during the administration of chloroform, the issue is attributed to paralysis of the heart. The conclusion to which his inquiry leads him, is that death is produced by asphyxia; or, to use his own word , that chloroform proves fatal "by its influence in restraining the respiratory movements at the earliest periods of its being administered, when its pungency would suddenly arrest its inhalation." Dr. Black analyzes the symptoms accompanying some of the cases on record, and he certainly appears to establish his view—the practical corollary being that, in administering chloroform,

"Our attention must be wholly given to the breathing, from the observation of which we must not allow ourselves to be diverted for a moment. If the patient breathes easily, he is in safety; if his breathing be attended by frequent coughing—and still more, if it appear to be restrained, with deepening turgescence of the head and face, we have before us the distinct warnings of danger; and unless we give immediate heed to them, they will be speedily realized."

The Advantages resulting from the Local Application of Chloroform Vapor. By Dr. Hardy.—In these papers, Dr. Hardy collects together many cases in illustration of the advantages of this practice. These cases he divides into four heads:—

1. Cases in which the vapor is applied to the unbroken skin.
2. Cases in which the cuticle is removed.
3. Cases in which the vapor is applied to unbroken mucous membrane.
4. Cases in which it is applied to abraded mucous membrane.

Under each head are many illustrations, of which we will select the following.

i. Cases in which the Vapor is applied to the Unbroken Skin.—Under this head we have one case of femoral hernia, two cases of tetanus, one of phthisis, one of neuralgia, one of dysmenorrhœa, several of cholera, two or three of scalp-tumors, one of gout, one of rheumatic gout. In some of these, and particularly in the first two, there can be little doubt that the benefits arising from the chloroform were partly, if not mainly, due to the inhalation of the vapor, much of it escaping into the atmosphere of necessity. But this does not apply to all cases. Thus:

Cholera.—During the last few months, instances of diarrhœa have been very prevalent in Dublin. The administration of chloroform, in frequently repeated doses of from fifteen to twenty-five drops in a little cold water, has a most excellent effect in relieving nausea in those cases, and of imparting a sensation of general warmth; but as the influence exerted by this method of exhibiting it was of short duration, a much more decided and permanent benefit was obtained by applying the vapor by means of a sponge, moistened with chloroform, and placed in a tumb-

ler. This applied over the epigastrium never failed in giving relief, and could be kept on constantly without the least inconvenience to the patients, who very soon became so convinced of its efficacy, that they anxiously wished for its continuance. (Care was necessary not to allow the fluid chloroform to touch the skin, as it felt so very hot; this, however, was easily accomplished by using a sponge sufficiently large to fill the end of the glass.)

Gout.—This case is related in the "Gazette des Hôpitaux," of 23d September, 1854, by D. Renouard: "On the morning of the 25th, the pain was most intense. It increased during the day and in the evening wrung cries from the patient, who writhed upon his bed, biting and tearing the sheets. The night passed without the least relief, notwithstanding the internal and external use of narcotics. The foot was œdematous; the skin was tense, and of a shining rose-color. On the morning of the 26th, having exhausted my resources, and being unable to remain an inactive spectator of such acute sufferings, I proposed the local application of chloroform, which was at once agreed to. Having procured Dr. Hardy's instrument, I commenced at noon the insufflation of the anæsthetic vapor, directing them chiefly to the most painful part. After twenty minutes application, which was twice or thrice interrupted, reducing the real duration to sixteen or seventeen minutes, the patient felt well enough to request its suspension. He did not say that he was free from all suffering, but that he was considerably relieved. The part subjected to the vapor of chloroform had become pale and cold, instead of red and burning, as it had been before. Moderate pressure could now be made without exciting the sensibility of the patient, who, so short a time before, could not endure the slightest touch. The calm lasted an hour and a half or two hours: the pain subsequently appeared to return, and continued increasing until evening. When I saw the patient again, between eight and nine o'clock, he was suffering much, although less than on the preceding evening; he was particularly apprehensive about the night. At the same time the central point of the pain had changed its place a little; it was nearer the internal ankle. The anæsthetic vapors were again applied uninterruptedly for fifteen minutes. All suffering ceased; what had been the principle seat of the pain could now be tolerably strongly leaned on without the patient feeling it. After a few minutes he fell into a deep sleep, which lasted two hours. On awakening he experienced merely a feeble sensation of pain, some transitory twitching returning at shorter or longer intervals, which did not prevent him from taking several other naps in the course of the night. From this day he quickly recovered. The attack was shorter than those of the preceding two years. The resolution of the congestion appeared to be more rapid than usual."

On the foregoing case, the editor of the *Revue Médicale* observes—"We cannot, in this case, fail to recognize the beneficial effects of the vapor of chloroform on the intolerable pain of gout; but its influence on the resolution of the œdema, although probable, does not appear to me to be sufficiently proved."

Rheumatic Gout.—On the 26th of October, a gentleman, who had suffered severely from frequent attacks of rheumatic gout, was directed by his medical attendant to have the vapor of chloroform applied to his foot, which was exceedingly painful. Mr. Robertson (the maker of the instrument) by means of the vapor douche, gave a bath of chloroform and warm water vapors combined. In a quarter of an hour he felt perfectly easy. Having dined with a friend, and partaken of champagne, his distress returned; and on the 28th of October the bath was repeated. In three minutes all suffering was removed; and after its use of a quarter of an hour, he said he never was more free from pain in his life. On the 30th, he had another bath for a mitigated return of the pain, and with equally favorable results.

2. *Cases in which the Vapor is applied to the Abraded Skin.*—Under this head we have cases of anthrax, painful ulcers, painful stump, cancer of the mamma, and elsewhere. When the cuticle is removed, either by abrasion, vesication, ulceration, or incision, the vapor of chloroform is enabled to act with much greater intensity than when the skin is unbroken. Whenever it is first brought in contact with parts in this condition, some patients complain of heat, others say it feels cool; in a few minutes a sensation is imparted of ease and freedom of pain, which in some instances is of very considerable duration. The following cases among others are given in illustration:

Case of Anthrax (from Dr. Benson, president of the Royal College of Surgeons of Ireland).—An unmarried lady, *æt.* about 36, highly nervous, and very impatient of pain, lately consulted me for anthrax, situated on the back of the neck, which was a little ulcerated and most painful. I proposed the inhalation of chloroform, to which she strongly objected, but consented gladly to its local application. The vapor was closely confined to the sore, and first produced a sensation of extreme heat, which was soon succeeded by perfect relief from suffering. A free crucial incision was then made, which did not give her the slightest uneasiness. She said the operation had not hurt her in the least; everything afterwards went on favorably.

Case of painful Stump (under the care of M. Larrey).—After an amputation at Val-de-Grâce, the stump having become excessively painful, M. Larrey made use of Dr. Hardy's apparatus, the result being, that the pains were soothed as soon as the vapor came into contact with the wound. ("Journal de Méd et de Chirurgie Pratique," March, 1854.) This case, Dr. Hardy says, serves to show of what great advantage this practice may be in gunshot wounds, where extraction of the ball is necessary. A stream of chloroform passed into the wound might enable the sufferer to undergo the operation without any pain.

Several cases of open cancer are related, in which the relief to the pain was very marked.

ii. Cases in which the Vapor was applied to Unbroken Mucous Membrane.

"Mucous surfaces seem to be particularly eligible for receiving the

influence of chloroform vapor. When its local application was first brought before the notice of the profession, I alluded to the sensation of heat which was experienced when those tissues were subjected to its action. In some instances this is so great that it is complained of a good deal, but I have never met with any case in which it was necessary to relinquish its use on that account. Ceasing to propel the vapor for a few seconds was quite sufficient to enable the patient to bear it. The relief afforded is in general so agrecable that many would willingly endure a greater feeling of discomfort rather than be deprived of its efficacy."

Case of Painful Hæmorrhoids.—At a meeting of the Surgical Society already alluded to, Dr. Forrest detailed the following case:

"A gentleman, *æt.* about 36, who had suffered from piles on several occasions, sent for me, owing to an attack of his old complaint. I found the mucous membrane of the anus everted, with several hæmorrhoids attached to it. The pain was so severe, nothwithstanding the use of fomentations, which had formerly relieved him, that no pressure could be borne, nor any attempt be made to returu them. The vapor of chloroform was then applied by the douche for several minutes, which produced so soothing an effect that I was able to press them within the sphincter without causing him any uneasiness.

Case of Irritable Bladder.—A female patient, *æt.* 37, the mother of one child, had suffered so much from irritation of the bladder for two years, but particularly during the month of July last, that her state was most distressing. The calls to micturate were incessant, and always attended with very severe pain. By means of a catheter attached to the douche, I threw the vapor of chloroform into the bladder, occasionally removing the nozzle of the douche from the end of the catheter, to allow the vapor to return. Great heat was at first complained of, but (by ceasing at intervals) the operation was continued for about five minutes. Next day the woman informed me that after the application of the chloroform, she was able to walk a distance of about two miles without being under the necessity of relieving the bladder. When she did pass water, it was in much greater quantity than it had been for a long time, and attended with less pain. The vapor was used on the second day with like beneficial results. Afterwards hip-baths and diluents completed the cure.

Case in which Menstruation was scanty and painful, and finally ceased. ——, *æt.* 35, enjoyed excellent health; menstruated regularly for three days, and free from any discomfort until her marriage, which took place nine years ago. After this event, she gave birth to a male child, which lived for six months. During lactation, the catamenia appeared each month as formerly. From this time her health gradually declined, and in the course of a year, notwithstanding medical treatment, she was in a very debilitated state. I first saw her four years after her confinement. Pregnancy had not taken place; her menstrual periods, in their approach,

and while present, were accompanied with severe pains occurring at intervals, and the flow continued for scarcely one day. Ulceration of the os uteri, which I treated her for, soon got well, her health was restored, and she again conceived, but owing to an accident aborted at the third month. Although by the miscarriage her general health suffered little, yet from this date menstruation steadily lessened in quantity, but was not attended with pain, until at length it entirely ceased, without there being any reason to attribute this circumstance to the existence of pregnancy. As the secretion diminished, her head and chest became very much affected with what she described as a "bursting sensation," which was particularly distressing at the time of each expected return of the catamenia. She was becoming very fat, and had a feeling of general discomfort. Various remedies had been tried in order to restore the uterine secretions and to relieve those uncomfortable sensations, but to no purpose. I now directed the vapor of chloroform to be thrown into the vagina when the next period was known to be approaching. On the first occasion menstruation was established and continued for two days: on the three following, the same means being resorted to, it flowed for three days in proper quantity, and with the absence of all the uneasy feelings above described. It now comes naturally and without the use of chloroform, and in every respect her health is perfect.

Case of severe Uterine Pain, with Suppression of Menstruation.—A lady of strong and healthy appearance, residing in the country, consulted me in September, 1852. She had given birth to two children, and had aborted several times. Since her last miscarriage, which was caused by jumping from a height, she felt a disagreeable sensation, of a painful nature, in the uterine region, and menstruation becoming more and more scanty and irregular, had entirely ceased. She was very languid and incapable of much exertion. On examination, the os uteri was found extensively ulcerated and the cervix enlarged. Her health having improved, and the uterus being healed, she returned to the country, where she made use of shower and hip-baths, and took gentle exercise on horseback, which served her greatly. Again her health declined, and she consulted a neighboring practitioner, under whose treatment she continued a considerable time. Afterwards she came to town, and informed me that owing to severe pain in her back and uterus, she was unable to sit for any length of time in the erect position, particularly in the evenings. All those symptoms were greatly aggravated periodically, when menstruation should be present. The uterus was rather larger than natural, but had no abrasion, and the cervical canal was pervious. I commenced the local application of chloroform vapor at the expected catamenial period. The following is the report given in a letter by the patient herself: "It is with much pleasure I tell you the result of the chloroform ordered by you. While in town it enabled me to walk without pain in my back, or the very disagreeable internal pain, or *gnawing* feel, which I had for some time—I may say for years. I had not a change for the last twenty months; but having used the chloroform for

ten days, it came on, which though scanty, I feel is all right. There was no pain whatever, as (when I began to feel uneasy) I used the chloroform. It has done wonders for me already."

"I lately received the following letter from this lady:

"I am able to take a great deal of exercise without fatigue, and when I have pain I use the chloroform, which has not in the least lost its effect, but soothes me at once." It is now five months since its application was commenced.

4. *Cases in which the Vapor is applied to Abraded Mucous Surfaces.* The vapor of chloroform, when applied to mucous surfaces, abraded or ulcerated, generally causes a good deal of the sensation of heat; but although this feeling is of more frequent and of longer duration than where the surface is unbroken, it is not so extreme as to prevent patients from easily bearing it. The following cases will serve to illustrate its influence when applied under these circumstances:

Case of Ulceration of the Os Uteri.—A patient, the subject of very extensive ulceration of the os uteri, suffered so much from lumbar pain and general distress in the uterine region, that the vapor of chloroform was applied in the usual manner, by means of the douche. The heat and scalding sensation was so great that until after the lapse of half an hour from its application, no beneficial effect could be perceived. No sooner had the uneasiness caused by the chloroform subsided, than the relief was complete, and of very considerable duration.

Elongation of the Cervix Uteri.—On the 20th of October last, late in the evening, I was called to a patient who was suffering from violent expulsive pains, which I found on examination to depend on an elongated growth from the uterine cervix, so long that it protruded through the os externum. The mucous membrane of the uterus was abraded, and the vaginal canal felt extremely painful to the touch. By an opiate suppository and draught, the pains were quieted, and the woman had a good night's rest. On the next day, I placed a ligature on the tumor, and until the third day (when I removed it below the ligature by a curved scissors) the pains were on each return perfectly removed by the vapor of chloroform thrown into the vagina by the douche. No complaint whatever was made during its application to the abraded mucous membrane.

Cancerous Ulceration of the Rectum.—The "Medical Times and Gazette" for August 19th, p. 195, contains the results obtained by M. Gonzales Conde. It says: "The Spanish professor has, after the example of the originator, Dr. Hardy, tested the local power of the anæsthetic to assuage the pains of cancerous ulcers. The cases were those of ulceration of the interior of the rectum, accompanied by most severe suffering, such as ordinary sedatives were insufficient to calm. M. Conde employed a bottle containing a sufficient quantity of chloroform. Its mouth was occupied by a well-fitting cork, through a hole in which a gum-elastic catheter was passed. The sound was introduced so

far, that its apertures were in direct contact with the ulcerated surface. The vaporization of the chloroform was commenced; first, by the application of hands to the bottle which contained it, then by bringing near it a heated stove. The patient experienced a slight pricking sensation, which took the place of the cancerous pains. This sensation extended upwards towards the colon. From the rectum some gas escaped, having the odor of chloroform. The sufferings were quickly appeased, but the most remarkable circumstance was that the pulse, which at the commencement of the experiment was accelerated, fell first to its natural rhythm, and then sunk to sixty beats in a minute. The ease, however, bestowed by chloroform, was not limited in its duration by the effect produced on the pulse. For a week the pains did not return, nor was it necessary to reäpply the anæsthetic for the whole of that period."—*Ranking. Abs.*

Chloroform in a Case of Eclampsia.—Extract from the Records of the Atlanta Medical Society: By EBEN HILLYER, M. D., Secretary. Jan. 10, 1856.—Dr. Darnall reported the following case: He was called at 7 o'clock, Nov. 28th, 1855, to see Mrs. W——, *æt.* 18 years; first child; found her suffering from intense pain in the right side of the head and right eye; with a frequent shivering, without a sense of coldness; full, strong pulse; not much increased in frequency; with dimness of sight; the face, arms and legs were considerably swollen; there was, also, evident contraction of the uterus. Upon examination per vaginam, he found the os uteri quite thin, and very slightly dilated; evidently showing she had reached the full term of her first pregnancy. Her general health had been very bad from an early period after conception, until now. In short, she had suffered all the ills "woman is heir to" during gestation; consequently, she was pale and anæmic. The sypmtoms above enumerated, impressed him with the belief that convulsions would soon come on unless prevented by an active course of treatment. Accordingly, he bled her—about thirty ounces, (by estimate.) The pain in the head and eye was not relieved to the extent he expected by the bleeding, notwithstanding its apparent copiousness.

A short time previous to the doctor's arrival, she had taken a full dose of Chapman's peristaltic persuaders. He, therefore, did not give any more cathartic medicine—deeming it best to wait a reasonable time for the operation of the dose she had already taken. Feeling a good deal of solicitude for his patient, he remained with her until 10½ o'clock. She was then sleeping, as far as he could judge, she was easy. But in less than an hour after he left, she was attacked with a severe convulsion. Dr. Darnall was immediately sent for, as were also Professors J. G. and W. F. Westmoreland. He found Dr. J. G. Westmoreland with her, who had bled her again (by estimate) ℥xvj to ℥xviij. She was then in a convulsion, and he opened the orifice, and allowed ℥xviij or ℥xx more to flow out. The convulsions ceased for four and a half hours, and then returned. Again they opened the orifice, and allowed ℥xx to flow; and again the convulsions ceased for three hours, and returned. The question now was, what could they do to save their patient. They had carefully

watched the progress of the labor; and the condition of the cervix uteri, which was not in a condition to allow them to turn and deliver. The use of the forceps was of course precluded for the same reason. Dr. W. F. Westmoreland proposed to give her chloroform, which was agreed to; accordingly, they gave her xxx gtts. every half hour in a table spoonful of water, until the convulsions ceased. The same dose was then continued for one hour or more. She continued to rest well ten hours, when efficient labor came on, and she was delivered of a dead fœtus, weighing nine pounds, without manual assistance, about forty hours after she was attacked. Consciousness did not return until Sunday, some forty-eight hours after delivery. She is now convalescent.

Dr. D. remarked that this was the first case of the kind in which he had seen chloroform used, and judging from its effects, he should use it with much confidence in all similar cases; that is, after the patient had been sufficiently depleted by the lancet. He was disposed to believe, under such circumstances, that it was equal, if not superior, to opium and its various preparations, in combination with *tart. ant. et potass.*

Dr. Logan remarked, that recently he had a case of retention of urine, which was promptly relieved by the external application of chloroform over the region of the bladder and loins.

Dr. Hillyer reported a case of flatulent colic, which was relieved by chloroform. He was called to see Mr. J. P. S., at 8 o'clock, Dec. 10th, 1855; found his patient violently attacked with colic; he had been suffering near an hour when he arrived; he was unable to speak; pulse very irregular, about sixty to the minute—two beats and then an intermission, then two or three beats in quick succession, then another intermission. When first attacked he complained of great pain in the stomach; his breathing was irregular, and somewhat laborious. When asked where the pain was located, he placed his hand upon the epigastric region. The friends of the patient informed Dr. H. that he was subject to similar attacks, but none were ever as violent as this. Dr. H. thought him in great danger, and unless immediate relief could be obtained, he would die. He gave him thirty drops of chloroform in a teaspoonful of water, and applied a large sinapism over the stomach and abdomen; in ten minutes he was greatly relieved; and in half an hour his pulse had become natural, and the patient said he was in no pain whatever.

[Since the above case was reported to the Society, I was called to the same patient, in a similar attack. The chloroform was administered as before, with as prompt relief. This agent has not been used internally, as an anti-spasmodic, to a very great extent. From my observation, I think it superior to any agent we have. I have known as much as a drachm taken at one dose, without any evil result.—*Atlanta Med. and Surg. Journal*, March, '56.

Chloroform in Colic: By M. Aran.—M. Aran states that repeated experience convinces him of the great value of chloroform given internally, as a curative agent in colic, employing it also externally until the acuteness of the pain is somewhat subdued. No absolute dose can be

laid down; for, while cases of medium intensity may require but 60 drops per diem, severe ones may require from 100 to 300 drops. A portion is given in water, suspended by mucilage, and about a third of the quantity in one or two lavements. The entire quantity should be given in divided doses, as the effects are soon dissipated. From the second, or more rarely the fourth or fifth day, the colic is relieved, but a less quantity of the chloroform must be continued until stools are re-established, which will usually be the case spontaneously when food is given. In twenty-one cases, only three required the use of purgatives. Still, in severe cases, the duration of treatment is abridged, and relapse rendered less probable, if the first success of the chloroform be followed by a dose of castor oil or seidlitz water. In chronic colic, occurring in persons who have often had the disease, and where obstinate constipation is accompanied by moderate pain, chloroform is of no avail, active purging alone succeeding.—*Braithwaite.* 1856.

Lead Colic Treated and Cured by Chloroform.—M. Aran has used chloroform with great success upon six cases of lead poisoning. From the administration of the first dose a decided improvement was perceived, which, in a few days, would completely restore the patient. The mode of administering chloroform differs from that generally adopted. To obtain its full effect he administers it internally, in doses of 30 gtts. Also in enemata, and as an external application upon the abdomen. The bowels are soon moved by this treatment, and the symptoms disappear. *Gazette des Hôpitaux.—Bost. Med. Jour.*

Chloroform in Pneumonia.—A Hungarian physician, Dr. Stohandl, reports three cases of pneumonia in which much benefit was derived from the inhalation of small quantities of chloroform (30 to 40 drops) repeated several times a day. After each inhalation the symptoms are relieved; after four or six hours they again became aggravated, but were again relieved by a repetition of the inhalation. In from five to eight days a cure was effected.—*Revue de Thérap.*, &c.

On the Internal Use of Chloroform in Fever.—Dr. Gordon, physician to the Hardwicke Fever Hospital, resorts to the use of chloroform in fever to subdue nervous irritation, and to procure sleep. He remarks: To the different means which have been made use of for this purpose, I would now add the internal administration of chloroform. I have used it with the happiest results when all other means had failed, and I can speak with confidence of its certain and speedy action.

Dr. Gordon proceeds to give the details of a case exemplifying the good effects of this article, and concludes his narrative with the following statement:

In the above case the chloroform was longer in producing the effects than in any instance in which I have yet used it. We learn from it, however, that we are not to be discouraged by the apparent failure of the first dose or two in procuring sleep; for, as in the present case, although actual sleep may not be at once procured, we may expect that

a state of calm and quietness will be induced, which would soon be followed by sleep. We learn also from this case, that the inhalation of chloroform is, to say the least, useless in procuring sleep in cases of cerebral excitement in fever. I had, on one occasion before, in the Hardwicke Hospital, fully tried this mode of administering it; its inhalation was followed by general convulsive movements, very similar to an epileptic seizure, and I have not since administered it by inhalation in any similar case. Dr. Corrigan carefully tried the effect of inhalation three times in the above case, each time without any good effect.—*Ranking. Abs.*

Chloroform in Military Surgery.—It appears from various journals that the Austrian government has recently issued a circular ordering that in future the army medical officers shall always employ, for the purpose of inducing anæsthesia, a mixture consisting of one part chloroform and nine parts ether, this being the proportion long employed by Dr. Weiger, a Vienna dentist. The eminent professor of military surgery, M. Baudens, in the Gazette Médicale, Dec. 29, 1855, says:

Many all-important practical questions are still in a state of controversy: incisions in gun-shot wounds, extraction of splintered bones, the propriety of immediate or secondary amputations, the advantages of resection or amputation, etc., etc. Even the benefits of chloroform have been questioned, and, in the Sardinian army, they are afraid to use it. In the French army, on the contrary, this precious anæsthetic has been used in more than 25,000 cases. The physician-in-chief, M. Scrive, from whom I have a document attesting this fact, assures me that no accident whatever resulted from the use of anæsthesia in these cases.

It is true that chloroform is used by our army surgeons prudently, according to the rules which I have proposed, and never transgress, intentionally, the stage of insensibility. This precept is based on the beautiful experiments of Mr. Flourens, which prove that the action of chloroform is progressive and successive as regards the nervous centres.

A great advantage of chloroform is that it permits wounds to be dressed and put in order that are apparently inevitably mortal, and that the surgeon would otherwise let alone, fearing to increase the victim's sufferings. Wounds thus dressed will, at all events, give less pain, and unhoped-for cures will sometimes result. Thus the portion of shell that, I send with this letter weighing *over four pounds*, was extracted, in my presence, by surgeon-major Mercier from the muscles of the right thigh of the soldier Steven of the 57th, at the field-hospital before Sebastopol. The projectile was buried in the upper and outer part of the thigh; the femur was shattered; the shock was extreme. Yet, under the influence of chloroform, the fragment of shell was extracted, the limb was amputated, and the patient is now in a fair way to recover.

Such facts speak louder than any criticism. It remained only for chloroform to be tested on the battle-field; it has triumphed completely *Virginia Med. Jour.*

Chloroform in Poisoning with Strychnia, by O. B. Knode, M. D., of St. Joseph, Missouri.—On the night of the 22d of December last, I

was requested to see, in great haste, a man who had taken six grains of this deadly poison. The individual who summoned me was an apothecary, who informed me that he [the patient] had purchased from him six grains, for the purpose, as he said, of killing rats. After procuring it, he went to a drinking saloon next door and asked for a tumbler and some water, saying that he wanted to take a little medicine; he was observed by the bar-keeper to empty the powder into the glass and swallow it down. After remaining a few moments, he remarked, that it was poison he had taken, and as it did not seem to have the desired effect he would go into the drug store and get some more. This declaration alarmed the bar-tender, and caused him to examine the glass in which he had mixed the dose, where he found some particles of the powder adhering to it. When he entered the drug store the second time, he said, he felt very badly—that he had swallowed the strychnine and wanted something to make him throw it up. The apothecary advised him to see a physician immediately, and directed him to my office; he started, and had walked but a short distance before he fell convulsed upon the pavement, where I found him about twenty minutes after he had swallowed it. He was perfectly unconscious; his whole muscular system convulsed; pulse small; breathing hard and agitated. I had him removed to the City Hotel, just across the street, and placed on a pallet. There being no stomach pump at hand, I gave him 15 grs sulph. zinc with 20 grs. ipecac, followed by warm water, which he swallowed with great difficulty; vomiting not coming on, I procured a large feather, with which, by tickling the throat, free vomiting was induced, and the stomach seemed to be entirely emptied. He, in the meantime, remained utterly unconscious, with violent contractions of the whole muscular system occurring at short intervals. He continued in this condition for half an hour or more without much apparent change, except that the spasms seemed to increase in violence. I then concluded to give him chloroform, with the hope that it might overcome the spasms; I gave him at once a small teaspoonful mixed with a little water, which he swallowed with great difficulty; he had one slight convulsive movement a short time after he took it, when I repeated the dose, after which they entirely ceased; and in ten minutes after, consciousnoss returned, and he asked that he might sit up in a chair by the fire, which he was permitted to do, when he conversed sensibly and intelligibly with me and the bystanders, and confirmed the statement I had heard from the apothecary and bar-tender, and declared that he had taken all of the six grains, with the intention of putting an end to his life.

This is certainly a most astonishing and rapid recovery, and I can but attribute it to the prompt and energetic action of the chloroform. The emesis produced could not have done much good, as the poison had already and for a considerable length of time produced its characteristic effects upon the nervous and muscular systems; and to exhibit more fully the completeness of the recovery, I will state that he was found, four hours after, by the city marshal (who had a warrant for his arrest,) snugly stowed away in bed with a prostitute.—*St. Louis Med. Jour.*

Formic Acid in the Blood of a Person, killed by Inhalation of Chloroform.*—The following note, received from a source which entitles it to credit, will be read with interest:

In the Journal of February 17th, an account of a recent death from chloroform in this city, was given. A quantity of the blood, removed at the autopsy, was placed in the hands of Dr. C. T. Jackson for chemical examination. He has ascertained that the blood contained formic acid, and that it could readily be separated by distillation in the heat of a chloride of calcium bath.

Chloroform consists of formyle and three equivalents of chlorine; formic acid of formyle and three equivalents of oxygen. The three atoms of chlorine leave the chloroform and unite with the blood, while three atoms of oxygen leave the blood and unite with the formyle of the chloroform, replacing the chlorine and producing formic acid. Thus the blood is not only deprived of its oxygen, but it is so altered as to be incapable of absorbing vital air, and the patient dies from asphyxia. The production of formic acid under such circumstances has never before been known, and of course it is to be regarded as an important physiological fact of no small practical moment.—*Bost. Med. and Surg. Journal.*

Chloroform in Intermittent Fever: by N. Dalton, Logan, Ohio; March, '56.—*Editor of the Ohio Medical and Surgical Journal.*—Dear Sir: Some time in September last, I visited a young athletic man, laboring under an intermittent with general visceral congestion, which seemed to menace his life. I was convinced he must die unless he was speedily relieved. For promptitude, I was induced to try the internal use of Chloroform, and gave him about two drachms, with a half gr. sulph. morphine. In a few seconds he fell asleep and slept soundly; his pulse, which could not be felt at the wrist, came up to about 90, full and soft, when he awoke, and to my astonishment expressed himself perfectly well. All the unpleasant symptoms had given way, nor was the cold stage followed by any feverish reäction. This all occurred in less than an hour. I was so much pleased with its effects that I concluded to test its anti-periodic properties by risking the probability of its return. From four to five weeks elapsed before it did return, during which time, and since, I have given it in the cold stage of quite a number of cases of simple intermittent, in doses varying from one to two drachms, in a little camphor water, both alone and connected with the morphine, and in every case have had the pleasure of witnessing the same prompt arrest of the disease, and in but two cases has there been any return of the ague, and in one only has there been any feverish reäction, but all are instantly arrested. I mentioned the matter to my partner, Dr. Hoffman, who has used the Chloroform in a number of cases with the same happy results; also to Dr. Pullen, who tried it on himself, with the effect of immediately arresting the chill, leaving him to feel as well as usual

*Since the above was in type, the public press has announced, (April, '56,) that the wife of Horace Wilson, of Branch county, Michigan, died from the effects of chloroform, administered to her by Dr. Berry, for the purpose of extracting a tooth.

after an intermittent attack; but being fearful of its anti-periodic properties, took from two to three grains quinine the next day, and has not had a return of the ague since.

I will report more fully as soon as I can get time, possibly during the coming month. In the mean time, I hope you will lay this before your readers, in some shape, that it may be more generally tried. If found to be as serviceable in the hands of others as in ours, it will be of incalculable benefit both in relieving human suffering and in a monetary point of view. Should it, on the other hand, serve no other purpose than so promptly to arrest those alarming and frequently fatal congestive chills, it will do much good.

ART. VIII.—*Pathological Effects of Excessive Cold.*

THE late frost, which has been more continued and severe than any which has occurred in England since the year 1814, and as severe and prolonged as this—indeed there was only a difference of 2° in the mean temperature, and of two days in the duration of these two remarkable frosts—furnishes a striking illustration of the baneful effects of increased cold, as may be seen in the subjoined quotation: "In the six weeks of severe frost, the deaths of 9408 persons have been registered. These deaths exceed the average by 1968; which appear under various diseases, and were the indirect results of the low temperature. The temperature of the six weeks was 28·4° on an average, and the deaths were nearly 100 weekly to every degree of depression below the freezing point of water. But the cold affected persons very differently, according to their age; for, in the five weeks that ended on Feb. 17th, at the first age of manhood, (20 to 40,) the cold did not destroy 2 in 10,000; at the age of 60 to 80 it was fatal to 38 in 10,000. If the average deaths at each of the five ages are subtracted from the deaths in the five weeks of cold weather, the numbers that are left to represent the deaths by cold are 367 children and youths under 20; 159 young men and women of 20–40; 290 middle-aged persons of 40–60; 561 of 60–80; and 173 of 80 and upwards. Upon dividing these numbers by the persons living of the corresponding ages, we find that the mortality by cold in the 100,000, was at the rate of 35 under the age of 20, and 18, 64, 382, and 1749 at the four subsequent ages. The above numbers show that the power of cold on life varies according to definite laws; thus the mortality by cold is (35) twice as great under the age of 20, as the mortality (18) at 20–40; but, after that turning point, the power of resisting cold, decreases every year, and men of 90, and men of 30, have suffered from the cold that we have experienced in the proportion of 100 to 1 (or of 1749 to 17·5.) The general result is, that the danger after 30 of dying of cold, is doubled every nine years of age; for out of the same numbers

living, to 1 death by cold at the age of 30, there are 2 at 39; 4 at the age of 48; 8 at the age of 57; 16 at the age of 66; 32 at the age of 75; and 64 at the age of 84. This series at least expresses very nearly the relative mortality by cold at the respective ages, during five weeks among two and a half millions of people."—*Ranking. Abstract. Dec.* 1855.

On the Morbid Appearances in Death by Cold: By Francis Ogston, M. D., Aberdeen.—The extent of our practical information relative to the effects of intense cold on the human body is but very limited. Though instances of death from this cause are less infrequent even in this country than is generally supposed, very few inspections of such bodies are known to have been undertaken, and those which have been recorded by medical writers are brief and defective. In these circumstances, it may be useful to give a detailed account of a few cases of this sort which have been seen and examined by the writer.

The three first are recent cases, the parties having perished in the vicinity of Aberdeen during the severe snow-storm of last spring.

Case I.—W. M., a male, aged 17, of weak mind and wandering habits, was known to have passed the night of Saturday, the 3d of February, 1855, in a turnip shed. On the Monday following, after sunset, he came to a farm-house in the parish of Newhills, about five miles from his usual place of residence, where he had some oaten bread and milk presented to him, of which he partook freely, and left the house, having been refused his request of a night's lodging. About an hour and a half subsequent to this he was found lying on the snow, not far from the farm-house, in an insensible state, and foaming at the mouth. He was scantily clad in ragged clothes, which were wet at the time. Without delay he was carried to an outhouse and laid upon some loose straw, where he calmly expired in about three quarters of an hour. Deceased had never been affected with epilepsy.

The body, inspected thirty-eight hours after death, well formed and well nourished. The head nowise deficient in size or shape. The lips and portions of the cheeks of a florid red. The rest of the surface, including the dependent parts of the trunk and limbs, unusually pale. The countenance presenting a smiling aspect. Joints rigid. Pupils dilated. Scrotum corrugated. Scalp, cranium, membranes, and substance of the brain, all unusually pale and bloodless. A marked degree of the same pallor and bloodlessness of the mouth, throat, and air-passages. A little frothy mucus in the trachea. Lungs collapsed, and containing less blood than usual. Right cavities of the heart, and both venæ cavæ enormously distended with a continuous fibrinous mass, surrounded with a thin layer of watery blood. Blood in a clotted state, completely filling the left cavities of the heart. Liver congested: the blood in this viscus, as well as in the heart, approaching more to the color of arterial than of venous blood. Stomach, intestines, and urinary bladder unusually pale and bloodless. Farinaceous food and milk-curd in the stomach. Spine healthy.

The only structural changes encountered in the cavities of the body were, dryness and considerable firmness of the brain, flattening of its convolutions; slight old adhesions of the lungs to the walls of the chest; partial emphysema of these organs; and buff-colored patches on the surfaces of the kidneys. The urine, which was in some quantity in the bladder, was free from albumen.

CASE II.—M. M'D. F., a female pauper, aged 70, of intemperate habits, was accustomed to pass the night in a barn at Craibstone, in the parish of Newhills. Between nine and ten on the evening of the 13th of February last (1855), she was seen not far from, and walking in the direction of, the barn. About seven o'clock on the following morning she was found dead on the snow close to the door of the building.

On the 15th, at 1 p. m., the body was inspected, when the following appearances presented themselves: A blush of bright redness on the front of both knees. The same redness, but less bright, over both cheeks, and the lower border of the right wrist. Lips and finger-nails bluish. Rest of the surface, including the dependent parts of the body, pale. Joints rigid. Pupils moderately dilated. Tip of the tongue in contact with the front teeth. Veins on the outer and figured surfaces of the brain full of blood. Interior of the brain containing more blood than usual. A quantity of frothy mucus in the throat. Right cavities of the heart unnaturally distended, and containing a large fibrinous clot and a quantity of fluid blood. A very large quantity of blood, partly clotted, in the left cavities of the heart. Both venæ cavæ, and the aorta and pulmonary artery, distended with fluid blood; which, like that in the heart, except when viewed in mass, was of a much brighter red than usual. Lungs partially collapsed, and containing only a moderate quantity of blood. Liver gorged with fluid blood of the same appearance as that in the heart. Minute injection of the capillaries of the peritoneal coat of the smaller intestines generally, giving them a uniform rose hue.

The structural changes of the body were as under: A minute patch of fatty degeneration in the coats of the basilar artery. Attenuation, to a moderate extent, of the right ventricle of the heart. Slight thickening of the tricuspid, and of two of the aortic valves. Atheromatous patches in the coats of the ascending aorta. Portions of the liver cirrhosed. Melanotic oval or rounded deposits, under the mucous coat of the stomach. Cortical portions of the kidneys attenuated, and of a buff color. A little milky urine in the bladder, becoming more opaque by heat.

CASE III.—B. A., or F., or R., a female, 83 years of age, of intemperate habits, was seen on the 28th of February last (1855), at Cotton, going northwards. On the morning of the 9th of March her body was found on the snow, at the side of a footpath through a field, from three to four miles to the westward of Cotton. Her clothes were soaked in water, and it was conjectured that her body had been covered with snow, and only exposed to view on its melting by the thaw, which had com-

menced a few days previously. She was lying in a crouching attitude.

The body examined on the same day (9th): Joints flaccid; lips, and instep of the right foot, of a bright red color; dusky redness of the ears, forehead, and upper part of the face; rest of the surface, including the dependent parts of the body, pale; countenance placid; pupils moderately dilated; soles of the feet blanched and plaited; scalp bloody; a thin layer of clotted blood, an inch and a quarter in greatest breadth, under the integuments of the forehead, to the right of the mesial line; a thin layer of clotted blood on the surface of the anterior lobe of the right hemisphere of the brain; at its right side and back part; two small clots of blood, immediately below the surface of the brain, at the same part; brain generally firm; tongue retracted; frothy mucus at the root of the tongue, and in the larynx; lungs pale, and containing but little blood; right cavities of the heart, and the vessels connected with them, distended, and containing blood, partially clotted, and a large fibrinous clot, which also filled the trunk and larger branches of the pulmonary artery; left cavities of the heart, and the bloodvessels connected with them, containing an unusually large quantity of blood, partially clotted, and a tenacious fibrinous clot, which was traced as far as the descending aorta and half way up the common carotid arteries; the blood in the heart and large bloodvessels, except when viewed in mass, appeared almost as bright-hued as arterial blood; a little glairy mucus in the stomach; spleen pale and shrivelled; a moderate quantity of bright-hued blood in the liver; spine healthy.

Besides the above, the following appearances were met with in the cavities of the body: Cerebral arteries mostly everywhere dilated, thickened, and inelastic, but otherwise natural; heart large, and its left ventricle hypertrophied; aorta, and pulmonary, subclavian, and carotid arteries, in the same condition as the cerebral; mitral, and tricuspid valves thickened and traversed by firm cartilaginous bands; portions of both the large lobes of the liver cirrhosed; kidneys mottled with yellow patches, their cortices attenuated, and the urine in the bladder albuminous.

Case IV.—On January 2d, 1837, J. G., aged 60, a street porter, had been engaged in delivering goods from an early hour till between six and seven o'clock in the evening. Returning from the bridge of Don (about two miles from Aberdeen) and feeling wearied, he sat down on the bank of the Aberdeenshire Canal at Nelson-street. The night being very frosty, he could not resist the tendency to sleep. After passing some time in this state, he awoke confused, and forgetting where he was, he advanced in the direction of the lights of the town, and fell into a lock in the canal, up to the neck in water, then covered with a thick crust of ice. Some men passing, hearing his cries for assistance, drew him out of the lock, and conveyed him to a hovel, without fire, in the vicinity. At this place he had a glass of spirits, and after resting for a little, and relating the above particulars, the men undertook to convey him to his own house. He accordingly set out with them, in his

wet clothes, although cold and numbed, and proceeded with difficulty about a hundred yards, when he became insensible. After carrying him about four hundred yards further, and being refused admittance into different houses, he was taken into a shop, when it was found that he was dead. This was at half past nine, p. m. A few minutes later he was seen by an assistant, who found his lips, nails, and general surface pale, the pupils dilated, and the limbs very cold, with only a little heat remaining at the precordia.

The body was examined forty-one hours after death. Prominences of the elbows bright-red; red patches, not so bright, on the fronts of the thighs, and on the right shin; lips, and remainder of the front of the body, very pale; dependent parts of the head, trunk, and extremities reddish, the color of the trunk approaching to lividity; scalp bloodless; a moderate quantity of blood in the back part of the longitudinal, and in the lateral sinuses; membranes and surface of the brain bloodless; a considerable number of bloody points in the interior of the brain; epiglottis of a uniform bright-red; slight redness of the back parts of the larynx and trachea; blood, of a purplish hue, filling the cavities of the heart on both sides, the venæ cavæ, the subclavian veins, and the aorta and pulmonary artery throughout their whole course—the blood, with the exception of some clots in the inferior cava, in a fluid state; frothy mucus in the air cells of the lungs; liver, spleen, kidneys, the left lung, and the dependent parts of the right lung, all moderately congested with fluid blood, of the same appearance as that in the heart and large vessels; food in the stomach; bladder full of clear urine.

The brain was of a firm consistence throughout. The lining membrane of the lateral ventricles, at their foreparts, and that of the third ventricle, was thickened, and of almost cartilaginous firmness. There were some old adhesions of the left lung to the chest and diaphragm. With these exceptions no structural changes were discoverable in the cavities of the body, or about the spine.

Remarks.—These cases present so many points in common, and several of these of so peculiar a kind, that little room is left for hesitation in assuming that the cause of death had been the same in all. Without, however, formally enumerating the particulars in which they coïncide, it may be sufficient to direct attention to a few of the more prominent of these.

One striking feature in all the cases was the color of the blood in the heart and elsewhere, so different from that which presents itself in ordinary inspections of the dead body. In one of the cases this was so marked that the appearances exhibited by the thoracic and abdominal cavities, when laid open, suggested the comparison of them to those of a living animal.

Another marked peculiarity, disclosed by all the cases, was the amount of blood accumulated within the cavities of the heart on both sides, and in the large vessels connected with them, arterial as well as venous. In three of the cases large fibrinous clots had separated from the blood both in the heart and blood vessels.

Corresponding with this accumulation of blood in and around the central organ of the circulation, was its marked absence or deficiency in other parts of the body. Thus the general surface in all was pale, and the usual sugillations wanting in the dependent parts of the head and trunk. In three of the cases the scalp was pale and bloodless. In the first case the same paleness and bloodlessness was observable in the skull and its contents. In the fourth case, though there was blood in moderate quantity in the longitudinal and lateral sinuses, with a considerable number of bloody points in the interior of the brain, the surface of the brain and its membranes were pale and bloodless. In the second case, while the veins on the outer and figured surfaces of the brain were full of blood, the sinuses were empty, and the membranes natural. In the third case, the sparing effusions of clotted blood at the corresponding parts of the scalp, and of the surface and interior of the right hemisphere of the brain, pointed to a fall about the time of the woman's death; a conjecture favored by the circumstances, that she had been seen previously in drink, and that the footpath beside which her body was found was bordered by a deep trench, filled with snow to the same level. In the first case the mouth, throat, and air-passages were bloodless. In the first three cases the lungs contained less blood than usual. In Case I, the stomach, intestines, and bladder are noted as unusually pale and bloodless.

Another peculiarity in the above bodies is the existence in all of diffused patches of bright redness of the surface, at various parts of the front of the face and limbs; and perhaps also the minute injection of the extension of the smaller intestines in Case II, and the mucous froth in the air passages in three of them, and in the air cells of the lungs in the remaining instance, may be regarded in the same light.

The paucity of details in the few published cases of death by cold renders it impossible to institute any complete or satisfactory comparison between these and the cases just adduced. From the notices collected by Dr. Copland, * we gather that Quelmalz found "the large veins and arteries filled with polypous concretions;" and Cappel, "The blood and fluids accumulated chiefly in the pectoral and abdominal viscera." Dr. Kellie again, in the two cases he has published,† met with the same injected appearance in the intestinal tube which was encountered in Case II. On the other hand, Quelmalz, Rosen and Kellie speak of cerebral congestion, to a greater or less extent, in their inspections.

In these circumstances, and till we have a larger collection of cases before us, it would be unsafe to draw any positive conclusions as to the immediate cause of death from cold, whether from syncope, as the foregoing cases would suggest, or from coma, as contended for by Dr. Kellie and others.—*Br. and For. Med. Chir. Rev.*

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* Dictionary of Medicine, vol. i. p. 357.

† Transactions of the Medico-Chirurgical Society, Edinburgh, vol. i, p. 84.

ART. IX.—*The Treatment of Gun-shot Wounds in the late Danish War:* by M. BINARD, Regimental Physician at Ghent.

IN the history of gun-shot wounds there is a very important point, which has already given rise to numerous discussions; and the subject requires, I think, to be reconsidered, in accordance with the new ideas which are at present justly beginning to prevail in reference to the treatment of contused wounds, complicated with more or less considerable injury of the bones. Is amputation necessary in the majority of cases of the latter description, or should numerous exceptions be made to the rule almost universally received since the commencement of the nineteenth century by military surgeons, in wounds with fracture of bones of more or less importance? Such is the question I am about to endeavor to answer, in availing myself of some interesting documents printed in a paper by the chief physician, Dr. Neise, in the *Deutsche Klinik* for 1853, and which is a *résumé* of all the reports published by the Danish surgeons on the wounded, furnished in tolerably large numbers by the war of the Duchies during the years 1848, 1849, 1850 and 1851.

I have lately also read with interest a work on gun shot wounds, by Dr. Simon, published at Giessen, in 1851. This book has caused a sensation in Germany on account of some ingenious and novel views of the author, but especially in consequence of the manner in which he has treated the question of the expediency of amputation in cases of wounds with fracture of the thigh.

It is, above all, in comminuted fractures of the thigh that this question has an especial importance. We know in fact that M. Ribes, agreeing on this point with the majority of French military surgeons, maintains that wounds with fracture of the two upper thirds of the femur rigidly demand amputation, since every attempt made to preserve the limb is invariably followed by a fatal termination.

A prominent feature in the statements of the German and Danish surgeons who had occasion during the war of the Duchies to perform amputation of the thigh in consequence of gun-shot wounds, is the great mortality by which they were followed: Thus, Dr. Clemmensen had 10 deaths among 15 who had undergone the operation. Dr. Djorup, in summing up all the cases of amputations of the thigh performed in the hospitals of Denmark, finds a total of 90 amputated, of whom 39 recovered, and 51 died, (more than 56 per cent.)

In Holstein, according to Dr. Esmarch, in 128 amputations of the thigh, there were 51 recoveries, and 77 deaths (about 60·15 per cent.) Under certain circumstances the mortality has been excessive ; thus the principal physician, Dr. Gotz, who published in 1852, in the *Deutsche Klinik,* an important paper on gun-shot wounds treated in the hospital at Delve, reports that the nine amputations of the thigh which were performed, were all followed by a fatal result, due in almost every instance to purulent infection. I may here remark, in passing, that Dr. Clemmensen has observed, as well as Professor Velpeau, that purulent infection was more frequent among those who had undergone amputation than

among the wounded who, in spite of severe injuries with abundant suppuration, had preserved their limbs.

In viewing facts so unfavorable to amputation of the thigh in gun-shot wounds with fracture of the femur, Dr. Simon has broached an opinion entirely opposite to that of M. Ribes, and it must be acknowledged that it is supported by arguments of considerable weight. I am, therefore, induced to believe that surgeons now acquainted with the advantage to be derived from the employment of the new method (méthode amovo-inamovible) in cases of severe fractures of the lower extremities, are, generally speaking, quite disposed to adopt the opinion of the German surgeon, and no longer to consider the dogmatic assertion of M. Ribes, as to the absolute necessity of amputation in fractures of the thigh in any other light than as referring to a last resource, which should not be employed but under exceptional circumstances.

The following is the mode in which Dr. Simon, in the work already referred to, has expressed his opinion on this subject: "Comminuted fractures of the thigh, produced by balls, and occupying its middle or upper third, ought in every instance to be treated by endeavoring to preserve the limb. In those of the lower third, immediate amputation should be had recourse to."

This doctrine, advocating an attempt to preserve the limb in every case of comminuted fracture of the two upper thirds of the thigh, is, perhaps, a little too general; but when we consider the great mortality which almost constantly attends amputations performed at that height, we shall be very much disposed to receive this most absolute proscription of the operation under such circumstances. We may, in fact—and present experience seems to prove it—obtain a more favorable result by attempting to preserve the limb; the question is then reduced to this: Is amputation of the thigh at this height attended with more danger than the treatment the object of which is the preservation of the limb? My answer would be, that, taking into account the efficacious means we now possess of treating serious fractures of the lower limbs, I think we may adopt this first portion of Dr. Simon's opinion.

But as to the necessity of immediate amputation in comminuted fractures of the lower third of the femur, although this operation is much less serious than that of the two upper thirds, I believe there will still be cases in which we ought not to have recourse to amputation, and where it will be more advisable to endeavor to preserve the limb. I think even that it would not be absolutely necessary to amputate immediately, except in cases where, the fracture of the bone extending to the knee joint, the latter should itself be the seat of considerable disturbance; for the formidable symptoms we should have ulteriorly to apprehend from this dangerous complication are of a nature to give a prominence to immediate amputation, as the only chance of saving the patient. In fact, while on the one hand the lesion of the femoro-tibial articulation greatly increases the seriousness of the fracture of the thigh, amputation, on the other hand, performed in this situation, is much less frequently fatal than it is when had recourse to at a higher point.

In the war of the Duchies, moreover, the Danish surgeons had many cases in which they succeeded in preserving the limbs, when the articulation of the knee had been traversed by a ball, and when the lesion of the bones was not too considerable; this was especially the case also in reference to the elbow joint.

One of the principal reasons formerly adduced in support of the almost absolute necessity of amputation in cases of gun-shot wounds with comminuted fracture of the lower limbs, was the difficulty of transporting the wounded without causing great pain, in consequence of the more or less violent motions imparted to the fractured bones, which were thus exposed to a most intense inflammation. It was especially to a want of means for producing complete immobility of the injured limbs that such occurrences were referable. But this objection no longer obtains to the same degree, in consequence of the efficacy of the new apparatus (nos appareils amovo-inamovibles.) I have lately witnessed, in a case of severe fracture of the leg, caused by the kick of a horse, with what facility a wounded man on whom one of these bandages was immediately applied can be conveyed in a carriage without experiencing any kind of pain or injury.

The facility of dressing without displacing the limb will be especially valuable in fractures where the splinters are numerous, and which are attended with abundant suppuration, and require frequent examination. I think the padded bandage will afford a decided advantage in this respect, and that it will be particularly useful in comminuted fractures of the thigh, for in such cases permanent extension is out of the question; we must indeed secure the immobility of the limb, but we must also place it in a position capable of being maintained for a long time without inconvenience, and we must therefore never extend it forcibly with the idea of remedying a deformity which cannot be of any importance after a lesion so serious as that under consideration, for if we succeed in preserving the limb, we must esteem ourselves very fortunate in having obtained such a result, even at the price of more or less deformity.

The treatment of gun-shot wounds has latterly given rise to many controversies, and experience has happily modified some ideas which were too absolute, and has sanctioned some improvements. It is thus that the practice of incisions intended to prevent constriction (débridement préventif,) formerly believed to be indispensable, is now acknowledged to be useless; that we no longer lay so much stress upon the extraction of certain foreign bodies, and that we willingly leave to the resources of nature, those which could be extracted only by prolonged or violent manœuvres ; that trepanning the skull is abandoned as useless or dangerous in the majority of cases in which it was before believed to be directly indicated; that the resection of bones is properly preferred to amputation in the articulations, especially in the upper extremities, where this practice has been attended with so much success, that it ought to be adopted as the rule. I think, however, that the question of determining the absolute necessity of amputation in certain cases of fractures of the limbs, is one which should be reconsidered. Now that

the treatment of this kind of injury has made so much progress, we must necessarily modify some generally received opinions, and seek the testimony of new facts in support of conservative surgery.

The surgery of the day, essentially conservative as it is, should make its powerful influence felt on the field of battle, as well as everywhere else, notwithstanding the assertions to the contrary which are repeated in many books, and which are in general based only on very questionable statements of the older military surgeons.

At the commencement of the late war, the Danish surgeons performed a much greater number of amputations than they did afterwards, because they had subsequently learned to modify their opinions as to the necessity of amputating immediately in certain cases of wounds with complicated fractures—for example, in those of the knee and elbow, which they at first looked on as imperiously demanding the removal of the limb. Favorable results frequently crowned their novel efforts, and they thus succeeded in preserving many limbs which a short time before would have been sacrificed—a lesson which all military surgeons will do well to bear in mind, when they shall be called on to deal with similar cases.

After these remarks, the author gives a *résumé* of a paper by the chief physician, Dr. Neise, in the *Deutsche Klinik* for 1853, which paper is itself a *résumé* of all the reports published by the Danish surgeons on those who were wounded in the wars of Schleswig and Holstein during the years 1848, 1849, 1850, and 1851. This *résumé* is also translated at length in the journal from which we obtain these particulars.—*Ranking. Abst.*

Art. IX.—*Pathology of the Ear.*

On Disease of the Ear extending to the Brain: by William Weir, M. D.*—There are few medical practitioners who have not had under their care cases of purulent discharge from the ear, often continuing for a long time, and occasionally producing some headache, and more or less deafness. Such cases, as they may not be attended with much pain, and, in many instances, give rise to little inconvenience, are often not considered, either by the patient himself or his physician, as of much consequence, and are hence allowed to go on for years without any attempts being made to produce a perfect cure.

These cases are known by the name of "otorrhœa," which, however, merely means "a discharge from the ear," and is not, correctly speaking, a disease, but merely a symptom, and which may be the result of several different affections of the auditory apparatus. It is well known, however, that cases of this kind are sometimes attended by very alarm-

* Editor of the Glasgow Med. Journal.

ing symptoms, in consequence of the affection spreading from the ear to the brain, giving rise to inflammation and abscesses, indicated by most severe pain of the head, more or less delirium, dimness of vision, or total blindness, coma, and death. Mr. Wilde, in his "Practical Observations on Aural Surgery," has a section on "Cerebral Affections consequent upon Otorrhœa," in which he says, "A case of otorrhœa may continue for years without causing greater inconvenience than the loss of hearing, and the pollution from the discharge: the patient, however, becomes suddenly unwell; he has a shivering fit, fever sets in, and pain is experienced deep in the ear, and over the side of the head. Sleeplessness is almost invariably experienced, incessant delirium follows, from which, however, the patient can be roused and induced to answer questions rationally." * * * "From about the commencement of the attack, the discharge from the ear generally lessens, but seldom altogether ceases, while unconsciousness, strabismus, and even convulsions supervene, followed by all the symptoms of inflammation, effusion, and suppuration within the cranium."*

After death, in such cases, the dura mater has been found separated from the petrous portion of the temporal bone, and that part of the bone carious, while inflammation of the membranes and substance of the brain, with abscess in the cerebrum or cerebellum, point out the cause of the cerebral symptoms, and explain the extension of the long-continued disease of the ear to the parts within the cranium.

The following case, which occurred to me several years ago, shows well this extension and connection of the two affections, that of the ear and that of the brain:

John Downs, aged 15, was admitted into the Royal Infirmary under my care, on 25th November, 1845. The following is the report of his state on admission: Is of a very anxious appearance, and only partially sensible. Lies on his back, rolls his head on the pillow, yawns and moans frequently, as if in pain. For two weeks has complained of a severe pain, referred particularly to forehead and occiput, with intolerance of light and sound. Thinks these arise from suppuration of right ear, to which he has been subject for eight years. General health has been long indifferent. Tongue furred; eyes natural; skin warm and dry; bowels open from medicine; pulse 60. *Cupping to six ounces; calomel and jalap.*

26*th Nov.*—Several stools from powder; headache continues very severe; pulse 56; very slight purulent discharge from ear. *Cupping to eight ounces.*

27*th.*—*Twelve leeches to temples; blister to nape of neck; ear to be frequently washed with tepid water.*

28*th.*—Pain of head a little abated; pulse 60, slightly irregular, but of good strength. *Calomel four grains; castor oil in the morning.*

29*th.*—Pain of head still continues; pulse 56; bowels freely opened;

* Wilde's Aural Surgery, p. 427, 8.

discharge from ear very scanty. *Blister to head; calomel and extract of henbane three grains, morning and evening.*

Hitherto the means employed had very little effect in relieving the symptoms, and, at this time, I did not think he could live above a day or two. I considered that the disease had spread inwards to the brain, as on the 30th November he became drowsy, the pupils were dilated, and the right one insensible to light. The pain of head, however, became easier, but the pulse was only 56, and he was with difficulty roused. There was some reason, however, to suppose that the lad was pretending to be worse than he really was, although he certainly could not have any voluntary power over the pulse, or the state of the eye.

1*st December.*—Head symptoms have gradually increased. Is at present drowsy, and cannot be roused; pulse very irregular, about 64; respirations slower than natural, and he has occasionally involuntary twitchings of the muscles of the extremities; does not move left arm; blister discharging slightly; two stools from a turpentine enema. *Small blister behind right ear.*

2*nd.*—No improvement; appears still quite unconscious, and the involuntary muscular movements continue; right pupil very much dilated, left of natural size, but both insensible to light; pulse now feeble. *Turpentine enema repeated.*

3*rd.*—Seems more sensible, but will not answer questions; right pupil still much dilated; two stools from enema, which he retained an hour and a half.

The nurse stated that he generally answered her when spoken to, and that he always appeared worse at the visit hour. The ear was formerly examined minutely, but nothing morbid could be detected. It was frequently washed out with tepid water, but the discharge had all along been very little, much less than before admission, when the head symptoms were not present.

He continued for a few days, sometimes better, and sometimes worse, but generally stupid and drowsy, and answered questions with hesitation. The right pupil was always dilated, the left natural; the pulse gradually rose to 76, and the discharge from the ear increased in quantity.

8*th.*—Is much more sensible; can now get out of bed, and walk with a little assistance; takes some food; considerable purulent discharge from the ear; pain of head removed; bowels regular; blistered surface nearly healed; appears weak in mind; and still answers questions with some hesitation. *Calomel continued.*

It is not stated in the reports that the mouth was sore from the calomel. I rather think it was not. I attributed the great improvement in the symptoms, however, to the calomel, and the copious purulent discharge from the ear relieving the pressure on the brain. He continued gradually improving until the 17th December, when the reports ceased. The pulse was 70 to 90, the appetite good, and the discharge from the ear moderate. The vision seemed perfect; the mouth was slightly drawn to left side, chiefly observable when speaking. Another

blister was applied behind the ear, and afterwards the common caustic, to make an issue. He became anxious to go home, and was dismissed on 6th January, "Improved."

13*th January—Re-admitted*.—Is much weaker and more emaciated than when he left the hospital. Again complains of severe pain in forehead, particularly referred to right side, with inability to keep eyelids of right side open. Right pupil dilated and insensible to light, but vision appears to be perfect. Discharge from ear continues, though not so profuse. Has no paralysis, only the angle of mouth at left side is slightly drawn downwards. Issue behind ear discharging slightly; tongue loaded; appetite good; some diarrhœa; skin warm and dry; pulse 96, small; mental faculties weak. *Head shaved and blistered. Chalk mixture.*

Became gradually weaker, and diarrhœa increased; was ordered wine and a milk diet, but he sunk and died on the 19th January, six days after his re-admission. At the visit on that day, the following report was taken: "Is at present comatose, and cannot be roused. Right pupil much dilated, left of natural size, both insensible to light; no discharge from ear for some days, and blister nearly healed; pulse 80; bowels more regular."

Inspection.—An opening, the size of a common quill, was found perforating the ridge of the petrous portion of the temporal bone of the right side, and communicating with the internal ear. This opening also perforated the dura mater lining the bone, that membrane not being separated. In the corresponding part of the middle lobe of the cerebrum, there was a similar opening leading into a large abscess, which extended back to the posterior lobe of the same side, and was filled with purulent matter. The brain around the abscess was much softened, and this softening extended more or less over the whole of the right hemisphere. There was some serous effusion about the base of the cranium, and much coagulable lymph on the under surface of the brain. The lateral ventricles were filled with serum. No other part examined.

Dr. Abercrombie, in his work on Diseases of the Brain, when speaking of the causes of inflammation of the dura mater, enumerates various diseases of the ear. When this is the cause, the symptoms are very insidious, and go on for some time without creating any great alarm, and perhaps, in twenty-four or thirty-six hours after any severe head symptoms set in, death takes place, being preceded by oppression, drowsiness, rigors, slight delirium, and coma. In some cases the patient, after complaining for a day or two of deep-seated pain in the ear, becomes restless and fretful, lies rolling his head from side to side on the pillow, or tossing about his arms, as if unconsciously, and in a short time sinks into coma. In other cases there may have been a discharge of pus from the ear for a long time, and this being suddenly suppressed, the affection of the membranes of the brain comes on, indicated by the symptoms already mentioned, which are evidently induced by the cessation of the discharge. On inspection, there is generally found disease of the petrous portion of the temporal bone, some portion being carious, and the dura

mater inflamed and thickened, or ulcerated, and detached from the bone at that part. Abscess in the cerebrum, and sometimes in the cerebellum, is also mentioned by Abercrombie, as being found in those cases where the disease has been several days or longer of proving fatal.

From the long-continued discharge, and the pain in the head, in the case of Downs, it is evident that the disease in the ear must have existed for a considerable time, and had spread from thence to the dura mater and substance of the cerebrum; and it is easy to understand how this may take place. Many cases similar to the one I have detailed are mentioned by Abercrombie and other authors, to some of which I shall immediately allude. Meantime, I shall shortly detail other two cases, one of which occurred to myself, and the other was a patient of the late Mr. Stirling, with whom I visited him.

Helen Yorkston, aged 18, *admitted* 26*th January*, 1853.—Complains of pain and general uneasiness throughout the body, but principally about the parotid gland and behind the right ear, from which there is a considerable discharge of pus. States that the left side was lately in the same condition, but is now much improved. Has almost entirely lost the sense of hearing. Seems to have no other complaint. Percussion of chest good, and auscultation discovers nothing abnormal. Pulse 110; tongue loaded; bowels costive. It appears that her complaints originated from a cold caught four months ago, and were at first attended by severe pains over the whole body, more especially in the back and head, followed by suppuration of the glands of the neck, and afterwards by the symptoms mentioned above. *Castor Oil. Fomentations to ear.*

27*th January.*—No improvement. *Leeches behind right ear, and blister to head.*

28*th.*—Has had pain over whole head, and some delirium during night. Pulse 140, small. Pupils slightly dilated, but sensible to light. Refuses nourishment, and has had some beef-tea by injection. *Calomel and opium thrice a day.*

29*th.*—Continues incoherent, and other symptoms as yesterday. Pupils largely dilated; pulse 144, rather feeble; bowels open.

Next day was in a state of profound coma, and died in the afternoon. The friends would not allow an inspection.

In this case there was no doubt disease of the brain, and it was set down as one of meningitis, supervening on the affection of the ear, inducing internal suppuration, and perhaps spreading to the substance of the brain itself. It is at least probable that the complaint originated in the ear and spread to the membranes of the brain; for had it commenced internally, it is not likely that she would have lived so long as four months.

The other case was that of a young man who had a discharge form the ear for several months, and some pieces of bone had come away. The pain was very acute, and, about the time I visited him, had begun to spread over the whole side of the head. He was seized suddenly with the symptoms I have already mentioned, became convulsed, afterwards comatose, and died in less than two days from the supervention

of disease in the brain. On dissection, caries was found in the petrous portion of the temporal bone, purulent matter lying on the dura mater in the immediate neighborhood, but no distinct abscess, and the substance of the brain all around was softened. The dura mater was extensively separated from the bone.

Mr. Parkinson, in the *London Medical Repository* for March, 1817, mentions the case of a boy, aged 14, who had been affected for two months with headache and discharge of matter from the right ear. A week before his death the pain increased, and was accompanied with great prostration, giddiness, and some vomiting. He continued in this state, without stupor or any other remarkable symptom, until the day of his death, when he was suddenly seized with convulsions, and died. An abscess was found in the middle lobe of the right hemisphere of the cerebrum, and another in the cerebellum. There was extensive caries of the petrous portion of the temporal bone, and effusion into the ventricles to the extent of three ounces.

Abercrombie remarks, in regard to these cases, speaking as if the disease commenced in the brain:—"The matter which is formed in these affections, whether it be in the substance of the brain, or betwixt the membranes, sometimes finds a vent by the ear, the dura mater being ulcerated, and the bone perforated by the caries, and in this way very alarming symptoms are sometimes unexpectedly relieved. The relief, indeed, is in most cases only temporary; the patient continues liable to pain, followed by discharge from the ear, and at last dies comatose, often with gradual abolition of the mental faculties, tremors, or general convulsions. In some cases of this kind there is reason to believe that a communication has existed for a length of time betwixt the ear and a diseased cavity within the cranium, and that the discharge thus afforded to the matter, from time to time, had retarded the fatal event. Surgical writers mention cases of this kind. A few examples may be met with where the relief is permanent."*

There is a case related by Mr. Brodie, in the Transactions of a Society for the Improvement of Medical and Surgical Knowledge, in many respects similar to that of the lad Downs. The patient had a discharge of matter from the left ear, from the time he was two years old until he he was fourteen. About this time the discharge wholly ceased, and he was seized with violent pain in the ear and left side of the head. The pain of head continued constant, but the discharge from the ear was only occasional. A few weeks afterwards the pain became excruciating, and he fell down insensible. He was drowsy, the pupils were dilated, and the pulse beat from 30 to 40 only. He was purged freely, and a blister was applied to the head. Next day he was sensible, but continued drowsy, with the pulse at 60. The symptoms became gradually worse, and he died on the fourth day, comatose.

On inspection, a cyst containing pus was found in the left hemisphere of the cerebrum. Its lower part rested on the petrous portion

* Abercrombie on Diseases of the Brain.

of the temporal bone, and a small opening passed through the dura mater and bone, communicating with the meatus auditorious externus. The substance of the brain around the abscess was much softer than natural.

Sir Benjamin Brodie seems to have considered this a case of abscess in the brain discharging matter by the ear, not disease of the ear extending to the brain. He says :—"The abscess in the brain must have begun to form at a very early period after birth, since it had occasioned ulceration of the bone, and had discharged matter by the ear when the patient was only two years of age. The partial evacuations from the ear prevented the rapid accumulation of matter, so that the substance of the brain was removed in proportion as the abscess increased in size." *

A case is detailed in the *Lancet*, as having occurred in Guy's Hospital. The patient was 25 years of age, and had been previously in good health. He had a discharge from one ear, with deafness, which commenced after an attack of fever, about six years before ; also, intense pain in the forehead, preventing sleep, with slight vertigo ; pupils natural; pulse 76, soft. He was cupped, freely purged, and a blister was applied to the nape of the neck. On the third day he was comatose—pulse 56 to 80; respirations 28. Ten leeches were applied behind the ears, his head was shaved, and he was ordered a grain and a half of calomel with two grains hyocyamus, every sixth hour. The coma continued, but he could be roused, and complained of great pain of head; the right pupil was now dilated, the left natural, and both slightly sensible to light. These symptoms continued unrelieved by free purging, turpentine enemata, and mercury to ptyalism. He died on the sixth day from the attack of the head symptoms.

On inspection, a large abscess was found in the middle lobe of the right hemisphere of the cerebrum, containing two ounces of pus. "At the superior and posterior part of the petrous portion of the temporal bone was a large opening, (the size of the external meatus of the ear,) which led into the tympanum, and contained a quantity of cheesy matter. The bone was carious, and the dura mater over it perforated, and of an ashy color." * * * "The abscess extended *inwards* as far as the descending cornu of the lateral ventricle on the right side, *backwards* to the middle of the posterior lobe, and *forwards* under the optic thalamus and towards the crus."*

There is a very interesting case in the *Association Journal*, related by Mr. Part to the London Medical Society. The patient was a clergyman, aged 25, who for five years had a purulent discharge from the right ear, attended occasionally with great pain. The disease proved suddenly fatal, without the extent of the mischief having been suspected. After being exposed to cold, and suffering two severe falls on his head, he was attacked with acute pain in the ear, followed by a copious, offensive, puriform discharge from the meatus, accompanied by deafness. H.

* Transactions of a Society for the Improvement of Medical and Surgical Knowledge, Vol. 3, p. 106.

† Lancet for 23d July, 1853, p. 77.

underwent different plans of treatment, but without material benefit. He then became subject to fits of giddiness, succeeded by vomiting and great pain in the ear and head; afterwards partial ptosis and turning up of the eyeballs, slight squinting, and drawing up the right angle of the mouth supervened. There was a swelling in front of the right ear, extending nearly to the margin of the orbit, great tenderness of the concha, and the copious puriform discharge from the external meatus continued. Various other symptoms indicating compression of the brain came on, along with slight tetanic symptoms, and the disease ultimately proved fatal.

Inspection.—On opening the swelling in front of the ear, a cavity was found as large as a hazel nut, and communicating with this was another beneath the temporal muscle, as large as a walnut. Both contained soft, cheesy matter. The dura mater was much injected, and adherent over the whole surface of the temporal bone. "The whole of the petrous bone, the basilar process of the occipital, and the large wing of the sphenoid, extending inwards to the middle line of the skull, were degenerated into a soft, cheesy mass, similar to that contained in the above-mentioned cavities." * * * "The malar bone was entirely destroyed, and the mastoid process of the temporal completely occupied by disease. The ventricles contained three ounces of bloody serum; the arachnoid was much injected, and between it and the pia mater was a layer of pus extending along the base of the brain; it was greatest in quantity on the anterior surface of the medulla oblongata, down the front of the medulla spinalis as far as could be seen. In the middle lobe of the brain there was an abscess containing upwards of an ounce of very fetid pus, and a second abscess existed in the middle of the posterior lobe, containing a similar kind of pus."*

Four similar cases are related by Mr. Howard in the *Canada Medical Journal*, the treatment of which, after many of the head symptoms had come on, seems to have been more successful than in any of those which I have already quoted. One, in which there was otorrhœa, with facial palsy, recovered under counter-irritation, calomel and quinine, and cod-liver oil. Another seems to have been much improved, after serious symptoms affecting the brain had come on. This was the case of a girl, aged 17, who had suffered for eight weeks a discharge of matter from her left ear, with pain over the side of the head. She had also giddiness, double vision, and numbness of the whole of her left side down to the toes. There were likewise partial ptosis of the left eyelid, suppuration of the ear, with perforation of the membrana tympani, but no signs of caries. By means of calomel and quinine three times a day, the biniodide of mercury rubbed behind the ear and the temple, purgatives with low diet, and a seton in the back of the neck, the symptoms were all relieved in ten days. "The ptosis, double vision, and giddiness disappeared; feeling was restored to the left arm, and in a very great degree to the left leg." There was only slight mercurialization. A feverish

* Association Medical Journal for 18th Nov., 1853, p. 1021.

attack, however, came on three days afterwards, attended with constant twitchings of her left arm and leg. This was removed by means of a blister to the spine, along with saline purgatives; and, a week after, she was dismissed, "perfectly well, with the exception of a slight halt or lameness in the left leg, scarcely perceptible to a stranger." As nothing was heard of this patient for a month afterwards, it was presumed that she had continued to improve.

In this case the disease could not have spread much into the brain and membranes, otherwise recovery, even to the extent mentioned, would not likely have taken place. No mention is made as to the discharge from the ear, whether it continued or was suppressed. In such cases, great temporary relief to the head symptoms is sometimes obtained from a copious discharge of matter by the ear, which was well exemplified in the case of Downs, first mentioned in this paper. The relief, however, is only for a time. The disease within the cranium certainly proceeds; the changes already mentioned are almost sure to take place; and the case ends fatally.

Perhaps the fullest and most particular account of affections of this kind is that contained in the papers by Mr. Toynbee, in the *Medico-Chirurgical Transactions* for 1851, and the *London Journal of Medicine* for 1852. The former is a very elaborate paper, and well worthy attentive perusal. Mr. Toynbee says, that cases of affections of the ear, which ultimately produce disease in the brain, are of very frequent occurrence, and the former affection continues often for a very long time, but at last gives rise to disorganization of the brain and its membranes. He considers that each of the cavities of the ear has its own particular division of the encephalon, to which it communicates disease. "Affections of the external meatus and mastoid cells produce disease in the lateral sinus and cerebellum; affections of the tympanic cavity produce disease in the cerebrum; affections of the vestibule and cochlea give rise to disease in the medulla oblongata." It appears also, from his experience, that discharge from the external meatus may arise from seven different sources; and he properly condemns the use of the term "otorrhœa," as applied to all these different diseases—a term under which is concealed our ignorance of the real nature of the affection. The most frequent cause of disease in the bone and cerebellum, is what Mr. Toynbee calls "chronic catarrhal inflammation of the dermoid layer of the external meatus." In this the discharge often continues for years; the periosteum becomes soft and detached from the bone, and caries or necrosis follows: purulent matter is then formed, and death occurs from the affection of the brain, often in a very few days.

Mr. Toynbee gives a table of sixty-five cases of these affections, taken from various authors, in which the symptoms of disease in the ear had continued for various periods, up to above twenty years, and all of which terminated fatally, with acute symptoms of disease in the brain, varying in duration from a few days to some weeks, presenting abscess in the cerebrum or cerebellum, and very often caries or necrosis of the different parts of the temporal bone. "These observations," he says,

"appear to me to show that chronic catarrhal inflammation affecting the dermoid layer of the membrana tympani, the dermoid meatus or the mucous membrane lining the cavity of the tympanum, if allowed to proceed unchecked, is liable to produce results fatal to life. These may occur within a few months, or they may be deferred so long as ten, twenty, or even fifty years." Such a state of the ear, however, is not likely to exist many years, "without causing a greater or less amount of disease in the bone, dura mater, or brain."

From the facts cited by Mr. Toynbee, and the cases he gives, he lays it down as a rule, that no person suffering from long-continued purulent discharge from the ear, "can be assured that disease is not being prolonged to the temporal bone, the brain, or its membranes;" and moreover, he believes that "any ordinary exciting cause, as an attack of fever, or influenza, or a blow on the head, is sufficient to induce acute symptoms in the head, which, as a general rule, are speedily fatal."

"It would appear also, that these affections of the ear are sometimes the exciting cause of mania and other states of mental excitement. In a paper upon the American Hospitals for the Insane, in the *Psychological Journal*, there is a report of the Ohio Lunatic Asylum, in which Dr. Smith states that "seven cases of insanity connected with disease of the ear, inflammation of the meatus externus and the tympanum, were treated in the course of the year (1851). Three of them were cured by curing this local disease. The fourth was a demented patient, in whom the otorrhœa produced maniacal excitement. The latter subsided in proportion as the former approached restoration. The other three were under treatment, but two of them have hitherto proved refractory.

It is probable that, in these cases, the otorrhœa had produced only irritation, or at most inflammation, without any suppuration in the brain or its membranes, otherwise it is not likely that the head symptoms would have been got quit of so easily.—*Glasgow Med. Jour.*

A New Method of Treatment in Otorrhœa: by Mr. YEARSLEY.—This new mode of treatment is neither more nor less than a modification of the remedy already introduced to the notice of the profession for the alleviation, if not for the cure, of all those cases of deafness that arise from partial or entire loss of the membrana tympani—namely, *cotton-wool*. Its influence, according to Mr. Yearsley, is not limited to the mere arrest and cure of the discharge; it has this additional superiority over the usual modes of treatment, that the sense of hearing, so frequently impaired under the use of astringents, is, on the contrary, not only not diminished, but decidedly, and in many cases immensely, improved. The treatment is to be carried into effect as follows:—

First of all, the passage of the ear is to be carefully cleansed by gently syringing it with warm water, and the moisture removed by means of a porte-sponge. The parts are now to be so clearly displayed by the aid of a powerful gas-reflector, that the necessary manipulations may be readily and accurately accomplished, when I take a small piece of dry

cotton—the size of which varies according to the circumstances of the case—and adjust it by gently pressing down every part of it upon the surface from which the discharge proceeds, exactly as if dressing an ulcer or any other surface of the body: this done, quiet is enjoined, restricting as much as possible every movement of the jaw, such, for instance, as takes place in eating and speaking. Twenty-four hours afterwards I remove this, and apply another dressing of the cotton. The importance of restricting the patient from moving the jaws will be at once manifest, if the reader will take the trouble to place the point of a finger in the passage of the ear, and read aloud the present paragraph. It will then be perceived how easily the cotton, however accurately adjusted, may be loosened and moved from its state of exact apposition. In eating, this detachment takes place still more readily, yet the patient cannot be debarred all the use of the jaw, seeing he must have food; nor, if great care be taken to keep the jaws in a state of motionless apposition, need speech be altogether interdicted; but for the same reason the food should be such as to require no mastication. Doubtless, no one will consider these restrictions as objections to this mode of treatment; though a more specious, but equally invalid objection to it may be raised, on the ground that the tympanum being a cavity, such a degree of accuracy in adapting the cotton to its surface, as described, cannot be attained. If the ear be examined with the admirable appliances for its illumination, now at the command of the aural surgeon, it will be found, in cases where the membrana tympani is destroyed, that the extent of the surface from which the discharge proceeds, is not only exposed to view, but the cavity is observed to be obliterated, and the walls of the tympanum, red and vascular, are seen thickened and tumid, if not spongy or fungoid. I speak here more especially of the worst cases that come under the notice of aural surgeons, in the great majority of which not only is the discharge itself cured, but the patient experiences a great amelioration in the state of his hearing also. Nay, more; cases can be referred to, in which the great disorganization of the ear seemed to preclude all hope of effecting any amelioration of the hearing, yet in which, after persevering in the treatment for a greater or less period, a change has been accomplished, which could not have been confined to the fungoid tissues alone, for, in the cases I speak of, a sensible improvement of hearing has been a coetaneous result.—*Ranking. Abs.—Lancet.*

On the Significance of Ear-discharge: by Mr. TOYNBEE, Aural Surgeon to St. Mary's Hospital.—There can, I think, be no doubt that a discharge from the ear should always be regarded with suspicion. This fact is fully borne out by an inspection of the accompanying table, showing the relation between the duration of the discharge and the acute symptoms. The cases are taken from a paper which I published in the *Medico-Chirurgical Transactions* for 1851 :—

	Age of patient	Duration of Discharge.	Acute symptoms causing death, and their duration.	Post-mortem Appearances.
Disease in the base of the brain.	42	35 years.	Pain in the head ending in coma ; five days.	Pus in the tympanum and labyrinth and around the medulla oblongata.
	17	12 years.	Pain in the head and ear; twenty-two days.	Pus in the tympanum and labyrinth; auditory nerve of a dark color; purulent matter deposited on the medulla oblongata, crura cerebri, and pons varolii.
	44	24 years.	Paralysis of the portio-dura nerve a few days before death.	Dura mater covering the upper wall of the tympanum thick and ulcerated; bone carious; mucous membrane of tympanum ulcerated.
	21	Occasionally for 14 years.	Violent pain in the ear and head; pain in the back and body; curvature of the neck backwards; delirium five weeks.	Tympanic cavity full of pus; a large abscess in right middle cerebral lobe.
	23	14 years.	Pain in the top of the head, followed by cerebral irritation; ten months.	An abscess in the left middle lobe of the cerebrum, dura mater detached from the petrous bone; the bone soft and carious.
	10	5 years; also earache at times.	Headache, vomiting, chillness, five days: was then convalescent; a day after intense pain in the ear came on, ending in death in five days.	An abscess as large as a small hen's egg in the left middle cerebral lobe; dura mater over tympanum very thick and ulcerated; carious orifice in upper wall of tympanum; tympanic cavity full of scrofulous matter.
Disease in the cerebral cavity.	Adult.	20 years.	Pain in the head for fourteen days; fever, coma, four days.	An abscess in the right middle cerebral lobe; dura mater ulcerated; upper wall of tympanum carious.
	24	3 years.	Cerebral irritation; abscess under the temporal muscle; delirium, coma; some days.	An abscess in the left middle cerebral lobe; the dura mater partly detached from the petrous bone, thick and dark colored; the bone dark, but not carious.
	14	12 years.	Several cerebral symptoms, coma, death in a few days.	A large abscess above the petrous bone, communicating with the external meatus, through petrous bone and dura mater.

Disease in the cerebellum and lateral sinus.	60	2 years, followed by intense pain.	Violent cerebral irritation during thirteen days.	Dura mater covering the petrous bone detached from it; and full of orifices; an abscess in cerebrum; petrous bone carious; tympanic cavity and vestibule full of pus.
	15	6 or 7 years.	Pain in the right ear; shivering; headache; abscess behind the ear; great prostration; ten days.	Coats of lateral sinus thickened; coagulum in sinus.
	45	20 years.	Pain in the left side of the head during the night only; cerebral irritation; delirium eight weeks.	The cavernous sinuses full of gray-colored matter; mastoid portion of temporal bone carious.
	27	Since early life.	Pain in the head, rigors, fever; an abscess over the mastoid process; stupor, coma, three weeks.	Lateral sinus full of pus; sulcus lateralis carious.
	20	7 years.	Shivering, headache, and pain in the right ear, followed by abscess behind it; cerebral irritation; death in ten days.	Abscess in left lobe of cerebellum; sulcus lateralis carious; pus in lateral sinus and jugular vein; abscess in neck; cerebellum soft.
	3½	2 years.	Pain in the ear and head; convulsions; great prostration; three weeks.	Caries of meatus externus and sulcus lateralis; pus in lateral sinus and jugular vein; abscess in neck; cerebellum soft.
	9	At intervals for 5 years.	Pain in the ear and headache; abscess behind the ear; delirium; convulsions; five weeks.	Lateral sinus full of pus; sulcus lateralis carious, and its cavity continuous with that of the tympanum; purulent deposits in the lungs.
	19	At intervals during 2 years.	Intense headache; tenderness of abdomen, great physical prostration.	Abscess occupying nearly the whole length of the right hemisphere of the cerebellum; petrous bone carious and soft; tympanum full of pus; cerebrum healthy.
	32	2 years.	Pain in the ear and side of the head; drowsiness, stupor, and coma; six weeks.	Abscess in right hemisphere of cerebellum; petrous bone carious; dura mater ulcerated.
	Adult.	16 years.	Headache, stupor, coma; a few days.	Abscess in right hemisphere of cerebellum; external meatus and petrous bone carious.

It is true that many persons live long, having had during the whole of life a discharge from the ear, without any disease of the bone; others live many years with a discharge, but at death the bone and dura mater are found affected, and might, under many circumstances, have taken upon them an active state of disease, ending in the death of the patient. It is important, therefore, that you should be able to give an opinion respecting cases of the kind.

In the first place, it behooves you to decide from what source the discharge comes. If it arise from the dermoid meatus, and the membrana tympani is entire, there is, as I have before said, most probably, irritation in the tympanic cavity, or mastoid cells, of which irritation this discharge is but a symptom. Unless there were simply some eczematous state of the meatus to account for the discharge, and unless the hearing power were perfect, such a case should be looked upon with suspicion, especially if it be attended by any symptoms of pain or cerebral irritation. Again, if the discharge issues from the tympanic cavity through a small or a valvular opening, and that it is requisite to blow the nose forcibly to clear out the tympanum, there probably is, or there will be, some affection of the bone, from the accumulation of the discharge. If there is a large orifice in the membrana tympani, or if it is absent,—if there is no ulceration of the mucous membrane of the tympanum, if there is some power of hearing remaining, and if by pressing and tapping the region around the ear, no pain is felt, and if there are no other symptoms of disease in the ear or the head, I think you may assume that there is no disease of the bone, and that by attention to daily syringing, and the other plans alluded to when speaking of the treatment of these affections of the ear, there is a fair prospect of the affection remaining confined to the mucous membrane of the ear. On the other hand, it is but fair for you to state, that negligence on the part of the patient, whereby the discharge would be allowed to collect so as to fill up the orifice in the membrana tympani,—a blow on the ear, an attack of fever, or any severe illness, might cause an irritation in the ear, which, if neglected, might advance to the bone.—*Ranking's Abs.—Med. Times.*

A Peculiar Serous Discharge from the Ear after Injury to the Head. By Mr. HENRY GRAY.—The history and examination of this case appear to negative all the various theories which have been advanced in explanation of the origin of the serous discharge from the ear, as far, at least, as this case is individually concerned. A short epitome of these are subjoined.

Dr. Laugier, in 1835, supposed that the fluid was the serosity of the blood (extravasated between the bone and dura mater) which filtered through a chink in the os petrosum, passed into the cavity of the tympanum, and from thence into the external auditory canal.

That it was the serous secretion from the cavity of the arachnoid.—Guthrie, 1842.

Marjolin supposed that it was the liquor Cotunnii.

Chassaignac (1850) that it was the serum of the blood filtered through an abrasion of one of the venous sinuses in connection with the fractured temporal bone.

In 1850, Nélaton, Auguste Bérard, and Robert, in France, Hilton and Prescott Hewett, in England, believed it to be the subarachnoidean fluid escaping through a rupture of the arachnoid membrane and fracture, implicating the auditory canal and communicating with the tympanum.

That it is the saliva passing into the tympanum, through the Eustachian tube.

A man, *æt.* 45, who, up to the time of the present accident, had enjoyed uninterrupted good health, was admitted into St. George's Hospital, under Mr. Cutler, on the morning of the 18th of October, 1854, having fallen from a ladder twenty feet in height a short time before his admission. It was stated that he was stunned for a few minutes after the accident; he soon rallied, however, and his comrades, on picking him up, observed a bloody watery discharge flowing from the left ear. He walked into the hospital, where the attention of those present was soon called to this discharge. A small wound was found at the back part of the head, on the right side; he was quite sensible, and answered most questions readily.

On the 19th, he was still sensible, but he had no recollection of the accident; the discharge from the ear continued, and to such an amount, that two ounces was collected in less than an hour.

On the 20th, he became very restless, delirium came on, the pulse increased in frequency, but there was much less discharge from the ear. He was bled to nine ounces; but in the evening, although the pulse was softer, it did not diminish in frequency, the restlessness continued, and rather more serous discharge was poured from the ear.

On the 21st and 22d, diffuse inflammation of the areolar tissue of the scalp came on, which, notwithstanding the usual treatment, did not subside. He gradually sank, and died October 25th, seven days after the receipt of the injury.

The discharge, varying somewhat in quantity, continued from the time of the accident until the day previous to his death. Its quantity was so great that it saturated the pillow-case, and it became necessary to have napkins placed under the ear. It was repeatedly collected in gallipots, and was always found to be mixed with a minute quantity of blood. After being allowed to stand for a while, the blood globules subsided to the bottom, forming a very thin layer of coagulum, the supernatant fluid still retaining a slightly roseate hue. On the day previous to his death it was mixed with pus. The discharge, when tested, was found to contain a large quantity of albumen; but no chemical analysis was undertaken, as its admixture with blood would have rendered the results fallacious.

On the post-mortem examination being made, a fracture was detected, commencing in the centre of the right cerebral fossa of the occipital bone, and just opposite to the wound already mentioned as situated in this region, it passed down through the corresponding cerebellar fossa, where it subdivided into two fissures, the innermost of which passed into the right margin of the foramen magnum, the outermost into the back part of the right jugular foramen. The triangular portion of bone included between these two fissures was comminuted. Another separate line of fracture commenced in the left margin of the foramen magnum, it passed obliquely outwards and forwards through the groove for the lateral sinus, and terminated at the back part of the left jugular fora-

men, so that the fracture did not encroach upon the temporal bone. This bone being now removed, together with portions of the occipital and sphenoid bones, the dura mater and other soft parts were detached from its various surfaces, and the bone was minutely examined, but no fracture could be detected in any part. This examination was carefully repeated, and at different times, but still no lesion of the bone could be discovered. The internal auditory canal was now examined; the tube of the arachnoid membrane accompanying the seventh pair of nerves was quite normal, but a minute quantity of blood was found in the subarachnoidean tissue surrounding the nerves. The cochlea, vestibule, and semicircular canals were then examined; they were healthy. On laying open the tympanum, its cavity was full of a thick tenacious muco-purulent fluid, and a similar secretion was found at the tympanic orifice of the Eustachian tube, and also in the mastoid cells. On washing this away, the lining membrane of the tympanum was found to be intensely vascular. In the Eustachian tube this vascularity ceased at the tympanic orifice, but the membrane lining the mastoid cells was as vascular as that lining the tympanum. The ossicula were healthy, and presented their usual arrangement; the stapes were firmly lodged in the fenestra ovalis; the fenestra rotunda was covered by its peculiar membrane. There was consequently no communication between the internal ear and the tympanum. The membrana tympani was ruptured; the aperture, about the size of a small pea, was situated at its anterior and inferior angle.—*Ib.*—*Path. Transactions*, 1855.

The Effects of Accumulations of Cerumen: by Mr. TOYNBEE, F. R. S.—These effects are sometimes serious. They may be enumerated as follows:

1. Simple dilatation of the meatus.
2. Absorption of the posterior wall, so as to allow of a communication between the cavity of the meatus and the mastoid cells.
3. Absorption of the anterior wall, so as to cause an orifice communicating with the fossa parotidea.
4. Absorption of the superior wall, producing an aperture into the tympanic cavity.
5. Pressure upon the outer surface of the membrana tympani, rendering it extremely concave.
6. Inflammation and thickening of the membrana tympani.
7. Perforation of the membrana tympani.
8. Perforation of the membrana tympani, and protrusion of the cerumen into the tympanic cavity through the orifice.—*Ib.*

A new Artificial Membrana Tympani: by Mr. THOS. WESTROPP.—This contrivance is thus described:—In the first place, my contrivance is a tube, very thin in texture, very pliant and durable in material, with a flat vibrating membrane at one end, the other extremity being open to admit the entrance of sonorous undulations. It is thus made: having accurately inspected the meatus, into which we desire to insert an artifi-

cial membrane, we must make a model of it in some hard timber (a cast is out of the question—I frequently failed in the attempt;) this model should be almost as perfect as a cast itself, though not too tight for the meatus; its end should be rather flat, and the circular edge nicely rounded off; the whole should be smooth and polished; this model, or, if we like to term it, timber cast, previously oiled, should be repeatedly dipped into a thin solution of gutta percha in chloroform until a film of sufficient thickness be formed to peel off in one unbroken piece; if the tympanal end of the timber model be of greater diameter than its centre (after the manner of the meatus itself, but this is not absolutely essential,) it will be necessary to make a small slit in the side with a knife, but the incision should not approach within a quarter of an inch of the extremity, where the flat membranous part lies. This tube, if found of unequal thickness in any position, a slight coating of the solution may be applied so as to remedy the deficiency; if the timber cast, or model, has been properly made, and all successive steps accurately carried out, the membrane, when cut with a pair of scissors to the required length, will be found to fit the meatus pretty comfortably, and when oiled and coated with cerumen, to exclude the external air from the cavitas tympani. The tube itself should not be allowed to protrude, but should be cut obliquely, so as to be entirely within the meatus. It easily adapts itself to the parts; the flat end lies at the proper angle in the side of the lost membrane, or on its remains. When it becomes advisable to clean its surface, it can be easily taken out by the patient with a small tweezers, washed, oiled, and reinserted; if found to fit, two or three of the same size should be made, and given to the patient, who should be taught how to use them.

In conclusion, I must remark that though my contrivance for supplying an artificial membrana tympani is simple, still I do not expect that every person who tries to make or adjust them will succeed at first; it requires much practice. They will as often fail as succeed in the attempt to construct a perfect membrane, as it is a difficult matter to hit upon the proper thickness of the membranous tube. The solution of gutta-percha requires to have a certain consistency and no more; it should be rather thin, so as not to coat the timber model irregularly, and to allow of its spreading evenly over its surface; each coating should be allowed to dry perfectly: this must be repeated six or eight times during a space of two or three days. The tube should not be taken off when too thin in its substance, or it will tear; it should not be made too thick, or it will be hard, tough, and irritate the meatus; but it should be about as thick as very fine sheet gutta-percha, or oil-skin: it is then pliable, soft to the ear, and will easily vibrate when adjusted; in short, the thinner it is made, consistently with durability, the better.—*Ib.*—*Ass. Med. Journal*, 1855.

Cases of Phlebitis, with Pneumonia and Pleurisy, from chronic disease of the Ear; by Dr. Gull, Assistant Physician to Guy's Hospital; ("Association Journal," 13th April, 1855; *Clinical Lectures on the Pa-*

thology and Treatment of Affections of the Ear; by Mr. TOYNBEE, F. R. S., Aural Surgeon to St. Mary's Hospital; *Disease of the Ear: Death from Implication of the Pneumogastric Nerve;* by Mr. COE, Surgeon to the Bristol General Hospital. Dr. Gull's cases were recently brought before the Royal Medical and Chirurgical Society, for the purpose of directing attention to a consequence of chronic disease of the ear, which has attracted little attention, namely, disease of the lungs and pleura. The cases, which are three in number, occurred in Guy's Hospital.

The first case was that of a man, twenty-one years of age, who, after exposure to cold, was seized with rigors, pains in the head, vomiting, and other febrile symptoms. Three days after his admission, he was found to have difficulty in moving the head, with pain extending down the right side of the neck, and it was ascertained that four years before, when working in a coal mine, he had received a blow on the right side of the head, after which he had discharge of matter from the ear, and had been deaf on that side ever since. The rigors continued to occur at irregular intervals, and symptoms of pleuritis appeared, followed by those of pneumonia and pneumothorax. He died on the ninth day after his admission, and the sixteenth from the accession of the symptoms. On examination after death, the bones of the right ear were found to be carious, but the brain and its membranes were entirely healthy. The right lateral sinus and jugular vein were inflamed, and contained lymph and pus, and there was lobular pneumonia of both lungs, with gangrene and pneumothorax on the right side. The second case was that of a man, fifty-two years of age, who had febrile symptoms and rigors which recurred daily. A few days after his admission, he was observed to have stiffness and pain in moving the head, and he mentioned that from infancy he had at times had a discharge of offensive fluid from the left ear, and was deaf on that side. The rigors continued to recur, and he had a slight cough. He died on the twenty-fifth day from the accession of his symptons, and, on examination, portions of the left temporal and occipital bones were necrosed, the lateral sinus and jugular veins were inflamed, the pleura contained a considerable effusion, and both lungs were in a state of lobular pneumonic condensation, and in places approaching gangrene. The dura mater was thickened, but the brain not materially diseased. The third case was that of a man, twenty-three years of age, who at first presented signs of low fever; soon afterwards he had severe rigors, with profuse sweats, and presented the usual signs of pleuro-pneumonia. He had discharge of bloody pus from the right ear, and pain extending down the right side of the neck, and had been nearly deaf for six weeks. He died eight days after his admission, or about three weeks after the accession of the symptoms. On examination, the right ear was found diseased, the occipital bones carious, the dura mater adjacent to it gangrenous, and the brain congested. The lateral sinus contained a clot, in the centre soft and pyriform. In the right pleura there was extensive sero-purulent effusion, and portions of both lungs were in a state of pneumonic condensation and disintegration.

Mr. Tonybee calls attention to the same subject through another channel, in a recent clinical lecture at St. Mary's Hospital, and his remarks are of much interest. Disease in the mastoid cells, he tells us, may terminate fatally from purulent infection arising from the introduction of pus into the circulation through the lateral sinus, as well as from disease of the cerebellum, or its membranes, and, before citing the evidence of his own experience, he refers to some former evidence on the subject.

"Dr. Abercrombie," he proceeds, "published an interesting case of purulent affection from disease of the ear; but the subject has been more thoroughly investigated by Dr. Watson, who, although deprived of the opportunity of making *post-mortem* inspections of the highly interesting cases which he has so fully detailed, there remained no doubt in his mind, nor can there be any doubt in the minds of his readers, that the cause of death was the introduction of pus into the system from the mastoid cells. Dr. Bruce has since published some valuable cases bearing upon the subject; and Mr. Wilde gives the details of a case in his work on the Ear. The facts brought forward by these gentlemen, coupled with those I shall lay before you as the result of my own experience, will, I trust, enable you thoroughly to comprehend the nature and progress of the disease. The following is Dr. Abercrombie's case:"

Disease of the Mastoid Cells; Deposit in the Lateral Sinus; Secondary Deposit in the Pleura.—A young lady, *æt.* 15, had been liable for six or seven years to attacks of pain in the right ear, followed by discharge of matter; but she had been free from any of these attacks for some time previous to the abscess which forms the subject of the following history. On the 25th of April, 1822, she complained of cold shivering through the day, and in the evening had headache, with pain in the right ear; and these symptoms continued on the following day. On the 28th, she was seen by Mr. Brown, who found her with quick pulse and foul tongue, severe pain in the ear, and slight headache. On the 29th, some discharge took place from the ear, but without relief of the pain, which continued with violence until the following day. On the 1st of May, the pain was somewhat abated in the ear, but had extended over the right side of the head; pulse frequent. General and local blood-letting were employed with partial relief. I saw her on the 3rd. The headache was then rather abated; the pulse was frequent and weak; she had a pale unhealthy aspect, and a look of oppression bordering on coma. The pain was chiefly referred to the parts above and behind the right ear, where the integuments were painful on pressure, and, at one spot near the mastoid process, felt soft and elevated. A puncture was made at this place with a lancet, but nothing was discharged. Topical bleeding, blistering, &c., were recommended.

4th.—Pulse, in the morning, 148; in the course of the day it fell to 84; looking much languor and exhaustion.

5th.—Dark-colored matter of intolerable fetor began to be discharged from the puncture which had been made behind the ear. The opening here was enlarged; and a probe being introduced, the bone was felt bare

and rough over a considerable space; headache much relieved: pulse natural.

6th.—Great discharge from the opening; headache much relieved; pulse 112; complained of some pain in the left side of the thorax; and there was considerable diarrhœa.

7th.—No headache; there was much discharge of fetid matter from the opening near the mastoid process, and a probe introduced by it passed downwards and backwards under the integuments as far as the spine.

8th.—Pain in the thorax continued; and was now so urgent that a small bleeding was employed with partial relief; it could not be carried further on account of increasing weakness. Pulse 140.

9th.—Said she felt better, and made no complaint of pain; pulse very rapid, and strength sinking.

Died on the 10th.

Autopsy.—Every part of the brain was in the most healthy state, except a small portion on the right side, near the ear, which was of a dark, leaden color; the tinge, however, was entirely superficial. The right temporal bone, externally, was bare through a great part of its extent; internally, it was in many places rough and dark-colored, and there was some dark-colored matter betwixt it and the dura mater. The dura mater at this place was for a considerable space thickened, spongy, and irregular; the coats of the right lateral sinus were considerably thickened through its whole extent, and the capacity of the sinus was very much diminished by a deposition similar to that which occurs in the cavity of an aneurism. The internal ear contained dark-colored matter. The left cavity of the pleura contained fully a pound of puriform fluid; the left lung was collapsed, dense, dark-colored, and covered by a coating of coagulable lymph.

From the examination I have made of deposits in the cavity of the lateral sinus, I have no doubt that the matter alluded to in the above case consisted of coagulated blood mixed with pus.

The following is one of Dr. Watson's cases:

A boy, *æt.* 11, had had a discharge of offensive, purulent matter from his ear, since the time when, four years before, he had gone through an attack of scarlet fever. In August 1833, he went for a walk into Kensington Gardens, and there laid down and slept upon the damp grass. The next day he was attacked with headache, shivering and fever. Strong rigors, followed by heat and perspiration, occurred very regularly for two or three days in succession, suggesting the suspicion that his complaint might be ague; but then pain and swelling of some of the joints came on, and were at first considered rheumatic. However, the true and alarming nature of the complaint soon became apparent. Abcesses formed in and about the affected joints; and one of these fluctuating swellings was opened, and a considerable quantity of foul, grumous, dark-colored matter let out. After about a fortnight, the child sank under the continued irritation of the disease. The hip-joint presented a frightful specimen of disorganization; it was full of un-

healthy, sanious pus; the ligamentum teres was destroyed; the articular cartilages were gone; and matter had burrowed extensively among the surrounding muscles. The knee and ankle-joints of the same limb were in a similar condition. Unfortunately, the head was not examined; but that the fatal disorder had penetrated from the ear to the dura mater I entertain no doubt; in all probability the inflammation had involved the veins or sinuses of the head.

Having given another case of a similar nature, Dr. Watson says:

I much lament that, in these instances, the direct link of connection between the diseases of the ear and of the disorganization of the joints was not demonstrated, for seeing (they say) is believing. Yet the pain of the ear, the discharge of pus from the external meatus, the subsequent pain in the head, coming on with fevers and rigors, and followed, after a short interval, by destructive suppuration in several distant parts, and, in the latter case, the actual femoral phlebitis—these circumstances form a chain of presumptive evidence amounting, in my judgment, to moral certainty, that the fatal mischief, in each case, found entrance through "the porches of the ear;" and that the dura mater underwent inflammation. The same evidence is scarcely less affirmative of the complication of cerebral phlebitis. Perhaps the veins of the diploë, which in the cranial bones are of considerable magnitude, were involved in the inflammatory mischief; perhaps the large sinuses of the brain. The close proximity of the lateral sinus to the diseased bone, and its formation by a duplicature of the dura mater, would seem to render such a complication highly probable.

The direct link of connection between disease in the ear and that of the circulating system was pointed out by Dr. Bruce, and also in the case cited by Mr. Wilde. In this case, "the membranous walls of the right lateral sinus throughout the whole of the mastoid portion of its course, were much thickened, and their lining presented a sloughy appearance, being covered with lymph of a greenish hue, and smeared with unhealthy purulent matter. This condition of the lining membrane extended along the jugular vein and superior vena cava, and within a short distance of the latter into the auricle. The left cavity of the pleura contained about four ounces of a thin, fetid matter." In addition to the facts above cited, all that is required is an account of the exact condition of the ear; and this I have supplied in the following case, which occurred to Dr. Heale, at the Free Hospital.

Pus in Mastoid Cells; Caries of the Lateral Sulcus; Pus in Lateral Sinus; Secondary Deposits.—Harriet G——, *æt.* 20, was admitted into the hospital on the 9th of March, 1850. She had great fluttering and irregular vibrating action of the heart, resembling erythismus mercurialis, but which subsided in a day or two. She was deaf in the left ear, and had long been subject to intense earache, with occasional fetid discharges from the meatus. She was restless, sleepless, occasionally delirious, and had no appetite. Soon after her admission, an abscess formed just above the left collar bone, which discharged large quantities

of matter until her decease. The disturbance of the heart's action returned after three doses of hyd. c. creta, 6 grains having been given every six hours; but it again subsided in about two days. She then had severe delirium, which abated after a sudden, large, and fetid discharge from the left ear; finally, she had erysipelas, violent delirium, succeeded by coma, and died on the 15th of April.

Autopsy.—A very large excavated abscess, with sinuses in various directions, was exposed at the root of the neck on the left side, communicating with, and extending through, the whole of the carotid sheath. The internal jugular vein was full of matter, which was also found burrowing down in the direction of the vena innominata; a fibrinous clot was found in that vein, extending into the descending vena cava; this being examined by the microscope, was found to contain pus globules. The lungs were filled with a frothy and purulent infiltration, without consolidation; there was a small circumscribed abscess between the pleura pulmonalis and the right lung, but not extending into the substance of the latter. The heart was healthy. The liver was pale-colored. The cerebrum was healthy; the arachnoid membrane in parts appeared smeared over with pus, more particularly in the posterior part, near the falx, joining the tentorium. The tentorium covering the left lobe of the cerebellum was much inflamed, thickened, and bad matter between it and the arachnoid, covering that lobe of the cerebellum; and, immediately beneath this, on cutting into the cerebellum, a circumscribed abscess, about the size of a walnut, was discovered. This was nearer the falx cerebelli, than to the outer margin of the cerebellum; the part of the cerebellum in contact with the cranial bones was healthy.

The petrous bone was examined by myself, and reported upon as follows:—

The meatus externus contained purulent matter. The glandular and periosteal portions of the membranous meatus were much softer than natural, and they adhered but slightly to the surface of the bone. The bone forming the upper and outer half of the tube, was found to present numerous foramina for the transmission of bloodvessels; they were much larger than natural, and some of them were surrounded by delicate layers of new bone; through the larger of these foramina large bristles could be passed, and they appeared to communicate with canals in the interior of the bone, which were continuous with orifices in the sulcus lateralis at its inner surface. The lateral sinus was of a dark-brown color; the dura mater forming its posterior wall was entire. The sinus was full of coagulated blood, mixed with purulent matter. The dura mater constituting its anterior wall, and which was in contact with the surface of the bone forming the sulcus lateralis, was very thick and soft; portions of it were destroyed by ulceration, and the bone was exposed. The bone forming the sulcus lateralis was of a dark color, and covered by masses of lymph and pus; its surface was rough presenting throughout numerous orifices and tortuous grooves; this appearance being produced by the almost complete disappearance of the internal table of the skull, which (excepting two scales, each measuring about two lines in

diameter,) had been destroyed by caries. A carious orifice existed between the cavity of the cerebellum and the mastoid cells. The bone forming the jugular fossa was also carious. There was an orifice in the posterior part of the membrana tympani. The tympanic mucous membrane was much thicker than natural, and in the upper osseous wall were observed a few small foramina for bloodvessels, and a carious orifice of a size sufficient to allow the passage of a small pin.

The mastoid cells at their upper part formed a cavity about the size of an ordinary horse-bean; it contained pus. This cavity communicated posteriorly with the lateral sulcus by means of an orifice three lines in diameter; anteriorly, the orifice into the tympanic cavity was not more than two lines in diameter, and it was placed above the level of the floor of the cavity containing the pus.

Pus and scrofulous matter in the Mastoid Cells; communication with the Lateral Sinus by the Veins; Secondary Deposit in Pleura.—Kitty D——, *æt.* 15, was admitted, under my care, as out-patient at St. Mary's Hospital, on the 16th day of February, 1854. She stated that, six months previously, she suffered from pain in the left ear, which was followed by dullness of hearing in it, as well as in the right ear, and this had remained to the present time, accompanied by a discharge from the left ear. Upon examination of the left ear, a small red polypus was seen at the inferior part of the meatus, near to the membrana tympani; the latter membrane was white; she did not complain of pain in the head. She was ordered gentle counter-irritation behind the ear, and the ear to be syringed with a weak astringent lotion. She remained much the same until March 27th, when she was admitted, in my absence, as an urgent case, under Dr. Sibson, in the hospital. When admitted, she was partly unconscious, was extremely prostrate, and could not speak; the skin was parched; the tongue brown and dry. Pulse 140, very small and thready; pupils sluggish; the left rather more contracted than the right. Upon inquiry, it was found, that, three days before, a marked difference was observed in her manner; this was attributed to the pain in the head and left ear, of which she much complained; she was unable to do any work. On the 25th, she kept her bed; on the 26th, she became still worse; and, on the 27th, application was made at the hospital. Upon being seen by one of the officers, she was at once admitted. Stimulants were freely administered, and the patient somewhat rallied; during the night she was very restless and wandered a good deal.

28th.—Seems quite sensible to all that is done to her, but does not speak; she mutters to herself. Pulse 140; skin hot; but still some moisture is apparent. Loud sonorous rhonchus of right lung; the head is held to the right side; the mouth is drawn to the right; the nostrils are expanded, and there is partial paralysis of some of the muscles on the left side of the face. She was supported by stimulants at the same time that a leech was applied to the neck.

10 P. M.—Very low; surface cold; skin clammy; face livid; subsultus tendinum; pulse feeble and irregular.

29th.—Much as yesterday; rambled during the night; voids urine involuntarily; tongue brown and moist; pulse 140, very small. During the evening very low; voided urine in the bed; muscles suddenly contracting.

30th.—Slept badly; at times wandered much; breathing hurried; pulse 140; nostrils dilated. She gradually became worse, and died at 2 15 P. M.

Autopsy.—Cerebrum firm; ventricles dry; gray substance, very dark. Over the left lobe of the cerebellum, at the posterior part of the petrous bone, is a dark bluish portion of the size of half-a-crown. The gray matter of the cerebellum very blue, to the depth of one-eighth of an inch; beneath the discolored spot, the substance of the cerebellum was slightly softened. There were considerable adhesions between the lungs and the pleura costalis; there was also tubercular deposit, covered by an unhealthy, plastic, fibrinous exudation; the pleural cavities contained a pint of fluid. The dura mater forming the posterior wall of the lateral sinus (where it is situated in the temporal bone) was of a dark color, and soft; the sinus contained at its upper part a firm coagulum of dark-colored fibrin; at its lower part it was full of dark-colored pus. The anterior wall of the sinus was attached to the bone much less firmly than natural. The mastoid cells were full of pus and scrofulous matter; their anterior wall presented an orifice about two lines in diameter, which opened into the meatus externus. The incus and the thick mucous membrane around it prevented the pus from escaping. The orifices for the passage of the bloodvessels from the mastoid cells to the lateral sinus were somewhat larger than natural.

It will be observed that, in this case, there was not any caries of the bone towards the cerebellum, and the only means by which the disease from the mastoid cells could be propagated to the cavity of the lateral sinus must have been the veins.

Mr. Coe's case is evidently one of remarkable interest, but it is almost spoiled for want of sufficient circumstantiality. It would seem to point to the conclusion that the lungs may become implicated in the cases under consideration through a nervous as well as through a venous channel. In Mr. Coe's opinion, the fatal result in his case was immediately due to irritation of the pneumogastric nerve, more especially of its inferior laryngeal branch. He writes:

CASE.—An out-patient of the Bristol General Hospital came under my care, complaining of running from the right ear, which had existed for some years, and occasional paroxysms of acute pain in the ear and head whenever the discharge ceased for a time, such being the case at the period of application. Leeches were applied to the mastoid process, and warm fomentations to the side of the head, and mercury was given internally. On the next day, symptoms of meningitis having come on, the patient was taken into the house. He progressed favorably for some days; afterwards he began to complain of stiffness and pain in the right side of the neck, and sudden attacks of difficulty of breathing, as if from the spasm of the glottis. There was a distinct rope-like swell-

ing descending from the base of the skull down the side of the neck, in the situation of the carotid sheath; it was very tender to the touch.

The diagnosis was, caries of the posterior portion of the temporal bone, meningitis, obstruction of the right lateral sinus, either from extension of inflammation or from secondary, purulent deposit, subsequent coagulation of blood in the internal jugular vein, inflammation of its sheath, with involvement of the pneumogastric nerve, especially the inferior laryngeal nerve (the phenomena of the irritation of this branch being, at any rate, more daily manifested than of any other portion of the nerve.)

The correctness of the diagnosis was proved by the post-mortem examination.

It would appear from these cases, that the chest may become implicated in more than one way as a consequence of disease of the ear, and hence another reason for regarding these cases with suspicion, and for treating them with promptness. The fact, also, is of great practical importance, for it naturally prompts us to inquire into the condition of the ear in sudden and serious affections of the lungs and pleura, and suggests a very different treatment, as well as a much more guarded prognosis, in cases where there is evidence of such disease.

On the Deafness connected with Fevers, (typhus, smallpox, &c.)—M. Triguet refers this symptom to inflammation of the internal ear, and his treatment is directed to the prevention of the accumulation of pus in the auditory cavities, and of the ruinous consequences of this accumulation. In order to this, he first tries the effect of leeching, cupping, or blisters in the neighborhood of the external ear. If this treatment fails, he catheterizes the Eustachian tube,—for this tube is obliterated from the first by the tumefaction of its mucous membrane,—and injects through the catheter certain emollient, anodyne, or slightly irritating solutions, according to circumstances. And lastly, if this treatment fails, he perforates the membrana tympani, and introduces the injection through the opening. Under no circumstances must the internal ear be allowed to remain distended with matter longer than can be helped.—*Ib.*—*From Arch. Belges de Méd.* and *Gaz. Méd. de Paris.*

From the preceding article, it will be seen that the British medical press has been of late rich in observations upon the pathology of the ear. The diseases of the ear, though exceedingly common, have been too little noted by the periodical press, as compared with many diseases of less pathological significance and frequency. For these reasons, the readers of the New Orleans Medical and Surgical Journal will not, it is believed, consider the above summary as unnecessarily long.

REVIEWS.

Rev. I.—1st. *An Analytical Compendium of the various Branches of Medical Science, for the Use and Examination of Students;* by John Neill, M. D., Surgeon to the Pennsylvania Hospital; Fellow of the College of Physicians, etc., etc., etc.: and Francis Gurney Smith, M. D., Physician to the St. Joseph Hospital; Fellow of the College of Physicians, etc. A new edition, revised and improved, with 374 illustrations. Philadelphia: Blanchard & Lea. 1856. 12mo. Pp. 974.

2nd.—*Synopsis of the Course of Lectures on Materia Medica and Pharmacy, delivered in the University of Pennsylvania;* by Joseph Carson, M. D. Second edition, revised. Philadelphia: Blanchard & Lea. 1855. 8vo. Pp. 196.

3rd.—*The Book of Prescriptions;* containing 2,900 Prescriptions, collected from the practice of the most eminent Physicians and Surgeons, English and Foreign; comprising also a compendious History of the Materia Medica of all countries, alphabetically arranged; and a list of Doses of all Officinal or Established Preparations; by Henry Beasley. Philadelphia: Lindsay & Blakiston. 1855. 12mo. Pp. 369.

4th.—*The Practitioner's Pharmacopœia and Universal Formulary;* containing 2,000 classified Prescriptions, selected from the practice of the most eminent British and Foreign medical authorities; with an abstract of the three British Pharmacopœias, and much other useful Information for the Practitioner and Student; by John Foote, M. R. C. S., London; formerly Surgeon to the Cholera Hospital, St. Helier's, Jersey. With corrections and additions by an American

physician. New-York: Samuel S. & William Wood, 261 Pearl-Street. 1855. 12mo. Pp. 390.

5th.—*The Anatomical Remembrancer, or Complete Pocket Anatomist;* containing a concise description of the Structure of the Human Body. Second American from the fourth London edition; with corrections and additions; by C. E. Isaacs, M. D., Demonstrator of Anatomy in the University of New-York. New-York: Samuel S. & William Wood. 261 Pearl-Street. 1855. Pp. 265. 18mo.

6th.—*On Bandaging, and other Operations of Minor Surgery:* by F. W. Sargent, M. D., Member of the College of Physicians of Philadelphia; one of the Surgeons to Wills Hospital, etc., etc., etc. New edition, revised and enlarged, with 128 Illustrations. Philadelphia: Blanchard & Lea. 1856. 12mo. Pp. 359.

7th.—*The Principles and Practice of Ophthalmic Medicine and Surgery;* by T. Wharton Jones, F. R. S., Professor of Ophthalmic Medicine and Surgery, in University College, London; Ophthalmic Surgeon to the Hospital, etc. With 110 Illustrations. Second edition, with additions from the second and revised London edition. Philadelphia: Blanchard & Lea. 1856. Large 12mo. Pp. 500.

The literature of "Uses and Abuses" has been abundantly produced, ranging from its relation to "Air" and "Aliments," down to its dealings with "Cosmetics" and "Corsets." It is, however, hardly yet complete. An essay on the "Uses and Abuses" of *little books*, in their relation to medical instruction, might be very fitly added. It is true the "Uses" might be dismissed with but comparatively few words; though on the subject of the "Abuses" words might be multiplied. It is not our purpose here to enter into the discussion of the subject; but rather to conform to the existing state of things, which do not appear to admit of remedy. The art of conveying superficial and imperfect instruction is one of the pre-meditated arrangements and purposes of the times. "Ample academic honors" are, and must continue to be *à peu de frais*, and to this end there must be an adaptation of books to teachers and pupils. As to medical authorship, its honors and distinctions in this wonderfully progressive age, are quite within the reach of the million; so

that the *men* and *materiel* are inexhaustable, and the supply of *little books* cannot fail to meet the pressing demand.

Accepting therefore without gainsaying, as a finality, this class of medical works, the utility of which is not denied, we shall, merely on their merits, bestow a passing glance at the volumes enumerated at the head of this article.

The "Compend" of Drs. Neill and Smith is incomparably the most valuable work of its class ever published in this country. Attempts have been made in various quarters to squeeze Anatomy, Physiology, Surgery, the Practice of Medicine, Obstetrics, Materia Medica, and Chemistry into a single manual; but the operation has signally failed in the hands of all up to the advent of the "Neill and Smith" volume, which is quite a miracle of success. The outlines of the whole are admirably drawn and illustrated, and the authors are eminently entitled to the grateful consideration of the student of every class. It may be said, truly, that the "Compend" will be liable to abuse in the hands of the indolent, superficial, and incompetent student, relieving him from more extended research. But it will bring him real compensating advantages. It will rescue him from the *utter ignorance* in which he is sure to be ingulphed, should he trust himself in the attempt to wade through seven extended and perfect treatises. We would advise such students to make the "Compend" their Alpha and Omega; and if indeed they thereby acquire but little knowledge, they can scarcely fail to attain "the most ample academic honors." With the student of the opposite class, however, there can be no abuse of the "Compend;" but, on the contrary, it must operate as a monitor, to guide him forward into more extended sources of knowledge. We commend him to his "Neill and Smith." By the way, the authors are in some places chargeable in this, as in former editions, with the palpable fault (as at pages 143, 144,) of inserting wood-cuts, lettered and figured on all the points of demonstration, without any reference to these letters and figures either at the foot of the page or in the text—for ornament, not for use. In the department of Physiology, we meet with no instances of this fault, the whole being highly finished. Not a few of them, however, occur in the department of Anatomy, while in that of Materia Medica they constantly occur, the organography of plants being illustrated and lettered, while the student will be compelled to resort to the pages of Pereira, Royle, or some other author, in which these same illustrations are inserted, in order to arrive at the explanation. At *Cinchona*, *Cinnamomum*, and *Humulus*, for instance, there are no less than an aggregate

of twenty-three lettered organographic figures, which speak only to the eye of the adept in botany. This ought to be reformed altogether.

Passing from the "Compend," which we hold to be a gem in its way, we open on the title-page of Professor Carson, in which he *promises* us "A Synopsis" of his Course of Lectures in his department in the University of Pennsylvania. Had he met the indications thus laid down, he might have produced a volume which, though necessarily a meagre exhibition, would have to some extent recommended itself not only to the student, but to the library of the practitioner. As it is, it is wholly useless to both; and only excites our astonishment that such worthless verbiage should have been copyrighted and published by a learned professor. The book is, in the main, a synopsis of nothing—an experiment in book-making, in which the ideas are omitted as unnecessary. The following is an example of the professor's most edifying mode of treating his subjects :—

"*Hoffmann's Anodyne.*—Mode of preparation, composition, properties, consistence, color, odor, taste. Sp. gr. 1.409: size of drop. Solubility in water and alcohol.

"Employment as an anæsthetic agent. Danger from its use. Mode of producing death. Dose: gtt. x to xxx. External employment."

Professor Carson's report of his lectures is still more laconic than the "Synopsis" of a parliamentary report made by Punch several years ago, on the occasion of a famous debate: "The Duke of Wellington," says he, "arose amidst a profound sensation. The noble Duke said, for his part, he was extremely fearful——. Lord Brougham replied, that from the beginning of this debate, he never had an idea——. The Bishop Llandaff remarked that he had never believed——. Lord George Bentinck said that he was truly indebted——. In reply to the question put to the noble lord, Lord John Russell said that he was not at all conscious——." As we have no proof, however, that Professor Carson anywhere intends to be facetious, we exhort him to produce a new edition of his work and favor the world with a *bona fide* "synopsis" of his course on "Materia Medica and Pharmacy." To all such authors we must exclaim, in the language of Macbeth: "Stay ye *imperfect speakers*, tell me more." We are quite at a loss to see how even the professor's class can profit by this "revised, copyrighted, second edition" of nothing.

So far as the class of books to which the volumes of Messrs. Beasley and Foote belong, is calculated to serve the legitimate purposes of the student and practitioner, these two *little books* are not deficient, being fully equal to the best efforts of their competitors. The book of Mr.

Beasley is strictly what it professes to be, a book of prescriptions; and the compiler has dealt with his materials in the true spirit of an English apothecary. He revels in the elaborate *signaturæ* of canine Latin, of which there is so great a display in the practical works of Great Britain. Mr. Foote has attempted a wider range of subjects, in about the same space, producing not only a "prescription book," but, in his own words, giving "much other useful information for the practitioner and student." Upon the whole, we think a low estimate should be placed on such works as these. No physician who has duly mastered the principles of his profession, can stand in need of such aids; and one who has not, can never learn the art of prescribing from any such sources. Works of this kind, doubtlessly, have their uses; but the abuses to which they give rise are but too apparent. The late eminent and distinguished Dr. Pereira, for example, is said to be the author of the "Physician's Prescription Book," which is an example of an abuse of authorship coming from a high source. In a few brief little pages it is attempted to enable the prescriber to master the "syntax and prosody of prescriptions," and to wield the language of Celsus. Nothing worthy of being called Latin can be picked up in this way,—no such compromise of labor and study can be admitted.

The "Anatomical Remembrancer" is a little book—very little—possessing no particular merits and demanding no special notice. Dr. Isaacs need scarcely have taken the trouble to treat the work to "corrections and additions." *Le jeu n'en vaut pas la chandelle.* Squatting on the title-pages of British works, and defacing the text with patches of authorship, [in brackets,] has become the reproach of American physicians. Such intrusion, however, is usually practised on works of merit—works calculated to draw the public attention and homage to the parasitical intruder—and in this respect the editor has departed from the general rule, and performed the humblest possible act of authorship. There was no particular necessity, whatever, for such a work as the "Anatomical Remembrancer."

From the little, "Dry Anatomy" from London, "with corrections and additions," by Dr. Isaacs, we turn to the book of Dr. Sargent—his "little book," as he calls it, in the preface to this, the new edition; and here we cannot withhold our entire approval. Dr. Sargent appears to have a just conception of what little books can do, where they are needed, and how they can render themselves generally useful, which is more than can be said of the generality of laborers in the vineyard of minor authorship. We have never examined a work which has better

fulfilled its mission. Dr. S. has given in a portable and neat volume, an admirably illustrated summary of theory and practice, in relation to implements, bandages, fractures, apparatus, dislocations, and other cognate subjects appertaining to the domain of minor surgery. The present is superior to the edition of 1848, and contains more than forty new wood-cut illustrations. Dr. Sargent "hopes," in his preface, that his "efforts will be found successful," and we think his prayer will be fully answered. His "little book" is insusceptible of "abuse," and its "uses" are self-evident.

The Manual of Professor Jones is a book well known to the profession, and is the valuable work of an eminent and learned author. It needs no patching at the hands of "editors," and can bring them no reputation. This ample manual, exemplifying as it does a far higher grade of authorship than the other books which form the subject of this notice, is not here introduced for the purpose of canvassing its merits, but with a view of noticing the unwarrantable and disreputable course of its Philadelphia "editors." We have before us the American edition of 1847, in which the name of Dr. Hays is introduced into the title-page as "editor." On looking for his brackets, however, to which he refers us, we find that out of 509 pages, *one page and a-half or about* 66 *lines* belong to Dr. Hays! The editor congratulates himself that "his task has been a very light one." Delightful "task!" "Honors are easy." In the present edition Professor Jones is again so fortunate as to find an "editor" to share his honors; to wit, Dr. Edward Hartshorne. Dr. H. tells us that "the only excuse he has to offer for the insertion of notes is, that they are founded on professional familiarity with the subject treated on." This is no excuse whatever for intermeddling with Wharton Jones' work, though it might be a good reason for writing a book of his own. Nevertheless, on scanning the brackets which he tells us includes all his additions, we find, that with the exception of two notes, *each less than two pages*, the "editor's" words, scraps, and phrases will make only *about* 119 *lines, or a little over two pages*, sprinkled over the 500 pages which go to make up the work! Surely so mortifying and humiliating a picture affords its own commentary, and we would as soon think of inserting our "office hours" and residence, in the form of notes in another man's book, as to enact the "editor" on such sorry pretences as have thereunto moved the "editors" of T. Wharton Jones. These editorial efforts forcibly recall to our mind a couplet from *le bon Lafontaine.*

"Après bein du travail, le coche arrive au haut:
Respirons maintenant! dit le mouche aussitöt."

To sum up, in regard to minor authorship, it may be said to make its appearance in our country in two forms, the *independent* and the *parasitical;* and as these are readily convertible into each other, it becomes a matter of critical interest to determine which of these is the more laudable, creditable, and deserving of encouragement. We think the preference should clearly be given to *the former*, and in this view, *little books* acquire an importance and value by comparison, beyond their mere merits considered intrinsically. The Neill of the "Compend" is superior to the Neill of Pirrie's Surgery; Smith in the "Compend" is in a more creditable vocation than in rounding out the second-hand thoughts of the noted compiler, Carpenter; the Sargent, in "Bandages," puts out of countenance the Sargent of Miller's Surgery; and Professor Carson, though playing in his "Synopsis" a *rôle* similar to that of "Briefwit," in the play, is more creditably employed than when with the United States Pharmacopœia in one hand, and the scissors in the other, he carved his way into a place in the title-page of the great work of Pereira. Whether our country is to produce little or great books, let the era of *independent authorship* be inaugurated, and in this behalf we look earnestly and hopefully to the Neills, the Smiths, the Sargents, the Hayses, the Isaacs, the Hartshornes, and the Carsons, as equal to any and every emergency. As it is, though we lay claim to political independence as a nation, we make ourselves no better than an abject little province of Great Britain. Let there be an end to *parasitical authorship.* "*Miserum est aliorum incumbere famæ,*" as saith the vehement Juvenal.—M. MORTON DOWLER, M. D.

Note on the Compendium of Profs. Neill and Smith.—Upon reading the proof of the above commendatory notice of the *Analytical Compendium*, so accordant with the scientific reputation of these gentlemen, the criticism of the reviewer concerning the engravings induced the undersigned to look for a few moments into the work, not having the leisure to read it; whereupon he accidentally opened on the anatomy of the ear, which more than confirmed the animadversion of the reviewer, as it regards *carelessness*, which to gentlemen of less reputation would be somewhat damaging, providing manly criticism should come into vogue.

The reading of the article on the ear, less than five pages, gave the following results: Figure 156 (p. 195) is not explained or at all referred to in the text. But in another page, under another and very different figure, (157) the lettering *a*, *b*, and *c*, though not designated as applying to any figure, may be solved by a possible accident, by turning backward, contrary to the rational indication afforded by its actual position.

In figure 157 many important parts duly lettered are not mentioned in the text, as *f*, *g*, *h*, *i*, *j*, *k*, *l*, *m*, *n*, the darkness being to the light as 2 to 1, nearly. In figure 158, the numeral 1 called for in the text is omitted, and 1*c* is *lc*; there is a *g* in the figure not enumerated in the text; in figure 159, no note is taken of *r*, *i*, *av*, *ac*, *st*, while *sp* is in the text but not in the cut.—Editor.

Rev. II.—*The Principles of Surgery:* by James Miller, F. R. S. E., F. R. C. S. E., author of a Treatise on the Practice of Surgery; Surgeon in ordinary to the Queen for Scotland; Surgeon in ordinary to his Royal Highness Prince Albert for Scotland; Professor of Surgery in the University of Edinburgh; Consulting Surgeon to the Royal Infirmary, etc., etc., etc.; fourth American from the 3rd and revised English edition; illustrated by 250 engravings on wood. Pp. 696; 8vo. Philadelphia: Blanchard & Lea. 1856.

The philosophical surgeon never loses sight of the fundamental principles of surgical science. Without these, experience the most ample and details the most multitudinous, lead to confusion, uncertainty, and error. The world moral, physical, medical and surgical, *has* always teemed with facts—facts sterile for science, until energized thought penetrated their apparently phenomenal chaos. The past has had a plentiful experience, abundant observation; the same may be said of the present; the future will be but a repetition of phenomena like the past, but real progress in science springs from the inmost recesses of the soul, the subjective element, and ages of sterile experience become at once prolific by a flash of thought, and thus a new era is inaugurated.

It is the great thoughts of surgical science *which make* the surgeon a benefactor to society, something more than a mechanical operator. How accurate soever he may be in this latter character, the fundamental qualification of a truly great surgeon consists in sound principles skilfully applied in practice. In proportion to his knowledge of the principles of his art, does he repudiate the use of the knife in a large class of cases in which the mere mechanical surgeon is but too willing to operate. Surgical medicine—*médecine opératoire*, as the French happily term it, is, for the most part based on the same principles as the practice of physic,

with this difference, namely; that in many cases prompt manual aid alone is efficacious or necessary to effect a cure, while in others, the manual operation is preventable by medical treatment, or is provisionally deferred as a possible eventuality or necessary alternative.

Hence, even the specialistic surgeon must be in no respect inferior to the physician in pathology and therapeutics. A disease amenable to medical treatment, which otherwise would necessarily eventuate in a surgical operation,—or a surgical operation, the effects of which would produce secondary disease subversive of all the advantages otherwise derivable from the operation, and sometimes even endangering health and life to a much greater extent than the original malady—requires an equal knowledge of the principles of medicine and surgery on the part of the operator. For example, an eye-surgeon who removes a cataract, may readily lose all hope of success from the operation by the subsequent inflammation of the iris and other tissues of the eye, unless, indeed, he be a skilful physician. He, who is well acquainted with the pathology of the eye, can scarcely fail in the pathology of any other organ whatever, and, *à fortiori*, he who is competent to treat all organs—the entirety of the constitution—must be doubly able in the special medical treatment of the eye, since he can best appreciate the general and local influences and reactions in the system; as in the case of the astronomer, who is obliged to study not only the dynamics of a special planet, but the dynamics of the whole planetry system, in order to calculate the mutual influences of the whole upon any special planet, and of each special planet upon all the others, whereby accelerations, retardations, aberrations, and preturbations take place, all of which must be truly estimated in order to eliminate a single truth, the universality of which shall be indisputable.

Let the reader carefully study the vast array of recent pathological observations and experiences which coustitute Art. IX. (in the Progress of Medicine) of the present number of this Journal, and then ask,—can any mere surgeon-aurist, or ear-doctor, who has not a profound knowledge of the whole circle of pathology and therapeutics, treat, with a reasonable prospect of success, the maladies of the ear?

Some advantages are doubtlessly attainable, as it regards neatness and celerity in operating, by practising a surgical speciality; but, upon the whole, these are not sufficient to compensate for the limited views of the healing art derived from one stand-point—from one isolated speciality, to the exclusion of the general principles of medical science.

The rapid advances in surgical science, the great multiplication of

able surgeons, the tendency to conservatism, the diminished number of operations in cases formerly considered purely surgical, the increased reliance upon Nature and upon the efficacy of medical treatment in cases once deemed amenable to manual resources alone,—all tend to the advantage of the public, and contribute to increase the honors, but to diminish the profits, of existing and contending surgeons. The surgeons of New Orleans could probably perform all the necessary surgical operations for half of the cities of the Republic, without accumulating thereby the wealth of a Girard, an Astor, a Touro, or a McDonogh.

A great majority of American physicians, scattered over a vast territorial expansion, remote from large towns where the most celebrated surgical operators usually live, being often remote from any professional assistance, must, from the necessity of the case, practise surgery as well as physic.

It is exceedingly difficult to acquire and fully retain that exact anatomical and surgical knowledge which is essential, in order to be always fully prepared for a rare occasional case of surgery, occurring, perhaps, but once a month, perhaps but once a year, the compensation for which will hardly supply the physician with surgical instruments adapted to all the emergencies which may happen in his vicinity, and which may be of the most appalling character, admitting of no delay.

The exact knowledge alluded to, is, however, necessary for the most part, to the successful practice of medicine. If, therefore, this knowledge failed to *pay*, (the lowest and most mercenary point of view in which it can be placed,) it would still be necessary to the *physician*; while, at the same time, as a *surgeon*, it will often enable him to save life and acquire a just claim to reputation. The utmost skill in the practice of physic seldom brings half as much reputation as moderate ability tried by the surgical ordeal, the material test. Neither reputation nor pecuniary gain is the most exalted possible aim—a higher motive, namely, duty, or benevolence, is neither a chimerical nor an impossible perfection of humanity. The serene and lasting satisfaction resulting from a conviction that pain has been relieved, or death averted in one, and, *à fortiori*, in many cases, is in itself no small reward, while, on the other hand, the consciousness that life has been sacrificed for want of skill, is a punishment little short of Cain's, which he declared was greater than he could bear.

It may not be amiss to enlarge a little upon this topic, in connection with the medical and surgical unity which is suggested by Prof. Miller's principles.

A residence in a city, where hospital facilities and post-mortem examinations are accessible, affords the city practitioner advantages over the rural or village doctor of equal ability and education. For example, the former has opportunities of not only refreshing his anatomical impressions and recollections of other days, but he enlarges the horizon of his knowledge—repels or dispels the clouds which would otherwise pass over the disk or settle upon the brightest orb of memory. It does not follow, however, that one city physician in fifty will ever avail himself of these advantages. Great is the law of compensation. The necessities of the rural physician, in his isolation, to some extent, compel him to keep up to the level of knowledge in anatomy, &c., in order to be prepared for every emergency, while, in a city, the indolent physician, who has forgot much that he once learned, may more readily turn over to others, difficult cases requiring an exact knowledge of anatomy, &c. Thus, a city physician even in a large practice, will sometimes decline the simplest operation in surgery, and does not think his reputation endangered by confessing that he "is no surgeon"—a confession or subterfuge that would be very injurious to a village physician. After all, the surest guarantee that a physician will acquire, retain, and be always ready to apply the utmost attainable knowledge in the healing art, is, not the profit it will bring, but the pleasure he will find in science itself. If every doctor in the nation were to keep himself constantly up to the level of knowledge in anatomy, physiology, surgery, &c., solely for the profits of the surgical operations which might fall to his lot, the economists and utilitarians might distrust his sanity. But, on the contrary, if knowledge be desirable for its own sake, as a source of pleasure to the possessor, apart from the direct motive of pecuniary gain, as much knowledge in many branches of science is known to be, then, it is easy to understand that the physician who may possibly never be called on to perform a difficult or important operation during a lifetime, though always prepared for eventualities, may yet be compensated in immaterial or intellectual wealth. This kind of capital many may regard as abstract, sentimental, ideal; but it must not be forgotten that the Beautiful or Ideal is the great model, the subjective type of the world of Art. The Æsthetic and the pecuniary, scientific research and market prices, have no necessary connection as cause and effect.

If this argument be fallacious, it is difficult to find any rational motive compensative for all the pains and incessant labors incidental to the high requirements indicated above, particularly in large cities, where, among nineteen-twentieths of the profession, it is easy to dodge difficul-

ties and avoid responsibilities for *mal-practice*. In large cities, idleness, dissipation, apathy, routinism, and the ardent pursuit of material wealth, prevail, probably more, than among rural physicians.

The blunders, failures, and the incompetency of the surgical practitioner are, as already indicated, for the most part, more obvious to the non-professional publie than those of the physician. The latter, though wholly incompetent, may be popular—may fail a thousand times where skill might have succeeded—yet his inefficiency and mal-practice will probably escape detection and exposure, while a single surgical case of mal-practice will probably be detected.

Further: surgical, still more than medical practice, occurs among the poor, the latter being more exposed to the causes of fractures, dislocations, wounds, &c. Hence, upon the whole, surgical services are less compensated than medical, unless the pleasures of charity be an equivalent, as would seem to be the case at the present day, seeing that many, if not all medical men offer their services gratuitously to the indigent—a phase of professional liberality, which, three centuries ago, had no existence, if the testimony of Bishop Latimer, Queen Mary's Martyr, be good for anything in this behalf, as the following statement of the bishop (taken from Southey's Common-place Book) will show :—"Ye see by the example of Hezekiah, that it is lawful to use physick. But now, in our days, physick is a remedy prepared only for rich folks, and not for poor; for the poor man is not able to wage the physician. God, indeed, hath made physick for rich and poor, but the physicians in our time seek only their own profits, how to get money, not how they might do good unto their poor neighbour. Whereby it appeareth that they be, for the most part, without charity, and so consequently not the children of God; and no doubt but the heavy judgement of God hangeth over their heads, for they are commonly very wealthy, and ready to purchase lands, but to help their neighbour, that they cannot do. But God will find them out one day, I doubt not."

The uncertainty of medicine has furnished material for satire in all ages. Its uncertainty, as compared with surgery, is often more apparent than real.

A writer in the Foreign Quarterly Review (London, 1834,) says of the physician, (and he might equally have said the same of the surgeon,) "he investigates the nature of our corporeal frame, examines its remotest structure, observes its minutest operations, and learns to know how fearfully and wonderfully we are made, that, when disease has interfered with and disarranged the machine, he may be able to remove

the offending cause, once more to set the functions in the train for action, and restore to all the parts to that perfect harmony on which our health, and, with it, our every comfort, depends."

The author of a Manual for Invalids (a physician whose faith in the existing certainty of physic is mingled with enthusiasm in this behalf,) says:—"The pathology of disease is a science of as determinate a character as any of the recondite truths of metaphysics or the more familiar facts of geometry; but it is not a science capable of being taught. By the intervention of language, men can generally be made thoroughly to understand each of the mathematical propositions; language and figures are quite adequate to explain numbers in arithmetic, and quantity in algebra; but language is very unequal to explain a great variety of very important facts in pathological science: it may be acquired by long observation and experience. The view of a diseased countenance is a better index to the complaint, than any detail of symptoms which in his language can convey."

The complex laws of medicine and surgery would be found, doubtlessly, as certain as those of astronomy, were the former fully discovered and appreciated—yet, at present, compared with the latter, they form a strong contrast, being in many cases devoid of certainty, scarcely rising beyond mere probability.

But it is time to glance at Prof. Miller's Principles; a formal review would be but an attempt to "gild fine gold," and would be wholly unnecessary, as the book has been universally approved by the medical public. This desultory article upon surgical medicine has been suggested by turning over the leaves of the work.

In this book of nearly 700 pages, there is scarcely any portion which is not as much medical as surgical in its character—scarcely one so isolated as to be best studied as a speciality—scarcely one which does not involve the constitution—the entire organism; as inflammatory, hectic, typhoid, and irritative fevers; cachectic affections, including scrofula, cancer, syphilis, rheumatism, gout, and scurvy, the so-called nervous affections—mental, sensational; motory, irritation; inflammatory processes—congestions, tumefaction, resolution, suppuration, ulceration, adhesion, granulation, abscess, sinus, fistula, pyæmia, sloughing, mortification, hypertrophy, atrophy, absorption, tumors, hæmorrhage, erysipelas, furunculus, carbuncle, periostitis, neuralgia, ostitis, caries, necrosis, rickets, fragilitas ossium, mollities ossium, exostosis, osteoma, enchondroma, osteocystoma, osteosarcoma, osteocarcinoma, osteomelanosis, synovitis, anchylosis, arteritis, aneurism, phlebitis, varix, neuritis; lace-

rated, contused, punctured, poisoned, and gun-shot wounds; malignant pustule, tetanus, burns, scalds, frost-bite, sprains, bruises, ecchymosis, strangulation, immersion, fracture, and dislocation: the two latter items, which relate more particularly to mechanical treatment, occupy about one-twentieth part of this work.

The medical student who does not intend to practise operative surgery, nevertheless, will find Prof. Miller's Principles of Surgery one of the best books, as a safe guide in the practice of physic, not to say surgery. Instead of commencing his pathological studies in systems of nosology, symptomotology, theory, &c., let the student read the Principles of Surgery, carefully studying every surgical operation that he may have an opportunity of witnessing: for many surgical operations are, for his purpose, direct vivisections of the highest value in both physiology and pathology. Surgical medicine—*médecine opératoire*—presents, in many cases, the fundamental types of disease more clearly defined than physic proper.

This Fourth Edition of Prof. Miller's Principles of Surgery, now diligently revised, greatly enlarged, abundantly illustrated, enriched with recent facts, and reasoned out of the author's more matured and enlarged experiences, must prove acceptable and very necessary to both physicians and surgeons disirous of keeping pace with the progress of medical knowledge.

The American Publisher's advertisement explanatory of the absence of editorial notes, is altogether satisfactory—"their aim having been merely to render the work an exact transcript of the author's last and revised edition"—an "*aim*" which has been too often lost sight of in the reprints of standard works of foreign authors.—Editor.

MISCELLANEOUS.

Memoirs of the celebrated Dr. Harvey; from Notes collected from the Bodleian Library and Ashmolean Museum.

[From the London Medical and Physical Journal, for February, 1815.]

Gul. Harveus, An. ætat. 10, in Schola Cantuar. primis doctrinæ rudimentis imbutus; 14, Col. Gonvil. et Caii Alumnus; 19, peragravit Galliam et Italiam; 23, Patavii Præceptores habuit Eust. Radium, Tho. Minad. H. Fab. ab Aquapend. Consul Angl. 16 * fit; 24, Doctor Med. et Chirurg. Reversus Lond. praxin exercuit. et uxorem† duxit; 25, Coll. Med. Socius; 37, Anatom. et Chirurg. Professor; 54, Medicus Regius factus. Scripsit de Motu Sanguinis, et de Gen. Animal. Obiit 30 Jun. md.clvii. Ætat. 80.‡ (But I will remember that Dr. Alsop, at his funeral sayd, that he was eighty wanting one; and that he was the eldest of nine brethren.)

He lies buried in a vault at Hempsted in Essex, wch. his brother Eliab Harvey built, he is lapt in lead, and on his brest in great letters Dr. William Harvey. I was at his funerall, and helpt to carry him into the vault.

In the library at the Physitians' Colledge, was the following inscription above his statue, (which was in his doctorall robes.)

Gul. Harveus, Natus A. D. 1578, Apr. 2. Folkston,§ in Com. Cantii, Primogenitus Tho. Harvei et Joanæ Halk. Frat. Germani. Tho. Jo. Dan. Eliab. Mich. Mat. Sorores. Sarah, Amey.

Under his white marble statue, on the pedestall, thus,

Gulielmo Harveo,
Vivo,
Monumentis suis immortalli,
Hoc insuper
Coll. Med. Lond.
Posuit
Qui enim Sanguinis Motum
(ut et animal ortum) dedit
meruit esse
Stator Perpetuus.

Dr. Harvey added (or was very bountiful in contributing to) a noble building of Roman architecture (of rustique work with Corinthian pillasters) at the Physitians' College aforesaid, viz. a great parlour, a kind of convocation-house for the fellows to meet in belowe; and a library

* Sic. Edit. † Smyth.

‡ Over Dr. Harvey's picture in a great parlour under the library, at the Physitians' College at Amen-corner, [burnt.]

§ Borne in the house which is now the post house, a fair stone built house, which he gave to Caius Coll. in Cambridge, with some lands there, in his will. His brother Eliab would have given any money or exchange for it, because 'twas his father's and they all borne there, but the doctor (truly) thought his memory would be better preserved this way, for his brother has left noble seats, and about 3000 pounds per annum at least.

above. On the outside, on the freeze, in letters three inches long, is this inscription, Suasu et cura Fran. Prujeani, Præsidis, et Edmundi Smith, Elect. Inchoata et Perfecta est hæc Fabrica. An. mdcliii.

All these buildings and remembrances were destroyed by the generall fire.

He was always very contemplative, and the first yt. I heare of yt. was curious in Anatomic in England. He had made dissections of froggs, toads, and a number of other animals, and had curious observations on them, which papers, together with his goods, in his lodgings, at White-hall, were plundered at the beginning of the rebellion, he being for the king, and with him at Oxon, but he often sayd, that of all the losses he sustained, no griefe was so crucifying to him as the losse of these papers, wch. for love or money he could never retrieve or obtaine. When K. Ch. I. by reason of the tumults left London, he attended him and was at the fight of Edge-hill with him; and during the fight, the Prince and D. of Yorke were committed to his care. He told me that he withdrew with them under a hedge, and tooke out of his pockett a booke and read; but he had not read very long before a bullet of a great gun grazed on the ground neare him, which made him remove his station; he told me yt. Sir Adrian Scrope was dangerously wounded there, and left for dead amongst the dead men, stript, which happened to be the saving of his life. It was cold clear weather, and a frost that night; which staunched his bleeding, and about midnight, or some hours after his hurt, he awaked, and was faine to drawe a dead body upon him for warmeth sake.

After Oxford was surrendered, which was 24 July, 1646, he came to London, and lived with his brother Eliab, a rich merchant in London, on —— hill, opposite to St. Lawrence, Poultry, where was then a high leaden steeple, (there were but two, viz. this and St. Dunstan's in the east,) and at his brother's country house at Roehampton. His brother Eliab bought, about 1654, Cockaine-house, now (1680) the Excise Office, a noble house, where the doctor was wont to contemplate on the leads of the house, and had his severall stations, in regard of the sun, or wind. He did delight to be in the darke, and told me he could then best contemplate.

He had a house heretofore at Combe, in Surrey, a good air and prospect, where he had caves made in the earth, in which in summer time he delighted to meditate. He was pretty well versed in mathematiques, and had made himselfe master of Mr. Oughtred's Clavis Math. in his old age; and I have seen him perusing it, and working problems not long before he dyed, and that book was always in his meditating apartment. His chamber was that room which is now the office of Elias Ashmole, esq. where he dyed, being taken with the dead palsey, which took away his speech; as soon as he was attaqued, he presently sent for his brother and nephews, and gave one a watch, another another thing, &c., as remembrances of him. He dyed worth 20,000 pounds, wch. he left to his brother Eliab. In his will, he left his old friend, Mr. Tho. Hobbes, 10 pounds, as a token of his love.

He was wont to say, that man was but a great mischievous baboon.

He would say, that the Europeans knew not how to order or govern our woemen, and that the Turks were the only people [who] used them wisely.

He had been physitian to the Lord Ch. Bacon, whom he esteemed much for his witt and style, but would not allow him to be a great philosopher, Said he to me, "He writes philosophy like a Ld. Chancellor," speaking in derision.*

About 1649, he travelled again into Italy, Dr. George, now Sir John Ent, then accompanying him.

At Oxford he grew acquainted with Dr. Charles Scarborough, then a young physician, (since by Ch. II. knighted) in whose conversation he much delighted; and whereas before he marched up and downe with the army, he took him to him and made him ly in his chamber, and said to him, "Prithee leave off thy gunning, and stay here, I will bring thee into practice." For twenty years before he dyed, he took no manner of care about his worldly concerns, but his brother Eliab, who was a very wise and prudent manager, ordered all not only faithfully, but better than he could have done for himself. He was, as all the rest of the brothers, very cholerique, and in his younger days wore a dagger (as the fashion then was, nay I remember my old scoolmaster, Mr. Latimer, at seventy, wore a dudgeon, with a knife and bodkin, as also my old grandfather, Lyte, and Alderman Whitson, of Bristowe, wch. I suppose was the common fashion in their young dayes,) but this Dr. would be apt to drawe out his dagger upon every slight occasion.

He was not tall, but of the lowest stature, round faced, olivaster (like wainscott) complexion; little eie, round, very black, full of spirit; his haire was black as a raven, but quite white twenty years before he dyed.

I first sawe him at Oxford, 1642, after Edgehill fight, but was then too young to be acquainted with so great a doctor. I remember he came severall times to our Coll. (Trin.) to George Bathurst, B. D. who had a hen to hatch egges in his chamber, which they daily opened to see the progress and way of generation. I had not the honour to be acquainted [with] him till 1651, being my cos. Montague's physitian and friend. I was at that time bound for Italy, (but to my great grief dissuaded by my mother's importunity.) He was very communicative and willing to instruct any that were modest and respectfull to him. And in order to my journey, dictated to me what to see, what company to keep, what bookes to read, how to manage my studyes; in short, he bid me go to the fountaine head, and read Aristotle, Cicero, Avicenna, and did call the neoteriques s . . t breeches. He wrote a very bad hand, which with use I could pretty well read. I have heard him say, that after his booke of the Circulation of the Blood came out, he fell mightily

* This must relate to Bacon's physiological opinions as exemplified in his *Historia Vitæ & Mortis*, the work which produced so much wit in the Tristram Shandy, concerning radical heat and radical moisture. Harvey's mode of inquiry was exactly such as Bacon pointed out in his Nov. Organum. But it must be admitted, that Bacon's only physiological work savours much of precedents, in the Lord Chancellor style.—EDIT.

in his practice, and 'twas believed by the vulgar, that he was crack-brained; and all the physitians were against his opinion, and envyed him; with much adoe at last in about twenty or thirty yeares time, it was received in all the universities in the world, and, as Mr. Hobbes sayes in his book, "De Corpore," he is the only man, perhaps, that ever lived to see his owne doctrine established in his life-time.

He understood Greek and Latin pretty well, but was no critique, and he wrote very bad Latin. The Circuitus Sanguinis was, as I take it, donne into Latin by Sir George Ent, as also his booke de Generatione Animalium, but a little book in 12mo. against Riolan (I thinke) wherein he makes out his doctrine clearer, was writt by himselfe, and that, as I take it, at Oxford.

His Maj. K. Cha. I. gave him the wardenship of Merton Colledge, as a reward for his service, but the times suffered him not to receive or enjoy any benefit of it.

He was physitian and a great favourite of the Lord High Marshall of England, Tho. Howard, Earl of Arundel and Surrey, with whom he travelled as his physitian in his ambassade to the Emperor ——, at Vienna, Ao. Dni. 163–. Mr. Hollar (who was then one of his excellencie's gentlemen) told me, that in his voyage, he would still be making of excursions into the woods, making observations of strange trees and plants, earths, &c., and sometimes like to be lost. So that my Lord Ambassador would be really angry with him, for there was not only danger of thieves but also of wild beasts.

He was much and often troubled with the goute, and his way of cure was thus: he would then sitt with his legges bare, if it were frost, on the leads of Cockaine-house, putt them into a payle of water, till he was almost dead with cold, and betake himselfe to his stove, and so 'twas gone.

He was hott headed, and his thoughts working would many times keep him from sleeping: he told me, that then his way was, to rise out of his bed and walke about his chamber in his shirt, till he was pretty coole, i. e. till he began to have a horror, and then returne to his bed, and sleep very comfortably.

I remember he was wont to drinke coffee, which he and his brother Eliab did, before coffee-houses were in fashion in London.

All his profession would allowe him to be an excellent anatomist, but I never heard any that admired his therapeutique way. I knew several practitioners in this towne (London) that would not have given 3d for one of his bills; and that a man could hardly tell by one of his bills what he did aime at.

He did not care for chymistrey, and was wont to speak against them,* with undervalue.

It is now fitt, and but just, that I should endeavour to undeceive the world in a scandall, that I find strongly runnes of him, wch. I have mett amongst some learned young men: viz. that he made himselfe away, to putt himselfe out of his paine, by opium; not but that, had he laboured

* Sic Edit.

under great paines, he had been readie enough to have donne it, I doe not deny, that it was not according to his principles upon certain occasions to ———, but the manner of his dyeing was really and bonâ fide thus: viz. the morning of his death, about ten o'clock, he went to speake, and found he had the dead palsey in his tongue, then he sawe what was to become of him, he knew there was then no hopes for his recovery, so presently sends for his young nephews to come up to him, to whom he gives one his watch,* to another another remembrance, &c. made sign to ——Sambroke, his apothecary, in Black-fryars, to lett him blood in the tongue, which did little or no good, and so he ended his dayes. His practice was not very great towards his latter end, he declined it, unlesse to a speciall friend,—c. g. my Lady Howland, who had a cancer in her breast, which he did cut off and seared, but at last she dyed of it.

He rode on horseback with a foot-cloath to visitt his patients, his man following on foot, as the fashion then was, wch. was very decent, now quite discontinued. The judges rode also with their foot-cloathes to Westminster hall, wch. ended at the death of Sir Rob. Hyde, Lord Ch. Justice. Anth. E. of Shaft. would have revived [it,] but several of the judges being old and ill horsemen would not agree to it. The scandal aforesaid is from Sir Charles Scarborough's sayings that he had, towards his latter end, a preparation of opium, and I know not what, which he kept in his study to take, if occasion should serve, to putt him out of his paine, and which Sir Charles promised to give him: this I believe to be true; but do not at all believe that he really did give it him. The palsey did give him an easie passeport.—*Eclectic Repertory, Vol. vi., p.* 107–113.

Paracelsus.

IT has not inaptly been observed,† that "in the true infancy of science, philosophers were as imaginative a race as poets." No discovery, in short, was promulgated but in combination with the marvellous. Hence the 'Admirable Secrets' of Albertus Magnus; the 'Natural Magic' of Baptista Porta; the 'Demones of Cornelius Agrippa; the 'Elixir of Life' of Van Helmont; and the 'Fairy' of Paracelsus. It would be no easy task to assign the earliest age of quackery in medicine. It is, perhaps, coeval with the introduction of chemistry, but the first renowned quack is probably to be found in Paracelsus. He boasted his power of making man immortal, yet he died at the early age of 48 years, in the hospital of St. Sebastian, at Saltzburg in Germany, in the year 1541, having followed a life of great indulgence and dissipation. It is not a little singular that the family name of this "strange and paradoxical genius" should have been *Bombastus*, which he changed, as

* 'Twas a minute watch, wth. wch. he made his experiments.
† D'Israeli's Curiosities of Literature, second series, vol. iii., p. 1.

was a common practice of the times, in which he lived, to another, and assumed that of Paracelsus. His zeal and application were extraordinary; He derived his knowledge from travelling in various parts of the world, and consulting monks, conjurors, barber-surgeons, old women, and all persons said to be gifted with the knowledge of secrect arts, remedies, &c. He was professor of medicine at Basle, but became renowned by a nostrum called *azoth*, which he vaunted as the philosopher's stone—the medical panacea—the tincture of life. He styled himself the monarch of physicians," and arrogantly exclaimed that the hair on the back of his head knew more than all authors; that the clasps of his shoes were more learned than Galen or Avicenna; and that his beard possessed more experience than all the academy of Basle: "Stultissimus pilus occipitis mei plus scit, quam omnes vestri doctores, et calceorum meorum annuli doctiores sunt quam vester Galenus et Avicenna, barba mea plus experta est quam vestræ omnes Academiæ." Extravagant as all this may appear, it yet had the effect of dissipating a too excessive admiration of the ancients, at that time prevalent in the schools. His boldness was such, that at his first lecture upon his appointment to the professorship in the University, he, before his pupils, publicly burnt the writings of Galen and Avicenna! His education, however, was very imperfect, and he was ignorant even of his own vernacular tongue. Thomas Erastus, one of his pupils, wrote a book to detect his impostures. He was nevertheless a man of great ability, and did much towards the advancement of chemical knowledge, particularly in its application to the purposes of medicine. Armed with opium, antimony, and mercury, he effected many extraordinary cures.—*T. J. Pettigrew.*

Upas Tree.

[From the *Eclectic Repertory*, for July 1816.]

The following extract from the Diary of an intelligent fellow-citizen will be read with interest, as the accuracy of the relation may be relied on; and it is only by actual and unprejudiced observation, that the true nuture of this wonderful production will be rightly understood.

In the morning we rode out to see the *Upas Tree*, with the sap of which the Malays poison their weapons. It is about three miles from the town of Balawangie or Balemboang, on the south-east end of the Island of Java, and is much loftier than the tallest Lombardy poplar; the branches begin to grow from the trunk like the palm tree, at a considerable distance from the ground. I had an opportunity of proving, by ocular demonstration, that the accounts which we have had of its destroying the vegetation and killing any birds that fly over it, are totally without foundation. I was myself under the tree a considerable time, rubbed my hand over the trunk, and saw birds fly on and off without any injury. The vegetation around it is remarkably luxuriant, extending to the very root of the tree.

The poison is extracted by making an incision in the trunk and catching the sap in a bamboo, and that it is deadly in the extreme I had an opportunity of proving. A bamboo, sharpened into the size and shape of the blade of a small penknife, was dipped in the sap and stuck in the leg of a dog, tied by a long string to a tree; in five minutes bebegan to be very much agitated; in ten he was in strong convulsions; in sixteen he was raving mad, frothed at the mouth, and appeared in the greatest agony; this lasted about five minutes, when he sunk down exhausted; he lay a few minutes apparently dead, when he again sprung up raving mad, foaming at the mouth for a minute or two, when he gave yell and expired.

The tree was covered with numerous incisions, where the Javanese had been extracting the poison. There are but two of these trees on the Island, one about one hundred miles from Batavia, and the one above mentioned. There are two kinds of the Upas Poison; the one, it is said, only affects quadrupeds and does not injure fowls of any kind, and the other *vice versa.—Extract from Diary, October 10th,* 1815.

Stone in the Bladder.

A STONE was extracted from the bladder of a patient in the Pennsylvania Hospital on the 8th July, by Dr. Dorsey, which was found to have concreted round a mass of lead an inch in length and nearly half an inch in width. This singular nucleus consists of two laminæ of thick sheet lead, weighing two drachms and thirty-eight grains. The patient, an intelligent man, declared himself unable to imagine any way in which it could have reached his bladder. Its size and irregular shape would certainly render it difficult to introduce it through the urethra; and yet scarcely a doubt can exist that it originally entered by that passage. The stone was soft and not unusually large.—*Eclectic Repertory,* 1816.

FOREIGN EXCHANGES.

Gazette Hebdomadaire de Médecine et de Chirurgie.
Bulletin Général de Thérapeutique.
Journal de Pharmacie et de Chimie.
Revue Médicale Française et Étrangère.
Gazette Médicale de Paris.
Archives Générales de Médecine.
Gazette Médicale de Lyon.
Gazette Médicale de Strasbourg.
Journal de Médecine de Bordeaux.
Annales d'Hygiène publique et de Médecine légale.
L'Union Médicale.
Il Progresso, Genoa.
L'Union Médicale de la Gironde.
El Siglo Medico, Madrid.
Revue de Thérapeutique Médico-Chirurgicale.
Dublin Quarterly Journal of Med. Science.
Medical Times and Gazette, London.
The Glasgow Medical Journal.
The Edinburgh Medical & Surgical Journal.
British and Foreign Medico-Chirurgical Review.
London Lancet.
The Indian Annals of Medical Science, Calcutta.
The Dublin Hospital Gazette.

Daily Delta Steam Job Print, 76 Camp-street, New Orleans.

MAY 1, 1856.

☞Owing to the fact that the Editor of this Journal was attacked on the 19th ult., with Spasmodic Cholera in an alarming form, leaving him in a state of great debility, the undersigned has assumed the duty of attending to the closing of the present number. He is happy to be able to give assurance to the subscribers to the "Journal," that the Editor will in a few days be again at his post, laboring with his usual untiring zeal in the cause of Journalism.

☞The undersigned has been requested by the proprietor, Mr. McCulloch, to remind the Subscribers to the "New Orleans Medical and Surgical Journal" that the present is the closing Number of Vol. XII, and that it becomes necessary that all arrearages on the part of subscribers, should be sent as speedily as possible. There is now outstanding a large amount due on account of subscription, and it is sincerely hoped that the subscribers will so far appreciate the labor and expense which has been incurred, in order to furnish them an acceptable Journal, as to make a speedy and prompt payment of all dues.

M. M. Dowler.

BOOKS AND PAMPHLETS RECEIVED.

The Action of Medicines on the System; being the Prize Essay to which the Medical Society of London awarded the Fothergillian Medal for MDCCCLII. By F. W. Headland, M. B., B. A., F. L. S., etc.; 2d American, from the 2d revised and enlarged Lond. edition. Pp. 408. 8vo. Philadelphia: Lindsay & Blackiston. 1856. From Mr. T. L. White, Bookseller, 105 Canal-street, New Orleans.

The Half-Yearly Abstract of the Medical Sciences. Edited by Drs. Ranking and Radcliffe, London. No. 22. Am. Ed. to December, 1855. Pp. 259. 8vo. Philadelphia: Lindsay & Blackiston. 1856. From Mr. T. L. White, Bookseller, 105 Canal-street; also, from Mr. B. M. Norman, Bookseller, 14 Camp-street, New Orleans.

History of Medicine, from its Origin to the Nineteenth Century; with an Appendix containing a Philosophical and Historical Review of Medicine to the present time. By P. V. Renouard, M. D. Translated from the French by Cornelius G. Comegys, M. D., Professor of the Institutes of Medicine, Miami Medical College. Pp. 719. 8vo. Cincinnati: Moore, Wilstach, Keys & Co. New-York: Miller, Orton & Mulligan. Boston: Whittlemore, Niles & Hall. Philadelphia: J. B. Lippincott & Co. 1856. From the Publishers.

The Principles of Surgery. By James Miller, F.R.S.E., F.R.C.S.E., &c., &c. Fourth American, from the Third and Revised English Ed. Illustrated by 240 Engravings on Wood. Pp. 696. 8vo. Phila.: Blanchard & Lea. 1856. From Mr. T. L. White, Bookseller, 105 Canal-street, New Orleans.

On some Diseases of Women admitting of Surgical Treatment: by I. Baker Brown, F. R. C. S. Philadelphia: Blanchard & Lea. 1856. From Mr. T. L. White, Bookseller, 105 Canal-street, New Orleans.

Analytical Compendium of the Various Branches of Medical Science for the use and examination of Students. By JOHN NEILL, M.D., Surgeon to the Pennsylvania Hospital, Fellow of the Coll. of Physicians, &c.; and FRANCIS GURNEY SMITH, M.D., Physician to the St. Joseph's Hospital, Fellow of the Coll. of Physicians, &c. A New Edition, revised and improved, with 374 Illustrations. Pp. 974. Large 12mo. Philadelphia: Blanchard & Lea. 1856. From Mr. T. L. White, Bookseller, 105 Canal-street, New Orleans.

A Chart of Incompatibles and Poisons. By J. W. HOYT, A.M., M.D. Cincinnati, Ohio. 1856.

Manual of Chemical Physiology. From the German of Prof. C. G. LEHMANN, M. D. Translated with Notes and Additions, by J. CHESTON MORRIS, M. D.; with an Introductory Essay by SAMUEL JACKSON, M.D., Prof., &c. Illustrated with 40 Wood-cuts. Pp. 331. 8vo. Philadelphia: Blanchard & Lea. 1856. From Mr. J. B. Steel, Bookseller, 60 Camp-street, New Orleans.

Report of the Commissioners of Emigration of the State of New York, for the Year ending December 31, 1855. Pp. 91. New-York. 1856. From Prof. Carnachon.

Ideas and Taste of the Age; an Address delivered before the Library Association, Keokuk, Iowa, February, 1854: by J. F. SANFORD, M.D., Professor of Surgery, Iowa Med. Coll. Pp. 18. Keokuk: 1854.

Valedictory Address to the Graduating Class of the Iowa Medical College. By E. C. FRANCIS, A.M., M.D., Professor of Obstetrics and Diseases of Women and Children. Pp. 17. Keokuk: 1856.

Compendium U. S. Census (1850.) Pp. 400. 8vo. Washington: 1854. From Hon. J. P. Benjamin, U. S. Senate from La.

Treatment of Displacements of the Uterus with the Abdominal Spring-Pessary. By J. McF. GUSTON, M. D., Columbia, S. C. 4 lithographs. Pp. 7, letter-press. Charleston: 1856.

An Essay on Intermittent and Bilious Remittent Fevers, with their Pathological Relation to Ozone. By A. S. GAILLARD, M. D. Pp. 59. Charleston: 1856.

Effects of Lead on the Heart. By JOHN W. CORSON, M. D, Physician to the New York Dispensary. Pp. 24. New York: 1856.

Report of the Board of Managers of the Eastern Lunatic Asylum, (at Lexington, Kentucky,) for the Years 1854–5. Pp. 61. Frankfort, Ky.: 1856.

Proceedings of the American Pharmaceutical Association, at the Fourth Annual Meeting, held in New-York, Sep. 11th, 12th, and 13th, 1855.

The Principles and Practice of Opthalmic Medicine and Surgery: by T. WHARTON JONES, F. R. S., Professor of Opthalmic Medicine and Surgery in University College, London; Opthalmic Surgeon to the Hospital, &c. 110 Illustrations. Second American Edition, with additions, from the Second and Revised London Edition. Pp. 500; large 12mo. Philadelphia: Blanchard & Lea. 1856. From Mr. T. L. White, Bookseller, 105 Canal-street, New Orleans.

One Hundred and Six Cases of Pulmonary Diseases treated by Bronchial Injections. By HORACE GREEN, M. D., LL. D., President of the Faculty, and Professor Emeritus of the Theory and Practice of Medicine, of the New York Medical College, &c. Pp. 40. New York: Edw. P. Allen. 1856.

INDEX TO VOL. XII.

ERRATA.—Page 503, 9th line, for ℥jj, *read* ℥jj.
" " 8th " for ℥jss, *read* ℥jss.

THE NEW ORLEANS
MEDICAL AND SURGICAL
JOURNAL,

WILL appear on the beginning of every second month. Each number will contain one hundred and forty-four octavo pages.

Subscribers will please to make their remittances and direct their letters on the business of the Journal to Mr. H. McCULLOCH, Proprietor, "*Delta Buildings*," 76 Camp Street, New Orleans.

The advertising sheet is under the exclusive control of the proprietor.

Letters and parcels must be forwarded *free of expense in all cases.*

All communications intended for publication, and books for review, should be sent *free of expense*, directed to B. DOWLER, M. D., *Editor of the New Orleans Medical and Surgical Journal.*

Terms of this Journal:—FIVE Dollars per Annum, *always in advance.*

☞NOTICE of intention to discontinue subscription must be given two months in advance, and no subscription discontinued unless all arrearages are paid up, except at the option of the proprietor.

The extensive circulation of this Journal in the South and South-west, affords great facilities for advertising. Advertisements will be inserted on the following terms:

For One Page, per annum,	$50	or One Insertion,		$10
Half Page, "	30	"	"	6
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Special Arrangements for CARDS, &c., of a line or two will be made.

Advertisements to be paid for *in advance.*

To correspondents and contributors to this Journal:—

1.—Write on but one side of the paper.

2.—Prefix the exact caption to the article.

3.—Add to the name, the profession, as M. D., Physician, Surgeon, Planter, &c.

4.—Articles for publication should not be addressed as personal letters.

5.—Communications about personal movements, plans and purposes, together with the affairs of institutions, lectures, and so-forth, should be sent to the Proprietor as advertisements. The sole aim of this Journal is to be useful to its readers in a scientific and not in an advertising sense.

6.—Anonymous articles will generally be excluded. Reviewers will please to add their names or initials to their articles.

7.—Articles sent for the original department of this Journal must not have appeared in other Journals.

8.—Articles should be sent at least two months before the time at which their publication is expected.

9.—Articles, provisionally accepted, the publication of which is necessarily deferred, will be acknowledged in the next issue; all others may be considered as not accepted, and may be re-claimed within two months.

10.—The acceptance of articles for this Journal must not be construed by the reader as implying the approval or disapproval by the Editor; he will not accept any article which he has sufficient reason for believing to be false in fact, immoral in import, or injurious to the public and the profession. Articles valuable for their facts, though defective in orthography and style, will be considered, revised and arranged for publication in strict accordance with the writer's views, without the Editor assuming the responsibility of either the facts or opinions which may be advanced on any occasion.

11.—Papers of moderate length, having a practical bearing, will be preferred.—[EDITOR.]

Editor's Office.—Notices.

SEPTEMBER, 1855.

Notice.—The onerous duties of journalism and private practice will prevent the Editor from answering consultation letters unless a fee of ten dollars be enclosed in the same.

Parties having occasion to write on business, would do well to add, however briefly, remarks, and facts illustrative of hygiene, disease, treatment, &c. These brief detached memoranda from various districts, converged to a focus in the Journal, would form, as a whole, a valuable correspondence mutually advantageous to the readers.

COMMUNICATIONS RECEIVED.

J. J. WILLIAMS, M. D., of Sommerville, Tenn.
JAMES COWLING, M. D., New Orleans.
A. DONNAUD, M. D., New Orleans.
MOSES MORTON DOWLER, M. D., New Orleans.

BOOKS AND PAMPHLETS RECEIVED.

New Monthly Medical Journal.—*The Indiana Journal of Medicine and Surgery:* J. Jackson, M. D., T. W. Forshee, M. D., Editors, Madison, Ia.

Report of the Commissioner of Patents. Part II. *Agriculture.* Washington: 1850. Pp. 574. 8vo. From Mr. Nevitt, Post Master, of N. O.

Report of the Commissioner of Patents for 1854*: Arts and Manufactures.* Vol. I. Text. Washington: 1855. Pp. 776. 8vo. From the Hon. John Slidell, U. S. Senator, of La.

Report of the Superintendent of the Coast Survey, showing the Progress of the Survey during the year 1853. Washington: 1854. 4to. Pp. 87 and 186; *with* 54 *Illustrative Sketches, Maps, &c.* From the Hon. John Slidell, U. S. Senator.

A Practical Treatise on the Diseases, Injuries, and Malformations of the Urinary Bladder, the Prostate Gland, and the Urethra. By S. D. Gross, M. D., Professor of Surgery in the University of Louisville; one of the surgeons of the Lousville hospital; member of the American Philosophical Society; Author of Elements of Pathological Anatomy; a Treatise on Foreign Bodies in the Air-passages, etc., etc., etc. 2nd. Edition, revised and much enlarged; with 184 illustrations. Philadelphia; Blanchard & Lea. 1855. 8vo. Pp. 925. From Mr. Thos. L. White, bookseller, 105 Canal-st. N. O.

Theories of the Production of Males and Females: by Silas Hubbard, M. D. Pp. 7.

Ninth Annual Report of the Smithsonian Institution, up to Jan. 1, 1855*:* Washington: Pp. 463. 8vo. From the Hon. W. H. English, of the House Rep.

Constitution, By-Laws, Rules of Order and Code of Ethics, adopted by the Sacramento Medical Society, 1855: Pp. 45. From T. M. Logan, M. D., Cor. Secy.

Letter addressed to the Mayor and Aldermen of the City of Knoxville: by Frank A. Ramsey, A. M., M. D., permanent member of the American Medical Association, etc. 1854. Pp. 87.

The Pathology and Treatment of Leucorrhœa: by W. Tyler Smith, M. D., M. R. C. P.; physician accoucheur to St. Mary's hospital; lecturer on Midwifery; Vice-president of the Medical Soc. of London; fellow of the Obstetrical Society of Dublin, etc., etc. Philadelphia: Blanchard & Lea. 1855. Pp. 199. 8vo.; with illustrations. From Mr. Thos. L. White, book-seller, 105 Canal-st., N. O.

A large Lithograph of Prof. Austin Flint, M. D., published by his friends of the city of Buffalo, N. Y.

Case of Acute Ovarian Abscess: by James M. Green, M. D. Pp. 6.

Rushton's Treatise on Cod Liver Oil, giving its curative properties and uses in various diseases. New-York: Frederick Y. Rushton, 1855 Pp. 60. 12mo.

The Half-Yearly Abstract of the Medical Sciences; being a Practical and Analytical Digest of the contents of the principal British, American, and Continental Medical Works, published during the preceeding six months; together with a Series of Critical Reports on the Progress of Medicine and the Collateral Sciences. Edited by W. H. Ranking, M. D., and C. B. Radcliff, M. D. Pp. 309. 8vo. Jan. to June, 1855. Phila.: Lindsay and Blackiston. From the Publishers.

Braithwaite's Retrospect of Practical Medicine and Surgery. Part 31st.; July, 1855. Pp. 336. 8vo. New-York: Stringer & Townsend, 222 Broadway. From the Publishers.

The London Lancet, (Aug. 1855) from the same.

The Dental Obturator; devoted to the Science and Art of Dentistry. Edited by John S. Clark, D. D. S. For August, 1855. Pp. 35. Publishers: H. D. McGinnis & Co., 36 Camp-st., New Orleans. From the Editor.

British and Foreign Medico-Chirurgical Review, for July '55. Pp. 223. New-York: re-published by S. S. & W. Wood, 261 Pearl-st.

Proceedings of the Academy of Natural Sciences of Philadelphia.

Review, Opinions, &c., of Dr. Charles A. Lee, and others, of the Testimony of Drs. Salisbury and Swinburne, on the trial of John Hendrickson, Jr., for the murder of his wife by poisoning. New York. Pp. 44.

Correction of the Erroneous Statements of Henry A. Smith, M. D., published in the Medical Examiner, Jan'y 1855, *in relation to a case of Gastrotomy, which occurred in the Practice of Washington L. Atlee, M. D.* Second Edition. Pp. 31. Philadelphia: 1855.

Proceedings of the Connecticut Medical Society: Hartford. 1855. Pp. 87.

Errata.—July No., p. 7th, 11th line from the top, for ℥j, read ʒj. Present No., p. 211, last line, for "refrigation," read *refrigeration.*

UNIVERSITY OF NASHVILLE.

MEDICAL DEPARTMENT.

The fifth Annual Course of Lectures in this Institution will commence on MONDAY, the 29th of October next, and continue till the ensuing March.

PAUL F. EVE, M. D., Principles and Practice of Surgery.
JOHN M. WATSON, M. D., Obstetrics and the Diseases of Women and Children.
W. K. BOWLING, M. D., Theory and Practice of Medicine.
C. H. BUCHANNAN, M. D., Surgical and Pathological Anatomy,
ROBERT M. PORTER, M. D., General and Special Anatomy.
A. K. WINSTON, M. D. Materia Medica and Medical Jurisprudence.
J. BERRIEN LINDSLEY, M. D., Chemistry and Pharmacy.
THOMAS R. JENNINGS, M. D., Institutes of Medicine and Clinical Medicine.
WILLIAM T. BRIGGS, M. D., Demonstrator of Anatomy.

The Anatomical Rooms will be opened for Students on the first Monday of October.

A full **Preliminary Course** of Lectures, free to all students, will be given by the Professors, commencing also on the first Monday of October.

A Clinique has been established in connection with the University, at which operations are performed, and cases prescribed for, and lectured upon, in presence of the Class.

Amount of Fees for Lectures in the University is $105. Matriculation Fee, (paid once only,) $5. Practical Anatomy, $10. Graduation Fee, $25.

Good Boarding can be procured at about $3 per week.

Further information can be obtained by addressing

J. BERRIEN LINDSLEY, Chancellor of the University.

NASHVILLE, TENN., July, 1855.

PHILADELPHIA
COLLEGE OF MEDICINE.

The WINTER Session will begin Monday, October 8th. The SPRING Session will open in March 1856 and close in July.

DEGREES will be conferred in March and July.

FACULTY.

GEORGE HEWSTON, M. D., Prof. of Anatomy.
B. HOWARD RAND, M. D , Prof. of Chemistry.
HENRY HARTSHORNE. M. D., Prof. of Institutes of Medicine.
JAMES L. TYSON, M. D., Prof. of Materia Medica.
ISAAC A. PENNYPACKER, M. D., Prof. of Practice of Medicine.
JAMES BRYAN, M. D., Prof. of Surgery.
LEWIS D. HARLOW, M. D., Prof. of Midwifery, &c.
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One full Course, $84.
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The Students are examined Daily by the Professors upon each branch. A ticket of admission for the year to the Philadelphia or Pennsylvania Hospital will be furnished to each advanced or perpetual Student; such as are sufficiently advanced will have also opportunities of attending cases in Medicine, Surgery, and Midwifery, under care of the Professors.

For announcement or other information address

B. HOWARD RAND, M. D., Dean,
At the College 5th street below Walnut.

University of New-York.

MEDICAL DEPARTMENT—SESSION 1855-6.

THE Lectures will commence on MONDAY, *October 15th*, and be continued until 1*st* of *March* following. The session of 1854-5 was attended by a class of 307 students; on 106 of whom the degree of Doctor of Medicine was conferred.

FACULTY OF MEDICINE.

REV. ISAAC FERRIS, D. D., LL. D., CHANCELLOR OF THE UNIVERSITY.

VALT. MOTT, M.D., LL.D., Emeritus Prof. of Surgery and Surg. Anatomy, and Ex-Pres. of the Faculty
MARTYN PAINE, M. D., LL. D., Prof. of Materia Medica and Therapeutics. [Midwifery
GUNNING S. BEDFORD, M. D. Prof. of Obstetrics, the Diseases of Women and Children, and Clinical
JOHN W. DRAPER, M. D., LL. D., Prof. of Chemistry and Physiology. [Anatomy.
ALFRED C. POST, M. D., Prof. of the Principles and Ops. of Surgery, with Surg. and Pathological
WILLIAM H. VAN BUREN, M. D., Prof. of General and Descriptive Anatomy.
JOHN T. METCALF, M. D., Prof. of the Institutes and Practice of Medicine.

CHARLES E. ISAACS, M. D., Demonstrator of Anatomy.
GEORGE A. PETERS, M. D., Prosector to the Prof. of Surgery.
ALEXANDER B. MOTT, M. D., Prosector to the Emeritus Prof. of Surgery.

JOHN W. DRAPER, M. D., LL. D., President of the Faculty.

COURSE OF INSTRUCTION.

The Course of Lectures given will be on Anatomy—general, descriptive, surgical, and pathological; principles and operations of Surgery; Materia Medica; and Therapeutics; Institutes and Practice of Medicine; Obstetrics; the Diseases of Women and Children, with Clinical Midwifery; Chemistry and Physiology; Clinical Surgery; Clinical Medicine; Clinical Lectures on the Diseases of the Genito-urinary Organs; Clinical Lectures on the Diseases of Women and Children; Clinical Lectures on Physical Diagnosis.

PRACTICAL ANATOMY.—The Legislature of New-York having passed the Anatomical Bill, the students will be furnished with increased facilities for the study of this department.

CLINICAL INSTRUCTION will be given at the New-York Hospital, and Bellevue Hospital; and the various dispensaries of the City, including the Eye and Ear Infirmary, in which there are yearly more than 80,000 patients, will be open to the students free of charge. In addition there are held in the College Building, also free of charge to the students of the University, Five Cliniques each week, as follows:

1. AN OBSTETRIC CLINIQUE FOR THE DISEASES OF WOMEN AND CHILDREN—On every Monday from 2½ to 4½ o'clock, P. M., by PROF. BEDFORD. Since the organization of this Clinique in October 1850, there have been actually presented to the classes of the University between EIGHT AND NINE THOUSAND cases of the most interesting diseases incident to women and children.

2. A SURGICAL CLINIQUE—Every Tuesday from 2½ to 4½ o'clock, P. M., by PROF. MOTT. This Clinique presents abundant opportunity for the study of Surgical Disease, and witnessing every variety of Surgical Operation.

3. A MEDICAL CLINIQUE—every Wednesday, from 2½ to 3½ o'clock, P. M., by Prof. METCALF. Patients, laboring under Diseases of the Lungs, Heart, &c., are presented at this Clinique; and full opportunity is given to the Students, for the study of Physical Diagnosis.

4. SURGICAL CLINIQUE, WITH THE DISEASES OF THE GENITO-URINARY ORGANS—Every Wednesday, from 3½ to 4½ o'clock, P. M., by Prof. VAN BUREN. Besides its general Surgical advantages, this Clinique presents ample opportunity for the study of Syphilitic Diseases, Strictures, &c.

5. SURGICAL CLINIQUE—Every Saturday, from 11 o'clock, A. M., to 1 o'clock, P. M., by Prof. Post. During the sessions just closed, besides various operations of importance. Prof. POST performed in this Clinique before his class, Lithotrity fifteen times, and Lithotomy once, with entire success.

FEES FOR THE WINTER COURSE.

Full Course of Lectures,	**$105**
Matriculation Fee,	**5**
For Instruction by Demonstrator,	**5**
Graduation Fee,	**30**

BOARDING.

Good Board can be obtained in the vicinity of the College, at about $4 per week.

N. B.—Students will please call, on their arrival, at the College No. 107 East 14th-st. and inquire for the Janitor, Mr. Polman, who will provide them with Boarding-Houses.—Letters may be addressed to Prof. DRAPER, President of the Faculty, University, New-York.

NEW-YORK, March, 1855.

Memphis Medical College.

SESSION 1855–6.

THE Regular Lectures of this College will commence on the 1st of November, and will continue Four Months.

FACULTY.

AYRES P. MERRILL, M. D., Professor of Principles and Practice of Medicine.
JOHN MILLINGTON, M. D., Professor of Chemistry and Toxicology.
RENE LA ROCHE, M. D., Professor of Physiology and Pathology.
HOWELL R. ROBARDS, M. D., Professor of Surgery.
ARTHUR K. TAYLOR, M. D., Professor of Anatomy.
C. B. GUTHRIE, M. D., Professor of Materia Medica and Pharmacy.
HERSCHEL S. PORTER, D. D., Professor of Natural History and Geology.
LEWIS SHANKS, M. D., Prof. of Obstetrics and Diseases of Women & Children.
E. WOODWARD, M. D., Demonstrator of Anatomy.

The Fee for the entire Course is $105, payable in advance. Matriculation Fee $5, Gradnating Fee, $25; Anatomy and Dissection $10, to be taken once before graduating. Rooms open from the 1st of October.

A Preliminary Course of Lectures, free to all students and the public, by each Professor, on subjects connected with his department, which cannot be fully taught in the regular course, will be delivered during the month of October.

CLINICAL INSTRUCTION is given twice a week at the Memphis Hospital. A City Dispensary Clinique has also been established at the College, at which Operations are performed, and a number of cases prescribed for and lectured upon by the Professors daily.

The College possesses an ample Museum and complete Chemical and other apparatus.

Students desiring further information will address Prof. L. Shanks, M. D., or, on arriving in the City, call on him at his office on Main-street.

The Preliminary Courses begin on the First Monday in October.

The Regular Lectures commence on the First of November, and continue sixteen weeks. The public commencement at which the degrees are conferred is held immediately after the close of the Lectures.

The Fees, for which the payment *must be made in advance*, are as follows:

Tickets to the Lectures of the Seven Professors,	**$105**
Matriculation Fee, for fuel, servants, &c.,	**5**
Tickets for Practical Anatomy,	**10**
Graduating Fee,	**25**

Comfortable Boarding, in private families, may be obtained at $2 50 to $4 00 per week.

Students desiring further information can apply, by letter, to PROF. LEWIS SHANKS, M. D., Dean of the Medical Faculty; or, on their arrival in the city, can call at his office, on Main-street, or at the office of the Secretary of the Faculty, in the College Building.

LEWIS SHANKS, M. D.,
Dean of the Faculty.

MEMPHIS, TENN.

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This is unquestionably the most popular Health Journal in the world.—*N. Y. Eve. Post.*

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MASSACHUSETTS MEDICAL SOCIETY.

PRIZE QUESTION.

Through the liberality of one of its Fellows, the Massachusetts Medical Society is authorized to offer the sum of *One Hundred Dollars* to the author of a Dissertation, which may be adjudged worthy of a Prize by a Committee appointed by the Councillors of the Society, on the following subject, viz :

"*The History and Statistics of Ovariotomy, and under what circumstances the operation may be regarded safe and expedient.*"

Dissertations for the Prize must be sent, post-paid, to the Corresponding Secretary, Dr. C. E. Ware, 6, Temple Place, Boston, on or before the *First Wednesday* of April, 1856.

Each Dissertation must have written upon it some device or sentence, and be accompanied by a sealed packet on which is written the same device or sentence, and within which is enclosed the author's name and residence.

The packet accompanying the successful Dissertation will be broken, in open meeting, at the annual meeting of the Society, in May, 1856, and the author's name announced. Such portions of the Dissertation as the Society may desire, may then be read, and the whole may be printed in the Society's Communications.

All unsuccessful Dissertations will be deposited with the Corresponding Secretary, from whom they may be obtained, with the sealed package un-opened, if called for within one year after the result shall have been declared.

The Prize is open to the Profession throughout the country.

By order of the Mass. Medical Society,

B. E. COTTING, *Rec. Sec.*

Roxbury, *Mass.*, *July* 31, 1855.

UNIVERSITY OF LOUISVILLE.

MEDICAL DEPARTMENT.

The Nineteenth Annual Course of Lectures in this Institution will commence on the last Monday in October next, and terminate on the last of February, under the following arrangement:—

Benjamin R. Palmer, M. D., Professor of Descriptive and Surgical Anatomy.

Lunsford P. Yandell, M. D., Professor of Physiology and Pathological Anatomy.

Samuel D. Gross, M. D., Professor of the Principles and Practice of Surgery.

Henry Miller, M. D., Professor of Obstetric Medicine.

Lewis Rodgers, M. D., Professor of Materia Medica and Therapeutics.

J. Lawrence Smith, M. D., Professor of Medical Chemistry and Toxicology.

Austin Flint, M. D., Professor of the Theory and Practice of Medicine.

T. G. Richardson, M. D., Demonstrator of Anatomy and Director in Pathological Anatomy.

The fee for admittance to the Lectures of each Professor is $15, ($105 in all,) payable invariably in advance. Matriculation and Library fee together, $5. Graduation fee, $25. Practical Anatomy and Dissection, $10—ticket to be taken at least once before graduation. Rooms open from 1st of October.

A Preliminary course of Lectures will be delivered, without additional charge, during the month of October.

Clinical Instruction is given twice a week at the Louisville Marine Hospital. Ticket $5, to be taken once before graduation.

A clinique has been established in connection with the University, at which cases are examined, prescribed for and lectured upon in presence of the class.

☞Good boarding can be procured at $3 per week.☜

B. R. PALMER, M. D.,
Dean of Faculty.

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CALENDAR FOR 1855-6.

1855.	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
SEPT.	..	..	..	..	..	..	1
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CARDS, CIRCULARS, BILL HEADS, RECEIPTS &c.

1856.	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
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LAWYERS' BRIEFS, CATALOGUES, PAMPHLETS.

1856.	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
MAY	..	..	..	..	1	2	3
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	10	11	12	13	14	15	16
	17	18	19	20	21	22	23
	24	25	26	27	28	29	30
	31						

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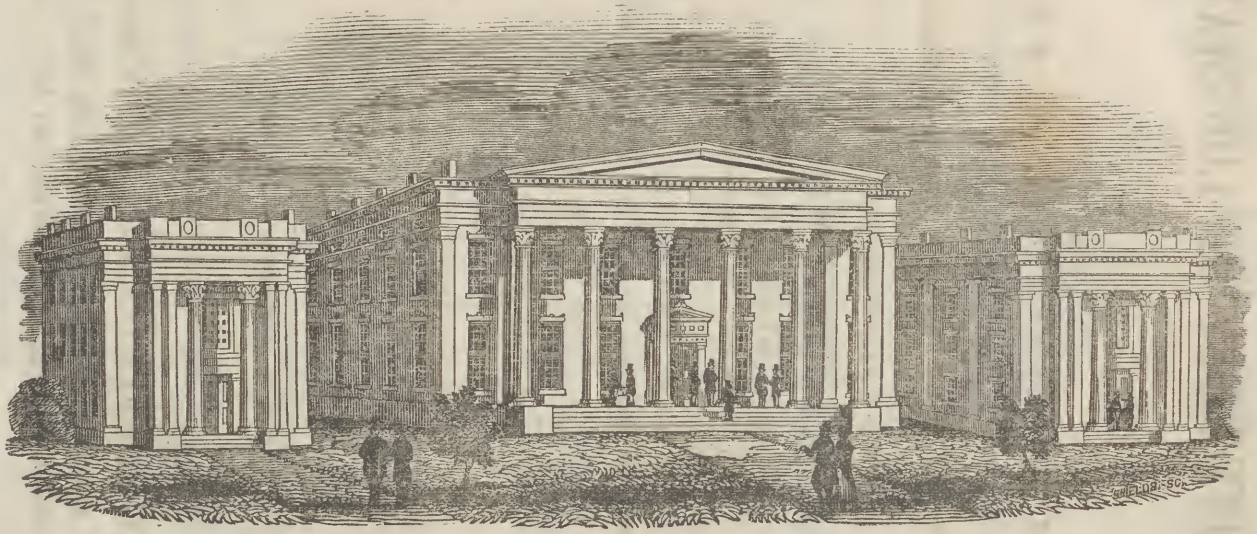

UNIVERSITY OF LOUISIANA.

UNIVERSITY OF LOUISIANA.

MEDICAL DEPARTMENT.

The regular Annual Course of Lectures in this Department will commence on Monday, the 19th of November, 1855, and terminate in March, 1856.

In 1854–'55 there were two hundred and twenty-three Matriculants, and fifty-four Graduates in the Department.

The Students of the Class, during the last session, were from Louisiana, Mississippi, Alabama, Texas, Arkansas, Tennessee, Kentucky, Missouri, Virginia, North Carolina, Georgia, Florida, and France.

The Faculty announce to the Public the continued prosperity of the Medical College of Louisiana.

More than twenty-one hundred names are on the Register of Matriculants, and many of the Graduates have acquired honorable distinction as Surgeons and Physicians.

The College is endowed by the State, and its usefulness has been extended by judicious appropriations of the Legislature.

MUSEUM.

The Museum of Anatomy is extensive. The preparations are chiefly works of scientific artists in England, France, and Italy.

In Human and Comparative Anatomy, there is—

1st.—A collection of Muscular preparations, from the Academy of Anatomy, at Florence. They represent more than three hundred and fifty separate dissections.

2d.—Thibert's Tableaux of the Microscopic Anatomy of the Tissues.

3d.—Auzou's Cabinet of Human and Comparative Anatomy.

4th.—A Cabinet of Human Bones, and a collection in Comparative Osteology.

5th—Preparations in Wax, (exhibiting exquisite skill in art, and knowledge in science,) representing the Anatomy of the Viscera, of the Nervous and Vascular Systems, and of every Organ in the Human Body.

The Pathological Department is enriched by medels from England and France, which represent Diseases of the Eye, and Diseases of the Skin; and, by a great number of specimens of Urinary and Biliary Calculi, obtained from Dupuytren's Museum, at Paris; from the College of Surgeons, London; and from amongst ourselves.

The models of the Diseases of the Skin were made by Mr. Towne, of Guy's Hospital, London. They are perfect, and each disease can be studied with their aid almost as well as in nature.

Besides the collections, brought from Europe, the Museum contains Anatomical preparations made by Members of the Faculty, and others presented by their scientific brethern.

The Pathological collection of Bones is excellent.

The other specimens of Pathological Anatomy are highly interesting. Every year this Department is rendered more useful by additions derived from the enlightened friends of the Institution.

CLINICAL INSTRUCTION.

The following extract is taken from a Report of the Board of Administrators of the Charity Hospital:

"This institution, the largest Hospital for the reception and treatment of patients in America, presents an admirable field for the study of disease, and is a valuable acquisition to our Medical College, the Professor in which are allowed every facility they desire during the course of lectures. We have resident students in the Hospital, who are furnished board and lodging, and are requested to execute the orders of the Visiting Physicians and Surgeons. We venture to assert, that those of them who remain their full period of two years, go forth with a better stock of practical knowledge and experience than any young physicians in the country."

The number of Medical cases, treated during the last year in the Hospital, was about 10,692; the Surgical patients numbered 2,000, and the Obstetrical cases, and those of special Diseases of Women and Children, numbered 500.

The College affords opportunities to students unsurpassed by any institution in the world. The Act which established the University of Louisiana, gives the Professors of the Medical Department the use of the Charity Hospital as a school of practical instruction: it is during the session of the school, therefore, in charge of the Professors.

There are about 800 cases usually in the wards of the Charity Hospital. The Professors visit every morning between 8 and 10 o'clock, the Medical, Surgical, and Obstetrical wards. Hence, a wide field is open for the practical study of diseases and their scientific treatment.

Members of the Classes of the Medical Department have gratuitous and free admission to the wards of the Hospital.

Attendance on cases of labor in the Obstetrical wards is provided by the Professor of Obstetrics, from among the candidates for Graduation.

The Professor of Surgery performs Operations and Dressings in the presence of the students, in the amphitheatre of the Hospital; and here, too, lectures are delivered on Wednesday and Saturday of every week, on Clinical Medicine and Surgery, and on special Pathological Anatomy.

LECTURES.

1.—The Professor of Anatomy, lectures five days of every week during the session.

2.—The Professor of Physiology and Pathology, lectures five days of every week.

3.—The Professor of the Theory and Practice of Medicine, lectures six days of every week.

4.—The Professor of Surgery, lectures six days of every week.

5.—The Professor of Obstetrics, lectures four days of every week.

6.—The Professor of Materia Medica and Therapeutics, lectures four days of every week.

7.—The Professor of Chemistry, lectures four days of every week.

The Professors have every thing deemed necessary to aid them in teaching the various branches of Medical Science, viz: 1.—Chemical and Philosophical Apparatus, of modern style. 2.—Specimens of Materia Medica and Chemical products. 3.—Surgical Instruments, from Charriére, a complete set. 4.—Paintings, plates, models, drawings, books, and special apparatus.

The Faculty supply, almost gratuitously, subjects for dissection. The supply exceeds the demand of the Class.

The Medical College of Louisiana affords the student means and opportunities of acquiring information in regard to the causes, nature, and treatment of local diseases peculiar to our climate, which he cannot obtain in any Northern, Southern, or Western College in our country.

CANDIDATES FOR THE DEGREE OF DOCTOR OF MEDICINE.

FIRST.—The Candidate must be twenty-one years of age, of moral character, and must have studied medicine three years.

SECOND.—He must have attended two full Courses of Lectures—the last of which must have been in this Institution.

THIRD.—He must write a Thesis on a Medical subject, and present it to the Dean, one month before the close of the session.

FOURTH.—He must be examined by the Faculty.

The rooms for Practical Anatomy will be open from the third Monday in October to the 1st of April.

The Dissecting Rooms will be open during the whole day; and from 7 P. M. to 10 P. M., it is the duty of the Demonstrators to be constantly in attendance, for the purpose of instructing the students dissecting.

TERMS:

For the Ticket of each Professor	$15 00
For the Ticket of Practical Anatomy	10 00
Matriculation	5 00
Diploma	30 00

☞ Fees for Tickets Required in Advance.

Boarding for Students is as cheap in New Orleans, as in any other large city of the Union.

Graduates of all respectable schools will be admitted to the course without charge except for Matriculation.

Students who desire further information, will address themselves to the Dean.

THOMAS HUNT, M. D., Dean.

New Orleans, August 18, 1855.

☞ The Administrators of the Charity Hospital elect annually, in April, fourteen Resident Students, who are maintained by the institution.

TEXT BOOKS:

Wilson's Anatomy,
Carpenter's Physiology,
Watson's Practice of Physic,
United States Dispensatory,
Ferguson's or Druitt's Surgery,
Fownes' Chemistry,
Churchill's Midwifery.

THE

NEW ORLEANS

MEDICAL AND SURGICAL

JOURNAL.

VOL. XII. JULY, 1855. No. 1.

EDITED BY

BENNET DOWLER, M. D.,

Corresponding Member of the Academy of Natural Sciences of Philadelphia; Fellow and Honorary Vice President of the Medico-Chirurgical College of the same City; Fellow of the Medical Society of Virginia; Corresponding Member of the Society of Statistical Medicine of New York, Fellow and a Founder of the Royal Society of Northern Antiquaries of Copenhagen, &c., &c.

EDITORIAL OFFICE—No. 80 ST. CHARLES ST., ROOM 31, NEAR COMMERCIAL ALLEY.

RESIDENCE—Delord-street, between Camp and Magazine, New Orleans.

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EACH NUMBER CONTAINS ONE HUNDRED AND FORTY-TWO PAGES OF READING MATTER.

H. McCULLOCH, PROPRIETOR, No. 76 Camp-street, NEW ORLEANS.

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To correspondents and contributors to this Journal:—

1.—Write on but one side of the paper.

2.—Prefix the exact caption to the article.

3.—Add to the name, the profession, as M. D., Physician, Surgeon, Planter, &c.

4.—Articles for publication should not be addressed as personal letters.

5.—Communications about personal movements, plans and purposes, together with the affairs of institutions lectures, and so forth, should be sent to the Proprietor as advertisements. The sole aim of this Journal is to be useful to its readers in a scientific and not in an advertising sense.

6.—Anonymous articles will generally be excluded. Reviewers will please to add their names or initials to their articles.

7.—Articles sent for the original department of this Journal must not have appeared in other Journals.

8.—Articles should be sent at least two months before the time at which their publication is expected.

9.—Articles, provisionally accepted, the publication of which is necessarily deferred, will be acknowledged in the next issue; all others may be considered as not accepted, and may be re-claimed within two months.

10.—The acceptance of articles for this Journal must not be construed by the reader as implying the approval or disapproval by the Editor; he will not accept any article which he has sufficient reason for believing to be false in fact, immoral in import, or injurious to the public and the profession. Articles valuable for their facts, though defective in orthography and style, will be considered, revised and arranged for publication in strict accordance with the writer's views, without the Editor assuming the responsibility of either the facts or opinions which may be advanced on any occasion.

11.—Papers of moderate length, having a practical bearing, will be preferred.—[Editor.]

THE

NEW ORLEANS

MEDICAL AND SURGICAL

JOURNAL.

VOL. XII. SEPTEMBER, 1855. No. 2.

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Journal de Pharmacie et de Chimie.
Revue Medicale Française et Etrangère.
Gazette Medicale de Paris.
Archives Generales de Medecine.
Gazette Médicale de Lyon.
Gazette Medicale de Strasbourg.
Journal de Médecine de Bourdeaux.
Annales d'Hygiène publique et de Médecine légale.
L'Union Médicale.
Il Progresso, Genoa.
El Siglo Medico, Madrid.
Revue de Therapeutique Médico-Chirurgicale.
Dublin Quarterly Journal of Med. Science.
Medical Times and Gazette, London.
The Glasgow Medical Journal.
The Edinburgh Medical & Surgical Journal.
British and Foreign Medico-Chirurgical Review.
London Lancet.
The Indian Annals of Medical Science, Calcutta.
The Dublin Hospital Gazette.

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MEDICAL AND SURGICAL

JOURNAL.

VOL. XII. NOVEMBER, 1855. No. 3.

EDITED BY

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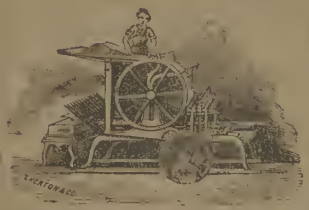

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