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A. HESTER, M. D.,

EDITOR AND PROPRIETOR.

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INDEX

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CONTRIBUTORS TO THIS VOLUME.

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J. H. G., M. D., South Carolina.
Drs. Bradley and Rogers, Alabama.
Dr. Thomas Peniston, New Orleans.
" Bennet Dowler, "
" W. M. Allen, Baton Rouge, La.
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New Orleans Medical and Surgical Journal.

Vol. 8, No. 1, July, 1851 lacking

TO READERS AND CORRESPONDENTS.

We again request our Correspondents to send us short and practical papers; such are generally read, whereas long and elaborate articles, however well written, are seldom acceptable but to few readers.—We are negotiating for several Foreign Medical Journals besides those which we now receive. The following Books, etc., have come to hand, viz..

On the Theory and Practice of Midwifery. By FLEETWOOD CHURCHILL, M D, M. R. I. A., Hon. Fellow of the College of Physicians in Ireland, Corresponding Member of the American National Institution, etc. With notes and additions. By D. F. CONDIE, M D, Secretary to College of Physicians, etc. With 139 illustrations. A new American, from the last improved Dublin edition. Philadelphia: Blanchard & Lea, 1851. (From Publisher, through Morgan, Exchange Place.

Intermarriage, or the mode in which, and the causes why, Beauty, Health and Intellect, result from certain Unions, and Deformity, Disease and Insanity, from others, etc. With 8 illustrative drawings. By ALEXANDER WALKER. Philadelphia: Lindsay & Blakiston, 1851. (From Publishers, through T. L. White.

The Practice of taking Blood in Diseases, contrary to common sense, to general experience, to enlightened reason, and to the manifest laws of Divine Providence. New York: 1851.

nnual Announcement of the Kentucky School of Medicine. Session 1851–52. *With a Catalogue of Students for* 1850–51. Louisville, Ky. (From the Faculty.)

Catalogue of the Officers and Students of the University of Louisiana, for the Academical year 1850–51. New Orleans: 1851. (From Prof. De Bow.)

talogue of the Officers of the New York Medical College, and announcement of the Course of Lectures. Session 1851–52. New York.

o the Members of the American Medical Association," containing the correspondence between Dr. Ramsay, Dr. Robertson and Dr. De Saussure, in relation to the charge brought against Dr. Ramsay's paper on Obstetrics, by the National Medical Association.

nual Circular of the National Medical College, Washington, D. C. Session 1851–52.

port on the Medical Department of the University of Pennsylvania, for the Session 1850–51. *To the* ALUMNI *of the School.* By the Medical Faculty. Philadelphia: 1851.

Annual Catalogue and Announcement of the Medical Department of the St. Louis University. Session 1851–52. St. Louis, Mo., 1851.

Annual Circular of the Jefferson Medical College, Philadelphia, for 1851–52.

The Transactions of the New York Academy of Medicine, instituted 1847. Vol. 1, part 1. Printed by the Academy. New York, 1851. pp. 165. (From the Academy.)

An Address on Medical Jurisprudence; its claims to greater regard from the Student and Physician; delivered before the Fellows of the Massachusetts Medical Society, at the annual meeting, May 1851. By David Humphreys Storer, M. D., Boston.

Third Annual Commencement of the Medical College of Evansville, Indiana, for Session 1851–52.

A new Sign Language for Deaf Mutes,—being the Thesis for the degree of Doctor in Medicine, presented and sustained before the Medical Department of the University of Buffalo, February 25th, 1851. By Albert J. Meyer. (Published in accordance with a vote of the Faculty.) Buffalo, N. Y. (From the Author.)

THE NEW-ORLEANS

MEDICAL AND SURGICAL JOURNAL.

SEPTEMBER, 1851.

Part First.

ORIGINAL COMMUNICATIONS.

I.—RUPTURE OF THE UTERUS FROM HYDROCEPHALUS OF THE FŒTUS. GASTROTOMY, AND RECOVERY OF THE PATIENT, PERFORMED BY SAMUEL B. MALONE, M. D., FORMERLY SURGEON IN THE U. S. NAVY.

(*Reported by* THOMAS N. LOVE, M. D.)

It is due my friend Dr. Malone to state that I volunteered without solicitation the task of reporting the following interesting case, and being kindly furnished the use of his case-book, cannot do better in presenting a clear view of the unfortunate accident, than copy his notes in full. The correct diagnosis, the prompt and energetic means adopted, and the speedy recovery of his patient, are highly complimentary to the Doctor's skill and medical treatment. The high social rank of the patient—her great moral and private worth added great interest and responsibility to the operation and subsequent treatment. It is also worthy of remark that by the time the necessary arrangements were made for the operation, the patient was considered in a hopeless condition,—being almost pulseless. But it was observed that the venous and capillary system contained a good deal of blood; that the patient was warm to the ends of the fingers, and the tongue not pale, which was accounted for by the presence of the fœtus upon the aorta and abdominal viscera;

and upon a slight reaction of the pulse the operation was proceeded with hoping that the patient might be sustained by the blood in the venous and capillary systems, which proved to be correct; for the pulse rose to a full beat as soon as the head of the fœtus was raised from the abdomen, although the pulse at first indicated great loss of blood, and approaching dissolution. The parietal bones of the fœtal head were much larger than common, measuring from the squamous to the longitudinal suture four inches and three-eighths, from the occipital to the coronal suture four inches and a half. This is after the bone had been dried.

"Sometime during the month of March I was notified that Mrs. H. would require my attendance in her fifth confinement,—having been called to attend her in all of her preceding labors. Age 28; large size; fleshy; full habit; fine health; pelvis well formed; very calm, even temperament, and great fortitude. Preceding labors quick and easy,—recovery rapid. During present gestation has been uncommonly large and inactive.

March 27th—Called on to visit her *in haste* a little after midnight. Stated that she had retired at her usual hour, and had fallen asleep,—woke up suddenly with pain, and great discharge of water,—succeeding pains slight, and decreasing in force. On examination found the os uteri so high up as to be *out of reach.* Pains gradually wore off, and for several days she was up about her room, though never entirely easy, and the water continued to flow occasionally.

On the evening of the 31st, in passing into the supper room, was seized with smart pain,—sent for me in haste,—on my arrival had become comparatively easy, so that no examination was made. Situation continued about the same until the 4th of April, when I was again called on, at 4 A. M., and found her, as she stated, *decidedly in labor.* On examination found the soft parts yielding,—os uteri dilatable,—head presentating, very high up,—pains regular, but moderate. Matters progressed slowly, but as I considered favorably, until about noon, when she exclaimed "now it comes." On examination found what I took to be the membranes nearly without the vulva. On attempting to ascertain the particular presentation, detected on the left side a smart coagulum, and on placing the left hand over the abdomen found two elevations with a decided depression between them. During the next pain the head receded from the vagina, which was immediately filled with a large quantity of fluid, and coagulated blood. The nature of the accident was at once suspected and soon ascertained to be a rupture immediately at the left sacro-iliac junction, through which the child had escaped into the abdominal cavity,—the placenta lying in the rent. The

facts were immediately communicated to husband and friends, and gastrotomy suggested as the only resource. The nature of the case being explained to the patient, and all the chances fully stated, she consented to, and urged an immediate operation.

Before the requisite arrangements could be made, there were such evident symptoms of sinking, as it was supposed from loss of blood, that the operation was deferred lest the patient might die under the knife. In the course of about an hour and a half slight reaction took place, and the operation was proceeded with in the presence of Drs. J. H. Hand, C. W. Malone and Thos. N. Love. An incision was made along the linea alba down to the facia, then through the facia down to the peritonial coat, on opening which a large quantity of watery fluid and coagulatedblood escaped. Next, the uterus with the left fallopian tube obliquely upwards, presented, contracted to about the size of the head of an ordinary infant. The hand was then passed over the fundus uteri, and down on the left side where the feet were found and grasped, and the child slowly withdrawn until the head arrived at the opening. The cause of all the difficulty now became evident, as the head was so large as to require an opening into the occiput, from which several pints of water escaped in a strong jet. The head thus reduced was removed by passing the right forefinger into the mouth, and the left into the opening. On subsequent examination several pounds of water still remained in the head. The placenta was next traced by the cord, and removed through the incision together with such coagula as could be found. The incision was then closed, with several stitches of the interrupted suture passing entirely through the walls of the abdomen, and the wound dressed with clothes wrung out of hot water. A decided dose of morphine was next administered.

The operation was borne with much fortitude, and there was little or no sinking of pulse or change of countenance. Reaction gradually returned, and during the evening and early part of the night she suffered severely with after-pains accompanied with free discharges of coagula, *per vias naturales*. Anodynes were repeated until the pains were relieved. Afterpart of the night slept calmly and refreshing.

March 5th, 6 A. M.—Left her free from suffering; at 9, returned; countenance and respiration natural; pulse 120; skin moist and warm. 6 P. M.—Condition the same; drew off urine; locial discharges free; troublesome disposition to cough.

March 6th, 6 A. M.—Slept all night. Countenance and respiration natural; pulse 116. Ordered full dose of ol. Ricini, and 30 drops spts. turpentine. At 2 P. M.—Pulse increased; cheeks flushed; took 20 oz.

blood from the arm. 6 P. M.—Countenance, respiration and skin natural; pulse 120. Tumefaction of the abdomen, and sighing; urine passed off naturally; no action on the bowels; ordered an enema.

March 7th, 6 A. M.—Slept quietly; countenance, respiration, and skin natural; pulse 120; no action; condition the same through the day. 6 P. M.—Urine passed naturally; no operation. At 9 P. M.—Had a fine action on the bowels. Cheerful and confident of recovery. Soreness and tumefaction of the abdomen diminished. All other symptoms favorable; pulse 112.

March 8th, 6 A. M.—Countenance and respiration natural; skin warm and moist; pulse 108. At 3 A. M.—Had a very free watery operation; took 1 oz. of paregoric, and slept well during the night. Locial discharges continue. 6 P. M.—Condition about the same during the day. At 3 this evening, four days after the operation, removed the stitches; incision firmly united by first intention. Supported the abdominal parietes with long adhesive strips. Discharges from the uterus still continue with very offensive clots.

March 9th, 6 A. M.—Respiration a little hurried; skin rather warm and dry; pulse 112. In the early part of the night became very restless, attributed to pressure on the lungs from effusion into the abdominal cavity,—relieved by elevating the shoulders to an angle of about 22½ degrees, in which position slept all night. At 9 last night gave a half grain of morphine, from which she slept about 36 hours. 6 P. M.—During the day countenance and respiration natural; pulse 100 to 108; skin warm and soft. Some appetite. Locial discharges free and offensive. Ordered a dose of cal. magnesia, and warm lemonade.

March 10th, 6 A. M.—Countenance bright and cheerful; respiration natural; pulse 88; skin warm and soft; slept well. In the early part of the night repeated the magnesia and lemonade. At 11, a free offensive motion from the bowels. 6 P. M.—Continued about the same during the day; pulse 100. Took rice and milk, and relished the taste of a piece of broiled ham, only swallowed the juice. Locial discharges, but less offensive.

March 11th.—Symptoms all favorable; slept well; evidence of effusion in the abdomen subsiding. Applied laced bandage for support.

March 12th—Countenance bright and cheerful; confident of recovery; respiration and skin natural; pulse 88; sufficient appetite. All the natural functions going on well.

March 13th.—Passed a comfortable night; gave a moderate dose of magnesia; pulse 100; respiration somewhat irregular and hurried;

hands rather warm and dry. 6 P. M.—Some headache during the day. Magnesia repeated at 9. In the morning no action; pulse 100; skin rather dry; somewhat depressed.

March 14th, 6 A. M.—Slept well; pulse 80, asleep,—88, awake; respiration and skin natural. The magnesia was repeated at eight last night. At 2 this morning had a fine operation. Feels better than at any time since the operation. Lies on either side, but feels a little soreness on the left.

March 15th, 6 A. M.—Symptoms all favorable. Rested well, and has sufficient appetite. Abdominal prominence diminishing.

March 16th.—Still improving in all respects. From this date, being the 12th day after the operation, nothing occurred worth noting."

REMARKS.

"In dismissing this most interesting case, many reflections present themselves. It may be contended that the continued discharge of water after the 27th demanded a closer examination on the part of the medical attendant. To this I would answer, that this is not a very unusual occurrence, and still all things may go off well. There is now a very intelligent lady in our town who sent for me on the 18th of August last. On my arrival she stated that it was some months or so earlier than she was 'looking out;' but that she had just had pains followed by a free discharge of water, both of which soon subsided. For near a month the same thing continued to occur at intervals. Sometimes I was called in, sometimes not. Finally on the 17th of September I was sent for, and found her in labor, which went through the ordinary course; the water collecting behind the membranes, then discharging, and the vertex presenting. In the course of some three or four hours she was safely delivered of a female infant, very small, but healthy. At three months old it was one of the plumpest, fattest children I have ever seen. Both mother and child are now in fine health. I have met with other cases of similar character, one in which the discharge of water continued three months before confinement, *and all did well.*

It may be said that as the labors of Mrs. H. were known by me to be usually quick, and as I found the external organs, as well as the os uteri, well prepared for delivery, and as the pains were regular, some impediment should have been suspected, and a more thorough investigation made. But the pains, though *regular*, were *moderate*, and the head continued to descend, though slowly, at each pain. Besides, the certainty that the child was alive, precluded the idea of opening the head,

the only practicable remedy in the case. Had all things been in readiness, I might and should have operated immediately, with a hope of saving the child. But as I knew by actual examination that the placenta was detached, and as there was no motion after the accident, a fact which I took care to ascertain, too long a time necessarily elapsed, before I was prepared to operate, to offer any hopes of saving the child. And then the condition of the mother was such as to render it more than probable she would die under the knife, an event no one would like to encounter.

The particular mechanism by which the accident was produced may be readily and clearly comprehended. When we reflect, that the head, converted into an enormous, elastic sack, was compressed by the contraction of the uterus with great force into the pelvis, presenting the condition of a portion of the surface forced into the mouth of a cupping glass by external pressure of the atmosphere, while other portions of the same sack were forced by the same agency in a direction almost at right angles across the sharp edge of the linea ileo-pectinea, over which the uterus was forcibly drawn, just about its junction with the vagina, the point at which the lesion doubtless actually occurred.

One striking peculiarity in this case is the enormous weight the gravid uterus must have contained at the full period of gestation. All who witnessed the operation will doubtless concur with me in the opinion that the head alone could not have weighed less than ten pounds, while the body of the child was well formed, and over the ordinary size,—added to which the great quantity of water that continued to escape for eight days. The placenta, membranes, etc., must have swelled the sum total to some 21 or 22 pounds.

There is a physiological, or perhaps more properly, a pathological fact connected with this case, well worth noting, namely: the rapidity and efficiency with which the absorbents act, when concentrated on one point. On the sixth day after the operation, it will be observed, that the effusion into the abdominal cavity was so great as seriously to impede respiration, by pressure on the diaphragm, rendering it necessary to elevate the chest. The large accumulation of fluid was quite perceptible through the abdominal parieties, which were nearly as much distended as before delivery, and the oscillation such as clearly to denote fluid, and not flatus. In the space of one week from that time the abdomen had returned nearly to its natural size. During this period the whole power of the absorbents must have been directed to a single object, as the patient shrunk but little, if at all, in the extremities, although she took little or no nourishment for near twenty days.

In cases of uterine rupture, or what practically amounts to the same thing—a tearing away of the uterus from the vagina, three courses of practice have suggested themselves, which I will endeavor to review as applicable to this case.

First. Leave the patient to nature.

Second. Attempt delivery *per vias naturales.*

Third. An incision into the abdomen.

The first course is but to abandon the unfortunate to a hopeless fate, and can only be justified when there is a positive certainty that the patient will die under the hands of the operator. Nature can effect nothing when the accident occurs at or near the full period of gestation; and something may be gained by judicious and well timed interference.

The second may perhaps be resorted to, when the child has not entirely escaped from the uterus. But this is a state of things which most generally continues too short a time to allow of any efficient action, and when the child has passed above the contracted uterus, and possibly become entangled among the abdominal viscera, there would certainly be great danger of dragging away some of the contents of the abdomen or of pelvis with the child. As regards the rejection of this course in the case of Mrs. H., certainly if 'there is a divinity which shapes our ends,' mine were most happily shaped, as had it been attempted certain defeat and deep mortification must have ensued. For although the feet may have been, (and actually were grasped in the last examination I made 'per vaginam,') and although they might have been brought down, and delivery effected, until the head reached the bony pelvis, here it must have been arrested, and no force could have removed it. Even had the true character of the obstruction been detected, and had the head been opened, it would have been impracticable to have evacuated all the water, and even could this have been accomplished, still the enormously enlarged head could not have been withdrawn without separating the bones,—a more critical operation, so high up and among such delicate organs, than I had the courage to undertake, without the aid of one of the most important of all the senses in surgical operations,—sight.

As to the applicability of the third mode to this particular case its success affords a sufficient commentary. Whereever the practitioner is fully satisfied of the true nature of the accident, and where he is sure the woman has strength to sustain her through the trying ordeal, it is undoubtedly his duty to make this last effort to wrest the unfortunate from an otherwise inevitable fate. But where there is no chance of success from the feeble condition of the patient, or where sufficient time has elapsed for active inflammation to have come on, it should certainly

be regarded as little less than criminal to resort to a most painful operation, which could only afford an opportunity of display to the aspiring operator without a promise of relief to the unfortunate sufferer.

Note: May 4th.—Made an examination for the first time since the accident; os uteri lower down than natural, a fissure or cleft easily detected in the os tincæ on the left side, extending through the neck and into the body of the womb, between the lips of which it is easy to pass the finger up to about the first joint. The discharge still continues dark and offensive, mixed with small fœtid coagula. Directed the injections continued as before.

June 4th.—Repeated the examination; the cleft nearly closed up; the discharge ceased; patient well; monthly periods returned.

There never was any secretion of milk, or the slightest pain in the breasts; they were covered with the common diachylon plaster, to which these beneficial results may in part be attributed."

In connection with Dr. Malone's remarks we think a reference to a few high authorities, and a synopsis of a few similar cases will not prove uninteresting to the reader.

There has been, and is yet a great difference among medical writers in regard to the treatment of ruptured uterus. This diversity of opinion induced Dr. J. B. Trask of New York to collect and make out a synopsis of over three hundred cases of ruptured uterus,* for the purpose of forming some data from which settled principles of practice may be established. In the introduction of this article he gives the practice and opinion of some leading men. Among them Ramsbotham says: "Feeling as I do, that to leave the child in the cavity of the belly is almost certain death to the mother, I should seriously entertain the question whether the parieties of the abdomen should be divided and the child extracted by that means, or whether the patient should be abandoned to the chance of what nature might effect; and the answer must depend entirely on the circumstances of the individual case. If she were in tolerably good spirits, if she had not suffered so great a shock as usual from the accident, particularly if, after explaining to her what had occurred, she was anxious for the operation to be performed, I should have no hesitation in undertaking it. But if I found her sinking, if the powers of life were ebbing fast, and particularly if thirty or forty minutes had elapsed since the rupture, and the movements of the fœtus had quite ceased, I should by no means sanction the incision, because of the painful nature of the operation, and because I should presume it would avail nothing, and might probably hasten her death."

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*American Jour. Med. Science. January 1848.

Jacquemier says: "Gastrotomy offers chances of recovery less unfavorable than those of abandonment, especially if the operation be performed before symptoms of inflammation present themselves."

"Dr. Robert Lee advises perforation when the head presents; and that when the child has passed through the rent into the abdomen, an attempt should be made without delay to deliver by grasping the feet. 'If a considerable time has elapsed since the accident, and the uterus has contracted so closely that the hand cannot be passed through the orifice and the rent, the best practice would be to leave the case to nature. Some have recommended gastrotomy under these circumstances; but the child is already dead, and the mother could hardly be expected to survive after such an operation.' If the fœtus has escaped into the peritoneal cavity, the patient, he says, may recover without gastrotomy."

Colombat says, "If the child has not passed entirely into the abdominal cavity, we should always endeavor to terminate labor by the natural passages; but in the contrary case recourse must be had to gastrotomy, because this extreme means offers some chance of safety to the mother, and especially to the child, which would indubitably perish unless we should act with great promptitude."

Dr. Collins is decidedly in favor of perforating the head when it presents, and does not recede. When the child has escaped out of the uterus, it is now the general practice, and undoubtedly the best, to introduce the hand through the lacerated parts into the cavity of the abdomen, and bring down the feet.

Dr. James Hamilton says, "If from the state of the passages the infant cannot be drawn forward through the usual apertures, the parieties of the abdomen should be divided."

"Among these," says Dr. Trask, "it will be seen that there is a great variety of sentiment as well as contrariety. Thus Blundell and Davis would not attempt delivery so long as there appeared to be any chance of recovery undelivered. Lee and Merriman would abandon the woman unconditionally when the rent has become diminished by contraction. Burns and Ramsbotham would be rather disposed, under these circumstances, to practice gastrotomy early, the former by a 'small' incision. Blundell would wait until there should be no chance of recovery if left alone. Velpeau would try every other mode before resorting to gastrotomy. Dewees, on the contrary, says, the only chance is in its immediate performance. Churchhill considers its propriety very questionable. Jacquemier would perform gastrotomy where there should be so great contraction as to render it doubtful whether the fœtus could be extracted after perforation. From the tenor of Dewees we infer that he considers

it expedient in contractions of a less degree than what would absolutely prevent delivery *per vias naturales.*"

"Although rupture of the uterus is comparatively a rare accident, the determination of the practice to be pursued under all conditions of its occurrence is a matter of the highest practical importance. If the chance for the unfortunate patient's recovery is, at the best, small, it surely is a matter of great moment, under circumstances of peculiar difficulty, to know what course presents the greatest probability of a favorable issue. In other words, it is our duty to enquire, which places the woman in the most favorable condition for recovery, when the fœtus has escaped into the abdomen, and the uterus is contracted:—the abandonment of the patient to the resources of nature, or delivery by gastrotomy? And when, from any cause, such a disproportion exists between the fœtus and the maternal passages, as to render delivery *per vias naturales* difficult, does the prompt removal of the fœtus by an operation, itself severe, but still of very short duration, and which allows the patient almost at once to rally, or the tedious, painful, and often long protracted procedure of dragging it, mutilated, through the natural passages, afford the best chance of immediate security, and place her in the best situation for ultimate restoration to health?"

We have not been able to see the conclusions to which Dr. Trask has arrived from the three hundred cases he has collected, as that number of the Journal (April No., 1848) has been misplaced. But from these cases we feel confident he must draw conclusions highly favorable to the operation of gastrotomy. He reports twelve cases of ruptured uterus occurring during gestation, all of which recovered. Gastrotomy was performed upon *but one* of these! In seven of these the fœtus escaped through the abdominal parieties by either a rent, or inflammation and suppuration. Now we ask, is it not probable that these seven cases, or at least one or two, might have recovered if the operation of gastrotomy had been performed, and thereby saved the woman of protracted suffering? Is it not the ruptured uterus, and the consequent hemorrhage and subsequent inflammation which proves fatal to the patient, and not the incision (though somewhat dangerous in itself) through the abdominal parieties?

He thus reports twenty-six cases of ruptured uterus occurring during gestation, none of which recovered. Fifteen of these were not delivered. Eight delivered. One perforation. Two, result not stated. Gastrotomy was not performed in a single case. Not one in which the fœtus made its escape through the abdominal parieties. In twenty-two of these cases there was a post mortem, which gives to them a high degree of

interest. The abdomen was generally found filled with coagula. Now suppose that the true condition of these patients could have been ascertained at the time of rupture, and an abdominal incision made, the fœtus removed, and the coagula taken away, or the fluid blood let out, would not the chances of recovery have been increased? But the alarming hemorrhage which occurs so suddenly in such cases always throws great terror upon all surgical interference.

He reports seventy-four cases of ruptured uterus occurring at full time, all of which recovered. Forty-seven delivered, either naturally or by the use of forceps, perforation, etc. On seventeen, gastrotomy was performed; and the other ten left to nature, and the fœtus finally escaping through the abdominal parieties, or otherwise.

He finally reports over two hundred cases of ruptured uterus occurring at full time, all of which proved fatal. Eighty-five delivered *per vias naturales*, by the use of the perforator, crotchet, turning, forceps, etc. Fifty died undelivered. Gastrotomy performed only *five times*. The other cases were either left to nature, or the result not stated. A post mortem was made in about 100 cases.

The above statement will at once strike any one as holding out great inducement to the surgeon to practice gastrotomy in ruptured uterus, where the accident is well understood,—the child being in the abdominal cavity. The cases of recovery from gastrotomy far exceed those in which it has proved fatal. These cases are not so encouraging for the use of the perforator, so highly recommended by Dr. Lee. In the eighty-five cases which proved fatal, delivery was effected by the use of the perforator twenty-seven times. In connection with this subject we quote the opinion of Dr. Meigs.

[Case ccxciii.] "In a case that occurred this spring, the gentleman administered the ergot at midnight, or a little later, and the child escaped into the peritoneum at about 2 A. M. Her fate was announced; but as she lingered longer than was expected, I was called at 7 P. M.

"I proposed to perform gastrotomy; but as the child could be touched through the rent in the vagina and cervix, it was deemed unadvisable to execute this purpose. Whereupon I withdrew it by means of my craniotomy forceps, after making perforation of the cranium. The woman was sensible, though pulseless, all the while, and quite conscious of her dying state. The operation was most fatiguing to me, and painful and exhausting to her, as the child was very large, and the pelvis a very bad one, which had caused laborious labors before. She survived the extraction for some hours.

A post mortem examination showed me, that it would be far more

humane in all such cases to extract the child by a gastrotomy operation, as the least painful, and least mischievous. I bitterly regretted having changed my purpose, and am now fully resolved in all future cases of rupture and escape to open the abdomen. I admit that a woman might recover, the child being left unextracted, but such good fortune is never to be expected. A hasty and speedy removal of the child and secundines gives, in my opinion, a chance not greatly inferior to that in cæsarean section."

Gastrotomy might have saved Dr. Wragg's patient. (See the *Southern Journ.* Med. and Phar. Charleston, March, 1847.) He states, a negro woman, quite healthy, was taken in labor on Monday,—died 2 P. M., on Tuesday. He arrived 2 hours afterwards. She had no sudden acute pain—"no sense of tearing"—no hemorrhage from the vagina. Made a post mortem—rupture caused by the large size of the fœtal head.

A very interesting case is reported in the London Medical and Surg. Journal, which is similar to Dr. Malone's case, by Thomas Radford. A woman in her ninth pregnancy—good health—waters escaped the day before labor came on—the pains then became apparently strong—the os uteri dilated—the head entered the pelvis. In four hours after labor began, the patient was seized with vomiting and coldness of skin. Up to this time it was thought the patient was doing well, pains then subsided, the patient rose up and stood on her feet, fainted, "moaned much," and expired, but never uttered any sudden exclamation or shriek; not much hemorrhage; abdomen presented two tumors.

Mr. Radford met with another case proving fatal in 16 hours after laceration. He remarks, that perforation of the fœtal head (which was discovered only by the post mortem examination to be hydrocephalic) might in all probability have led to a more fortunate issue; but during the life of the patient this fact was not known. Speaking of the hydrocephalic head, it may be proper to state, that its existence is not so easily ascertained, as some writers would lead their readers to believe. Three cases of this description have come under my observation, and yet the indications which are stated to characterize this condition of the head were absent in all."

In the following case hydrocephalus was not known until after the head was perforated. "Case 47. Æt. 36—mother of several—previous labors easy—pains moderate at first, and suddenly, after about five hours, bearing down almost entirely ceased. From one to two hours after rupture the pulse was rapid and indistinct, countenance anxious, excruciating pain in the abdomen, a slight oozing of blood *per vaginam*. Prompt delivery resolved on; head at the brim of the pelvis; after a fruitless

trial of long forceps for one half hour they slipped. The perforator then used, and the fœtus found hydrocephalic ; delivery at once finished ; two pounds of coagula removed. A rent from the cervix, posteriorly up into the body of the womb, as far as the finger could reach—great prostration followed, but she recovered. Dr. Campbell, Edin. Med. and Surg. Journ. 1828. p. 328." From Dr. Trask's reported cases.

"Case 49–Operated on twice successfully by gastrotomy, after rupture and escape of the fœtus. The second time the fœtus lived half an hour after its extraction. *Ibid.*"

"Case 50—Feeble ; fourth pregnancy ; full two weeks before labor. A transverse rupture of the fundus took place ; fætus escaped. Gastrotomy twelve hours after rupture ; child dead. Liquor amnii and blood in the abdomen ; the intestines inflamed. Cured in about one month. *Ibid.*"

"Case 82.—Wife of a vine-dresser. Rupture and gastrotomy at the end of eighteen hours ; child dead ; a gangrenous abscess formed in the hypogastric region ; but she was at work in the field in six weeks. At the end of nine years again pregnant, and had rupture of the womb, the fœtus escaping entirely into the abdomen. Gastrotomy again, only waiting for the administration of the sacrament, two hours or more. Infant gave signs of life for half an hour after the operation. The woman subsequently had a child naturally. *Ibid.*"

"Case 121.—Eleventh child ; for two weeks had severe pain in the lower part of the abdomen, with tendency to sickness ; pains tolerably strong ; duration eight or nine hours ; no physician called for an hour and a half after rupture. Died undelivered in less than two hours. *Ibid.*"

"Case 137—Exostosis of one of the pelvic bones ; hydrocephalic fœtus ; labor had been suffered to continue for many hours. Rupture ; died without any attempt to extract the fœtus. Post mortem showed several rents. *Ibid.*"

"Case 139.–Fifth pregnancy ; full time ; had dull and continued pain in the abdomen ; water escaped, and uterine action was very much abated. At the end of three hours gave three ordinary doses of ergot ; action increased in a small degree for one and a half hour, when the vectis was used, but failed ; fœtus then considered hydrocephalic ; head suddenly receded, and pains at once ceased ; sinking came on ; rupture had taken place, and the fœtus had escaped in the belly, and could be felt there. Apparently soon the uterus was found permanently contracted, admitting but two fingers ; patient exhausted, and but few hopes could be entertained of recovery. Gastrotomy—this occupied thirty

seconds, without the loss of a teaspoonful of blood; patient expressed herself greatly relieved, and passed a good night. Died eight hours after delivery. Post mortem, uterus healthy, except near the laceration in the posterior wall, where it was completely altered and softened in its texture, owing to chronic inflammation; fœtal head of monstrous size. Mr. Lord, in Lond. Lancet, 1828, 9 vol., p. 310." *Ibid.*"

"Case 161. Æt. 28. First labor; hydrocephalic fœtus; in labor over 24 hours; convulsion; sudden exhaustion; perforation; died on fifth day. Post mortem, a large rent in front and lateral part of the vagina." *Ibid.*"

Here is a case where gastrotomy would have been better and much safer practice.

"Case 203. Æt. 36. Good health; borne several; at full time fell upon the ice, and struck her abdomen, causing her to feel that she was split open; repeated syncopes; incessant vomiting; cold surface; death. like aspect during twenty-four hours; os undilated; occasional pain, and extreme tenderness of belly; seventy-two hours after rupture symptoms no better; os still undilated; artificial dilatation commenced, 'a process so obstinately resisted by the unyielding state of the parts, as to require from four to five hours to effect a delivery of the child." Child large; profuse hemorrhage, from the uterus not contracting; firm adhesion, in part, of the placenta to the uterus. Died on sixth day from rupture."

"Case 214. Tenth labor; previous labors easy. About seven and a half hours after the escape of the waters she felt a slight acute pain in the belly, and she said, 'feel what a strange lump is in my side.' The head had receded; turning soon after with perforation behind the ear; child hydrocephalic; rent through the whole extent of the left side. Died in twenty-three hours. Dr. Fahnestock. *Ibid.*"

"Case 235 .Second child; the first a forceps case. Pains for thirty hours of unusual severity; os completely dilated; pains suddenly ceased; slight hemorrhage; immediate vomiting of dark green; excessive prostration; difficult breathing; extreme anxiety; pulse extremely rapid and feeble. In fifteen hours no part of the fœtus could be felt per vaginam; form of abdomen changed, and extremely tender; child's limbs distinctly felt; a coil of intestines in the womb, and a large rent in the left side; was in a better state than at the time of the accident; no pain except on pressure; fissure in the womb so contracted as not to admit the finger. Gastrotomy nineteen hours after rupture; a large quantity of bloody fluid in the abdomen and the placenta; intestines much inflamed; child large; not half an ounce of blood lost in the operation, and was comfortable after it. Died sixteen hours after the operation, and thirty-five after rupture." *Ibid.*

"Case 252. In her fourth labor Cæsarean operation, on account of supposed contraction of the pelvis. After this delivered of twins at full time, alive, by another practitioner. In her sixth labor the uterus acted with great energy, and she exclaimed that something had given away; considerable hemorrhage followed; vomiting and syncope; head receced; gastrotomy; child almost all in the cavity of the peritoneum; dead; mother lived thirty-six hours. Post mortem; rupture at the place of previous incisions." *Ibid.*

We might quote manyother interesting cases from Dr. Trask's collection, but deem it unnecessary. To any one who will take the pains to compare the operations of gastrotomy performed by American Surgeons with those of other countries, must feel that American Surgery can boast of superior success. We have not time or space to collect the recent cases, but will be content with a single citation. Dr. Field, of Pulaski, Tennessee, (Charleston Medical Journal, May 1851,) performed gastrotomy for ruptured uterus. The patient had natural labor; anodyne given to mitigate pain; tried to deliver *per vias naturales;* operated twenty-four hours after the accident; child extracted; the woman recovered. They brought her system under "the influence of mercury, thereby anticipating peritoneal inflammation, which is the great danger in those cases. Under this treatment the abdominal incision did not heal kindly, but exuded a dark sanious matter." We prefer the plan pursued by Dr. Malone, of trusting more to the resources of nature, and combatting symptoms as they arise, rather than anticipate evils by medication which might not occur.

Columbus, Miss., 1851.

II.—AN ESSAY ON THE USE OF QUININE, AS A REMEDIAL AGENT.

BY A. P. MERRILL, M. D., PRESIDENT.

Read before the Memphis Medical Society, May 15th, 1851.*

It is remarkable to observe, with what slow, wavering and uncertain steps our Profession approaches anything like perfection, in its application of active remedies, to the cure of disease; and for how long a period of time we are kept in a state of doubt, as to the most proper

*The following resolution was passed by the Society:

"*Resolved*, That a copy of the Essay on the Use of Quinine as a Remedial Agent, read at the present meeting of the Society, by DR. MERRILL, be furnished to the Editor of the New Orleans Medical and Surgical Journal for publication."

GEO. R. GRANT, M. D.
Corresp. Sec'y. Memphis Med. Soc.

and effectual method of using them. Medical men are not fully agreed, even now, as to the best manner of giving mercury, opium, tartar emetic, and many other medicines, which have for ages held a high place in the Materia Medica. And what a commentary is not this upon the confidence and pertinacity with which new remedies, and new combinations, are constantly urged upon the public, depending entirely upon the experience of a single man; and, frequently, of a man too, whose experience in the use of the proposed remedy is very limited; and one, indeed, who is quite incompetent to form a correct judgment in the premises, however extensive his opportunities of observation may have been.

It seems to be a curious anomaly in human affairs, that a numerous body of learned men, acting under the most favorable circumstances for observation, may report the results of their experience, in the use of a particular remedy, from one generation to another, even for centuries, and yet their successors, equally learned and talented, perhaps, will prescribe this remedy with much less boldness and confidence, than will the ignorant, but popular charlatan, who relies for all his knowledge upon his own limited personal experience. And it is certainly an extraordinary fact, in the history of human error, that a large portion of mankind, even in this enlightened age, will prefer the skill of such charlatan, to the professional judgment of the man of science, with all the lights of the experience and observation of other men of science and learning to guide him.

This cautious proceeding on the part of well educated men, instead of becoming a reproach to them, ought to be considered the highest recommendation of our Profession. But the imperfection in the science of medicine, which it implies, should stimulate us to a free interchange of opinions, and to a free discussion of practical results, with a view to a more rapid increase and diffusion of sound medical knowledge and practice. This is one principal object of our Society, and in accordance with it I propose to present you this evening, according to promise, some observations on the use of Quinine, as a remedial agent.

In all the long list of medicines, which have been added to the Materia Medica, during the last half century, this article now holds the most prominent place. Its discovery seems to realize the hope, rather than expectation, which has been entertained by medical men for twenty centuries, that a specific remedy for febrile diseases might one day be discovered. Its febrifuge quality is not only unquestionable, but is now, I believe, unquestioned all the world over. Consequently, it has found its way into the list of remedies, not only of those who profess

to treat this class of diseases upon public and well approved principles of science,but also into all the nostrums of quackery, concocted for that purpose. It is even permitted to occupy a place, too, in the list of remedies of that rapidly increasing class of Doctors, who professing greater skill or greater acumen than their neighbors, and setting aside the experience and researches of the scientific world, boast the pursuit of some peculiar and exclusive plan of treating diseases, peculiar to, and original with, themselves.

There appears to exist then, at the present time, a remarkable degree of unanimity in reference to the value and usefulness of this new remedy. But there is quite as remarkable a discrepancy of opinion, as to the proper method of its administration. We find it recommended, in a great variety of forms and combinations, and in doses ranging from the inconceivable decillionth of a grain of the homœopathist, up to the scruple and even drachm doses of some physicians. Nor do men differ much less in the choice of the time, or stage of the disease, in which it should be given, than in the quantity which constitutes a proper medium dose. Some confine its use to the period of intermission, or remission; others prefer to give it in the height of the paroxysm; while there are many who advise a repetition of the remedy at regular intervals, without regard to pyrexial changes. Some anticipate the paroxysm, by beginning with small doses, and gradually increasing the quantity, up to the time of its expected accession; and others, reversing this order, commence with a large dose, and seek to maintain the impression produced by it, by a subsequent exhibition of the medicine, in gradually diminishing quantities, and prolonged periods.

The object of this brief essay is to communicate to the Society some of my own views upon this subject. They possess little claim to originality, but being the result of actual experiment and observation, they may be entitled to a hearing, and to some consideration. And I cannot devise a better plan of stating my opinions, than by relating, very succinctly, the course of treatment which I pursued, in the cure of remittent fever, as it appeared upon a plantation in Mississippi, during the summer and autumn of 1849.

This plantation is situated upon the highlands, a little north of the 31st degree of North latitude. The negroes number about 120 souls, and their cabins are placed in the midst of a large area of cultivated land, which has mostly been under tillage for many years past. The ground is uneven and rolling, and is principally chained by a large bayou, which runs within a few hundred yards of the negro quarters, where it overflows a small tract of bottom land, and deposits upon it a sediment

of clay and soil, whenever there is any considerable rain in the neighborhood. Within two or three miles of the place, these highlands fall off suddenly into an extensive river swamp. Whether it be from these features in the location, or from other causes not so obvious, that the disease arises, I will not now attempt to decide; but periodic fevers, of greater or less severity, have been prevalent on this plantation nearly every summer, for many years past, although the whole population has been once changed, within the period to which my observations refer. During the year of which I am now to give you some account the disease was more general than common, and, also, a good deal more violent. I believe that no person on the plantation escaped it entirely, although in some few cases it was comparatively light; but many of the negroes suffered more than once, and some of them had as many as four or five attacks of fever, during the season.

This disease exhibited, in general, all the usual symptoms of our Southern bilious fevers, with inflammatory and congestive symptoms more or less developed. Unlike these fevers upon ordinary occasions, however, nearly every severe case was attended by spasms; and several children who were attacked with violence, had general and long continued convulsions, during the height of the febrile exacerbation. Delirium also attended several cases, and in some there were frequent watery dejections from the bowels, which, together with the cramps, and the symptoms of venous congestions which attended such cases, seemed to indicate the influence, to a partial extent, of the cause—whatever it may be—of Asiatic Cholera. This disease was then prevailing in some parts of the country not very remote, but not in that immediate neighborhood.

In a large majority of cases the attack came on in the night, or early in the morning, without premonition. In some cases, but not generally, the patient complained that he had had a distinct chill, or ague. The exacerbation of fever came on slowly, increasing in violence gradually during the day, but moderating somewhat in course of the night, and invariably followed by a remission about the dawn of day the succeeding morning. A perfect intermission never occurred in the more violent cases; and whenever the disease was not worsted at the first remission, a second exacerbation supervened almost immediately. This always proved more violent and painful than the first, giving rise to symptoms of congestion, and all its alarming concomitants.

Blood-letting was occasionally resorted to in the early stage of the fever, and always, I believe, with a good effect. But negroes, much more than white men, feel the debilitating effects of bleeding for several

days after the operation is performed, and when the attack is not so violent, as to endanger the confinement of the patient for more than a day or two, it is a saving of time to the owner of the slave to omit it. In all cases the tartar emetic, in small and frequent doses, was used during the continuance of the fever, and with very marked good effect. The dose, and the frequency of the repetition of it, were varied according to the susceptibility of the patient; ranging from an eighth to a half a grain, and given every half hour to every two hours. It seemed to be important, in obtaining the full good effect of this important remedy, to give it in sufficient quantity to excite some degree of nausea, but not to produce vomiting. With some physicians and planters there is considerable prejudice against the use of tartar emetic in fever, lest it should impair the tone of the digestive organs, and thus retard convalescence; but I have seen no reason to believe the prejudice well founded. Ipecacuanha is generally used by such persons as a substitute; but it is far less efficient in subduing fever, and frequently produces aqueous and debilitating dejections from the bowels, which it is difficult to control. It appears a little singular, that ipecacuanha should produce this effect, in the inflammatory and congestive stages of fever, and yet prove an invaluable and efficient remedy in diarrhœa and dysentery, with inflammatory and congestive symptoms.

Cold bathing was employed very freely in this disease, and with excellent effects. This was done by stripping the patient naked down to the waist; then, holding the head and shoulders over a large tub, placed by the bedside to receive the water, it was poured from a considerable height, in a free stream, over the head, neck and shoulders; taking care always to saturate the hair well with the water in the beginning. Very striking relief was obtained by this application; and the refrigerant effect was increased in many cases by the use of cold enemata. Ice would, in such cases, be a valuable addition; but planters are not apt to believe that its importance will justify the expense. Much other false economy is also practiced by them, in the arrangement and management of their plantation hospitals, and this is more particularly the case on the largest plantations, with absent owners.

In the height of the exacerbation the pulse became very frequent, numbering 130 to 150, and it was not apt to suffer any considerable abatement, while the paroxysm continued, even though other febrile symptoms were partially relieved. The usual morning remission was presaged, however, by an abatement of arterial action; a partial relief from pain and restlessness, and sometimes by sleep.

In this stage of the disease, which generally occurred, as I have said,

early in the morning, I gave the patient what I considered a full dose of quinine—eight or ten grains, in most cases,—and if the peculiar effects of this remedy were not quite obvious in the course of an hour, the dose was then repeated, either in full or in part. In a large majority of cases, however, the one dose proved quite sufficient for the purpose intended. The patient being *quininized*, (to use an expressive term), it was my next object to keep him in that condition for a sufficient length of time to prevent a recurrence of the paroxysm. This was effected by the exhibition of gradually reduced doses of the medicine every second, third, or fourth hour. The first dose being eight or ten grains, and the patient being brought under the full influence of the medicine, the next dose might be five, the next three, then two, perhaps, and sometimes even one grain. For greater security against a return of the disease, small doses were often continued for 24 or 48 hours, so as to carry the patient fully through the second or third febrile period. In no one case, I believe, when the *quininization* was thus established and maintained, was there a recurrence of the fever. It is possible, I think, that the succession of small doses given was not always necessary; but I have not had the courage, in a violent and alarming fever, to rest my case upon the first impression made by this remedy.

Sometimes, on account of the delirium present, there was difficulty in giving the quinine, and in other cases the stomach would reject it when administered. In all such its beneficial effects were equally well secured, by giving the first dose by enema. And here I am tempted to relate a case in which this method of exhibition was resorted to with difficulty; and it was one of the most alarming of the season.

A smart and active black boy, about twelve years old, was attacked by the disease in the night. When I first saw him, early in the morning, his fever was high, he was delirious, his muscles rigid, and he had occasional spasms in his face and limbs. His pulse was rapid, indistinct, and at times could not be counted. I did not find it, at any time during the day and night—and I saw him frequently—below 150. He was restless, talked incoherently, and refused to swallow anything. He was bled, and cold water was freely applied, both externally and by injection, during all the day and night. At early dawn the following morning his pulse had fallen to 124, and was fuller, and more distinct. There was less heat of skin also, and when undisturbed by the attendants he was more quiet and composed. He was still delirious, however, would not answer questions, had an unmeaning stare, talked incoherently, and resisted all attempts to administer drinks or medicine.

After waiting half an hour, and finding there was no further abate-

ment of pulse, or other febrile symptoms, I concluded the point of greatest remission had been reached, and attempted to administer eight grains of quinine, mixed in water. In this I failed; but after several ineffectual attempts, I succeeded in giving him 24 grains by injection, well rubbed in a gill of starch. He struggled against this violently, and it required the aid of several persons to hold him, but the medicine was secured in its position by making a strong man press a roll of linen for sometime firmly against the anus. In about half an hour the boy fell asleep. His skin became cool, and finally a little moist, in his slumber, and when he awoke, in about two hours, he looked calmly round him, and for the first time made some coherent remarks. He appeared to be wholly unconscious, however, as to what had been passing, and even that he was sick. His pulse had gradually fallen to 90, his skin had now become quite cool and moist, and he had not been long awake before he urinated freely, for the first time since his attack. The only complaint he now made, was of the effect of the quinine upon his head and ears, which he recognized as a familiar sensation, for I had cured him of an attack of fever the previous year in a similar manner. Small doses of quinine were given him during the next 24 hours, and he was fully cured of his disease.

Quinine in proper doses always acts, under favorable circumstances, as a contra-stimulant; and to secure the patient its full febrifuge effect, it must be given in such quantity, and at such time, as to produce upon the system this contra-stimulant influence. I have no doubt that the quantity actually required for this object varies, according to the age and constitution and the idiosyncracy of the patient, and that it depends also, in some degree, upon the character and violence of the disease, and the distinctness of the remission in which it is given. I have rarely seen a case which required a larger dose than ten grains; and under ordinary circumstances the medium dose might properly be fixed, perhaps, at six or eight grains. When given by enema, the common rule of trebling the quantity may be followed with safety. It can scarcely be doubted, however, that doses of 20, and even 60 grains, have been given without producing any permanently bad effects. In my view of the matter the exhibition of such large doses, particularly in the febrile paroxysm, may generally be considered as somewhat hazardous, and that it is, except under extraordinary circumstances, an unnecessary waste of this precious medicine, to say the least of it.

We have many remedies for disease—and it may be true of a greater number than we can now suppose—which seem to require to be given in doses, which will produce in the system their own peculiar constitu-

tional effects, to insure their full curative power. This may in some degree account for the discrepancies to be observed, in the experience of different physicians, with the same remedy. Take arsenic as an example. It has been declared a valuable febrifuge, and the testimony in support of its powers in this respect is of the most reliable character. Yet this medicine has not obtained the confidence of the Profession, because it has not proved uniformly successful in the hands of all who have used it. May this not be owing to the fact, that those who have signally failed in its use, have given it in quantities too small to excite in the whole system that peculiar action, which this remedy is known, under certain circumstances, to produce? It is not improbable that opium acts in the same way, to the relief of diseases, in large doses, which it aggravates in small. Like quinine, and several other medicines, in small doses it is supposed to operate as a direct stimulant, and in large to act as a contra-stimulant. In the one case its action may be confined to a local influence, extended by sympathy; and in the other it may produce a more general effect, by a more direct power over the nervous system. Belladonna cannot be relied upon to relieve a nervous headache, unless given in quantity sufficient to produce dryness in the throat. Aconite and stramonium produce an abatement of fever, only when they affect the head.

I would suggest, then, as a general rule in the use of quinine, for the cure of periodical diseases, that it be given in the remission; and that the first dose be sufficiently large to ensure its full contra-stimulant effect upon the system; and that the impression thus produced be maintained for twelve to twenty-four hours, by the exhibition of smaller doses. My belief is, that when this is judiciously done there can be no renewal of the exacerbation, and that the disease is at once eradicated from the system. Cases of intermittent or remittent disease may occur with such complication of symptoms, as to render it difficult by this, or by any other known method of treatment, to bring the patient thus suddenly under the full contra-stimulant action of the quinine. In the most malignant forms of yellow fever the vital energies may become too far exhausted, before a perceptible remission of the disease takes place; and the system may not in that case be able to sustain the strong sedative action of the remedy, which is essential to its full febrifuge power; but whenever this power can be exercised and sustained for a sufficient length of time, the diseased action will, I am well convinced, be subdued. And here I may take occasion to mention, that I have found the carbonate of ammonia a sufficient antidote against the alarming sedative power of quinine, in all the cases in which I have had an opportunity to use it.

Sometimes the contra-stimulant effects of quinine are very striking, and even alarming. I have lately treated a case of highly inflammatory Pneumonia in this city, which, after pretty active depletion, yielded to this power of the medicine so suddenly, as not only to strike the attendants with surprise by the rapid reduction of pulse, abatement of heat, thirst, &c., but to induce that peculiar kind of indirect debility and nervous irritation, which constitutes delirium tremens. The patient was a young man of excellent constitution, sedentary occupation, and strictly temperate habits. He was attended by me in conjunction with Dr. Grant, a member of this Society, who is now present, and who concurs with me in opinion, that the patient suffered for two days with unequivocal symptoms of delirium tremens.

I have no doubt that fevers may be, and have been, successfully treated by quinine given without reference to the remission. The febrifuge power of this medicine is such, that its exhibition must prove successful in many cases, upon almost any plan of using it; but there can be as little doubt, that the most effectual and certain method of cure is, to begin the use of it in the remission, and to continue it in the manner I have herein indicated. Our books treat of continued fevers, as a separate variety, which would seem to make it necessary to qualify this general recommendation; but if the human body is liable to attacks of fever in this form—fevers which have no regular periods of remission—I have never met with them, and am certain they must be of very rare occurrence in this climate. Yellow fever has sometimes been designated a continued fever, but of the many cases which have come under my observation, I have never met with one that did not daily remit, and generally—almost universally—this remission takes place, as in the fever of which I have given some account in this paper, *early in the morning*. This critical period in malignant fevers is apt to occur unfortunately at an hour, when the nurse is asleep, and the physician absent.

With the wide prevailing, and apparently well founded, opinion among medical men, that quinine is not only a febrifuge medicine, in the common acceptation of the term, but an actual specific remedy for fever, and, perhaps, also for all that class of diseases, which observe in any degree the laws of periodicity, it will be strange if it does not become in time a much more important remedial agent than it is at present considered. The yellow fever, which has been so very destructive of human life in Southern latitudes, does not differ in its symptoms, and its general pathological character, in any material degree from the plantation epidemic, of which I have spoken this evening, and it is not unreasonable

to presume, that it may yet be brought just as completely under the power of this medicine. Asiatic Cholera, too, is doubtless a kindred disease to our various forms of congestive fever, having its periodical exacerbations and remissions. Even this great opprobrium of our Profession will probably become curable by a system of treatment which shall combine depletory measures with the use of quinine and ammonia, all so skillfully applied as to overcome the disease, and at the same time give all necessary support to nervous and muscular power.

In the various neuralgic affections this remedy has already acquired considerable celebrity, and it is not improbable, that all the various forms, in which this protean disease appears, may be cured by its skillful use. The various painful affections to which the term neuralgia is applied, in its modern acceptation, observe, I believe, the laws of periodicity, and this strengthens my conviction of the efficacy of quinine in their treatment, if it can be properly applied. I have seen a case of this disease lately, in which the curative power of this medicine seemed to depend upon the time and manner of its exhibition. A lady, after suffering very severely for several weeks with an affection of this kind, which resisted the application of a long catalogue of remedies, including the use of quinine in small doses, given at regular intervals, was promptly relieved by a dose of ten grains given in the remission, and followed by several smaller doses during the next twenty-four hours. This remission was, on close examination, found to occur at the same hour daily, and was evidenced by a partial relief from pain, and by the ability of the patient to sleep only at that particular time.

III.—REMARKS ON THE DISTINCT AND INDEPENDENT VITALITY OF THE BLOOD.

BY WM. P. HORT, M. D., NEW ORLEANS.

[*Continued.*]

In commencing this fourth article on the distinct and independent vitality of the blood, it will be necessary to correct an error of the press; and it may be expedient to review briefly the ground we have traversed.

At page 273 of the September number of the New Orleans Medical and Surgical Journal will be found the following remark: "My attention has been called to an oversight *of* Dr. Fowler, of Macon county, Alabama." It should be *by* Dr. Fowler. In his letter to me, dated the 3d August, 1850, he remarks: "acetate of lead is classed by you among

the agents having a tendency to disorganize the blood." This was, indeed, a great error, for the following remark, which may as well be republished for the benefit of new subscribers, will be found on the 13th page of the July number of the said Journal.

"A solution of acetate of lead was then used. There were but four circular corpuscles to be seen at first; the greater part were edgewise, or apparently folded up; most of them changed their position, and became circular in a short time. The motions were lively, both tremulous and progressive, without established currents. Small monads were well defined, and in motion. The corpuscles were under size, and some of them had vibratory and progressive motion at the same time, which I have never noticed when there are currents."

Dr. Fowler observes: "For fifteen years Muriate of Ammonia has been with me the *sure* remedy in Influenza and Pneumonia. Its modus operandi a mystery—its effects in many instances wonderful. I have repeatedly been asked among what class of remedies I placed it, and now, for the first time, am able to give a true answer.* I never regarded it as a stimulant; but in that condition of the lining membrane of the stomach and bowels, mentioned by Dr. Adler, it is a violent irritant. Time after time I have watched at the bedside of patients threatened with suffocation from pulmonary inflammation and congestion, and have seen the violence of both subside, and health restored, under the use of this remedy. I could perceive no injurious effects resulting from its use; no exacerbation of the symptoms, but a quiet, calm and silent falling back into the line of health."

In another part of the letter Dr. Fowler says, that "the emplastrum plumbi has, when applied to the breast of a woman, the same power to arrest the flow of blood to the part, and as a sequence the secretion of milk, that you ascribe to muriate of ammonia. Indeed, no other remedy has been so efficient in practice in arresting inflammation of this gland. Can you explain this concordance in the action of these two remedies?"

That they act alike in counteracting inflammatory action, by checking undue motion in a part affected, is an undoubted fact—and this is all we know about it. There is no process of reasoning by which a man could, "a priori," arrive at the knowledge that one remedy would possess a specific influence, which another would not; or that two remedies, differing essentially, should produce the same effect. The knowledge of final causes (I speak philosophically,) is beyond the grasp of human

*He refers to the action of Muriate of Ammonia on the living corpuscles of the bood, as described in one of my articles on the blood. *H.*

intellect. It is well that we can discover only facts in the study of natural science, and with them we must rest satisfied.

The alcoholic solution of muriate of ammonia, producing the same result as the preparation of lead spoken of, I prefer as being more convenient and agreeable to the patient.

Since the last article on the blood, which was published in the September number of the Medical Journal, A. D. 1850, it has been suggested to me by a friend, that I may have been premature in claiming priority in the announcement of a new fact in connection with the vitality of the blood. He alluded to remarks which are to be found in the second part of the New Orleans Medical Journal for July, 1845, which I must confess I had entirely overlooked. As the same idea may occur to others, I will quote from the article in question, in order to make it evident that the facts connected with the blood which were developed in the University, during repeated microscopic observations with Professor Riddell's most powerful Spenserian lens,* go beyond any fact on the subject previously announced.

"The great mind of Hunter saw and believed that the blood possessed in itself an independent life, even while circulating loosely in the blood-vessels; but he knew not the nature and seat of that vitality. This discovery was reserved for the physiologists of our days. There are particles termed globules floating in this liquid, about the 3000th part of an inch in diameter, or so small that myriads of them are contained in a single drop. It has been ascertained, respecting these globules, each and all, endowed with a definite and uniform shape, and with a developement in virtue of which they pass, by successive transitions, from a condition of origin to one of final evolution—a veritable organization, in other words, properties which give them a claim to the title of life as much as those which justify the application of that term to the ovum from which proud man himself dates his being. The atomic particles of which the blood is composed being thus individually alive, collectively they form a mass, of which it may literally, as well as allegorically, be said: "For it is the life of all flesh; the blood of it is for the life thereof." "For the life of the flesh is in the blood."

"But there is still another discovery which has of late been made, and which promises to be of great value in organic physiology, viz., that there are at least two kinds of globules in the blood, one yellow or red, the other transparent or white, and which differ from each essentially, both in form and organization." * * * * * "And I will even go

*It is peculiarly powerful, as has been already stated, in its *defining* power.

further with him, (Mr. Addison,) and say, that those granules are themselves each and all possessed of an independent life. I have repeatedly watched them, and shown them to others, when burst from their cell-membrane, performing sundry independent, and apparently voluntary evolutions in the field of the microscope, until to the eye the whole looked like a mass of creeping things.

"In this view, then, the blood is doubly alive, as exhibited—first in its forming and taking part in the repairs of the animal machine, and secondly in the independent movements possessed by the ultimate particles of its matter."

The foregoing is from an introductory lecture to a course on Surgery, by John Houston, M. D., delivered on the 4th Nov., 1844.

We cheerfully concede to Dr. Houston priority in announcing as a fact in physiology the independent vitality of the globules or "granules" of the blood; and it is very satisfactory to find a fact which was affirmed in a former article on this subject sustained by an observer on the other side of the Atlantic. His description, however, according to the observations and remarks made by Professor Riddell and myself, and confirmed by other competent observers, is replete with errors. He speaks of the globules of the blood as being of a definite and uniform shape, "and with a developement in virtue of which they pass by successive transitions from a condition of origin to one of final evolution." What *transition* is there in the gradual growth of a living sac or cell? There is progress, but not transition. The silkworm, the chrysalis, and the moth, are an illustration of transition; but no such thing occurs in the development of the living entities in the blood. It is the gradual growth and expansion of a very minute into a full grown and well developed, cell.

The Lecturer says also, "that there are at least two kinds of globules in the blood, one yellow or red, the other transparent or white, and *which differ from each essentially, both in form and organization.*" (Italicised by H.)

This is pure fiction or imagination. We have described the blood corpuscles and the monads—the parent and the offspring—*identical* in *form* and *organization.* The small cell that has been repeatedly seen to burst from the external surface of the well developed parent cell, grows, as a child grows up to manhood, and in time becomes a mature corpuscle capable of propagating with uninterrupted continuity, so long as the living entity continues to exist.

The microscope used by Dr. Houston must have been very defective in the defining power, since he compares the evolutions or motions of

what he calls the granules, that have burst from their cell-membranes, to a mass of creeping things.

There are reptiles and insects that *creep*, but the monads of the blood recently ushered into distinct and independent existence, appear more like entities floating in air, than creatures crawling on the earth. Their various motions have already been described. They are as free and unconstrained as the motion of any animal.

Again, what are we to think of the expression "independent movements possessed by the *ultimate particles* of its matter." (Italicised by H.)

The movements of the blood corpuscles and monads, when spontaneous or voluntary, are the result of *organization*. Some chemists and physiologists have doubted the existence of any such thing as vitality, referring all the phenomena of life to chemical action. But who ever entertained or expressed the idea, either as a fact or as an hypothesis, that the *ultimate particles* of matter of which we know absolutely nothing, are endowed with vitality.

The blood must always have been supposed by intelligent, reflecting observers to be possessed of the common vitality pervading every part of the living body.

In our first article of the blood it was stated that Dr. Hunter believed in its distinct and independent vitality, although he never demonstrated it with the microscope. Also that Schultz concluded that, as the globules of blood were expanded by the addition of water, and that they could be restored to their natural size and form by using certain neutral salts, the blood corpuscle was an organic structure capable of being relaxed and stimulated.

In the preceding articles on this subject I have remarked, that the monad or young blood corpuscle separates from the parent cell, precisely as the process of propagation is carried on in that variety of the infusoria, to which the Naturalists have assigned the name of Volvox Globator.

Moreover, that as certain animalcules can be revived from an apparently inanimate condition by the addition of water, so can the corpuscles and monads of the blood be revived, after remaining in a dry state like dark red powder for four days; and they can also be roused to vigorous action when moistened with salt water.

Another important fact has been established, that the same salts taken into the stomach affect the blood precisely as when blood is taken from the back of the finger, and subjected to experiments. In the researches into this subject by Professor Riddell and myself at the Uni-

versity, it has been clearly demonstrated, that Muriate of Soda, Borate of Soda, Carbonate of Soda, and Sulphate of Soda act favorably on the blood, while the effect of Phosphate of Soda is unfavorable.

That Chlorate of Potash, Bi-Carbonate of Potash, Supertartrate of Potash, and Sulphate of Potash act favorably; but the acting of the solution of Caustic Potash was the very reverse. That the action of Carbonate of Ammonia, of Muriate of Ammonia, of Sulphate of Magnesia, of Calcined Magnesia, and of Aqua Calcis was favorable. That Acetate of Lead acted favorable, though not so much so as the alkaline neutral salts; also a solution of refined sugar and diluted cognac brandy; but that the action of nitrate of silver was very unfavorable.

It appears then, that, so far from my claiming the knowledge of the vitality of the blood as a discovery, I gave precedence to the Jewish legislator in ancient times, and to Hunter, Schultz, and others in modern times. But I feel assured that Professor Riddell and myself have gone beyond all our predecessors in the developement of important and interesting facts connected with this subject, having had the advantage of a very superior microscope, and having tried such varied experiments with chemical and medicinal agents, and that we have made such discoveries as cannot but have an important *practical* bearing on the diagnosis and treatment of diseases.

The vitality of the blood is fully proved, under the necessary conditions, from the beneficial effect of introducing the blood of a vigorous, healthy person into the veins of a sick person attenuated by disease, or suddenly prostrated by severe hæmorrhage.

We find a case in point, published in the Courrier des Etats Unis, as having occurred in one of the Paris hospitals. "The patient was a woman, and after her accouchement a profuse and exhausting hæmorrhage followed. Her pulse had ceased to beat for several minutes, and nothing more than a slight undulatory shuddering could be perceived from time to time. She was evidently dying, and as a last resort of his art, the Surgeon, Mons. Nealton, determined to try what effect infusing blood into a vein would have, which determination was soon carried out. One of the attendants, Mr. Dufour, voluntarily offered to lose his blood in the cause of humanity, and the required quantity being taken from his arm, it was injected from a syringe into a vein in the head of the patient, and immediately into the system. The blood was injected at about its natural temperature. The whole quantity was from thirteen to fourteen ounces. There were two injections, the first about eight ounces, and after an interval of five minutes, five or six more. The woman revived immediately, and was doing well for a week after the

operation, when she was carried off by an inflammation of the bowels.

Modified by the action of the gastric juice in the stomach, certain remedies administered internally will, it is well known, improve the condition of the blood; we allude to various preparations of iron, to sarsaparilla, to hydriodate of potash, etc., etc.; but there is no vitality in such medicaments, and it would be extremely dangerous, if not immediately fatal, to introduce them, even with the utmost caution, into the venous circulation. But a portion of the vital blood of one healthy, vigorous person can be introduced into the feeble and dying frame of another by infusion into the veins, not only with impunity, but generally with signal success. And why? They are *kindred* in every sense of the word—in their constituted elements, in their peculiar organization and functions; and above all, in their vitality.

The transfusion of blood from the veins of one person into the veins of another has often proved eminently successful in cases of profuse uterine hæmorrhage. Thirty years elapsed before the doctrine of Harvey was fairly established as a physiological fact. In the Encyclopædia Americana there are some interesting facts stated which may with propriety be quoted. "As soon as the circulation of the blood was admitted, people's minds were seized with a sort of delirium; it was thought that the means of curing all diseases was found; and even of rendering man immortal. The cause of all our evils was attributed to the blood. In order to cure them it was thought that nothing was necessary but to remove the bad blood, and to replace it by pure blood drawn from a sound animal. The first attempts were made upon animals with complete success. A dog, having lost a great part of its blood, received by transfusion that of a sheep, and become well. Another dog, old and deaf, regained by these means the use of hearing, and seemed to recover its youth. A horse of twenty-six years, having received in his veins the blood of four lambs, recovered his strength. Transfusion was soon attempted upon man. Denys and Emerey, the one a physician, and the other a surgeon, of Paris, were the first who ventured to try it. They introduced into the veins of a young man, an idiot, the blood of a calf in greater quantity than what had been drawn from him, and he appeared to recover his reason. A leprous person, and a quartan ague were also cured by these means; and several other transfusions were made upon healthy persons without any disagreeable results. However, some sad events happened to calm the enthusiasm caused by these repeated successes. The young idiot we mentioned fell into a state of madness a short time after the experiment. He was submitted a second time to the transfusion, and was immediately seized

with a *hæmaturia*, and died in a state of sleepiness and torpor. A young prince of the blood royal was also a victim of it. The Parliament of Paris prohibited transfusion. A short time after, Riva having in Italy performed transfusion upon two individuals, who died of it, the Pope prohibited it also.* From this period transfusion has been regarded as useless, and even dangerous."

In these cases it appears that the blood of *animals*, and not human blood, was used. Admitting, however, that there may be danger in this practice, we know of sufficient successful cases to convince us *that it is not useless.* Failures may arise from several causes. The blood transfused may be impure ; or too great a quantity may be thrown into the veins ; or from the want of skill in performing the operation, inflammation in the vein may be excited, which it is well known often spreads with great rapidity. The first thing to be determined, is whether the blood is in a healthy condition. This point can only be positively decided by the use of the microscope, and a practised eye can immediately detect a departure from the normal condition of the blood. This being ascertained, all that remains to be done to insure success will depend upon the judgment and skill of the operator. No person should be permitted to die of hæmorrhage, without a fair trial of transfusion.

In those remarkable cases of Metastasis which I communicated to Dr. Hester, and which were published in this Journal, November, 1850, there is every reason to suppose that the disease (yellow fever) was communicated by the mother to the child through the medium of the blood. We know of no other means of communication ; and should any person suppose the existence and agency of contagion in these cases, how could that account for the immediate relief afforded to the mother. B. may contract the small-pox, or any other contagious disease, from A.; but it will afford no relief to A. It is to be inferred that only a portion of blood corpuscles were diseased in the cases spoken of, which, by some conservative principle of nature of which we are ignorant, were suddenly transferred to the child, producing in its body the disease, of which the mother was thereby relieved. We cannot conceive of any other rational explanation of these cases of metastasis.

The idea expressed in the quotation made from the Encyclopædia, that all that was necessary to cure disease was to remove bad blood, and replace it with pure blood, is by no means unreasonable. The great practical difficulty is that we may be unable to decide to what

*Probably the transfusion of blood was not the cause of death, which might have occurred from some obscure and unobserved disease, which the transfusion of blood could not relieve.

extent the blood may be diseased, and what may be the necessary quantity to be removed. As before observed, nothing but the microscope would be available to throw light on this interesting subject.

It is probable that in all cases of metastasis where *inflammatory* action is transferred from one to another part of the body, it is by means of the blood; the diseased corpuscles being, by some incomprehensible law of nature, transferred from one organ to another. In diseases of the nervous system, unaccompanied with inflammation, electricity would, no doubt, by some physicians be pressed into the service, and its excess or deficiency would be considered sufficient to explain not only the cause of disease, but the modification of symptoms.

One hypothesis is about as good as any other, and to me it appears probable that some disturbance of the sanguineous system is antecedent to all affections or irritations of the nerves.

This is a subject well worthy of investigation. If we have indulged in hypothesis, yet it is based on undeniable facts. We can hardly estimate the benefits that might result from its clear elucidation, as regards diagnosis, prognosis, and the treatment of diseases.

Much has been said about the effect of Muriate of Soda on the blood, whether within or without the body. "Poggiate has examined the composition of the blood of man under ordinary circumstances, as contrasted with blood, when 154 grains of salt were daily consumed.

	During usual diet.	During salt diet.
Water - - -	779. 9	767. 6
Blood Corpuscles, -	130. 1	143. 0
Albumen - - -	77. 4	74. 0
Fibrine - - -	2. 1	2. 3
Fatty matters - -	1. 1	1. 3
Extractive matter and salts	9. 3	11. 8

From which it is evident that the proportion of solid constituents is increased; this occurs chiefly in the blood corpuscles and extractive matter—the amount of albumen being slightly decreased."

(Comptes rendus, XXV.)

We have now adduced abundant and varied facts in these articles on the blood, to demonstrate the vast importance of Muriate of Soda in its action on that fluid; and it is remarkable what an ample provision for the wants of all has been made by the God of Nature. Some persons are of opinion, that the salt in the Ocean is solely there for the purpose of preserving the water from putrefaction. If this be so, why are not our great Northern lakes provided with salt? How does it happen that the fresh water of the Caspian Sea is always pure?

The salt of the ocean is probably as much a necessary of life for the fish in the sea, as it is for the buffalo on the prairies. Besides, it affords a never failing supply to all persons residing on the sea coast, and to their stock of every description. All through the Western country, where salt could not be conveyed from the sea board, on account of the great expense of transportation, what are called salt licks are to be seen; and to secure the Indians and animals from the possibility of being deprived of the requisite supply of salt, we find in the most central point between the Mississippi river and California the extensive Salt Lake so well described by Col. Frémont, and near which the great Mormon settlement has been established.

Before describing new experiments on the blood, recently made, I shall select from my notes of last year some interesting facts, which *directly* in some cases, and *analogically* in others, sustain the doctrine of the distinct and independent vitality of the blood, and the universality of the globular or cellular organizations. It will be curious to notice the identity in structure and appearance of the living cells, whether found in the blood as corpuscles and monads, or as globules in pus, milk, and the secretions generally.

March the 2d, Professor Riddell and myself examined with the microscope blood taken from the eye of a fly. We observed extremely minute colored globules, and from that and other experiments we concluded that there seems to be some ratio between the size of the animal, or insect, and the size of the globules. The arrangement of these globules in question is very peculiar; they were so grouped together as to present the appearance of several squares, with intermediate spaces separating and insulating each square. We were not certain that we saw any motion in the globules, though once or twice we imagined that there was a slight tremulous motion in them.

On the same day we examined the fluids of a very small winged insect, which was crushed in the attempt to catch it. There were strong indications of exceedingly minute globules, although they were not sufficiently defined, and therefore could not be seen with the distinctness necessary to make us positive of the fact. Professor Riddell, however, did not doubt their existence.

In an examination with the microscope at the University, about the 1st of March, 1850, we examined blood taken from the belly of a musquito, which was so full of blood extracted from a human being, that it could not fly, and perceived monads of various sizes; globules resembling those seen in milk, with current and vibratory motions; the matured globules or blood corpuscles were digested. This blood was brought to us by Dr. Nutt.

On the 2d of March, at Carrollton, we observed in milk from the human breast, and also in that taken from cows, globules similar in shape to those seen in the blood. The motions were quite evident. The smaller globules or monads retain the power of motion much longer than the matured globules. Their vitality is far superior, as they for a long time resist the destructive operation of agents which almost immediately disorganize and destroy the matured corpuscles. The above phenomena of motions may be seen in milk, that has been taken twelve or more hours from the female breast, or from the cow.

2d April. In human fœces from a healthy person, made into an emulsion with distilled water, we observed an abundance of living and moving animalcules, mostly in the form of ovoid globules like those seen in milk, of various sizes, and clearly perceived spontaneous motions.

April 11th. During observations made at Carrollton, we perceived in the luminous tail of a lightning-bug, pressed between mica and glass, numerous globular bodies near 1–15,000 part of an inch in diameter, with distinct motions, which salt water rendered very lively.

Professor Riddell stated to me that he had seen minute moving monads in the juice of the potatoe; also in a mixture of gamboge with water; they were very abundant and lively; of a form apparently globular, and less than 0000.2 inches in diameter. They still retained the power of motion, when mixed with spirit of turpentine, iodine or ether. Boiled in water and a strong solution of chloride of calcium, or in weak nitric acid, *they still moved.* Boiled in strong sulphuric acid their forms were still visible, but all motion had ceased. Boiled in strong nitric acid most of them were speedily disorganized, and none were afterwards seen to move.

Professor Riddell observed in the dejections from a cholera patient in the Charity Hospital, animalcules with a rapid tremulous motion; they sometimes whirled over in one direction once, twice, or even five times. I subsequently repeated and confirmed these observations. Dr. Plummer, of Richmond, Indiana, saw globular and ovoid animalcules in cholera dejections; he says nothing about their motion. Professor Mussey, of Cincinnati, observed oval and globular animalcules, and some of them very slender, which moved like a serpent, with a lateral flexure of the body.

April 12th. We examined a scab of vaccine matter, triturated with distilled water, six weeks old, furnished by Dr. Barton, and we observed globular moving bodies 0000.39 inches in diameter; also a few elongated elliptical bodies 000.12 inches long.

April 20th. We examined some matter from a scarlet fever patient, which Dr. Meux sent to us. The general mass of matter in the field of vision was very confused. By close examination we perceived monads of various sizes and shapes. We also discovered a cylindrical round headed worm with a round tail; others presented an ovoid appearance; we observed besides a long slender worm, twice as long, and nearly half the thickness of those first described. A sluggish motion was perceptible in all, yet quite sufficient to demonstrate that vitality was not quite extinct.

On the 29th May, 1851, I had an opportunity of observing monads in the liquor taken from the testicle of a man who died of apoplexy. They were perfectly regular in form, although without motion. The spermatozoa were seen as usual, but there were very few of them, and of those some apparently disorganized. On all occasions we have to notice the extraordinary vitality of the small monads, which remain intact, whilst every other living entity in the blood is, from no matter whatever cause, disorganized.

On the same occasion Dr. Riddell afforded me the opportunity of examining what remained from a previous examination of the ovum of a virgin deceased, furnished that day by Dr. Hunt, the distinguished Professor of Physiology in the Medical Department of the University of Louisiana. The living entities, which I considered to be very minute monads, were clustered together like compact bunches of grapes, the external covering or sac having been destroyed in dissection. They were much more numerous than those we had previously seen in the blood corpuscles. No motion was perceptible. This, as a link in the chain of continuity, is an important and interesting physiological fact. We never doubted of the vitality of the ova in the ovaria of the female, but now we see the "quo modo" in which the vitality of the mother is imparted to them. It would appear then that the *ovum*, while yet in the ovaria, possesses an *independent* vitality, and is furnished with a stock of extremely minute monads, ere it enters the uterus, and receives a more abundant supply through the placenta.

In the Dublin Quarterly Journal of Medical Science, for August, 1850, there is an article on a peculiar form of Gonorrhœa, by W. Colles, F. R. C. S. I., Surgeon to Stephen's Hospital, etc.

"The urine, when passed, at times appeared clear and natural; in general, however, we could perceive a slight cloudiness through it, and on allowing it to settle in a glass vessel we shall perceive after one or two hours a copious yellowish or cream colored deposit consisting entirely of pus. If we take a drop of this urine immediately after it has

been passed, before any alteration can occur in it, and place it under a microscope, it will be found to be loaded with pus globules. In some instances in this affection a number of yellowish shreddy particles will be seen floating through the urine, which at times alarm the patient, causing him to suppose he is laboring under seminal weakness. On examination, these articles will be found to be composed of clusters of pus globules and epithelial scales adhering together. That the pus, thus equally diffused through the bladder, has its source from the bladder, cannot, I think, admit of a doubt." etc. etc.

Dr. Fleming, at the request of Mr. Colles, examined the urine of some of these cases. He says, "as regards your views respecting those inveterate cases of Gonorrhœa, which are so annoying to the patient and puzzling to the Surgeon, no second opinion can be entertained, but that the lining membrane of the bladder furnishes a portion of the purulent fluid, and, as you remark, at a much earlier period than would be suspected. To test the direct passage of the pus from the bladder, I have made the following experiments both in males and females. In the latter case it is often important to do so. I introduced a catheter, and allowed one ounce of the fluid to escape, so as to get rid of the urethral discharge. I then collected some of the urine in a clean glass, examined it fortwith with the microscope, and found pus globules. I have applied the same test in equivocal cases of Hæmaturia, and found equally satisfactory results as regards blood globules.

So far as the secretions of the body, whether healthy, or morbid, have been examined, living entities of the globular or ovoid form have been invariably seen. They, no doubt, come from the blood, however they may be modified in shape and general appearance by disease; and it may be observed that all such consist either of the very minute, or the half matured monads. I have never seen anything like matured blood corpuscles in secretions, and especially in morbid secretions.

These corpuscles and monads must have been co-existent with man from his creation; and they have, with unbroken continuity, been passed from the parent to the child, in the blood which is transferred from the mother to the fœtus in the womb, through the umbilical cord and placenta.

There are many circumstances connected with this view of the subject, which are not yet positively decided. Does the blood that passes from the mother to the fœtus consist of blood corpuscles or monads, or of both? It appears probable that during more than three fourths of the time of fœtal existence, considering how feeble and delicate the living entity must be, none but the most minute monads pass at first through the placenta into its system. Only a certain portion of the mother's

blood which passes through the vena umbilicalis, after being collected from the very fine branches in the placenta, returns to the mother through the arterial system. As a general rule one vein and two arteries are found in the umbilical chord. More blood is constantly required for the nourishment of the child from the time that the punctum saliens can be seen, until it leaves the mother's womb—a matured fætus, prepared for independent nutrition, assimilation and growth.

Now as the vena umbilicalis arises from very minute blood vessels in the placenta, we might be induced to infer, that none but the smallest monads pass to the child.

The cases of Metastasis of which I have spoken, when the mothers were relieved of yellow fever, in consequence of the disease being transferred to the child, would, however, seem to be adverse to this opinion. Experiments, ample and conclusive, have demonstrated the very superior vitality of the monad as compared with the matured blood corpuscle. It has been seen that they resist the effect of chemical agents, which immediately cause the disorganization of the corpuscle. Indeed, their vivacity and tenacity of life are alike extraordinary; and I am therefore constrained to believe that the matured corpuscles become diseased, while the monads remain unaffected. If this be true—and the inference appears to be just,—the matured corpuscles alone can convey the disease from the mother to the child. And here I would observe, that I have never seen a case of metastasis, where disease, such as yellow fever was carried off by the fœtus, until it had arrived to within a few days of the natural period of utero-gestation. The conclusion therefore is, that at first the smallest monads pass into the circulation of the fœtus, similar to those described as being found in the ovum; that as it grows larger monads are admitted; and that when near, or at maturity, corpuscles as well as monads pass through the umbilical vein, the placenta having become enlarged, and having kept pace with the growth of the fœtus.

It has been affirmed, I believe, by Denis, that the blood of the fœtus contains more solid matter and corpuscles than that of the mother. I have had no opportunity of confirming this fact, yet there is no reason to doubt it. The child, when born into the world, begins to take nourishment into the stomach, and as it grows older, it requires more abundant and stronger nutriment. The fœtus in the uterus, however, receives nothing into the stomach, and hence there are no excrements.

Indeed, the child has been supported by absorption, more like a plant than an animal. From twenty-four to thirty-six hours after birth, the meconium, as it is called, ordinarily passes from the child. Whether

this is collected in the intestines, about the termination of the fœtal condition, or is the result of the mother's milk, we cannot positively determine. The child is usually put to the breast, as soon as the mother has sufficiently rallied, that is, generally, within an hour, and this affords ample time for digestion, incipient assimilation, and the elimination of excrement.

Drs. Chapman and Hosack, once the two great rival Professors in the Medical Colleges of Philadelphia and New York, entertained different views or theories in relation to what part of the system was first disturbed by disease, and as to the modus operandi of medecines in the cure of the same.

The doctrine of the former was, that almost every disturbance of health originated in irritation of the nervous system, and that remedies generally acted upon the nerves.

The latter maintained, that in almost every instance the cause of disease was an abnormal condition of the blood, and that remedies, which he supposed to act directly on the blood, should be prescribed. Both were right in some respects, but their views were too exclusive.

We have seen that a certain class of agents—the alkaline salts—act directly on the blood in a very favorable manner; the appearance of the corpuscles, etc., being so similar, with very slight modifications, in every experiment, as to justify the expression "*alkaline appearance.*"

This fact is established beyond all doubt, since it has been shown that blood taken from the body, either by artificial bleeding, or by hæmorrhage, presented the same peculiar characteristics, after being submitted to the action of alkaline remedies introduced into the stomach, as when the same were used with blood taken from the finger.

Nitrate of silver, it has been already observed, acts very unfavorably on the corpuscles of the blood abstracted from the body, and yet, when administered internally for the relief or cure of certain nervous diseases, it acts mildly, and after some time causes the same discoloration of the skin, as if it had been applied directly to the surface. I have prescribed it internally for months together without seeing this effect produced.

When discoloration of the skin was the result of the administration of this remedy, Dr. Chapman supposed that decomposition took place in the stomach, and that the oxygen, nitrogen, and silver, *separately* entered the blood vessels, through which they passed, until they finally reached the surface, where being chemically re-united the nitrate of silver was reproduced. This case is a puzzler; and I can see but one explanation. The nitrate of silver may be so modified temporarily by

the action of the gastric juice as not to injure the blood corpuscles. One idea is darkness, the other is theory.

There are some facts connected with this subject, which we can ascertain, establish, and partially, if not fully, explain, but there are almost as many others of whose modus operandi we are entirely ignorant.

How is it that the Uva Ursi dissolves concretions in the kidney? Is it by improving the condition of the blood, or by a peculiar direct chemical influence on the concrete substance?

Rheubarb, when pure and fresh, is of a bright yellow color; yet in the course of one or two hours it imparts to the urine a deep blood color.

Madder (Rubia) possesses the property of producing a red color of the bones, and it will affect the milk of cows in the same way, when they have eaten freely of it.

In ten minutes after eating asparagus, the peculiar smell of that vegetable is perceptible in the urine.

These are well known facts, but I allude to them to show that they pass through the blood vessels without injuring the corpuscles. All the absorbents and lymphatics of the intestinal canal are supposed to be connected with the thoracic duct, and thereby with the blood. We know of no other means for the transmission of substances from the interior to the exterior surface of the body. The perspiration, which often yields a peculiar odor from eating abundantly of garlic, onions, etc., is eliminated from the blood in the delicate capillary vessels which abound on the surface of the body.

The safest conclusion is to admit that sometimes the nerves are primarily affected by disease, and sometimes the blood, while neither can be long deranged without influencing the other. And the same remark may be made of remedies; some appear to act directly on the nervous system, and others on the blood.

Thus, sulphuric ether in violent paroxysms of asthma will afford immediate relief. Its influence must be directly on the nerves, for there is no time for it to produce the desired effect of allaying spasmodic action through the medium of the blood.

The primary effect of opium, when given in the usual dose, is to excite, and equalise the circulation; after which nervous irritation gives place to a sleepy languor, and finally to profound sleep. When, however, it is administered in a very large dose, its influence seems to be simultaneous on the nervous and sanguineous systems.

Hydrocyanic acid in sufficient quantity will destroy life in one or two, seconds ; its action, therefore, is on the nervous system.

It is evident then, that no *general* rule can be established, or theory maintained, as to the modus operandi of remedial agents. Some act specially under all circumstances, and others exert a varied influence, according to the dose, and peculiar condition of the system. It is to be presumed, that whatever acts favorably on blood extracted from the body, will act favorably when administered internally.

There is nothing more adverse to truth and progress, than when two rival Professors of learning and talents espouse and maintain different theories, with a tenacity as enduring as life itself. No light can penetrate through the thick veil of prejudice—and no truth can overcome self love and self esteem.

On the 15th May, at the University, we tried the effect of a moderate solution of the Nitrate of lead on the corpuscles of healthy blood. It paralysed them and the monads, so as to destroy all motion, without however, producing any disorganization. The corpuscles were corrugated and congregated in a mass, presenting something of the mulberry appearance. The monads were scattered about as usual, evidently less affected than the corpuscles.

June 12th. The effect of a solution of Nitrate of Potash was tried on healthy blood. It may be considered as sedative in its action, like the Muriate of Ammonia, and by no means unfavorable. The field of vision was very much crowded with corpuscles, some of which presented the circular form, whilst others seem edgewise, or corrugated, and in some, monads could be perceived. Spontaneous and lively motion succeeded to currents of motion. On changing the field of vision monads appeared in abundance, and as usual exhibiting voluntary motion.

The Phosphate of Lime was next used ; it was mixed with distilled water. The corpuscles were much compacted, and some were in confused masses, apparently disorganized. Monads were seen in lively motion. A few minutes afterwards, the field of vision being changed, the idea of disorganization was discarded, as the blood corpuscles were distinctly seen, presenting the round surface. What has been described as the alkaline appearance was particularly noticed. No monads were perceived in the corpuscles ; otherwise they were unusually abundant. We could not determine whether or not there was motion.

On reflection we should say that the effect of Nitrate of Potash on the living entities in the blood is favorable. Much, however, must depend on the strength of the solution.

Nitrate of Potash may be administered internally with great effect, when in proper doses. It may also be so given as to prove destructive to life. Properly combined it acts as a sedative, both to the nervous and circulating systems. It often acts favorable on the kidneys, facilitating the secretion of urine, and correcting its quality. Combined with syrup of Morphine it will allay in a few hours excessive irritation of the mucous membranes of the nose and throat, and relieve irritation in the upper parts of the bronchial tubes. It controls the effects of tartar emetic, enabling persons to vomit freely and without pain, who otherwise could not take tartar emetic on account of the severe spasms produced by it in the stomach. Thirty grains may always be combined with an emetic with great advantage; this being considered the average quantity for an adult—and to be pro-portioned according to circumstances.

Phosphate of Lime also, when taken internally, acts favorable on the stomach and intestines. Morphine may be added where there is pain. It is especially useful in the premonitory symptoms of Cholera, whether they appear in the form of diarrhœa, or of dysentery. A safe prescription is 200 grains of the phosphate to 6 ounces of gumwater with 2 grains of morphine. From a tablespoonful to a wineglass full to be taken, and repeated according to circumstances.

It may be assumed as a general rule, that whatever acts favorably when administered in proper doses internally, will also so act on blood abstracted from the body. It must, however, be observed that solutions of great strength have been mixed with the blood without producing disorganization, or destroying motion, which could not with impunity or safety be introduced into the stomach.

Crystallised Chloruret of Lime in solution was mixed with blood drawn from the finger. Its action was favorable. The corpuscles generally were well defined, some were corrugated; monads were abundant, and in lively motion. The appearance was decidedly alkaline, which may always be considered favorable.

Here is another experiment which tends to sustain the preceding remark. The dry Chlorate of Lime made into pills of five grains each with the third of a grain of opium, one of which is taken three times a day, has, in the experience of the writer, proved more beneficial in incipient, or even confirmed cases of Phthisis, than all other remedies previously prescribed.

When treated with Chloride of Soda, the corpuscles of the blood appear at first corrugated and misshapen, while the monads as usual were unaltered in form. At first, currents of motion in different directions were observed; but in a short time spontaneous motions were

clearly perceived, although currents recurred several times. The blood corpuscles were brought into shape, presenting somewhat of the alkaline appearance, by the addition of salt water, which rendered the spontaneous motion more lively.

Whatever of unequivocable favorable action occurs in this experiment is, no doubt, owing to the salt water; yet we can by no means say that the effect of the chloride was unfavorable, or disorganizing.

On the 17th June, we tried at the University the effect of very pure Prussiate of Potash, prepared by Liebig, when we witnessed a most beautiful alkaline appearance; the blood corpuscles seemed to be globular, and were finally shaded. There was the usual number of monads in proportion to the corpuscles; we also noticed the usual varieties in size and arrangement. Both were in spontaneous motion. We infer from the general appearance that its action on the blood is favorable.

We have reason to think that we have heretofore employed solutions that were too strong; it was therefore decided on this occasion to dilute the substances employed freely with water. We feel sure that the result was highly favorable to proper development and clear investigation. Indeed, in some instances, we might have totally failed in making correct observations. I some years ago prescribed the common Prussiate of Potash of commerce in certain forms of intermittent fever, and often succeeded with it. On no occasion did it disorder the stomach, or aggravate the disease, when it failed to produce a cure.

Hydriodate of Potash produced much the same effect on the blood as common salt. About half the corpuscles were globular and shaded as in the preceding experiment, while the balance were edgewise, or folded up, or corrugated and misshapen. There were not as many free monads as we generally see; but an unusually large number of monads was contained in many of the corpuscles. Voluntary motion of the different kinds already described were noticed in all.

Here again it may be observed, that the position lately assumed is sustained; for every physician knows the beneficial effects resulting from the internal administration of this article in cases of obstinate secondary syphilis, and in chronic and syphilitic rheumatism; and especially when combined with Vinum Colchicum, of the effects of which on the blood we shall soon have occasion to speak.

Nitrous Ether produced the alkaline appearance decidedly in some corpuscles, and but partially in others, while many were edgewise, folded up, etc., as in the case of hydriodate of potash. At first there were currents of motion; and a general tendency to accumulate in close contact was observed, which finally resulted in presenting what we have

denominated the mulberry appearance. Many corpuscles contained monads, and some were independent and moving slowly about in different directions which they frequently changed. Although the corpuscles seemed to arrange themselves voluntarily and systematically, it would not be safe to affirm that there was positively spontaneous motion. On adding a solution of common salt it produced the usual effect of separating the impacted corpuscles, and imparting to them generally the alkaline character. After the currents of motion had subsided, voluntary motion was very distinctly seen. The effect of nitrous ether on the blood we therefore decided to be favorable. Its use as an internal remedy, often very beneficial, is too well known to require any comment.

Fowler's solution—the arsenite of potash—also produced a very decided alkaline appearance of the corpuscles. The field of vision was very full of them, yet each one was distinctly and beautifully shaded. The globular form represented cannon balls. There was present the usual number and variety of monads, which as well as the corpuscles, exhibited voluntary motions. This preparation has been extensively used both in the United States and in Europe, and with great success, in the cure of intermittent fever of the tertian type. And from the appearance we have just described, when acting directly on the blood drawn from a finger, we must consider its action favorable; and, indeed, it is safe to come to the same conclusion in every instance where we see the alkaline appearance.

To our surprise Vinum Colchicum produced much of the alkaline effect, but the appearance of the corpuscles was very particular; they were globular, but it seemed as if there was some relaxation, causing a wavy line of the circumference of the corpuscle. Monads were quite abundant, and presented a very singular appearance. Some were detached, but the greater part appeared to be held in contact with the corpuscle by a mere filament, or else protruding in a remarkable manner from the sides of the corpuscle, creating the idea of a great effort being made by the corpuscles to detach them. In some instances as many as six monads were attached to a single corpuscle, and they were of various sizes, from the smallest to those that were more than half matured, in which last the globular form and peculiar shading could be observed. These gave rise to a very different idea; it seemed that they had been detached, and in fact the largest must have been independent for some time, and that from some unknown cause they were clinging to the corpuscle as if for protection. Is this peculiarity the effect of the wine, or of the Colchicum? Probably of the latter, as in former experiments made last year, diluted brandy, about the strength of madeira or sherry

wine, did not produce any such effect as continued adhesion and tension, but caused the immediate expulsion of the monads who manifested no disposition to return and cling to the corpuscle from which they had been detached, or to any other corpuscle. The monads were more perfect in form than the corpuscles, although after waiting some time, some of the corpuscles assumed the true alkaline character. Voluntary motions continued for some time. In one or two new fields of vision, we perceived groups of corpuscles occasionally which presented the mulberry character. This preparation of Colchicum can be taken internally with impunity in large doses, beginning with a few drops, and gradually increasing the dose. Those who suffer the agonizing twinges of the gout are well aware of the relief it affords. I have already spoken of its use when combined with hydriodate of potash. We have more reason to suppose that its effects on the blood were favorable rather than that they were unfavorable; they were favorable with perhaps two exceptions; first, in forcing a premature detachment of the monad from the parent corpuscle; and even then we do not know that this would prove prejudicial to either. Or secondly, when the half grown, as well the smallest monads are induced to cling to the corpuscle; for there may be cause of alarm without danger or injury.

The general effect of a watery solution of the root of rheubarb was to corrugate the corpuscles, giving the idea of the action of an astringent agent. It had a tendency also to cause impaction of both corpuscles and monads, giving to them the mulberry aspect so often spoken of. When free to act, voluntary motions of both corpuscles and monads were apparent and continued for some time. We were rather inclined to consider its action on the whole favorable, since it produced nothing like disorganization, and neither destroyed vitality, nor voluntary motion. It cannot be said to be unfavorable.

Cyanuret of Iron and Potash produces effects somewhat similar to those resulting from the use of Muriate of Soda in solution. Some of the corpuscles were globular, containing a large number of monads; others were edgewise, and others misshapen. Voluntary vibratory motion was perceptible. Effect favorable, as in the case of alkaline salts and other alkaline compounds.

In all these experiments I was assisted materially by Professor Riddell. We made our observations with his powerfully defining microscope.

Considering that the vitality of the blood, and the doctrine of a diffused sensorium go hand in hand, I shall conclude this article by some cursory remarks in relation to the latter physiological fact; for such I do not hesitate to call it.

In an article published in January, 1849, I observed: "Some persons may be misled by supposing that cerebral developement is something entirely different from lower forms of organization and function; and may say that the analogies presented do not hold good, because plants, and some animals and insects, have no brain. But no such difference actually exists; the brain of man is only a higher degree of organization than the brain of an ape, a dog, or elephant, and their brains bear a similar relation to the smallest amount of brain or cerebral matter that we can perceive in an inferior animal or in an insect. The substance of the brain is the same as that of the nerves, whether the amount be greater or less, or the organization higher or lower."

It is difficult to imagine how the statement of the foregoing fact failed to suggest in my mind the doctrine of a diffused sensorium. Dr. B. Dowler's experiments on the alligator first called my attention to the subject. As I proceeded with my experiments on the blood, which enabled me clearly to establish the fact of the distinct and independent vitality of the blood corpuscles and monads, and as I applied it to the explanation of several curious phenomena, previously unintelligible, the conviction of the truth of the doctrine of a diffused sensorium became strong and decided; and the theories of Carpenter, and Hall, and Bell, and Magendie, and in short of nearly all, if not all the physiologists of the day, were to my mind completely, and for ever, overthrown.

In the September number of the Journal, of 1850, there is a concentrated, convincing and able article on the Nervous System, by Dr. Ely of this city, in which the doctrine of a diffused sensorium is triumphantly vindicated and established by facts which defy alike theories, criticism, hypothesis, prejudices, and preconceived opinions. After speaking of seven decapitated turtles, who had the inferior plate of their shells removed, so as to expose the entire contents of their bodies, the Doctor observes: "The entire abdominal viscera, including the oviparian apparatus, teeming with eggs, were exposed to view. The hearts of all of them were fully exposed, and particularly attracted our attention by their continued and regular beating. Their legs were continually in motion, as if laboring to escape, which they doubtless would have done, headless as they were, if their unscientific vivisectors had not taken the precaution to lay them on their backs."

What possible better evidence could be adduced to prove positively that the sensorium is diffused, and not confined, as a majority of the physiologists of the day contend, to the brain.

Again, Dr. Ely observes: "the prevailing doctrine of the day is 'that there is no positive ground whatever for regarding any part of the spinal cord as a sensorium independent of the brain.' (Carpenter's Human Physiology, p. 136.)

"If a decapitated animal makes resistance against acts of violence in the same manner after decapitation as before, must we say that in one case the animal experienced painful sensations, and in the other not? According to the theory of the day, a decapitated animal ought not to experience painful sensations, the head—the alleged seat of the sensorium—being gone; but no one can look upon the movements of a decapitated alligator, or turtle, when violence is offered them, without being convinced, that these animals experience pain. We can explain their movements upon no other supposition."

This is an unanswerable argument. But it may be further said, that when we sever the slender connecting link between the anterior and posterior parts of a wasp, it is dangerous to touch the tail for several hours afterwards. I have frequently seen persons stung an hour or two after the separation had been made, who inadvertently took up the posterior part to examine it. As long then as vitality lasts there are sensorial sensation and perception, and muscular contraction; for it is by muscular contraction that the sting of the wasp is protruded.

Many other illustrations might be cited amongst the lower animals, equally decisive of the point in question.

In man, however, if the spinal cord is severed, all below the lesion will be paralysed; a needle or pin may be thrust into the flesh, without causing any sen sation whatever; and without sensation there could be no such thing as perception. Now, death does not ensue from a mere state of paralysis; for persons who may be victims of this nervous disease, confined to their beds and incapable of motion, may live for years. But this is a very different case from an accident which has destroyed the continuity of the spinal column. In this instance functions necessary to life are suspended, and death speedily occurs. What then has become of the diffused sensorium? The bodies of soldiers have been known to spring upwards with considerable energy, after their heads had been carried off by a canon ball. It is but a momentary convulsive effort, followed instantaneously by complete death, and does not help us out of the difficulty. I do not perceive how we can establish the existence of a diffused sensorium in man similar in its phenomena to what we observe inturtles, alligators, and ot her animals. With the exception of a separation of the spinal cord with dislocation or fracture of the bones, and of some severe cases of paralysis, and

pressure on the brain, I know of no case in which I would not admit unhesitatingly the doctrine of diffused sensorium. I would not deny the fact in relation to the excepted cases, although I can offer no explanation of what appears to me profoundly mysterious, and at variance with other facts concerning certain animals of which we have spoken, besides several others of the lower order of animals to which I have already alluded.

We may suppose that there is something very different in the organization of man, and that of the inferior animals. There may be tenacity of life in inverse ratio with complication, and perfection of organization; or, instead of such a general rule, there may be special organization susceptible of the remarkable phenomena of which we have spoken. But this is mere hypothesis.

It would appear that the great object of Physiologists and Metaphysicians was mystification and obscurity, instead of light and simplicity. Who can attempt earnestly to comprehend Dr. Marshall Hall on the reflex system, and some other of his physiological speculations, without having his mind confused, and his thoughts bewildered.

And who can read Dugald Stewart's tedious chapter of extreme length on *personal identity*, without going to sleep?

Theories, and hypotheses, and speculations are happily fast disappearing before the steady, though slow developement of facts, and the second sober thought of reason. The Baconian, I mean the inductive philosophy, is again in the ascendant.

IV.—THE DISEASES AND PHYSICAL PECULIARITIES OF THE NEGRO RACE.

BY SAMUEL A. CARTWRIGHT, M. D., OF NEW ORLEANS.

[*Continued.*]

In the Report on the Diseases and Physical Peculiarities of the Negro Race, read before the Louisiana State Medical Society, and published in the New Orleans Medical and Surgical Journal of May last, I briefly enumerated some of the more striking anatomical and physiological differences separating the negro from the white man.

Attention was also called to the fact, that the same medical treatment, which would benefit or cure a white man, would often injure or kill a negro, because of the differences in the organic or physical characters imprinted by the hand of Nature on the two races.

It was not deemed necessary in that brief paper to refer to authorities to prove the facts enumerated, which are just as well known and established in that branch of medicine embracing comparative anatomy and physiology, as the size and motion of the planets in astronomy. The Report was not drawn up to meet objections coming from those persons who have never made comparative anatomy and physiology a special study.

But as they have made objections to it, and are inclined to look upon the facts it sets forth as a farrago of nonsense, or, at least, as very questionable assertions needing proof, the object of this paper is to give them the proof. This trouble might have been spared, if the comparative anatomy and physiology of the different races of mankind had not been strangely neglected in the course of instruction in the Medical Schools of the present day.

In Europe, where there is but one race of mankind to treat, comparative anatomy and physiology are of no great practical importance. Nevertheless, those branches have been extensively cultivated, particularly in Germany and France, by the greatest men that ever adorned the medical profession.

In this country comparative anatomy has been very much neglected, and comparative physiology and therapeutics more so. Our Northern States, like Europe, contain but one race of men, (excepting a few free negroes), and all the medical instruction of the books and schools in that region is confined to that one race. But here in the South we have two distinct races of people living in juxtaposition, in nearly equal numbers, differing widely in their anatomy and physiology, and consequently requiring a corresponding difference in their medical treatment.

Yet when it was asserted in the Report, that the Queen of England's medical advisers, without a knowledge of the physical differences between the Ethiopian and Caucasian, would not be qualified to prescribe for a negro, great exceptions were taken to the remark by those who are aware that different temperaments, as the sanguine and phlegmatic, require important modifications in medical treatment, but were not aware that Cuvier, Ebel, Sœmmering, Malpighi, Pechlin, Mecklin, Albinus, Stubner, Virey, and many other illustrious men have long ago demonstrated by dissections so great a difference in the organization of the negro from that of the white man, as to induce the majority of Naturalists to refer him to a different species having a different origin.

So great is the difference in the medical treatment demanded by the peculiar organization, physiology and habits of our black population,

that very learned physicians from Europe and the Northern States, on first coming South, have felt and acknowledged their incompetency to treat their diseases successfully, until they have had time to make themselves acquainted with their peculiarities.

The owners of slaves consider it safer in most cases to trust to the empiricism of overseers, rather than to the regular doctors, who are new comers, practising on the false abolition theory that the negro is only a lampblacked white man.

There is nothing to prevent young physicians, new comers to the South, from treating negroes successfully, if they were to study their diseases, their anatomy, physiology and pathology with half the care they devote to the white paupers in the Northern and European hospitals and almshouses. On coming South they find no such class of persons, as those whom they have mostly studied to treat.

They not only find no complaints arising from want of food, fire, clothing, and the common comforts of life, such as those they have been accustomed to see in the hospitals, but they find one half of the population composed of a people whose anatomy and physiology is a sealed book to them.

Although the every day experience of the Southern people proves that Nature has made so great a difference between the white and black races, as to make it absolutely necessary for the safety of the State and the wellbeing of society, that the latter should be subjected to different laws and institutions from the former, yet the text books of the Northern Medical Schools contain not a syllable to show what that difference is, but advise the same rules and principles, and the same therapeutic agents, as if there was no other race of mankind than that inhabiting the Northern States. The popular error prevalent at the North, that the negro is a white man, but by some accident of climate or locality painted black, requiring nothing but liberty and equality, social and political, to wash him white, is permitted to go uncorrected by the Northern medical schools. This error can be, and should be, corrected at the dissecting table, by reviving comparative anatomy, and making it an essential part of a medical education. If the Northern schools will not correct it, the Southern schools, instead of being as they now are Northern institutions located in the South, using the same text books and echoing the same doctrines, should take upon themselves its correction, and have their own text books, containing not only the anatomy, physiology and therapeutics applicable to the white race of people, but the anatomy, physiology and therapeutics of the black race also. As soon as they do this, the empire of medical learning will

come South, where the study of two races of people will give students better opportunities of acquiring knowledge, than the one race at the North. Physicians will also reclaim the practice among three millions of people that the overseers have mostly got. It will be for the interest of the planters to employ physicians, instead of overseers, to treat the diseases of their negroes, as soon as they properly qualify themselves for this branch of Southern practice. A Southern country physician never wants practice, who is properly qualified to treat the diseases of negroes. It is only those medical men whose knowledge is confined to the diseases, the anatomy and physiology of only one race of men, as contained in the Northern hornbooks in medicine, who are superceded by overseers and empirical practitioners. So little attention has been paid to the anatomy and physiology of the negro race, that when it was mentioned, among other peculiarities of the negro, that his blood was blacker than the white man's, it was supposed by those physicians, who have paid no attention to comparative anatomy and physiology, that I was making random assertions requiring proof, instead of reiterating truths that have been known for centuries, needing no other proof, than the perusal of works of the highest authority in medicine.

Thus, Malpighi, the celebrated anatomist of *rete mucosum* memory, says: "La couleur noire reside non seulement dans le fluide qui colore le tessu muqueux mais encore *le sang*, le part cortical du cerveau et plusieurs autre partes internes du corps, impregnées d'une teinte noire et ce qui a été remarqué également par d'autres observateurs." Here is not only the authority of Malpighi in proof of the darker color of the negro's blood, and the impregnation of the brain, membranes, and other internal parts of the body with a darker hue, but likewise his testimony that other observers had remarked the same thing.

J. F. Meckel (see vol. 13, p. 69, Mem. Acad. Berlin) says, that not only the blood, but the bile and cortical part of the brain are of a darker color in the negro than the white man.

According to his authority the negro is not only a negro on the skin, but under the skin. The words of that great comparative anatomist are: *Le nègre n'est donc pas seulement négre à l'exterieur, mais dans toutes ses partes et jusque dans les plus profondement situées.*

Nic. Pechlin, in a work entitled "*De cute Athiopum*," and Albinus, "*Diss. de sede et causa coloris Athiop.*," have remarked that not only the blood, but the muscles of the negro are of a darker red than the white man's. These authors also state that the membranes, tendons and aponeuroses, so brilliantly white in the Caucasian race, have a livid cloudiness in the African.

J. J. Virey, one of the authors of the great Dictionary of Medical Sciences, Paris, says in the 35 volume, p. 388, that the flesh of the negro differs in color from the white man's, as the flesh of the hare differs from the rabbit.

This author confirms everything said in the Report about the darker color of the blood, membranes, smaller size of the brain, and larger size of the nerves in the negro than the white man.

The celebrated anatomists Sœmmering and Ebel also speak of the darker color of the blood, muscles, etc. These anatomists confirm every word in the Report about the brain being smaller, and the nerves larger, in the black than the white race.

M. M. Cuvier, Gall and Spurzheim, also found the capacity of the brain about a ninth less in the negro than in the European.

Saml. George Morton (see "*Observations on the size of the brain in various races and families of Man.*" Philadelphia: 1849,) has ascertained that the negro's brain is nine cubic inches less than the white man's.

Lately some attempts have been made by British abolitionists to distort the facts of science by representing the African brain as equal to the European, and the mind of the former equal to the latter.

A certain Doct. Robt. Bently Todd, of King's College, London, in a work on the "*Anatomy of the brain, spinal chord and ganglions,*" London, 1845, endeavors to throw some doubt and uncertainty on the received and well established facts in regard to the inferiority of the negro's intellect, the comparative smallness of the brain, and the larger size of his nerves.

Also James Cowles Pritchard, another British writer, author of "Researches on the physical history of Mankind," in 5 vol., London, 1844–1850, an abolition work disguised under the pretence that the authority of the Bible would be impeached, if the great differences, that Natural Historians and Comparative Anatomists professed to have discovered in mankind, were not called in question. Pritchard in the preface of his work admits that the weight of authority in the learned world is altogether against his conclusions. His conclusions not flowing from the premises prove that scientific truth was not the object of his work, that it was not written for learned men, but to cast dust in the eyes of sophomores and the vulgar to prevent them from seeing the truth on the slavery question.

He pretends to be very fearful that the learned anatomists and naturalists, unless held in check, will bring the Scriptures into disrepute. He does not seem to be aware of what Cardinal Wiseman justly ob.

serves, that "it is only half way science and half way truths that militate against the authority of the Bible." The whole truth, when brought out, and perfect freedom of science to pursue its investigations untrammelled to its terminus, have in every instance demonstrated the truth of the Bible, while imperfect investigations, and the omission of the truth, or the tying science down to the narrow interpretations of Biblical commentators have generally led to skepticism and infidelity.

Pritchard seems to be so much afraid, that if the physical differences which Malpighi, Sæmmering, Cuvier, and other comparative anatomists have discovered in the negro's organization, approximating him to the monkey tribes, be admitted, the Bible will be invalidated, that he has taken much pains to try to overturn their general truths and principles by partial exceptions. He adduces instances to prove, that white persons have turned black in whole or in part, and that the negro's skin has in some instances turned white ; but he ought to know that the change of color in all such cases is the effect of disease.

Dr. Rush was so much afraid that the black skin, thick lips and flat nose of the negro would invalidate the Mosaic account of the creation of man, and the unity of the human family, that he published in the Medical Repository, vol. 4th, p. 409, some suggestions attributing the black color, thick lips and flat nose to a disease resembling leprosy. But observation proved, that so far from the black color being caused by disease, the blackest negroes were always the healthiest, and the thicker the lips and the flatter the nose the sounder the constitution.

Both Pritchard and Todd labor to prove by a few cases, exceptions to the general rule, that the brain of the negro and his mental capacity are equal to the white man, lest the Scriptures be invalidated, if an inferior slave race be admitted. They overlook the fact that the Mosaic history distinctly specifies an inferior slave race of people called Canaanites, Gibeonites, etc., and that these people were reduced to slavery, and their country taken from them by divine command.

In aiming to overthrow Cuvier's specific, characteristic traits of the negro's organization, Pritchard did not seem to be aware that Cuvier and Moses agree exactly in their definitions, both defining the negro as "the *knee bender*," (see Cuvier Mem. *Du Museum*, d'Histoire Nat., tom. 3, p. 159), where the anatomical structure of the negro's knees is brought forward by the greatest naturalist the world ever saw, as a specific mark of difference between him and the white man, and also the inferiority of intellect from the diminished quantity of brain. Exactly the same things are set forth in the inspired writings by the name given to the Canaanite or Ethiopian race—the Hebrew verb *canah*, from

which the word Canaan is derived, literally meaning *knee bender, crushed or broken in mind*—tantamount to Cuvier's race of man with weak and timid mind, and "*les genoux à demi-flechés.*" Hence it would appear that the Bible does not stand in need of Todd, Pritchard and other British abolitionists to support its truth by special pleading, or by dodging the truths of science. Both Todd and Pritchard are compelled to admit that the negro's blood is darker than the white man's, but they deny that the brain is of a darker color, as Meckel, Pechlin, Albinus, Malpighi and many other comparative anatomists have asserted. They quote three dissections made by Sœmmering, where the difference in color was not apparent, but rather unnaturally white. They concealed the fact, or did not know it, that disease tends to obliterate the dark color that pervades the negro's organization, giving the deeper seated parts an unnatural whiteness.

Thus, as the Report sets forth, in negro consumption the mucous membranes, instead of being dark, are paler and whiter than in the Caucasian race. It would be very unfair to adduce those cases of whiteness of the gums and mucous surfaces in diseased or consumptive negroes to disprove the fact of darkness being the general rule. Todd and Pritchard labor much to call in question the facts heretofore observed by comparative anatomists, that the nerves leading from the brain are larger in proportion than in the white man. Yet they are forced to admit that the negro's sense of smell and hearing is more acute. The auditory and olfactory nerves must therefore be larger, or the physiological law of nervous developement being proportional to activity of function must be denied. Those, likewise, who deny that the nerves of the stomach are no larger in the negro than the white man, are compelled to admit that his digestive and assimilating powers are stronger, which is the same thing as to admit that the nerves of organic life are larger. Everything asserted in the Report, in regard to the negro's eye and his bearing sunlight without a covering on his head, will be fully confirmed by reference to Sam. Thos. Sœmmering's work, entitled "*Icones oculi humani,*" where it is distinctly stated that the plica lunaris in the inner canthus of the negro's eye is anatomically constructed like that of the ourang-outang and not like that of the white man.

Virey confirms every word said in the Report about the small size of infant negroes' heads, and the sutures being closed. See Dict. de Scienc. Med., vol. 35, p. 401.

In regard to the bones of the negro being harder, whiter and containing more phosphate of lime than those of the white man, naturalists universally agree. Herodotus mentions the greater hardness of the

Ethiopian skulls, proving in that respect, at least, that the negro is the same now that he was two thousand years ago.

The Crania Ægyptiaca prove, as Morton justly observes, and has placed on the title page of his catalogue of skulls, that "*the physical or organic characters, which distinguish the several races of men, are as old as the earliest records of our species.*" Abolitionism is founded in ignorance of those physical differences in the races of men that science proves.

A radical reformation is greatly needed in our system of education, medical and political, which is so defective as to lead to the fatal error that there are no physical or organic characters in the Ethiopian organization different from that of the European. In medicine, a blundering practice in ignorance of the negro's anatomy and physiology, is not the only evil of this defective system of education. The peculiar phenomena indicating debasement of mind, necessarily springing from this difference in organization, are attributed by ignorant, political demagogues of the North to the effects of Southern slavery. But it could easily be shown by anatomy, physiology, and ethnographical investigations that the debasement of mind, falsely attributed to Southern slavery, arises from causes imprinted by the hand of Nature on the sons of Ham so far back as the time when the catacombs of Egypt were constructed. The vulgar error, that there is no difference in the organization, physiology, or psycology of the African, and that all the apparent difference arises from Southern slavery, is the cause of all those political agitations which are threatening to dissolve our Union.

The knowledge to correct this most mischievous error, which has already split nearly every protestant denomination of christians in the United States, is to be found by cultivating comparative anatomy, physiology, history and ethnography.

June 20th, 1851.

V.—OBLITERATION OF THE OS UTERI. CÆSAREAN OPERATION SUCCESSFULLY PERFORMED—BOTH MOTHER AND CHILD BEING SAVED.

BY D. B. GORHAM, M. D., OF BAYOU SARA, LA.

The following is a brief history of a case in which I successfully performed the Cæsarean operation, in the presence of, and assisted by, Drs. Walker and Stirling, of this parish.

About 3 o'clock, P. M., on Friday, 9th of May, 1851, I was called to see the woman Lily, the property of Daniel Turnbull, who was said by the messenger to be in difficult labor. On my arrival I obtained from the overseer the subjoined account which I give in the language that I received it. "The woman Lily is about 25 years old; had her first child 3 years ago, at which time she had a long and tedious labor, and had finally to be delivered by a physician (now residing in Kentucky) who, as the *old granny* states, used no instruments. What the difficulty was at that time he cannot say. The child was always puny and sickly, and died when it was a year old. Patient has been afflicted for some time with a large rupture in the belly, for which she wore a truss; is weakly, and always considered among the *trash gang;* to his knowledge has had no venereal disease. A year ago from the coming June she reported herself in the "*family way*," and was soon numbered among the *big bellied* women, since which time she has done little or nothing. Threatened her several times lately to put her to work, as she had gone over the nine months, and accused her of trying to palm herself off as a *big bellied* woman, when really there was very little the matter with her. Told her that if she did not *lay in* in a day or two he intended to put her in the field. On being questioned as to her real condition she said that she did not know whether she was in the *family way* or not, but that something was the matter with her. On Thursday morning, the 8th May, Lily was said to be taken with labor pains. Sent for the *granny* who worked with her from that time until 3 o'clock on the following day. Came to him then and said this was the most *comical* woman that she had ever come across, as she had been working with her all day and all night, but could find no place for the child to come out at, and told him to send for a doctor."

It immediately struck me that this was a case of retroversion, or some other malposition of the uterus which, though it had baffled the skill of the old midwife, yet would yield to my better educated manipulations; with this assurance I accordingly proceeded to the cabin to investigate this "*comical*" case. I passed my hand (as no part of the uterus could be felt by the finger) into the vagina to make a search for the os tincæ, which I persisted in for some time, but to my astonishment I could not find anything resembling it. The pains were frequent, but instead of the expulsive power being exerted in the axis of the superior strait, it was directed towards the left crus pubis upon which the child's head would advance during a pain and retract as soon as it subsided. Seeing this strange and pervertive action of the uterus exerting its power over, instead of under, the pubic arch, I immediately thought that the os uteri

must be reposing on the left bubic bone, and with this impression I again passed my hand with the determination to find the os uteri if it existed; but this hope was soon frustrated as I could distinctly, and without the possibility of being deceived, trace with my finger the full *uterine circle*, whose area I also explored with all the tact that I was master of; thus satisfying myself that a total occlusion had taken place. I immediately set to work to rectify this preternatural presentation by pushing up the *breach*, and attempting to force down the head in the superior strait, but every effort failed to accomplish this desirable purpose. As the patient was already in a state of relaxation from exhaustion (being bathed in a profuse perspiration) I did not resort to bloodletting or antimonials. That a section of the uterus was now unavoidable was evident, but whether to practice the cæsarean or introvaginal was with me a debateable question.. I then told the overseer that this case would be a very difficult one to manage, and that I desired a consultation with some other physician ; he accordingly sent for Dr. Wm. Walker, who met me in three hours. He also made a prolonged and thorough search for the os uteri, but with no better success than myself. We discovered after repeated examinations a very superficial transverse fissure about a half inch in length, but we could not be justified in taking this as the relic of the lost os tincæ.

We now (determined to make assurance doubly sure) left the patient after having given a drachm of laudanum to allay the frequent pains, which were harrassing her to no purpose, to see her on the following day, hoping (a forlorn hope) that time might *possibly* develop the os uteri. I doubt whether this delay was judicious, as the patient was much exhausted (having been in labor 30 hours) and the *parts* swollen, tender, and a bloody mucous pervading the whole vaginal surface.

We met the next morning, at 10 o'clock, 10th May, (Dr. Walker being accompanied by Dr. Stirling, recently a graduate of the New Orleans Medical College) and proceeded to examine our patient, whom we found *in statu quo*.

We then determined without hesitation to adopt the cæsarean section in preference to the introvaginal, as it was impossible to rectify the bad position stated above, and without which it would have been hazardous to attempt a section of the uterus within the vagina, large enough to extract the child by instruments or manually, as we would have been compelled to do, for the natural powers would have been utterly inadequate to expel the fœtus. In looking around for an operating table we could not find anything better than a cotton bale which was close at hand, upon which we placed the patient. Dr. Stirling now administered

the chloroform on a piece of sponge, which in half a minute produced the most complete anæsthesia. Dr. Walker making firm pressure on both sides of the abdominal tumor so as to keep the uterus in close contact with the walls of the abdomen, I, with one sweep of the scalpel, divided the integuments and adipose matter from just below the umbilicus (there is no necessity of cutting above it) to a half an inch of the pubis, (the bladder being evacuated,) thus exposing the peritoneum, through which I carefully made an incision large enough to admit two fingers, which I introduced, and guiding the knife I divided it to the full extent of the external opening; this exposed the uterus which was of a dark, livid color. I then made into it an incision equal to the external wound, exposing the membranes distended with water and protruding through the lips of the wound. The substance of the uterus was found an inch or more thick with a serous deposition. The membranes were now divided, and the fœtus with its appendages removed. The child, which was large and well formed, cried vigorously. There was no intestinal or omental protrusion. The operation was completed in less than two minutes. The uterine vessels, which were large and distended with dark blood, bled freely. The wound was kept open for half an hour, the blood being removed by a sponge occasionally dipped in cold water; and as soon as the blood-vessels were exhausted, and the blood ceased to flow, the wound was closed by sutures and adhesive straps, over which a compress was placed and a bandage applied.

During this operation no air or fluid was permitted to get into the peritoneal cavity, as the walls of the abdomen were kept the whole time in close apposition with the uterus. The patient suffered little or no pain, as she was unconscious of having been delivered. Another operation remained yet to be performed on the uterus:—that of opening a passage for the escape of the *lochia*, which, as the uterus had not contracted sufficiently to assume its natural pyriform shape, (thereby causing the neck to dip into the vagina, and afford a proper point for establishing an artificial os tincæ,) we prefered to wait a little while until that condition obtained, thinking that the *lochia* would escape through the external wound.

May 11th—being the next day after the operation, I visited the patient; doing well; the lochia discharging, as anticipated above; uterus contracting, but yet a shapeless round mass; ordered the breasts to be drawn twice a day for the purpose of inviting the secretion of milk.

12th May.—Found the patient not doing well; had complained much the night previous of tightness and pain in the abdomen, with fever and restlessness. The uterus enlarged, and abdomen tender. The lochia

not escaping through the external wound, but accumulating in the cavity of the uterus. The alternative was now evident; I passed my hand to discover the condition of the uterus, and finding the slight fissure before alluded to corresponding with its most pendant portion, I plunged a sharp pointed bistoury into the cavity, making a crucial incision of half an inch. The lochia now flowed freely. The abdomen soon relaxed; pain ceased, and fever subsided. The incision is kept open by a large gum elastic bougie.

13th May—Patient comfortable; passed large coagula. Ordered cold water dressings to be constantly applied over the wound.

15th May—Breasts secreting an abundant and wholesome fluid. Child now nursed exclusively by the mother.

As the patient is improving rapidly every day I shall dispense with any further details; suffice it to say that at the end of two weeks she was doing as well as women who have had a natural and safe delivery. Wound healed; appetite good; sleeps well, and is gaining flesh; the uterus contracted to its natural size, and can be readily felt by passing a finger; artificial opening *rounding off*, and no disposition to heal; lochia sparse and colorless.

I cannot dismiss this case without making a few remarks relative thereto, as it possesses peculiarities seldom met with, and 1st as to the cause which called for the operation. In the 414 cases collected by Dr. Churchhill, but 17 of them have the cause assigned, viz.: distortion, moll. ossium, malacostion, exostosis, fibrous tumor, etc.; in the 397 that remain, the cause is not alluded to, or is unknown. The probability is, however, that the pelvis has suffered a diminution in its capacity, either from deformity, or the encroachment of bony or fleshy tumors. I found a somewhat analogous case in the New Orleans Medical Journal, inserted by the Editor from a note by G. S. Bedford to Chailly' Midwifery; but here there are points of difference, for though the os tincæ was occluded it was not effaced; the presentation was good; pains powerful, and direction favorable; the cause (remote) which led to the occlusion was apparent.

2d. The dropsical condition of the substance of the womb, which, so far as I have examined the annals of obstetric operation, is unnoticed.

3d. The rapidity of recovery is astonishing; at every visit I was fearful of encountering that much dreaded peritoneal inflammation so much talked of both by ancient and modern writers; but not the slightest symptom of it ensued. Does not the African enjoy an immunity from those dreadful symptoms, which so often assail the Caucasian, after capital operations? Do not the few cases on record show (when the negro

has been subjected to the cæsarean operation,) that this operation is not so much to be dreaded as formerly, when the European women were exclusively the subjects ?

The affirmation, I think, is the answer; and it is what we might expect *a priori* from the radical physiological difference which exists between the two races.

VI.—POPULAR ERRORS EXPOSED.—MOTHERS KILLING THEIR CHILDREN.

BY M. ROUANET, D. M. P., NEW ORLEANS.

Dr. Hester.

SIR:—Whilst in Biloxi, in the summer of 1850, I was one day returning home, when a gentleman came to me in a great hurry and said "Come doctor, come with me to that house," pointing it out to me, "there is a child which is very probably dead."

"What can I do for such a child ?" said I. "Do you think it in my power to bring the dead to life ?"

"Oh, come ! pray," said he ; "the child is, perhaps, not quite dead, as it was yet breathing when I went out for you."

I followed the gentleman, and entered into a room exceedingly hot and so dark that I could scarcely distinguish two or three ladies holding a child which was dying with convulsions.

"Why is this chamber so well closed ?" said I to those ladies.

"My child has the measles," replied the mother, "and I am afraid of the air and light."

(There is in New Orleans a renowned physician who prescribes all these precautions.)

"This is a great error, Madam," said I,* there is not in the whole word a practitioner so far behind in his profession as not to know that nothing is more necessary to sick persons than fresh air. Have those shutters opened in order that I may see your child."

I found the whole body of the poor little creature very red, but from heat and asphyxia, and not from any eruptive disease. I ordered the doors and windows to be thrown open, and taking a pitcher I poured over the child's head, to the great astonishment of the whole company, a large stream of cold water. Almost immediately the spasm ceased, and in less than ten minutes the child took its mother's breast, and seemed to be entirely well.

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*I have been informed since that it was indeed an error.

During the same week I was called to see two other identical cases, in *La* —— street, well known in Biloxi.

Here are three children whose lives have been in great danger, not from any disease, but from the ignorance and immoderate fear of their mothers. I cannot account from whence originates so foolish and so murderous a prejudice.

I have heard of children dying with measles in this country, where the most dangerous surgical operations are generally attended with the greatest success. Are we not authorized by the three aforesaid examples to suppose that death in such cases is to be attributed to the same lamentable error already mentioned, rather than to the disease itself.

Let it be known to every mother, nurse or attendant, that the air in sick rooms, as well as in mosquito-bars, ought to be renewed several times a day, in ordinary cases, and oftener when the patients are children, particularly when they are afflicted with eruptive fevers, which very quickly vitiate the atmosphere.

Great care ought to be taken, however, not to expose the sick person in a draught when about ventilating the room. This can be avoided by keeping the door and windows alternately open. The best way to ventilate a chamber in ordinary circumstances is to keep some fire in the hearth.

New Orleans, May 17th, 1851.

VII.—MALIGNANT PUSTULE—VEL CARBUNCLE, CHARBON, ANTHRAX, PREVAILING AS AN EPIDEMIC IN THE PARISHES OF ST. MARY AND VERMILLION, LA.

BY JAS. H. BALDRIGE, M. D., OF FRANKLIN, LA.—JULY 1851.

As little is known of the treatment of a disease commonly termed Charbon, it may not be uninteresting to the majority of your readers to report a few cases with the treatment, as it appears at the present time in this parish.

In the Southern provinces of France, particularly in Lorraine, Burgundy and Provençe, and in the Southern part of Germany this disease, termed by them "Pustulo Maligne," Charbon, Anthracine, and "Mil's Brand," often prevails. Morand, a French Surgeon, in the history of the Royal French Academy, for 1766, gives a description of this disease. In 1755, in a work upon the treatment of biles by Chaussier and Enaux, there is described the "Pustulo Maligni," which resembles much

the Charbon. Karfer also describes a disease resembling this in a great degree. There are other notices given of the malignant pustule as seen in different parts of Europe by different authors, having many symptoms in common with the disease as it appears here, but differing in some important particulars. Dr. Gross in his Pathological Anatomy has the best description of Charbon that I have seen; yet he has omitted several important symptoms.

No matter how common it may be in the Southern portions of France, Germany and Italy, its appearance in the United States, excepting the extreme Southern parts, is of rare occurrence. At the present time it prevails epidemically amongst the stock of this parish, and in the parish of Vermillion. So far as I can learn from the oldest and most intelligent Creole planters of the parish, charbon never appears amongst the stock, excepting after protracted heat and drought.

Of the remote cause nothing is positively known. In one of the reports above alluded to, vitiated provender with impure water is set forth as the cause. In St. Mary during this drought there has been no scarcity of good water and food. Another attributes it to a poisonous marsh malaria. The first appearance of this disease here was among the mules which were in a healthy part of the parish, and we have had no excess of disease in the human subject generally attributed to malaria. I think the most plausible speculation to be the elimination of a powerful poison produced from the rapid decay of animal matter, caused by great heat and the absence of moisture, which being imbibed by the common carrion fly is reproduced in the living animal upon the principle of inoculation from the bite. Be this as it may, it is an established fact that the disease is reproduced by the bite of a fly, by contact with the secretions, blood and excrements of the animal affected. Laceration of the flesh with the hides of cattle which have died of this affection has been known to reproduce the disease.

Those who treat stock affected with charbon, such as butchers, shepherds, tanners, and stockdrivers, are most liable to it. It generally appears upon the parts that are habitually exposed, upon the extremities, face, neck and breast.

Charbon is characterized by a round prominence with a small vesicle in the centre, which contains a sero-sanguinolent fluid. As it increases, it presents a rough granulated appearance, and the contents of the vesicle become darker; the surrounding skin and cellular tissue become rapidly involved, and an erysipelatous, phlegmonous inflammation ensues. There is tendency to gangrene, and if not arrested by appropriate treatment, hastens to this end—becoming putrid from the centre

to the circumference. The cellular tissue becomes indurated, presenting to the touch a hard resisting tumor. The size of this tumor varies from one to two inches. It runs its course in from 24 to 86 hours. Constitutional derangement, although considerable, is nothing like so great as described by the above mentioned authors, or as we would expect from such a disease. In fact, the nervous system appears to be depressed or benumbed as it were. The rapidity or progress of the disease is dependent, in a great measure, upon the seat of the vesicle; if near a highly vascular part it is much more rapid, than if near a spot not so well supplied with blood vessels and lymphatic glands.

The following cases will, perhaps, give a better conception of this disease as it appears here, than a simple description of the same: C., S., aged about 30 years, of good constitution and regular habits, states, that whilst reading in his room he was bitten by a common green carrion fly upon the back part of the left hand; that the bitten spot immediately swelled to the size of a pea, and itched very much; that it continued to itch, sting and swell, until that time, which was twelve hours after it occurred. The tumor had a brownish vesicle in the centre of it, surface somewhat granulated and had a firm indurated base. Complained of a peculiar burning sensation alternating with itching. The swelling had reached the wrist of the afflicted arm, and continued to extend upwards rapidly. I applied a strong solution of the nitrate of silver by a dossil of lint, and permitted it to remain until it had destroyed that portion of the tumor which was prominent. Applied then aqua ammonia, and directed him to place the arm and hand in a strong lie bath and to let it remain an hour; to resort to the bathing frequently during the day, and when not bathing to use the lie poultice. He had taken salts which acted freely. Six hours afterwards I saw him again, and found the swelling had reached halfway the fore arm. Complained of a numbness, a heaviness in the arm, produced, as he stated, from the distended condition of the part. Administered Dovers' powders, grs. x., and left two other powders to be taken one hour apart until he slept, and wrapped the arm up in a hop poultice. In the morning he stated that he had not slept from the unpleasant fulness produced from the swelling; that he could not bear the hop poultice, and was compelled to resort to the lie bath. The swelling now reached midway the arm, the entire arm looked as do the extremities in Anasarca. The lymphatic glands could be traced by their reddish appearance—were tender to the touch and enlarged, particularly those of the axilla of the affected side. There was little or no fever. Prescribed carb. of amm. grs. vi. to an ounce of mucilage, every hour; continued alkaline baths and dressings. That

evening there was not much change. Continued treatment. The next morning he stated that he had slept four hours, and felt better. I found swelling somewhat diminished, and the base of the tumor much softened. He continued to improve from this time, and by the aid of simple dressings of a mucilaginous nature was soon restored.

Dennis, a field hand, aged 34, black, and of robust constitution, states that whilst hoeing he was bitten by a green fly on the left arm, and that he killed the fly with his right hand; that the bitten place itched and smarted very much, and that it swelled rapidly. Stated that he was bitten just before the dinner bell sounded.

Yesterday (July 6th.) It was now 26 hours since the bite. Midway the back part of the left forearm I found a hard tumor of a rough granulated appearance, with a vesicle containing a yellow fluid. The swelling reached the arm; temperature of the limb but little higher than natural; pulse 90, and soft; tongue natural; complained of a numbness and weariness of the arm. The glands were swollen and enlarged. I made a crucial incision down to the base of the tumor, from which exuded drop by drop a bloody serum, or yellowish water. Pressing open the wound I filled it with aqua amm. fort., allowing it to remain several minutes. He complained of a little burning sensation. Administered a saline cathartic; directed the use of the strong lie bath, and poultice afterwards, with gr. x of carb. of ammonia every two hours in mucilage.

On the morning of the 8th found him, with the exception of the swelling, which had reached the shoulder, about the same. Perhaps the glands in the axilla and those down the side were more enlarged than they were the day previous. They were more painful to the touch. The sulph. of magnesia operated freely; had not slept much; complained of no pain, and wishes to eat. The tumor has a hard leathery feel; is of a dark color, and insensible. Continued the lie bath, alternating with a poultice, with carb. of ammonia every hour instead of every two hours.

July 9th. The swelling somewhat diminished; the indurated mass appears to be about separating from the healthy flesh. Continued the poultice with an occasional bath.

July 11th. This morning the tumor became detached, leaving a cavity an inch deep and two inches and a quarter wide. It was now treated with emolient poultices and simple dressings, and continues to improve.

There are other cases that have fallen under my care, of wounds produced from the bite of the fly, but as they present nothing differing from the two cases reported above, worthy of note, I deem it useless to mention them. One case which occurred on the 14 inst. was produced on the hand from dressing the wound of a mule suffering from it. As

yet no cases have occurred where the disease is seated near the neck, head or face. I am inclined to think that if bitten about the neck or any highly vascular part, unless immediately removed by caustic or the scalpet, death would shortly ensue. I would furthermore add, in support of the alkaline treatment, that of all the remedies recommended by those who had much experience in treating the disease amongst the lower order of animals, that some powerful alkali entered into the composition of the nostrum used, although they frequently attributed the virtue of the remedy to some other ingredient.

It is not, however, so easily managed or successfully treated in the mule, horse, or cow. If seen early, before the poison has become disseminated throughout the system, and removed by the knife, actual cautery, or caustic, they almost invariably recover. Generally it is not detected until too late, and death ensues at a period varying from 24 hours to 7 days. There is no complaint on the part of the animal, commonly, at all, and will continue to eat until a few moments before death. It frequently falls dead. The planters generally treat it, when they see it early, by cutting freely into the tumor and filling up the wound with a compound of soft soap and quick lime, composed of equal parts. Others remove with the knife all of the inflamed mass. Others rely upon the hot iron, which is generally the safest remedy in the hands of persons who do not know where to cut. Some open the wound, and pour in hot spts. of turpentine, others hot lard. I presume the virtue depends upon the heat.

Some of our Planters have lost several thousand dollars worth of horses and mules,* and an immense number of cattle. Hogs that eat of the dead carcasses soon die of the disease. The dog that eats them meets with the same fate. It is generally thought that a good rain will check the disease.

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*This epidemic, like that described in the First Book of Homer's Iliad, made its first assault upon mules,—

"On mules and dogs th' infection first began;
And last, the vengeful arrows fix'd on man."

[*Ed.*]

VIII.—CASE OF PROLAPSUS UTERI. SUCCESSFULLY TREATED BY EXCISION.

BY DR. JOHN B. C. GAZZO, LA.

The lady whose case forms the subject of the following communication was about twenty years of age when the prolapsus occurred. Her health and constitution, as far as I could learn, had been good down to the time of her confinement, which took place sometime during the month of March, 1849. The pregnancy which resulted in the prolapsus was her first. Her labor was protracted and very tedious, having continued more than three days; but was marked by no important event, save the affliction above mentioned. Ten months after the prolapsus took place, I was consulted, and my opinion and advice requested. The history furnished me at this time induced me to regard it as a case of procidentia. The anxiety and determined purpose of my patient did not permit me long to doubt, and without further delay I was summoned to examine into the nature of the infirmity.

The examination disclosed a complete protrusion of the lining membrane of the womb, and the womb was depressed completely out of the vagina. The neck of the uterus terminated superiorly in an angle somewhat obtuse, and the vagina had contracted upon itself, so as to render its several coverings a mere band of the width of three-eighths of an inch. On each margin a whitish line was to be perceived, commencing in the angle above, and continuing down to the antero-posterior diameter. Long continued irritation of the gastro-intestinal surfaces subjected the lady to frequent attacks of colic and diarrhœa from the slightest error in diet.

The propriety of removing by excision the prolapsed portion of the womb, in cases where the prolapsus has become obstinate or permanent, was founded on the practice of the celebrated Dupuytren, which Dr. Dieffenbach of Berlin, and also Astley Cooper of London, considered as deserving to be ranked among the most valuable improvements of modern surgery. This operation was said to consist in excising portions from the circumference of the prolapsed uterus, in such a manner as to form a star—shaped round; the uterus is then replaced, and the cure is completed by the contraction of these incisions in the process of healing, so as to prevent the recurrence of this disease.

The above case is given in support of the following operation, viz.: whether the complete removal of the protruded portion by the knife would not be a less painful and more effectual mode of operating, than those partial and interrupted incisions practised by others. The parts cut will in both instances be the same, and by complete circular excision,

carried round and through the base of the tumor, the wound will be less extensive, and by the removal of the structure and the morbid portion, the cut will heal with greater facility. I then have had an opportunity of performing this operation upon the above case. It was with difficulty that the protruded portion could be reduced, and when replaced, without considerable pressure, would immediately return to its former prolapsed condition. I therefore determined to remove the diseased, indurated, and protruded portion, with the knife.

Operation. April 27th, the following operation was performed. By gently drawing down the uterus with a strong short forceps, (the labia being held asunder,) I then cut through the duplicature with a firm stroke of the scalpel, and the part left out hollowed in, so as to have the form of a diaphragm. By this method I avoided the risk of wounding the bladder and peritoneum. The cut and pendulous extremity was then returned within the vagina. Immediately after the excision of the uterus severe vomiting, and fainting supervened. I saw the woman again the next day; the cut extremity of the womb had subsequently protruded, and a very considerable hæmorrhage had taken place before it was discovered. The bleeding was, however, easily restrained upon the replacement of the uterus, and by the use of cold water and creosote applications; after which it returned no more. Considerable tenderness and soreness of the abdomen took place, and continued for a few days, which was relieved by warm bathing, fomentations, low diet, and aperients. In about twenty-seven days the lady had recovered from the operation, and has since remained entirely well, and perfectly relieved from this disagreeable complaint.

In conclusion, I would observe, that in any similar case to which I may hereafter be called, I should not hesitate in resorting to the same practice, though with this precaution :—to guard against intestinal inflammation, (which I neglected in the case above related,) by restricting the person to a low diet for two or three days previously, and emptying the bladder a few hours before the operation.

Lafourche, La., May 29th, 1851.

Part Second.

EXCERPTA.

I.—OBSERVATIONS ON THE NATURE AND TREATMENT OF YELLOW FEVER.

(*Translated from the French of* ———, BY THE EDITOR.)

In some of our former Numbers we published portions of an excellent work, written by an able and learned French Naval Surgeon, on Yellow Fever. The work, (very rare,) from which we made the translation, has been misplaced, and the author's name forgotten; this will not make the facts and observations, which he has collected from personal observation in the Gulf—at Havana, Vera Cruz, etc., the less valuable and interesting to our readers, especially at this season of the year. We shall continue these translations from time to time, without any very scrupulous regard to connection or date. The facts will prove useful, we hope, to many who read the Journal, and feel anxious to learn the peculiarities of the disease in other regions than our own. At the time the author gathered the materials out of which his work was made, he was full Surgeon on board the French Frigate "Herminie."

We thus continue with the (*Ed.*)

SECOND PART.

OF THE YELLOW FEVER ON BOARD THE "HERMINIE."

The yellow fever annually rages as an epidemic, at Havana; but by a fatal distinction, the year 1837 was remarkable for the gravity — the longue continuance of the epidemic, and as a natural consequence of these two facts, —for the great number of persons who were attacked by the fever. The Frigate *Herminie* reaching the moorings of Havana, the 3d of August, without previous acclimation, at a period of the greatest heat, of storms and the abundant rains which accompanied them, could not fail to experience the morbid influence of the season and the climate; the first case of yellow fever occurred on board the 7th, four days after our arrival; it was soon followed by many others; on the 21st the commander fell sick; on the 26th we had the misfortune, to loose M. Fournier, captain of a sloop of war, after only three days sickness; up to the end of November, the whole number of men, that had been attacked, amounted to one hundred and forty three.

At that time, the temperature of the atmosphere fell; the north winds more

frequently prevailed, and up to the close of February, we had only a few sporadic cases. At this period we sailed for the coast of Mexico; we anchored in the roads of Sacrificios, near Vera-Cruz, the 10th of March 1838, having on the sick list only a few light cases of dysentery, and two convalescents from yellow fever, among whom was Mr. Dumoiron, an ensign of the vessel, who had been seriously attacked on the 15th of February. I had some knowledge, from report, of the coast of Mexico, and I knew that at Vera-Cruz, especially, the yellow fever, often committed great ravages; but I secured for the crew of the frigate, a full and perfect security; at first I did not doubt in the least, but that all those, who had paid their tribute to the yellow fever, in the island of Cuba, would henceforth be exempt from a second attack; then I hoped that the others, who up to this time had escaped the disease, might be considered as acclimated, since they had passed with impunity through an epidemic season remarkable on account of a combination of the most unfavourable circumstances.

Unfortunately my predictions and expectations were entirely disappointed: to date from the moment of our arrival, sporadic cases of yellow fever appeared from time to time, as if to keep us engaged, and towards the middle of the month of August, the epidemic influence was distinctly marked; then we had as high as twenty odd new cases of sickness "per diem"; from the 16th of August to the 11th of September, the total number of the sick rose from one hundred and ten to three hundred and forty three, thus divided:

	SCORBUTIS,		WOUNDS,	DIFF'T. DISEASES	YELLOW FEVER,	
16 August	55	6	20	10	19———	110
11 September	75	0	8	3	257———	343
Difference	20	6	12	7	238———	233

After the 16th of September, the number of new cases of yellow fever was on the decrease; on the 30th, the day of our departure for Havana, we had two hundred and forty nine on the sick list, of whom ninety three were scorbutic, eight wounded, and one hundred and forty eight affected with yellow fever; these latter were almost all convalescent.

During the passage, eight men were also attacked; we did not reach Cuba, until the 1st of November; on the 15th we steered our course for France, and up to the 3rd of December, the day on which the frigate was wrecked upon the reefs of Bermuda, no person was attacked; the thermometer or mercury had fallen much lower. Here the danger of a disease ceased, which, during eighteen consecutive months, constantly prevailed on board, and on two occasions, epidemically.

We should not have had any further losses to deplore, had not an unrelenting fatality forced us to take refuge in Martinique, where three of our crew fell victims to the earthquake of the 11th of January 1839, which destroyed Port Royal, two days after our arrival in that city.

Independently of yellow fever, we have had to struggle against scorbutis; from the 15th of April, the day on which the blockade of the ports of Mexico commenced, up to the 27th of September, the crew was constantly short of water and reduced to the fare of servants on board, which, as we know, consists in salted viands and in dried legumes; a high range of temperature, extreme humidity of the atmosphere, violent storms, heavy showers of rain marked the months of June and July; this was quite enough to develope scorbutis; one hundred and ninety four men contracted this malady, and I should moreover observe that I do not comprehend among this number those sailors who had only slight symptoms, such as tumefaction of the gums, bloody oozings from the buccal mucous membrane, petechiæ etc.; I would then have had to inscribe three fourths of the crew on the list.

After each epidemic, I addressed to the councils of health, both of Brest and of Rochefort, the observations which I collected upon the yellow fever. They are the two memoirs which I here unite into the bulk of a single work.

I shall divide this work into two sections ; in the first shall be embraced the epidemic of Havana and that of Vera Cruz, up to the close of August; in the second, I will treat of intermittent yellow fever, such as it presented itself at the Sacrificios during all the month of September. The difference between these two epidemics has been so well marked, as well in relation to the symptoms as to the therapeutic indications, that it would be impossible to comprehend them in the same description.

SECTION I.

YELLOW FEVER WITH A CONTINUED TYPE.

Topography of Havana and of Vera Cruz.—The Island of Cuba, the largest of the Antilles, is situated near the Gulf of Mexico, and extends in longitude east, from 74°th to 85°th degree, and in latitude north from 19° 45 to 23°. Havana, the greatest and most commercial city of the island is 23° 9 in latitude, and 84° 42, in longitude. It is well built up; the streets are spacious, and almost all have banquets, or walks constructed of free stone; but the space which separates them is not paved, and the earth is here so soft that the least rain suffices to saturate it and to produce a great quantity of mud, the odour of which is extremely offensive.

The general cleanliness of Havana, which still calls for many hygienic improvements, appears however to have made in a few years rapid progress; they are due entirely to the two last Governors, M.M. Vivez and Tacon.

The harbour of Havana is a real port, which forms a circular dock or basin, the circumference of which is about eight miles. The channel which connects it with the sea is very long and very narrow ; it is commanded on the left, on entering, by fort *Moro* and by the citadel. The city is to the right. In tracing the circumference of the bay, on leaving Havana, we find :—1st. an extensive marsh of fresh water with which, in high tides, the sea water commingles: these marshes, like all those which I shall indicate from time to time,are fed by rain water, so that when during the winter season the rains fall frequently, and evaporation being very rapid in consequence of the heat, they become inundated at one period and dry at another;—2d. a small village called Regla, built upon a narrow slip of land which extends into the harbour, and whose point is occupied by a cemetery :—3d. a new quantity of marsh abounding like the preceding, in *mangliers* and *paletuviers*:*—4th. a peninsula on which stands the Hospital of M. Bélot; although surrounded by low lands, it is by reason of its slight elevation above the level of the sea, the most salubrious point of all the bay. M. Bélot is moreover engaged in drying up the marshes which surround his establishment :—5th. more marshes :—6th. the village of Casa Blanca, a place fronting Havana :—7th. and lastly the Moro.

Thus more than two thirds of the circle which forms the bay are occupied by marshes. Lofty mountains protect the port on the northern side, towards the East and the South the country is much flatter, but still the harbour is the lowest point; hence the flow of rain water necessarily tends to this spot. The embouchure or mouth of the river is nort-west and south east.

It is important to remark that the sea in the bay of Havana becomes phosphorescent every evening ; that the sea water, when sealed up, exhales, after standing twenty four hours, a very well marked putrid odour: often in strong gales the sea itself disengages this unpleasant smell ; finally, during a calm, especially shortly after a tempest, the agitation of the water by the oars renders it sensible to persons who may be in the boat. This is an observation which many officers of the frigate have made as well as myself.

*We are unable to render these two words into English. *Trans.*

The city of Vera Cruz is situated in the remotest part of the Gulf of Mexico in 19° 10′ 52″ of north latitude, and 98° 29′ of west longitude; it is handsomely built; its streets are very large and cut each other at right angles; cleanliness there would be easily maintained; but the police pay no attention to this part of their duty and the citzens regard it with the same indifference. Vera Cruz is bounded at the North-West by a plain of white sand, which is succeeded by very high mountains; to the North-East and tothe east, by the sea, which bathes its ramparts; to the South and West, by extensive marshes which are separated from the sea only by a few hillocks of sand.

Sacrificios is nearly a league East-South-East of Vera Cruz, and more than a mile from the south coast. It is a small island of sand, half a mile in circumference, where we can scarcely find a spot of productive soil, and where nothing but reeds are found to flourish. It is protected from North to South, in passing eastward, by coral reefs which are exposed at low tide; in the centre of the island three pits are dug out and filled with brackish, stagnant water, which is renewed in proportion as the quantity is diminished by evaporation.

As to the *Herminie*, it offers precisely the same accommodations as all frigates of the first class. The hatches are very large and well perforated; the scuttles are opened every day. The ships crew is composed of six hundred and thirty men; most all for the first time have arrived in the colonies; they are young and robust; all of them from Britain and Normandy; we had not a single sailor from the interior of France. I have deemed it necessary to record these preliminary details, because, in the history of an epidemic, there is no circumstance which does not exhibit some degree of interest.

CHAPTER THE FIRST.

CAUSES.

At Havana and Vera Cruz, we find a combination of all the causes of yellow fever pointed out by authors, and theory alone indicates "*a priori*" the force of their action. *Caloric.*—Yellow fever is endemic at Havana; we observe some isolated cases of it annually.

During four months, viz July, August, September, and October, it prevails epidemically. It is the period of the greatest heat; in 1837, the mean temperature was in

August - -	28 90	Reymier.
September -	29 05	
October - -	27 30	
November -	24 70	

It is only during the month of October that a very striking difference is observed between the temperature in the middle of the day, and that of the mornings and evenings; in August and September, the heat is insupportable; a circumstance of greater importance in the production of yellow fever, is the sudden and frequent vicissitudes of temperature giving rise to a series of changes altogether different from morbid lesions. The thermometrical cyphers above indicated, suffice then to show us what an important part heat performs, considered first, as an agent of putrefaction, and second, of evaporation.

Independently of this mode of action which should be ranked among the determining causes, heat may moreover be regarded as a predisposing cause.

Under its protracted influence, indeed, especially when joined with humidity (which is the case in Havana), the organism is oppressed with languor; the desire for repose is extremely urgent; the intellectual faculties loose their energy; the digestive apparatus no longer possesses the same power; either diarrhœa or constipation supervenes; the appetite diminishes: the thirst on

the contrary, is much increased; the skin constantly inundated with perspiration, becomes the seat of a true phlegmasial action, whose effects are characterised, either by *bourbillons*,—a miliary eruption accompanied with an itching and smarting often extremely painful, or with a large number of furuncles, which may be considered as agglomerations of *bourbillons*. Necessarily from this state, which is general with unacclimated Europeans, there is but one step to a disease, particularly if we recollect with what facility a prevailing epidemic impresses its stamp upon intercurrent diseases. This condition of the digestive tube and of the skin constitute of itself the most powerful predisposition to colonial diseases; acclimation subdues it in a great measure; yet inertia of the digestive tube exists even among the Creoles, but in them it is definitive, and the inflammation does not seize upon the gastric mucous membrane, whilst that of the European is at the same time debilitated and rendered very excitable.

At Vera Cruz, the thermometer rises at least as high as at Havana. In the harbour of *Sacrificios*, during the months of March, April, May, and June 1838, every day, towards ten o'clock in the morning, the breeze of the offing refreshed the atmosphere; but in the following months, it was generally oppressive, and the heat was truly suffocating. Again, in spite of their sojourn, for more than a year, in intertropical countries, the marines of the *Herminie* were constantly tormented with very painful cutaneous eruptions; their skins were constantly bathed in perspiration, and hence the inertia and diminution of innervation of the digestive tube, as was the case during the first month of of our sojourn in the Island of Cuba.

In a word, the general state which we have consented to call acclimation, no longer existed in them; they remained amenable to the morbid causes, and the heat reserved for them all its fatal effects of the preceding year.

Focus of maritime infection. The topographical observations which I have previously given, suffice to show the extent and composition of the soils which surround the bay of Havana: I shall only add here, that the harbour forms the common *dépôt* of all the canals which receive the filth of the city;—that the tides never rise higher than 2 or 3 feet, and that hence the water of the harbour is almost stagnant,—a circumstance, joined perhaps to the innumerable quantity of phosphorescent animalculæ which it contains, contributes greatly to the production of the odour which I have mentioned.

At Vera Cruz, throughout the rainy season, that is to say: from the end of June towards the middle of August, the marshes which surround the city on the South and South-West, are inundated, and the evaporation which goes on in the interval of squalls, tends greatly to increase the natural humidity of the atmosphere; but when two or three days elapse without rain, and especially when it has entirely ceased, the evaporation continues from the surface to the bottom; the debris of vegetables, the myriads of insects, which are buried in the mud under the water, become exposed to the air and then it is not only the water in a state of suspension which is mingled with the atmosphere, but also true lethiferous gases.

At Sacrificios, when the tide is low, there remains, between the banks of coral, a great quantity of marshy ground which becomes corrupted by repose and which furnishes likewise its quantum of deleterious vapours. (Sea water taken in the harbour of Sacrificios putrifies by rest almost as promptly as that of Havana; the water which was collected in the Gulf, fifty leagues in the offing, requires more than three days to undergo the same change). In the space between the rocks, we find millions of both living and dead crustacea, and others again in a state of putrefaction. Lastly, if it is true that mosquitoes can be produced by stagnant water, and that the presence of a large number of insects indicates the insalubrity of a place,—the coast of Vera-Cruz, should then be regarded as extremely unhealthy.

We believe it has been remarked, at Havana, that the phases of the moon exercised a marked influence over the production of the yellow fever, and that the greatest number of cases corresponds with the periods of the full and new moons.

If this observation be well founded, I believe that its cause should be sought in the tides. From the first quarter to the full moon, and from the last quarter to the new moon, the sea rises higher and higher, so that on each intermediate day, a much greater extent of marsh is inundated by the salt water, which, on retiring, leaves behind it an extensive surface for evaporation. The 14th of September, the day of the full moon, fourteen sailors were seized with yellow fever, which constituted, for one day, in 1837, the largest number of cases; we had ten cases the 5th;—eight the 8th;—eleven the 9th;—nine the 10th;—eleven the 11th, and the preceding days gave a smaller sum total; the cyphers, or number of cases then increased at those periods in which the sea extended itself to a greater extent over those lands which constitute the centre of maritime infection. Being unable to verify a second time this observation, either at Havana or at Mexico, I only regarded it as of secondary importance.

Electricity.—As I have already had occasion to observe, Mr. Bélot has remarked that thunder storms exercise great influence, not only over the appearance and developement of the epidemic in general, but also over the progress of yellow fever in particular cases.

I have fully satisfied myself of the correctness of this observation, in the two successive epidemics on board the *Herminie*. At Havana, the cases of yellow fever were increased in a direct ratio to the frequency of the storms; thus from the 3d of August up to the 31st there were thirteen days of storms, nine of which occurred during the eleven last days of the month; in September, during the first eighteen days, fourteen were remarkable for the violence and long duration of storms; thunder was not heard but three times in the last twelve days, and twice only in the course of the month of October.

The number of patients corresponds accurately with these observations:

33	Cases	in August.
110	do.	September, 13 of which were relapses.
27	do.	October, 14 of which were relapses.

At Vera-Cruz, it was towards the close of July that the storms commenced;—they continued through August, and during the first days of September; the yellow fever confined itself precisely within the same periods of time; the number of sick increasing slightly in the first fifteen days of August,—reached its *maximum* in the first days of September, and began to decline in a few days after the cessation of the storms. Certainly I do not pretend that the electrical saturation of the atmosphere can be the only or primary cause of yellow fever; but it is one of the productive causes, and its action is but little appreciated because, when it is perceived, the other causes, recognised by all authors, as accessory, at least, have at the same time, reached their highest degree of intensity.

As to the changes which electricity produces in the progress of yellow fever, they are still much more manifest, when separately considered. I have myself witnessed the singular modifications impressed on the disease, and on many occasions, after violent peals of thunder. I have found the condition of patients already seriously ill, rendered much worse, both in regard to the frequency of the pulse, and sometimes an increase of fever;—always evident indisposition among convalescents. On the 30th October 1837, for exemple, out of 28 convalescents, there were two complete relapses, and 17 of the others, experienced wandering pains through the whole body, and showed some acceleration of pulse; but on the night preceding, the thunder echoed without intermission.

Its unfavourable influence is sometimes so evident that one is justified in

saying that the patient has been killed by a thunder bolt. M. F. whose case we have related in our fourth observation may be mentioned as one quite in point;—the whole time of his sickness was unfavorable to him, and opposed effectually the powers of medicine. Does not this aggravation of the symptoms of yellow fever by electricity indicate, that in this disease the nervous system suffers some lesion, and plays a highly important part ?

This fact induces us to recommend the use of cold applications, to the head and to the abdomen, where the two great nervous centres are located (viz) the encephalic, and ganglionic. The following case seems to me well calculated, to confirm what I have desired to establish.

FIRST OBSERVATION.

Legall Jean, twenty three years of age, *capitaine de pièce*, sailor of the 121st company, of a sanguine temperament, August 13th 1838, indisposed since four in the evening ; at six, skin hot, but moist ; redness of the face ; injection of the conjunctivæ ; cephalalgia ; pains in the loins and in the lower extremeties ; tongue dry, red at the point ; slight odour of the breath ; epigastric pulsations scarcely perceptible ; no motion from the bowels since yesterday ; free flow of urine ; pulse frequent without any great degree of developement.

Diet,—acidulated gargarisms, eight cups to the abdomen, four ad nucham ; purgative lavement.—At ten in the evening, skin dry and burning ; the cephalalgia and lumbar pains much augmented ; manifest odour of the mouth : strong cœliac pulsations ; * pulse full, hard and frequent; the face has become highly coloured.

Bleeding to syncope, emollient lavements ; sinapisms to the feet ; —Syncope supervened after the loss of three lbs. of blood ; transpiration abundant ; a copious stool ; nausea without vomiting ; flow of urine ; instantaneous relief.

14*th of August.* A litte sleep during the night ; he has had three liquid stools ; skin less hot ; pulse less developed ; the cephalalgia has much diminished ; the lumbar pains almost extinct ; the face is still highly coloured; the epigastric pulsations are not so violent ; but a pain has developed itself in the epigastrium which greatly torments the patient. *Six cups to the epigastrium ; two emollient lavements.* At three o'clock in the evening, sensibly better, the epigastric pain has ceased ; the head more relieved ; the expression of the physiognomy is more cheerful; scarcely any pain of the limbs ; slight heat of skin; pulse almost normal.

Eleven o'clock at night : a violent storm arose ; I hastened to visit the sick ; † Legall tells me that he suffers much—that the pain of the head returned at ten o'clock, more violent than ever. I find his skin burning, and as dry as parchment ; the pulse frequent and very resisting ; speech hurried, tendency to delirium, general agitation ; he assured me that he had drank nothing.

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* The author regards violent pulsations at the epigastrium as diagnostic of genuine yellow fever, especially early in the attack ; without endorsing this declaration to its full extent, we can nevertheless bear testimony to the reality of this painful symptom, as we experienced it ourself when stricken down by the yellow fever.

Ed. et Tr.

† The author has elsewhere called the attention of the profession to the influence of thunder storms, over the progress of yellow fever. It seems to aggravate the disease in a very marked manner ; excites the nervous system often to raving delirium. Hence he took the precaution to visit the sick soon after the storm ; this should be done in all critical cases of yellow fever, for if neglected, the patient may be lost.

We can testify to the injurious effects of heavy thunder storms upon serious cases of this disease ; we have witnessed it in the Charity Hospital. This obtains to some extent in all diseases. *Ed. et Trans.*

Cold water to the head and abdomen, sinapisms to the feet.

15*th of August.*—Two o'clock in the morning. The storm has been over for two hours ; the agitation is not so great, but the skin remains hot, the pulse quick, frequent, and hard ; cœliac pulsations energetic ; the odour of the breath repulsive ; an infectious stool. This state continued throughout the day ; the tongue is covered with a whitish thick coat. In the evening, nausea, epigastralgia ; painful hiccough ; fetid odour of the breath persists ; acrid heat of the skin. *Four dry cups to the epigastrium, sinapisms to the knees, blisters to the legs; cold water continued.*

16*th August.*—Amelioration ; the blisters have drawn well ; temperature of the skin reduced ; hiccough ceased at eight in the morning, and the nausea at five o'clock ; cœliac pulsations less pronounced ; pulse not so frequent ; the odour of the breath persists ; he has had in the course of the night four large liquid stools.

From this moment no accident supervened to arrest the progress of the patient towards convalescence, and Legall was dismissed cured the 4th of September.

Reflections.—Legall was not the only one, in whom on the 14th of August the pernicious influence of the thunder storm was manifested ; in two thirds of the patients I remarked an evident nervous agitation, but calmness soon returned ; I have selected this case as an example, because the electrical influence is here so well marked as to leave no doubt in my mind.

The progress of the yellow fever indeed continued, at first, its ordinary course; on the 13th of August the first symptom of distinct yellow fever commenced, but the skin remained moist, the pulse partially developed ; up to this time there were no grave symptoms. This may be a benign *vomito*, for the cure of which local bleedings and derivatives will suffice, or rather they are as yet only the prodromes of the disease.

The truth is contained in the second hypothesis. At ten in the evening, being six hours after the attack, the skin becomes dry ; all the symptoms were exasperated. The syncopal bleedings arrested the onward progress of the disease and produces an immediate amelioration, which was sustained for forty hours. Then being suddenly and powerfully impressed by atmospheric electricity, the entire organism, or rather the nervous system experienced all at once a violent shock ; the harmony of the functions was destroyed, and this state of derangement continued, with all its attendant evils, for a day and a half.—I have seen so many similar facts that I cannot admit a mere coincidence,—an effect of chance ; and reposing upon my own experience alone, I conclude that electricity exercises the greatest influence over the progress and termination of the yellow fever. In France, besides, have we not often witnessed analagous results ? Have not all army surgeons observed that, in the wards of the wounded, hospital infection, or gangrene, appeared most frequently after great discharges of electricity ? Does not the same cause frequently influence the appearance of typhus ? Finally, it is a fact so well ascertained that it has obtained popular favour, viz : that, during a storm, not only the sick, whatever may be the nature of their affection, are agitated, are seized with insomnia, but even many individuals, in perfect health, experience inquietudes, nervous twitchings, sometimes to such a degree, that digestion is deranged. Besides, in the Colonies, electrical explosions are much more powerful than in Europe, and its effects must there be more serious.

The second remark to be made, in relation to the case of Legall, refers to the singultus which the majority of authors signalize as a prognostic sign of extreme danger. The fact is generally true ; but, in consequence of the existence of hiccough alone, we must not despair of effecting a cure.* Be-

*To despair of a case of yellow fever with hiccough would indeed be culpable and timid in the physician. Again and again have we seen singultus continue to harrass

sides Legall, many patients, and among others M. Desbordes, whose case I shall hereafter detail, will confirm the correctness of these observations.

I now return to the causes of yellow fever:

Humidity of the atmosphere.—The Hygrometer, kept at Havana, gave the following as the mean number of degrees:

In August	71,52
In September	69,64
In October	64,85

At Vera-Cruz, for want of an instrument of this kind, I was unable to appreciate the amount of humidity in the air; but previous observations show that the hygrometer varies continually between 60 and 100°

This humidity possesses the twofold inconvenience of being itself, by reason of its combination with heat, an efficient cause of the disease, and secondarily, as a means of transporting the miasmatic effluvia which produces the yellow fever.

The abundant rains which precede, accompauy, or follow thunder storms, contribute powerfully to the diffusion of miasms, and, in the second place, they produce direct effects by a species of shower bath, in which those are plunged who, from imprudence or from necessity, wear their clothing saturated with water. Another constant source of humidity among the sailors of the *Herminie* was hard necessity, which compelled them for six months in Mexico to wash their own linen with salt water; the cotton, the linen, and the woollen clothing being washed in this manner, were never thoroughly dried; and the clothes are scarcely brought in contact with the skin, when they again become moist. We should, with a view to remedy this inconvenience pass a hot iron over all the clothing cleansed by salt water.

Winds.—At *Havana*, the *East* and *North* winds are healthy, but those from the *South* are insalubrious; a calm prevails when the winds stand from the latter point. But, generally through the winter season, the evenings and mornings are calm, and during the day, the south winds prevail more frequently than the North. In the harbour of *Sacrificios*, the land breeze is very rare during the months of March and April; in June and July they sometimes blow in the morning; August and September have been remarkable on account of the regularity of the West and South-West winds, continuing this direction every night and lasting at least until ten in the morning. This breeze carried with it fœtid exhalations whose disagreeable odour was quite perceptible.

This sensation, experienced by all on board the frigate, ought to modify the opinion which I had conceived; viz: that a certain direction of the winds rather produces the yellow fever than any other disease, not because it facilitates the transportation of miasms, but rather because it coincides with the rain,—the heat, and the thunder storms. At Vera-Cruz the same coincidence takes place; but the first fact does not the less exist, and we understand that the marsh effluvia may the more readily extend its sphere of action to a few miles distance, when it is carried by a current of air, than when it is forced, by the mere power of its expansion, to travel against its current.

One fact is certain, viz: from the moment the land breeze is regularly established, the *vomito* manifests itself in an epidemic form. It is impossible not to take into consideration the value of this cause.

Atmospheric Pressure.—At Havana the thermometor varies but little, and when it does vary, it is in a uniform manner. But this want of fluctuation in the mercurial column is in direct opposition to the impression which we generally experience. Many times during the day, the atmosphere undergoes such changes that it appears at one hour light, and at another heavy and oppressive, whilst the Barometer does not vary the least.

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the patient for days and gradually pass away leaving him without a bad symptom. It is however but just to admit this as an alarming symptom, especially when conjoined with others portending approaching dissolution; *per se* it is not necessarily fatal, or even threatening. *Ed. et Trans.*

In the Gulf of Mexico, this instrument in general manifested likewise very few variations, but acquired suddenly an extreme degree of sensibility, when the north winds were about to be established, which blow during the winter with great violence ; twenty four hours previous to this time, the column of mercury falls very low, and it is only when the mercury begins to ascend that the storm bursts forth ; the attentive examinatiou of the barometer is then useful to the mariner who can thus prepare himself to receive sudden, violent squalls, and also to the physician, who should calculate upon the salutary influence of a cold and violent wind,—to ventilate his ship, and thereby destroy or at least diminish the ravages of the yellow fever.

The frigate Herminie *has become itself a center of infection.*—When all the causes, which I have enumerated, are combined and act together, the yellow fever rages epidemically ; when some of them are wanting or their action becomes much enfeebled, we find only sporadic cases. This occurs in all those countries where *vomito* is endemic.

At Havana and Vera-Cruz, the yellow fever prevails annually ; but during favourable seasons, it ordinarily assumes a benign character; it is then rare for vessels which are in these latitudes, to have a single case of the fever ; hence the brigs *Laperouse*, the *Alcibiade*, the *Dunois*, and the *Laurier*, which had anchored near us at Sacrificios, did not have a single case of the *vomito.* As to the Herminie, it was far less fortunate ; after the epidemic of Havana, there were constantly on board the frigate men affected with the yellow fever. Does not this fact clearly prove that the vessel contained within itself all the conditions necessary for the production of this disease ?

Mr. Page, lieutenant of the vessel, and his domestic Panaget, arrived in excellent health from Havana, where during that year the epidemic had not reigned with any great violence ; they spent only two days in the harbour ; during this time the land breezes scarcely blew at all in the morning and gave place at a favourable hour to a brisk sea breeze ; for three days previous, there had not been a *north* wind, which, in consequence of its purifying influence, the Mexicans call *le medicin du vomito ;* we sailed the 30th of September, four days afterwards, in spite of a north-north-east wind, which renewed the air of the battery and the hold of the vessel ; the yellow fever seized Mr. Page and his valet Panaget ;—a yellow fever by no means grave in its character, it is true, but still it was yellow fever, and the epidemic had ceased ! Where shall we find the cause of these two last cases, if it did not exist in the ship itself ?

I well know that CONTAGION will be immediately suggested to the minds of certain physicians ; but I will observe that if contagion were really the means of transmitting the yellow fever, it would be surprising that an epidemic did not declare itself much sooner on board the *Herminie.* During the months of April and June we have had a sufficient number of patients to render the propagation of the germ quite easy, if there had been such a principle ; and yet it was not until towards the middle of August that the epidemic appeared in reality.

I am, however, far from being persuaded that the collection of a great number of patients, confined within a limited space, may be without danger to those persons who live near such infected individuals ; I am quite satisfied, on the contrary, that if at Sacrificios it had been possible to put on shore our first fifty patients, instead of increasing in number to three hundred and eighty two, our total amount would have scarcely reached one hundred and fifty.

But here I see nothing save infection, and not contagion. When all the battery was encumbered with iron bed steads and supplementary bed frames which had to be constructed in great haste, and about one hundred and eighty hammocks in which men lay, from the second day of their attack, as soon as they had been bled and cupped ; under these circumstances it was physically impossible to observe perfect cleanliness, more especially when the frigate was

a centre of infection, which powerfully augmented the predisposition to the yellow fever. But even before this *encumbrement*, the *Herminie* had already become a real floating marsh, exposing men continually to effluvial vapours sufficient to produce sporadic cases of the vomito; the hold and all the store rooms, without exception, were impregnated with so great an amount of humidity, and such a high degree of temperature that the biscuit and the vegetables were damaged after remaining some months on board, and we were compelled to enter a *process verbal* of condemnation against such provisions. At Havana, on our arrival, in August 1837, as a hygienic measure, we washed the ships hold with fresh water; some hours afterwards the water became so much corrupted that it diffused when pumped out, an insupportable odour of putrefaction; we attempted to destroy it, but the disagreeable smell continued; we had to use more frequent washings, taking care to pump as fast as the cock furnished it. In despite of this precaution the water of the hold always produced a disagreeable impression upon the sense of smell, even during our seven months anchorage at Sacrificios. Apropos to this subject, I believe that it would be prudent for a ship coming from Europe to Havana, not to put a single drop of harbour water in the hold, although it should become necessary to cleanse the vessel every fifteen days;—a measure which would have at the same time the immense advantage of modifying the life of the sailors, for a few days, and of exposing them to a purer and more salubrious atmosphere.—The two following tables will enable us to judge of the influence of hygienic rules adopted on board the frigate; in order to render the report more intelligible, I have recorded the number attacked per centum.

TABLE FIRST,—HAVANA.

Grade of employment on Board the Frigate Herminie.	Number on Board when at Havana.	Number affected with Yellow Fever.	Proportion of sick, per centum.	OBSERVATIONS.
Cooks and assistant Cooks	9	6	66,66	Of the four Surgeons comprised among the Officers and the *élèves* one only was affected.
Bakers	3	2	66,66	
———	—	—	——-	
———	—	—	——-	
Officers	12	6	50,00	
First Class Commanders	11	5	45,49	
Ship Boys	18	8	44,40	Of the four who attended the Infirmary, one was attacked.
Smiths	3	1	33,33	
Rowers	96	28	29,14	
Top Men	48	12	25,00	
Second Class Commanders, Sailors etc.	278	63	21,61	
Elèves of the Marine	5	1	20,00	
Total	502	143	28,60	

By this table we see the influence of professions over the developement of yellow fever. The *cuisiniers* and the bakers were the greatest sufferers; if the smiths have had in their favour a marked difference, it is to be ascribed to this fact: that they did not labour constantly, and that the forge being on the deck, in the shade, the artificial heat has always been less intense than in the battery and between the decks. Next to the cooks and the bakers, the greatest number of cases are met with among the *Cambusiers* — — — —and caliers, who occupied the lowest, the least ventilated, the hottest, and the most unhealthy part of the Frigate; the number of officers who were attacked, are greater proportionally than that of the sailors; the hygienic measures adopted were made obligatory upon the latter.

Finally, among the crew, the rowers figure first, who have communication with the land, and who consequently, were forced to remain sometimes exposed to the sun and rain; afterwards come the topmen, and in the last place, the marines, who had no special employment on board. As to the comparative immunity which the *éléves* enjoyed, I know not to what cause it can be attributed.

I think we should indicate also the hygienic precautions adopted on board, precautions which the great number of sick might lead us to suppose, utterly useless, but without which I am convinced that the number would have been doubled. (*To be continued.*)

II.—MEDICAL CORONERS.

"Judge Jackson stated emphatically in Court, on Thursday, during the progress of a trial in which reference was made to the Coroner's Court, that none but medical men ought to be appointed to the office of Coroner, as from their education they were peculiarly qualified to discharge efficiently the duties of the office. This opinion of his lordship appeared to be acted upon of late, very generally, both in Ireland and in England, as medical men are selected in almost every place where a vacancy occurs."—*London Lancet*, March 15th, 1851.

We transfer the above most cordially to our pages, well knowing that in very many instances the ends of justice have not only been subserved, but greatly injured by the appointment of non-medical coroners. Of the many cases which we could bring in support of this assertion, we adduce one only, which occurred not long since.

A fine boy, two years of age, was heard to have been scolded and ill-used by a drunken, brutal step-father; suddenly all was still; the next morning it was reported that the child had had fits, since which time it had remained in a deep state of unconsciousness;—he died in the evening, and was hurriedly interred on the following morning. The Coroner being apprised of the circumstance, on the second day summoned a jury to investigate the matter, when an old, respectable, but timorous physician, gave it as his opinion, that to exhume the body was unnecessary, seeing that decomposition had already commenced, the weather being extremely warm, and that all marks of external violence or contusion would have disappeared!—The jury was satisfied with this evidence, and a verdict, "died of natural causes" was accordingly returned. Now, had the Coroner been a well informed medical man, he would have insisted upon the disinterment of the body, seeing that the symptoms under which the poor child succumbed denoted concussion and compression of the brain; and moreover, that the period from the time of death was far too short to have completely effaced all indications of injury, even of the soft parts, but the skull, if fractured or depressed, would for a very long time bear marks of the violence. The consequence would have been that a bolder practitioner would be called for, and not having the fear of putrefaction before his eyes, to blind his judgment, would have manfully acquitted himself of the important duties devolving upon him; and if violence had been inflicted, he would no doubt have detected it. That this would have been the case, subsequent circumstances warrant the conclusion.

It has not seldom happened, that cases of poisoning have occurred in the country parts, and on the opinion of the neighboring physicians, innocent of all knowledge of the action of poison, and the proper methods of detecting it either pathologically or chemically, persons implicated in a most nefarious deed, have escaped detection and punishment. But, had the Coroner been a physician, he would have assisted the less initiated practitioner, or would have ordered the attendance of a man better qualified in such matters; one familiar

equally with pathology, chemistry, and the present state of science; one on whose testimony a jury could rely. And, on the other hand, he might on very many occasions save the country the expense of post mortem examinations in cases of sudden deaths or accidents, where no suspicion of foul play could be anticipated.

The country, society, law and justice, would be alike benefitted, if professional men of ability and experience were appointed or elected to these important and responsible offices. We will in a future number return to this subject.

(*Northern Lancet.*)

"We heartily endorse the truth of the foregoing remarks on the qualifications of Coroner. His duties are of the most important and responsible nature,—scarcely less than those of the Judge of our Criminal Court. Without reflecting upon the present worthy, patriotic and estimable incumbent, in this connection, we feel it our right—yes, our imperative duty—to insist upon the absolute necessity of appointing some competent, popular and scientific medical gentleman to this office; he must be an educated physician, familiar with medical jurisprudence, organic chemistry, anatomy, surgery, and toxicology. The office of Coroner belongs to the medical profession, and the duties appertaining to it should be performed by it alone. In all the great cities of Europe, and in most of them in this country, physicians hold the office of Coroner; but in New Orleans the people seem to think any man is qualified to hold an "inquest,"—to determine the nature of wounds, to analyse the symptoms of poisoning, in a word, to appreciate all the causes of death in any particular case.

It were as reasonable to look for an able decision in an important and complex point of law, in a merchant, as to expect a non-medical man, however worthy and intelligent, but yet uninstructed in medical science, and especially in medical jurisprudence, to estimate correctly the causes of death, and to find a true bill in cases calling for an inquest. A medical Coroner would be enabled, from his knowledge of his profession, to dispense with the services, when not absolutely necessary, of a second or consulting physician, and thus save to the city and State the usual fee of ten dollars, now demanded for this usually requisite extra service. In this way every inquest now costs the city thirty dollars —twenty for the Coroner, and ten for the medical witness. This will reduce the tax now levied upon our too patient population to one-third less, and thus prove a blessing to the community, whilst the ends of justice, we would venture to assert, would be equally, if not better, attained under the new arrangement.—Let the State bestow upon our present patriotic Coroner some easy lucrative office; but, in the name of justice and humanity, let the Doctors handle the dead." (*Ed.*)

III.—ON THE PATHOLOGY OF CEREBRAL SOFTENINGS, AS ELUCIDATED BY THE MICROSCOPE.

BY DR. HUGHES BENNETT.

The nature of the cerebral softening has been much disputed, a difficulty always existing as to their dependence on inflammatory action, or on a process analogous to senile gangrene. The following remarks are calculated to throw light on this obscure subject:—

From a careful analysis of thirty-two cases of softening of the nervous centres, which were published in 1842–3, it may be concluded that two varieties of softening undoubtedly occur. In the one the products of inflammatory exudation may be detected; in the other, these are not present. It is necessary to determine, with exactitude, the distinguishing characters of these two kinds of softening, which may be denominated inflammatory and non-inflammatory softenings.

Inflammatory softening always contains numerous granules and granular corpuscles, which are more numerous according to the degree of softening. The nervous tubes and normal structures are always, when the softening is great, more or less broken up. The nature of inflammatory softening of the brain, like all such lesions, depends upon the exudation of blood plasma, the developement of granular corpuscles, and the subsequent breaking down of the latter.

If chronic, it may be considered a fatty degeneration of the brain. When recent, the serum poured out also assists in producing the softening.

In non-inflammatory softening, on the other hand, we find the cylindrical and varicose tubes of the part are rendered more soft and easily separable from each other. They have more or less lost their natural firmness and consistence, are readily torn across, the varicosities are easily enlarged by pressure, and, when separated or broken off, assume a globular form. The tubes also are more or less broken into fragments, and no exudation granules, masses, or corpuscles are to be detected.

The nature of non-inflammatory softening varies according to circumstances. It would seem to arise from four causes:—1st. From mechanical violence in exposing the nervous centres. 2nd. From a mechanical breaking up of the nervous tissue, by hæmorrhagic extravasations, whether in mass or when infiltrated in small isolated points, constituting capillary apoplexy. 3rd. From the mere imbibition of effused serum, which loosens the connection between the nervous tubes, and diminishes the consistence of the nervous tissue. 4th. From the process of putrefaction.

As regards the difference supposed by some to exist between the softening in adults and that in more aged persons, the author fully agrees with M. Durand-Fardel, when he says:—"Cerebral ramollissement is the same malady in old persons as in other adults; that it presents no other differences than the modifications, which a variation in age always produces, connected only with the form, and not with the nature, of the lesion."

As for the opinion that softening of the brain is a lesion *sui generis*, due to diminution of nutrition, to gangrene, or obstruction of the arteries, the author's observations have convinced him that all such explanations are hypothetical in the highest degree, and have no real existence.

The cases which the author has recorded also indicate that different symptoms were present in such cases as were inflammatory, and in such as were non-inflammatory. Thus, in twenty-four cases carefully examined and analyzed, in which cerebral softening was observed, granular corpuscles were present in eighteen, whilst in six no traces of these bodies could be found. On analyzing the symptoms of these cases, we shall find a marked difference between those accompanying the one lesion or the other. Thus in the cases

where only inflammatory softening was present, well-marked symptoms invariably existed, such as loss of consciousness, preceded or followed by dulness of the intellect, contraction, or rigidity of the extremities, or paralysis. On the other hand, and in the six cases of non-inflammatory softening, there was no paralysis or contraction, and no dulness or disturbance of the intellect. Again in the four cases where both lesions were present, symptoms could always be observed in the sides opposite the inflammatory softening, while none existed opposite the non-inflammatory. An analysis of these twenty-four cases therefore leads to the conclusion, that the two kinds of softening are alike distinguishable, both by their intimate structure, and by the symptoms accompanying them during life. (*Edinburgh Monthly Jour.*)

IV.—A CASE OF CROUP, IN WHICH TRACHEOTOMY WAS SUCCESSFULLY EMPLOYED.

BY GURDON BUCK, JR., M. D.

Read April 3, 1850.

Samuel B——, a lad eleven years of age, residing in Brooklyn, Long Island, was attacked in the month of May, 1849, with scarlet fever, in the treatment of which calomel was freely administered. Profuse salivation succeeded, and destructive sloughing which involved the left edge of the tongue, the gums and the alveolar sockets of the lower incisor teeth of the left side, and the under lip at the left angle of the mouth. Superficial abscesses also formed beneath the scalp and upon other parts of the body. At the expiration of about five weeks from the commencement of his illness, and while gradually recovering from the debilitated condition consequent upon mercurial cachexia, he was attacked with symptoms of croup, of which he was temporarily relieved by appropriate remedies. In a few days, however, the disease re-appeared with increased violence, and notwithstanding the judicious and skilful treatment employed, it advanced steadily towards a fatal termination. Under these circumstances I first saw the patient on the 8th July, at 1 o'clock, P. M., at the request of his attending and consulting physicians, and found his condition as follows.

He lay in a horizontal position with his head thrown backwards, and breathing with great effort, each inspiration being accompanied with a loud, hoarse, metallic sound. His countenance was anxious, his pupils dilated, and his eyes had a wild expression. The voice was reduced to a whisper. The skin was moist; the pulse, though frequent, was not irregular nor intermittent, and still retained a good degree of force. The respiratory murmur was audible and clear over the entire posterior part of the chest. The patient's situation was evidently one of imminent danger, and inasmuch as the disease had steadily advanced with only temporary abatement, during the preceding forty-eight hours, in spite of efficient treatment, the only remaining source that afforded a reasonable hope of relief was the operation of Tracheotomy, without which it was scarcely possible for him to survive many hours. The operation was therefore decided upon without delay, and performed as follows:

A folded sheet being passed round the body confining the arms to the sides, and the patient placed so as to expose the neck favorably to the light, a longitudinal incision, two inches and a half in length, was made over the median line by dividing perpendicularly a transverse fold of skin, pinched up between the thumb and finger of the operator and an assistant. This incision extended over the lower half of the larynx and upper part of the trachea. The subjacent layers of aponeuroses were then successively divided, and the sterno-hyoid and

thyroid muscles drawn to either side. The isthmus of the thyroid body being now brought into view was partly torn across at its upper edge, and partly pushed down till the three or four superior rings of the trachea were laid bare.

After delaying till all hæmorrhage had ceased, the opening into the trachea itself was effected as follows:—A transverse slit, one-fourth of an inch in length, was made between the first and second cartilaginous rings; the lower edge of the slit was then seized with a clawed forceps and a triangular piece excised with scissors curved edgewise, the incisions commencing at either extremity of the slit and meeting below at the inferior edge of the fourth tracheal ring. At the instant of perforating the trachea the air rushed in with a hissing sound, and as soon as the opening was completed, respiration was promptly established through it, and in a short time became tranquil and easy. No embarassment occurred from hæmorrhage into the trachea at the moment of opening it, the precaution having been taken to delay the opening until the flow of blood had ceased. The convulsive cough consequent upon establishing a new passage for the air to and from the lungs was of short duration.

The rapid transition from extreme distress and anxiety to a state of tranquil repose and comfort, was scarcely less gratifying to those who witnessed it than agreeable and welcome to the patient himself. His countenance lost its wild and anxious expression, and became calm and natural. Directions were given to wipe away promptly the viscid secretion from the wound whenever coughing occurred. At 9 o'clock, P. M., we found our patient had slept quietly most of the time since the operation, and his breathing had continued perfectly easy. Fearing lest the tracheal opening should become contracted by the swelling of the edges of the wound and the accumulation of the viscid secretion around its orifice, a full sized canula of the ordinary shape was introduced and secured in place by a tape tied round the neck.

July 9th. Patient had passed a quiet night. Respiration continued easy and other symptoms were favorable. Removed the thracheal tube, and after cleansing it of the tough viscid secretion lining the inner surface, replaced it as before.

11th. Progress still favorable. The rapid accumulation of the viscid secretion upon the inner surface of the tube rendered it necessary to cleanse it twice in twenty-four hours. On exploring the top of the larynx with the forefinger passed back into the fauces, the aryteno-epiglottic folds were felt to be very much swollen, soft, and pulpy. The epiglottis itself was normal. Applied a solution of nitrate of silver (℈i to ʒi), to the larynx by means of a curved whalebone probang.

12th. Increased the strength of the solution to one drachm to the ounce, and applied it daily. The continuance of the obstruction of the larynx without perceptible abatement showed conclusively what would have been the result of the disease if the operation had not been resorted to.

14th. Some diminution of the obstruction in the larynx seemed to have taken place. In closing momentarily the tracheal opening, patient was able to breathe once or twice through the natural passage, but not without great effort.

The application of the nitrate of silver was continued till the 30th, when it was suspended for three weeks, the tube in the meantime being changed twice in twenty-four hours.

August 20th. On resuming my attendance which had been interrupted by sickness, patient was found to have improved very much in health and appearance, and to have gained flesh and strength. The condition of the larynx was as follows:—

The tube being removed and the tracheal opening closed, a few words could be uttered in an audible tone, but not without conisderable effort. Respiration could be carried on through the larynx only a very short time, and also required very great effort.

With the view of exercising the obstructed parts without removing the tube, a free opening was made at the bend of the tube through its convex side which would allow the ascending column of air to pass up through the larynx in the act of expiration, and the reverse to take place in the act of inspiration, the outer orifice of the tube being closed.

With the tube thus arranged, and in situ, it was found that after inflating the lungs through the tube a very considerable effort was required to expel the air through the larynx with the external orifice of the tube closed; thus showing the existence of obstruction to the egress as well as the ingress of air through the larynx. Patient was directed frequently to repeat this experiment himself, in the hope that the expansive pressure of the ascending column of air against the walls of the larynx might aid in overcoming the obstruction.

28th. No perceptible improvement had taken place since the preceding note. The obstruction appeared to be unchanged. Resumed the application of solution of nitrate of silver (℥ i. to ℥ i.), and succeeded in passing the sponge into the cavity of the larynx.

30th. Some improvement was now observable. Patient could count from one to six in a clear tone of voice with the tube closed externally.

September 1st. Still further improvement has taken place. Patient could count up to thirty, and breathe a few times uninterruptedly through the larynx.

5th. A sudden change of weather having interrupted his improvement since the previous date, patient was now again regaining what he had lost. Ordered iodide of potassium in solution, two and a half grains, three times a day. Stopped applications to larynx.

11th. The improvement of the voice continued, while that of respiration did not keep pace with it; imprudent exposure to the cold wind on the roof of the house had retarded his progress. Resumed the application of solution of nitras argenti (℈ iv. to ℥ i.) to the larynx, but continued it only a few days, after which all further treatment was laid aside. Up to the present time, (April 3d, 1850.) the patient, who is now submitted to your examination, has continued to enjoy excellent health. He still wears the tracheal tube arranged in the way already described, and suffers much less inconvenience from it than would be supposed. He is a boy of great activity, participates ardently in all out-door sports of boys of his age, and also attends school. With the tube closed, he can breathe eight or ten times uninterruptedly, though before completing the number considerable effort is requisite. In using his voice he closes the tube with his finger.

In the month of October following, this patient was seen, and his condition ascertained to be very much the same as when exhibited to the Academy.

(*Transact. of the N. Y. Acad. of Medicine.*)

V.—DEATH BY APNŒA, INDUCED BY A DOSE OF LOBELIA INFLATA.

In the July Number of the Charleston Medical Review, 1851, we find an interesting account of the Epidemic Influenza, which prevailed in Monroe, N. C., in the fall of 1850. This sketch is given by Dr. Twitty, of Monroe, in the course of which he relates the following case of mal-practice. *Ed.*

"The fourth was a lady, æt. nineteen, and just six weeks married, who though the office of the womb was disturbed, did not suffer as had others similarly affected, influenza proper having yielded in a few days. We called in the afternoon of the third day, and found our patient sitting up and feeling well,

but inclined to be hysterical, for which, and to procure sleep for the night, we prescribed a dose of morphine, and left, not expecting to return professionally. She was not, however, destined thus to escape, and was, accordingly, seized during the night with the most violent hysterical convulsions, the attendants being unable to retain her in bed. The trunk was contorted in many directions, while the limbs were intractable and the hands firmly clenched, at all of which, the friends and relatives being wholly unacquainted with its meaning, were certainly very much alarmed; so much so, indeed, that we were earnestly entreated to do every thing, when, in fact, we could do but little or nothing. Desirous to please, and with the view, too, of cutting short, if practicable, the spasms, we ordered the cold descendant douche, a warm bath, semicupium—and as a placebo, also, for a distressed mother and anxious husband, we introduced between the teeth a tea-spoon, containing a few minims of the tinc. of assafœtida, but soon learned, not with surprise, that the patient could not swallow, nor could she be held, with any justifiable force, in the bath.

We endeavored to quell the fears of husband and parents by acquainting them, partially, with the patient's condition, and our talk seemed to afford some solace, but the father, still uneasy, proposed to call in a relative of the sick, to which we offered no objection. The gentleman soon appeared, and declared that "she should be bled immediately." We shall not assume the prerogative of conferring the degree of M. D. on this gentleman, it not having been done by those authorized, but, for the sake of convenience, will call him doctor. The doctor, then, being an old practitioner, a favorite and a relative, the patient was bled. He then proposed to give of his *sine qua non*, tinc. of lobelia—in reply to which, feeling concerned for the welfare of the sick, we informed him that the power of deglution was lost, (a fact of which he had probably never dreamed,) but did not urge any objection, being determined to let him carry out his course, as he had commenced it, without our advice. We must not omit to mention here, that before the patient was bled, all appearance of convulsion save tonic spasms of the flexors of the fingers, the apices of which were still buried in the palms of the hands, had ceased; she was, in truth, just ready to fall into that state of lethargy which often follows such attacks. The doctor, with his assistant, raised the patient to a semi-recumbent posture and introduced his emetic dose of lobelia hot; instead of passing down the œsophagus it was thrown into the rima glottidis; he then, with tremulous hands, replaced the head on the pillow, from which it was never raised until after the *vital spark had taken its flight*,—death by apnœa having quickly followed. About the time the lobelia was administered we left the room, but were soon summoned to return "in haste." When we entered, the blackened countenance told us too plainly our patient was moribund, if not actually dead. With the handle of a tooth-brush we brought away a quantity of frothy mucus and lobelia, commingled with blood, which had been forced in the *mortal struggle* from contiguous vessels, but our power and means were to limited too bring the dead to life. We have thus given our humble opinion, and leave the reader to form his. Had we believed that plethora, general or local, was the cause of convulsions in this case, then we might have taken blood; but we had no reason to entertain any such view; on the contrary, we are ready to discard an explanation so untenable. Now we know hysteria frequently (not exclusively, as the name would imply, and as formerly believed,) arises from uterine derangement, not, however, because that organ fails to eliminate from the circulating mass fluid, which, when allowed to remain, produces plethora and this hysteria, as the doctor, from the explanation he ultimately attempted to give, would have us to believe, but because the nervous system is, at such times, (alluding to those cases only which occur at the "monthly period,") unusually impressible, requiring but a trivial cause to derange it notably; and, in this instance, we had one amply sufficient, without plethora." The patient was of a decidedly nervous

temperament, debilitated by previous disease, her complaint evidently one of the class neuroses, dependent upon cerebro-spinal erethism and not upon "plethora." The disease was one rather of hyposthenia, requiring for its removal some of the stimulating anti-spasmodics, and not blood-letting.

By a parity of reasoning, the lobelia was objectionable, the result of a rash attempt to administer which was, as we have already seen, most tragical.

VI.—BENEFICIAL EFFECTS OF TEPID BATHS, AND OF OPIUM, AT THE SUPPURATING PERIOD OF THE SMALL POX.

No one who has observed the tension, the turgidness, and high state of inflammation of the skin at the suppurating period of the small pox, has failed to think of the employment of remedies capable of reducing this painful erethism, the source of so many inconveniences and serious accidents to the patient. Baths certainly afforded the beast means of accomplishing this object; but a great number of Physicians thought that they were liable to the inconvenience of exposing the patient to a chilliness, and to the developement of inflammatory accidents with respect to the organs of respiration. On the other hand, nothing is more common than to observe at this period of the disease, in the course of the small pox, even when it is most natural, a violent delirium, which continues especially during the night, and which appears most frequently in connection with a swelling and tension of the skin, particularly the skin of the face. What is to be done to counteract this delirium? Physicians still preoccupied with fears suggested by the physiological school, hesitate to administer narcotics and anodynes; they apply leeches behind the ears, and blisters at the nape of the neck. The delirium continues, notwithstanding, as long as the fever of maturation, and the swelling of the skin last. But if, on the contrary, following the example of Sydenham and of Cullen, they administer preparations of opium, they quiet the agitation and delirium, and procure for the patient some hours of calm repose.

No, the fears which the use of tepid baths and of preparations of opium inspire, are by no means justified by observation. Cullen, who had so much experience, gave to almost all his patients opiates from the fifth day, and during the whole course of the disease. M. Rayer, who has such an extensive practice, does not hesitate to administer baths and opiates in the course of variolic eruption.

In support of the practice pursued by these eminent physicians, we may cite certain facts which we have been permitted to observe in the ward of M. Aran, at the Hôtel-Dieu. This physician who is occupied in investigating the abortive treatment of small pox by topical applications of Collodium, had lately in his ward two patients afflicted with severe confluent small pox. Both were taken with a violent delirium, which lasted during the whole period of suppuration. With the first M. Aran had used opium for the purpose of procuring to the neighboring patients a little repose during the night; but at the same time he had prescribed a bath to quiet the agitation and excitement of the patient. The patient was perfectly comfortable in the bath; and then followed, each time it was used, a calm of some hours, confirmed by the administration of two pills of aqueous ext. opii. The delirium was combatted in this manner during three consecutive days by tepid baths and opium; without entirely disappearing it was so far subdued as to give very little uneasiness, and was perfectly compatible with the repose of the ward. In the second case, with a young woman of about twenty-five years, the same symptoms were met, from the time of their appearance, by the same remedies, and the third day she had passed that terrible

period of the disease, without any other accident than a moderate degree of agitation and of sub-delirium. The fourth day, like the first patient, she recovered the free use of her senses.

Perhaps we may be permitted to hope that, if physicians would more frequently make use of these two remedies in confluent small pox, they would not meet with so many serious and fatal symptoms. The two cases which we have observed in the ward of M. Aran are certainly of a character to induce physicians to recur more frequently than they do to the practice of Sydenham and Cullen. (*Bulletin Gén. de Therapeutique.*)

VII—OF THE VALUE OF BELLADONNA IN THE TREATMENT OF LEAD COLIC.

Of all the modes of treating this intractable affection, cathartics combined with narcotics undoubtedly hold the first rank, and is most resorted to by the general practitioner.

A physician of Nantes, M. Malherbe, has recently treated with marked success twenty-nine cases of Colica Pictonum after the following manner: his chief reliance was upon the extract of Belladonna, prepared according to the formula of M. Bretenneau, and given for nervous constipation of the bowels. On the first day M. Malherbe administeted 5 centigrammes of the extract, combined with 10 cent. of the powdered root of the same plant. If a decided impression be produced upon the disease, he repeats the same the day following; and after three or four days the pains will have subsided, and the bowels be freely opened. But if the first dose or two fails to check the disease, then the dose both of the extract and powder is doubled. In some cases the medicine has been increased to 20 centigrammes of the extract and 40 do. of the powder, before the enteralgia has been conquered.

The efficacy of this treatment may be greatly enhanced by frictions over the abdomen with unguent formed of the extract of belladonna and cerat simp.

When the tonic effects of the medicine are perceived, the dose may be gradually diminished, and finally discontinued altogether, when a perfect cure is effected. (*Transl. Bulletin Therapeutique.*)

We have seen it recommended in some authentic works to administer large doses (one or two drachms) of the powdered sulphate of alumina in the cure of lead colic; this treatment we have seen tried with complete success in more than one instance. It does not, as might *a priori* be anticipated, produce or increase the existing constipation—it positively acts as a purgative—at all events, by allaying the pain, and relaxing the spasms of the muscular coat of the intestines, it *facilitates* the action of purgative medicines.

We have found, finally, that when all the above mentioned means fail, small doses of calomel combined with fractional doses of opium, given until the salivary glands are excited, will remove the last vestige of the lead poisoning.

(*Ed.*)

VIII.—ON THE URINE IN DELIRIUM TREMENS.

M. Michea has remarked, that in the delirium tremens the reaction of the urine differs widely from that of health. In the healthy state, on the admixture of caustic ammonia, the urine becomes milky and opaque, and deposits the phosphate of ammonia. With oxalic acid an abundant precipitate of the oxalate of lime is formed. In cases of delirium tremens no such phenomena occur. So long as the cerebral disturbance continues, neither of the above reagents cause any opacity in the urine, but as soon as convalescence commences precipitates appear. From these data he establishes the two following propositions:—1. The phosphates are diminishing in delirium tremens. 2. The return to the normal condition of the urine as regards the phosphates, is one of the critical signs of the disease.

M. Michea asks whether these facts throw any light on the etiology of delirium tremens, but at present does not reply to the question. He thinks, however, that the facts may offer some indication for treatment, in the suggestion of allowing animal food as the chief source of the phosphates. The absence of these principles from the brain, he explains by the fact that drunkards have habitually bad appetites, and that when delirium ensues they frequently abstain from food, and especially animal food, for days. They thus deprive themselves of the source whence the phosphatic elements of the urine are derived.—*Revue Med. Chirug.*

[It is but justice to Dr. Bence Jones to state, that he has long anticipated the observations of M. Michea as regards delirium tremens; but he has shown, as far as our memory serves us, that a deficiency of phosphate in the urine is also observed in other diseases of the nervous system, which, if correct, would militate against M. Michea's theory of the cause of their deficiency.—Ed. P. J.]

IX.—LARGE DOSES OF OPIUM IN THE TREATMENT OF EPIDEMIC CEREBRO-SPINAL MENINGITIS.

Some of the French, and among the number, M. M. Bailly and Boudin, speak in high terms of the efficacy of large doses of opium in the cure of epidemic cerebro-spinal meningitis, (cerebro-spinal typhus) as they are pleased to designate it. At one of the French Military Hospitals, where this terrible disease prevailed as an epidemic, large doses of opium proved eminently successful, and seemed to be the only remedy upon which any reliance could be placed. They gave it in narcotic doses, and kept up a decided impression upon the system, until the more violent symptoms of the disease yielded. The extract was the preparation of opium given in these cases, and was given in two and three grain doses. It may be given in much larger doses, no doubt, in desperate cases.

Let the medicine be fairly tested; and if it fails it will only share the fate of all others that have been hitherto tried.

(*Thèse de Mr. Bailly, in Bulletin Gen. de Therapeutique*, 1851.)

Part Third.

REVIEWS AND NOTICES OF NEW WORKS.

I.—*Review of Dr. Cartwright's Report on the Diseases and Physical Peculiarities of the Negro Race.* By James T. Smith, Surgeon, La.

[The paper from the pen of Dr. Cartwright, of this city, on the *Diseases and Physical Peculiarities of the Negro Race*, has excited a good deal of discussion both in and out of the Profession; but as yet the criticisms of the article have been confined chiefly to the popular or non-professional prints. We have received, since that article was published in the N. O. Journal, two or three long reviews of Dr. Cartwright's paper, only one of which can be admitted in the present number. The criticism below is so liberal in its views, and so courteous in its tone, that we unhesitatingly give it publication, being assured that Dr. C. courts just and enlightened criticism, and is anxious to hear the other side of the question.—We may here state that we are willing to publish a fair and candid *critique* of any paper that may appear in our pages; but in no instance will personal abuse, or discourteous allusions be tolerated.]

(*Ed.*)

In the May number of the New Orleans Medical and Surgical Journal we have the Report on the Diseases and Physical Peculiarities of the Negro Race, by Samuel A. Cartwright, M. D.

The subject in itself is one of great interest, not only to Southern Physicians, but Southern Planters also; and the reputation of the author would have led us to expect something both instructive and original. How far these expectations have been realized we shall examine impartially; for truth is a very small grain of gold in a large mass of dross, and the only way to obtain it is by carefully sifting.

To prosecute our subject, *recté et in ordine*, we will begin with Dr.

Cartwright's opinion in regard to the Ethiopian Physiology and origin. Canaan means in the original, says he, slave by nature—or submissive knee-bender. And the said Canaan, he maintains, is the descendant of Ham, the son of Noah. As to the philological derivation of the name, it is rather an unsatisfactory way of settling such matter, (for Dean Swift maintains that the Peter of the Roman Catholics is but the [Jew Peter] Jupiter of the Polytheists,) and we should be loth to pin much faith to such derivation, more especially when the Doctor's great authority, Genesius, is directly opposed to him, as will be shown hereafter. But as to the fact of the Canaanites being negroes, we are positively incredulous, and do not find in Scripture a single sentence to confirm this idea. The description given of the inhabitants by those sent to spy out the land by Moses is very different from that of either a misshapen or black race of men, "for," said they, on their return, "nevertheless the people be strong that dwell in the land, and the cities are exalted and very great, (Numb. xiii c. 25 v.,) and again in the 32d verse: "And all the people that we saw in it were men of great stature, and we were as grasshoppers before them." Now this does not look much like Dr. Cartwright's description of the negro with "his legs curved outwards, and his feet flat, the heel so long as to make the ancle appear in the middle of the foot, and the gait hopper-hipped," (see Journal,) and above all we do not hear one word of the black complexion, which being one of the most striking circumstances connected with the subject would have been one most likely to have been reported—the spies being charged to find out what manner of people those were who dwelled in the land.

Again, if the Canaanites—the descendants of Noah, had become Ethiopians, both in complexion and anatomical structure, when did the change commence, which Dr. Cartwright says marks the difference between the negro and the white man? Can it be proved that the descendants of Noah could have been so operated on by the climate as to render them incapable of breathing to advantage a pure atmosphere, (see Journal,) and requiring them nightly to resuscitate themselves with a feast of vitiated and already respired atmosphere. (See Journal.)

Dr. Cartwright's ideas of the power of climate have never been equalled, in our opinion, but by the son of Erin, who, on his arrival in New York, meeting a negro, asked him how long he had been in the country, and on receiving the reply, "three years," exclaimed wildly: "Holy J——s, only think what a climate, but three years in the country, and black and curly already."

But in all earnestness, for the subject is well worthy of it, if this cli-

mate of Asia is such a terrible transformer, why did it not change the complexion of the Jews who went in and possessed it; and why does it not turn its present inhabitants into negroes? If, on the other hand, the change was miraculous, would there not have been mention made of it in the Scripture. Things much less wonderful, and much less important, are there minutely and distinctly alluded to.

"It is," says Dr. Cartwright, (see p. 692) "commonly taken for granted that the color of the skin constitutes the main and essential difference between the black and white race; but there are other differences more deep, durable and indelible, in their anatomy and physiology, than that of mere color. In the albino the skin is white, and yet the anatomy is that of the negro." "Besides, it is not only in the skin that a difference exists between the negro and the white man, but in the membranes, the muscles, the tendons, and all the fluids and secretions, etc., etc. (p. 695.)

The defective atmospherization of the blood, known to occur in sleep during infancy, and to be most congenial to their constitution, is the identical kind of respiration most congenial to the negro constitution of all ages and sexes when in repose." This catalogue of the differences between the white and black man would seem long enough, and yet we can add one more, hitherto unnoticed by any physiologist, and one more confirming the difference of the two races than any hitherto alluded to, which is that the pure African *sheds his hair once a year, like one of the lower animals.* That the fact is so will be plainly seen, from the African hair never being more than from one to two inches long, which, of course, would grow much longer did not some shedding process take place. The catalogue of differences furnished by the Doctor has been long; but he seems to have forgotten all this time, that he is proving, beyond any possibility of doubt, that the negro cannot be the descendant of Ham, the son of Noah, and brother of Japheth and Shem; he can make no man, acquainted with the first principles of animal physiology, believe that the G. G. G.-Sons of Noah require a defective atmospherization of the blood for the general development of their constitution.

The Doctor's name and fame may do much, but they cannot do that; and all the Doctor's erudition, anatomical, physiological, and melanestical, (and we are far from underating any of them,) goes to show, that the negro is not the descendant of Ham, and therefore inheriting no portion of the curse so heartily bestowed on his descendants by his father Noah, while he seems to have been still in that maudlin, garrulous state common on awaking from the effects of a debauch. For, "Noah awoke from his wine, and he said: cursed be Canaan, a ser-

vant of servants shall he be unto his brethren." And so all the Doctor's Hebrew erudition about Canah and Canaan amounts to nothing, and has no reference whatever to the matter in hand, sounding more like the sermonizing of some ancient classleading exhorter, than the grave and astute exposition of a learned professor.

But there is something so learned, so benevolent, so transcendentally philanthropical in the theory of Dr. Cartwright regarding the curse of Canaan, that it is impossible not to be struck by it; for he says: "the wisdom, mercy and justice of the decree, that Canaan shall serve Japhet, is proved by the disease which we have been considering, because it proves that his physiological organization, and the laws of his nature are in perfect unison with slavery and in entire discordance with liberty." (p. 714.) We say that there is something so exquisitely original and ingenious in regard to this theory, (namely that Canaan should thank God that he has made him a beast, and not a man), that perhaps the worthy Doctor may not feel inclined to abandon so sweet a bantling; but if this be the case let him give up his "anatomical and physiological differences of the two races;" from one or the other of these hobbies he must dismount, and not stand like a second Astley or Ducrow poised upon either of his studs in the ring, as the turns of the circle may require him to preserve his balance.

But taking, in the mean time, as the most tangible of the two, that the African is of a different race, and, therefore, requiring a different treatment for his diseases, (for, if he be not of a different race, to suppose his diseases require a different treatment, is a glaring absurdity; and, in fact, on this being the case depends all the value of Dr. Cartwright's Report), we will proceed to examine the different heads under which negro diseases are classed in the Report.

PULMONARY CONGESTION,—PNEUMONIA, ETC.

The remarks of Dr. Cartwright on the treatment of this class of diseases appear generally judicious; but we find him again mounting his hobby, "for," says he, "young and old, male and female, instinctively cover their heads and faces, as if to insure the introduction of warm, impure air loaded with carbonic acid and aqueous vapor." Now the reason why negroes cover their heads is a very plain one; not to obtain an impure atmosphere, as is here said, but in cold weather for the purpose of warming themselves, (for they are of a race naturally very sensitive of cold, and formed to be denizens of a torrid zone), and they cover their heads in warm weather to ward off the attack of insects. Their

requiring for the benefit of their constitutions the breathing of carbonic acid, we will believe when we see one fattening and thriving in the Grotto del Cheine of Naples.

"But even in these diseases, Pneumonia, etc., they will not bear blood letting, as the white race do." This we conceive to be an error,—a negro, unfed, unhoused, and unclothed, will bear no depletory treatment as well as a strong, well fed, white man; but a stout, healthy negro will bear quite as much of either bleeding or purging as any white man, and we are not quite certain but that he will bear more, for in all animals the higher the intellectual developement, and the finer the nervous organization, the less of either depletion or stimulation will the system tolerate.

We do not think that Dr. Cartwright will deny the more delicate and sensitive organization of the white man's nervous system.

BILIOUS AND ADYNAMIC FEVERS.

The Doctor's remarks on the treatment of this class of diseases appear no less judicious than those on the former, and the fact of negroes not being subject to vomito or yellow fever, cited, is certainly a singular anomaly; but if a strong proof against the yellow fever and those just alluded to being identical, as is truly said, is also a strong proof against the identity of the white and black races, and goes sadly against encumbering the negro with the curse intended solely for the benefit of the sons of Ham by their captious great grandsire Noah.—We pass now to the head of

NEGRO CONSUMPTION.

Dr. Cartwright appears to have some whimsical fancies in regard to nomenclature; "some physicians, says he, looking upon negro consumption through Northern books, suppose it to be a variety of phthisis pulmonalis." Now this appears to us a very natural mistake to fall into, and if the Dr. will continue to call the disease negro consumption, he will contribute to the misleading of many others. "The seat of negro consumption is not in the lungs, stomach or liver, or any organ of the body; but in the mind." (p. 705.) Now, if this be the case, could not the Doctor, with his familiarity with Greek terms and facility of inventing nomenclature, call it by some other name indicating "that it came from bad management on the part of the master, and superstition on the part of the negro?" What a fine field for a harmonious and far sounding combination of Greek terms; the very roll of it filling every crevice up

of some mudwalled cabin with its many sided echoes, would, if well uttered, be sufficient of itself to make the emaciated knee bender straighten up his legs and walk !

DRAPETOMANIA, OR THE DISEASE CAUSING SLAVES TO RUN AWAY.

This may well be called a new disease, discovered by Dr. Cartwright, and like the discovery by Sir H. Davy of Potassium, Sodium, and Calcium, etc., is calculated to marshal the way to the pathology of a very numerous class of diseases hitherto never dreamed of as being anything but vices; for if a strong desire to do what is wrong be a disease, the violation of any one of the ten commandments will furnish us with a new one, so that with a long Greek word for the commencement, and the addition of the *magic* "*mania*," we shall have a disease for coveting your neighbour's money (a disease common to both the white and black races), or a disease of bearing false witness, or a disease for cutting your neighbour's throat, commonly called murder; all of which shall no longer be treated by the Penitentiary, but by calomel, capsicum, etc.

This we consider as the greatest step in the progress of philanthropy made in modern times.

The Doctor next informs us, that he was born in Virginia, east of the Blue Ridge, and that he there discovered, that masters who were too familiar with their slaves were as apt to cause them to run away, as those who were too severe. Now, no one can appreciate more highly than we do the great advantages which Dr. Cartwright must derive from the place of his birth—East of the Blue Ridge in Virginia; still men who have not been quite so fortunate in the place of their nativity have long since discovered, that soldiers, servants, and schoolboys, are quite as easily spoiled and rendered unmanageable by too lax as by too strict treatment. And though we give full credit to the Doctor as the discoverer and classifier of the disease, yet we cannot but confess that he is not the first discoverer of the causes. That familiarity begets contempt, and that a worm trodden on will turn, are very old proverbs, indeed, almost as old as the Blue Ridge itself. In the treatment of this disease we again encounter the formidable derivation of submissive knee-bender, etc.

The Doctor gives no specific for the treatment of this disease, and we think leaves it very much as he found it. He, however, under his next head,

suggests a species of remedy which, with some modification, the Greek master applied to his drapetes and the Roman to his fugitivus—it is, the "strapping in" recommended by the Doctor. "The best means," says he, "of stimulating the skin is to have the patient well washed with warm water and soap, then to anoint it all over with oil, and to slap it in with a broad leather strap." Now they, the Romans and Greeks, used the strapping in without the anointment, and with a much narrower strap than the one recommended.

We will now conclude with a few remarks on the Doctor's Physiological and philological theory in regard to the Ethiopian race, and refer our readers for this purpose to an article published by Dr. Cartwright in the Southern Quarterly Review, in 1842, entitled "Canaan identified with the Ethiopian race." That article and the one under our more especial consideration are so much identified in language and ideas, as to render it by no means improper to allude to the one while reviewing the other. Firstly, then, as to the derivation of the word Canaan. This Dr. Cartwright defines to be the submissive knee-bender, and quotes the authority of Genesius ; but, strange as it may seem, the derivation of Genesius is, in fact, far different ; for, according to his authority, Canaan means a merchant. "The northern part of Canaan," says he also, "at the foot of Lebanon, is called Phœnicia." "The Carthagenians, a colony of Phœnicians, also retained their ancient name, as is testified by Augustine, as follows : Interrogati rustices nostri, i. e. Hipponens, quid sint Punies, respondentes Canani, corrupta scilicet, ut in talibus solent una littera, quid aliud respondent quam Cananæi." Here then we have the Phœnicians, Canaanites and Carthagenians identified.

The Phœnicians were the great merchants of Tyre, and Zidon—the daughter of Tyre. The same Phœnicians or Canaanites were the great colonizers of their age ; they colonized the Basque provinces in France, where a dialect of their language is still spoken ; from one of these came Henry of Navarre, the Bearnais, no less distinguished for his personal ease and grace in the palace, than for his frank and fearless bearing on the field—the beau ideal of a chivalrous, brave, gay, gallant and generous monarch, whose favorite air yet attunes the hearts of his countrymen to deeds of daring that none can do who cherish not the memory of a glorious ancestry. His person, as described by historians, does not remind us very forcibly of Dr. Cartwright's description of the

Canaanite; nor his battle cry of "follow my white plume" suggest much the idea of his "gait being hopper-hipped."

The Canaanites or Phœnicians were also the colonizers of that portion of the West of Ireland now known as the country of Galway; the men of which are still proud of their ancient descent.

"And the Bodkins sneeze
At the green Chineze."

For they come from the Phœnicians.

The colonization of a part of Ireland by the inhabitants of Zidon, the daughter of Tyre, is by no means apocryphal, as it is distinctly alluded to in the xxiii chap. of Isaiah, 2d v.: "Be still, ye inhabitants of the Isle; thou whom the merchants of Zidon, who pass over the seas, have replenished.

Besides, though the Irish descendants of the Phœnicians have not been quite so careful of the language of their ancestors, as their brethren in France, yet they have preserved with quite as much sanctity many of their customs, and with most especial care those relating to their devotion to the wine cup.

[Here we omit a part of the Review, lest the spirit and intention of the author might be misinterpreted, and thus give unnecessary offence in certain quarters. We venture to exercise this privilege, the more readily because the paragraph alluded to is rather a playful digression from the subject matter, than a continnation of the argument sought to be sustained throughout the paper. Upon the merits of the Review our readers must decide. We are authorized by the writer of the criticism to disclaim any intention to reflect personally upon the Reviewed. The main object of the paper is to present the other side of the question, and thus elicit truth. It is not always agreeable to an author to have his favorite doctrines on a particular subject called in question, but in this age of inquiry and progression, every writer who ventures to put forth anything either new or original, must expect to encounter opposition, if not ridicule.] (*Ed.*)

Does this look like a deficient atmospherization of the blood?

Having before identified the Canaanite and Carthagenian, we will

now contemplate one Carthagenian, and see if he was a submissive knee-bender, or had not a sufficient atmospherization or vitalization of the blood, so essential to the expansion and freedom of action of the intellectual faculties. That Carthagenian is Hannibal—and as to his intellectual faculties, courage and determination we give the testimony of the greatest soldier who ever drew a sword. Speaking of great generals, *Napoleon* says, in relation to the crossing of the Alps performed by the Carthagenian army, and the remaining in Italy sixteen years after it: "Aucun plan plus vaste, plus étendu, n'a été exécuté par les hommes. L'expedition d'Alexandre fut bien moins hardie, bien plus facile, elle avait bien plus de chances de succès! Cependant cette guerre offensive fut méthodique. La fortune lui trahit à Zama."

His great conqueror, Scipio, placed Hannibal as the first of Generals, himself as the third.

But we have done with the great General, and we come now to consider the moral courage of the man. In the words above quoted, fortune has betrayed him; how does the man of this race of the submissive knee-bender conduct himself? Themistocles in his exile sought the protection of his enemy Artaxerxes, and Napoleon wrote a flattering letter to the Prince Regent, calling him the greatest, the most constant, and the most generous of his enemies. Hannibal past from kingdom to kingdom, stirring up hatred and war against his enemies; driven by Roman influence and Roman fame from court to court, beset by assassins, a single individual, he was persecuted by a nation at that time the most powerful on earth. There was no submissive knee-bending in him; he stood alone, threatening defiance, and rolling his hatred of the Roman name like a sweet morsel under his tongue—the African lion of the desert, but the lion at bay—and in his last words flinging scorn and contempt in Rome's very teeth for her daily fear and persecution of a feeble old man. "Solvamus," said he, "diuturna cura populum Romanum, quando mortem senis expectare longum censit." Is this like "a servant of servants," and the "submissive knee-bender?"

Alas! There is something most melancholy in the fate of this great warrior and accomplished scholar, for he was both; but in the thing not mentioned among his misfortunes he was, of all, most unfortunate: "his history has been written but by his enemies." The hatred of Rome was so intense against the Carthagenian, that she erased with his walls his very language.

A hero's voice is made but to cheer a hero's nation, and a hero's

name but to be sung in a hero's own language. You may transplant facts, the knowledge of arts and sciences, from one to another, but the sound of a hero's name bears but euphony in a hero's own tongue.

The name of Hannibal has never been mentioned in history, with the admiration of matured wisdom, for his astuteness and sagacity, or with the fierce, wild burst of youthful enthusiam for his dauntlessness and daring; nor uttered in song with the tremulous accents of woman, wailing for the misfortunes of him with whom the glory of Carthage departed for ever.

For such a general we look in vain among the Joshuas, and Gideons, and Jephthas, though their glory has been called upon to "awake with harp and lute."

There is no song for Hannibal, as for the son of Jesse; nor as for the son of Athens;

> "Immortal dreams that did beguile
> The blind old man of Scio's rocky Isle."

II.—*Review of Report on the Meteorology, Vital Statistics, and Hygiene of the State of Louisiana.* By E. H. Barton, M. D. *With an Appendix.* By H. G. Heartt, Actuary of the British Commercial Life-Insurance Co. of London, etc.

The same work, without the Appendix, republished in 2nd Volume of Southern Medical Reports. By E. D. Fenner, M. D. New Orleans: 1851. Davis, Son & Co., 59 Camp st.

Vital Statistics is a new science and very imperfect, particularly so in this country, where the data on which they are founded are, in a great measure, wanting. The years 1849 and 1850 gave an extraordinary number of deaths for this city and Lafayette, which were charged in the aggregate to their population, when not a third belonged to it. This led to the error, that "the mortality of New Orleans and Lafayette was double what it ought to be, compared with other places," at the very time when it was actually less than in any other city in the Union. The students of the new science of Vital Statistics, as none are masters—the science being imperfect and all its votaries mere students—became alarmed at their own figures, and Drs. Barton, Simonds, and others, who had heretofore opposed the popular error abroad, of the insalubrity of this city, began to write reports well calculated to favor that delusion

both at home and abroad. New comers, timid and inconsiderate persons, became panic stricken, and many of them fled the city. In flying from imaginary dangers here, it too often happened that they run into real ones. More died on the steamboats from cholera, than if they had remained at home. The year 1849, (according to Dr. Barton's official Report, 1849,) gave only 106 deaths among the natives of New Orleans and State of Louisiana, who remained in the city. In 1850, the Dengue, which seldom or ever killed man, woman or child, frightened many into more dangerous abodes in other places. But what puzzled Drs. Barton, Simonds and others, was the fact, that the absenteeism of the citizens did not lessen the mortality, and they became the more frightened at the great aggregate of deaths, and no body sick. The physicians of the city had little or nothing to do. The newspapers from time to time announced the healthfulness of the inhabitants; yet the mortuary reports showed an unusual number of deaths. Physicians were wondering what had become of their reputation, that they had not been called in to see some of the persons who had died. Dr. Barton, unable to explain the mystery by his thermometer, barometer and hygrometer, and disbelieving in bad air or malaria, came to the conclusion, that so many deaths could not occur unless our citizens had by some means lost their acclimation; and an entire revolution took place in his opinions in regard to the whole subject of acclimation and the benefits to be derived from it. At length, Dr. Dowler began to suspect, that neither the inhabitants of New Orleans, nor the visitors to the city on pleasure or business, nor the unacclimated residents furnished the excess in the bills of mortality, which had led Dr. Barton to the conclusion, that "the mortality was double what it ought to be, in comparison to other places." Holding fast to the Baconian philosophy, and not letting it go to be carried away by hasty deductions drawn from the imperfect science of Vital Statistics, Dr. Dowler prevented his fears from getting the better of his judgment, and was thereby enabled to do justice to the subject. The fact that the number of deaths continued about the same, whether the citizens remained at home, or fled in all directions; whether the city contained its usual number of visitors on business and pleasure, or had its hotels and boardinghouses almost entirely empty, by reason of the country people being afraid to come to town; whether the doctors were idle or busy—facts like these—instead of driving him into the extravagances of believing that our citizens and their usual country guests were decimated, led him to doubt that they and their country friends and customers had any share at all, or of much consequence, in this excess of mortality. If they had, the mortality ought to abate when the latter

stayed away, and the former fled from their homes. But it often seemed to increase as the population diminished. Hence the *induction* that our population had little or nothing to do with it, notwithstanding the *deduction* from Vital Statistics that they were all dying. By turning to Dr. Fenner's Southern Reports, vol. 1, pp. 99 and 105, it will be seen that the mortality of 1849 is estimated at 9,862. Of these, subtracting the deaths among the negroes, 3,097 are reported as unknown. They could not have been citizens, or they would have been known. They could not have been sugar or cotton planters from the country, coming here and dying, or some of our merchants would have known them. They could not have been country merchants, or traders, hemp or tobacco growers, or any of that class of people having business here, nor others coming for pleasure and to make purchases; if they had been, some one would have known their names and residences. Who were they? Nearly half the population of the State of California have been passing backwards and forwards through our city, leaving, as they go and come, many of their unknown dead for us to bury. There is no other city in the Union that gives egress and ingress to perhaps more than half of all the people on our Pacific coast. The various countries of Europe, particularly the German States, are filling our unoccupied lands in the Mississippi valley with emigrants, that mostly pass through this city. Arriving here in a bad state of health, from crowded and pestilential ships, they leave many dead to go to swell the bills of mortality. Many paupers, sickly and destitute persons, who have barely had the means to pay their passage across the ocean, are left here unable to get any further, the mortality among this class of people anywhere and everywhere is always great. The admissions into Charity Hospital in 1849 were 15,558. Of these 13,776 were foreigners, 1,782 from the different States of the Union, 142 unknown, and only 147 from all Louisiana. The deaths in the Hospital that year were 2,739. "If figures are to be taken without explanation," says Dr. Dowler, "147 sick Louisianians, in 1849, furnished no fewer than 2739 deaths." (Page 290, Hester's Medical Journal, 1850.) Yet figures were taken without explanation, and the whole of the mortality was charged to the population of this city—and the population underrated at that. If they had been explained, it would have been seen at once, why the movements of our population, to or from the city, had little or no effect upon the mortality, because it was derived from other sources than our population, or our guests on business or pleasure. The making of calculations and drawing deductions from the aggregate number of deaths, contrasted with the resident population, without explanations or allowances, was the great error that

Dr. Barton fell into when he made his report to the Board of Health. Dr. Dowler detected the error, that the deductions of the imperfect science of Vital Statistics had led into, and he exposed it in an able paper drawn up on the basis of the only true philosophy—the inductive method. But his publication came too late. A large portion of the physicians, as well as the people, had become too much frightened, from the plausible deductions presented to them in the official paper called the Report of the Board of Health, to see the merits of the unpretending inductive method by a private individual, vindicating truth and exposing the errors that had excited their fears. The attempt to vindicate truth and the reputation of this city, was misinterpreted, by a portion of those whose fears had been most excited, as an attempt to gain popularity with the commercial classes and property holders by representations of health not warranted by the facts presented in the bills of mortality. It was looked at as a false light, calculated to deceive the thoughtless and the unwary, and to lead them into a trap. Whereas it was only a philosophical *induction*, proving that about two-thirds of the mortality had been derived from classes not enumerated in the census, and showing the fallacy of those *deductions*, which had led gentlemen of high standing "to write self-damnatory opinions against their own city," under the mistaken notion that they were defending and upholding the truth at all hazards, when they were themselves under the delusion of the false light of the imperfect science, called Vital Statistics. Although he proved, that with the exception of the class of strangers, the inhabitants of New Orleans, whites and blacks, natives and acclimated, were singularly exempt from fatal epidemic fevers, and had a right, in all truth and candor, to congratulate themselves on the enjoyment of unparalleled salubrity, yet the 3,097 deaths among the unknown, and 3,569 among foreigners, were all charged to the population of New Orleans, and brought forward as evidences of the want of candor and fairness against those who denied its unhealthfulness. The position was taken, that it was not only wrong, but immoral, to deceive the people, by those who were themselves deceived by a false philosophy. It was supposed that Dr. Barton ought to know better than any one else the sanatory condition of this city, having devoted so much time to the subject. But too much learning is sometimes worse than none, as it tends to beget extravagances of opinion, which the less learned, ardent and enthusiastic are not so apt to fall into. In 1841, Dr. Barton published an essay, representing this as the most healthy city in the Union.* Nothing has

*Dr. Barton in the Report above referred to, (which by the by was official, he being President of the Board of Health,) says: "That acclimation (yellow

occurred since, but the war with Mexico, the famine in Europe, and the settlement of California to change that opinion. Those three circumstances have greatly tended to swell the bills of mortality in this city, and his not making due allowances for the increased mortality derived from these sources has, no doubt, caused him to change his opinion. The authority, therefore, of Dr. Barton of 1841, going one way, is very good authority against Dr. Barton of 1851, going in the opposite direction. At any rate it seems sufficient to justify an inquiry into the question, whether he is wrong now or right then. The cause of truth and science demands it, no less than the interest of this community. Already has his late pamphlet, entitled "Vital Statistics and Hygiène of Louisiana," made a very unfavorable impression in Boston in regard to the healthfulness of this locality, as it is well calculated to do everywhere. The Editor of the Boston Medical and Surgical Journal, July, 1851, after reading it, came to the conclusion, "*That it is most certain that people die in New Orleans in appalling numbers.*" He holds up Dr. Barton's pamphlet to taunt those who have given favorable accounts of the prospect of enjoying health and life in this city. To give weight and force to his conclusions, which make New Orleans in the eyes of the world something very similar to a charnel house, he calls his paper "a masterly document" from "an accomplished, talented and persevering medical philosopher," "going no further than he was strictly warranted by facts." To prove the correctness of the conclusions, and to show that they may be relied on with the utmost confidence, he says, that "thirty-six gentlemen of the highest respectability and intelligence came to the common sense conclusion that the Medical Society ought not to monopolize all the useful knowledge spread out before it, and consequently they very properly invited the Doctor to favor them with the printed report, embodying correct statistics of the mortality of the city of New Orleans and the State of Louisiana, "*that comparison may be made with that of other cities and States.*"

Dr. Barton's statistical tables, prepared by him with so much labor and care, with a few exceptions seem to be correct. But most unfortunately for the cause of science and the reputation of the city of New Orleans, he has drawn the most erroneous conclusions from his own tables, in consequence of having committed several errors both in logic and in arithmetic, and has thereby swelled the ratio of mortality more than what his own tables and data justify. The double and trible mortality

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fever) was worth the risk, and that deducting the mortality of the Charity Hospital only 1 in 51.15 died annually in New Orleans."

imposed on our city by mistakes, not in the data, but in the arithmetic, and taking divisors in one table to calculate the mortality in another, has been seized on by the Boston editor to disparage our city abroad, and to call in question the veracity of those who contend that it is not the Golgotha that it has been represented to be. The Boston editor did not look behind his conclusions to test their correctness by calculating the figures in his tables. Nor did the thirty-six gentlemen of the highest respectability and intelligence take that trouble, or they never would have called for its publication, as they would have perceived that the conclusions were not sustained by the premises. They trusted too much to the Doctor's arithmetic and logic, and although his conclusions were most adverse to the best interests of the city, like highminded and honorable men they concluded to call for the publication of what they supposed to be legitimate deductions. Thus Dr. Barton, at page 56 of the pamphlet, drew the deduction, that the mortality was 9.83 per cent. among the *uninsured* white population, while among the *insured* it was only 0.77 of 1 per cent. Although "*the insured* were picked lives," yet he affirms what is very correct, that "*all the insured are of those ages most liable to death here, viz.: middle life.*"

He proceeds to explain the virtues of insurance in the following language and very correct doctrine:

"*The one* [*the insured*] *really takes care of himself, for himself and family, while the other is reckless and indifferent to influences, which the other* [*the uninsured*] *avoids. So powerful do I consider the influence of proper habits in correcting the influence of climate or condition, that I place personal paramount to general hygiène:—the one is for the individual,* (*and is controlled by his sense of interest*), *what the other is for the community, who are ignorant of its importance, and here extremely negligent of it.*" "*I have the figures to sustain me.*" "*From the great difference, then, in the tables of general mortality, and those of the special mortality, as furnished by the Insurance Companies, arise the profits of such companies.*" See page 57.

No wonder, therefore, that a great number of highly respectable and intelligent gentlemen, many of whom are connected with the Insurance Companies as officers, agents, or stockholders, should "come to the common sense conclusion," in the language of the Boston editor, "that the Medical Society ought not to monopolize all the useful knowledge, and consequently they very properly invited the Doctor to favor them with the printed report." The conclusion, in regard to the mortality among the insured, is correct. The officers of the insurance companies calculated it. But they neglected to look behind Dr. Barton's conclusions, into the facts and figures furnished by his tables, to see if he had made a correct calculation, from the data there given, of the mortality among

those *unfortunates*, the *uninsured.* Although life-insurance companies are very useful institutions, and more persons ought to avail themselves of the advantages they afford than do, and although they encourage good morals and correct habits by refusing to grant policies to the profligate and intemperate, yet the difference in the mortality of the insured and uninsured is by no means as great as what Dr. Barton makes it. By referring to table F (pages 52 and 53 of pamphlet, and the same table republished in Southern Reports, pages 152 and 153, vol. 2), and making a correct calculation of the data there given, it will be found that the ratio of mortality is only 2.9 per cent. instead of 9.83. Dr. Barton was called on to point out by what process of calculation, based upon the data of his own tables, he arrived at the ratio of 9.83, and was informed that his own table F only made it 2.9 per cent, including the Hospital. He repudiated table F, as the data were derived from the United States census. But elsewhere he uses the U. S. census, and that very table F, to draw comparisons unfavorable to the city. (See p. 25 pamphlet, p. 125 Southern Reports.) Dr. Fenner congratulated himself that he had omitted that part of Dr. Barton's Report, which makes the mortality of this city reach 9.83 per. cent., but like the thirty-six gentlemen he took Dr. Barton's deductions upon trust, and admitted another part of the Report into his volume abounding with errors of the grossest nature, calculated to retard the cause of science, and to do the city irreparable injury, and so far from being supported by the data given, the data disprove them so clearly and palpably, that Dr. Barton's publication, instead of injuring, would be an advantage to the city and useful to men of science in the search of truth, if every reader would look behind the deductions to the data from which they are drawn, and make the calculations himself. But how few will take that trouble,—especially when his deductions are endorsed by thirty-six gentlemen of the highest respectability and intelligence that our city affords. The Boston editor never thought of doing it. As an instance of the gross errors and illogical deductions (p. 46 of the pamphlet, p. 146 Southern Reports), he says :

"Now cast your eyes over table D, and you will see, through our neglect and ignorance—and, of course, the former arising from the latter—we have actually had a mortality, during more than 60 years, on an average, of nearly twice and a half as much as that! [2 per cent]; and during some series of years near three and a half times as much! while in some single years it has exceeded four times as much, or 8.33 per cent!"

Now, when we do as he tells us, and cast our eyes over table D, instead of finding a plain case of such high averages of mortality made

out against the city, we find that these averages have been arrived at by underrating the population, and making no allowances for the 30,000 immigrants mentioned in table D. Thus, for the year 1850, the population of New Orleans and Lafayette is put down at 109,693. The data given (at pp. 52 and 53 of the pamphlet), when correctly added, give a population for that year of 144,419 as the population of New Orleans and Lafayette, including the parish of Jefferson, and 131,793 for New Orleans, excluding the parish of Jefferson and the 5th ward of Lafayette. By turning to p. 35 of the pamphlet, (135 of the Southern Reports) we find the Doctor attempting to prove by figures how very impure the air of the city is, and that it is infected by 150,000 tons of excrementitious matters. But he cannot get the 150,000 tons without introducing 130,000 inhabitants, and he introduces them accordingly. But table D will not work out a mortality 6.9 per cent. for that year, and he spirits away some twenty-five thousand of the very people he before introduced to infect the air of the city, before he can draw the deduction from the table of the high ratio of mortality above mentioned. For the four preceding years he makes the average population only 90,000, and makes no allowances for the 30,000 immigrants per annum mentioned in a note to table D, as recorded at the Custom-House. For the ten first years he gains an extravagantly high ratio, by giving the city an average population, for those years, of only 7,020 inhabitants, and makes no allowance for immigration. Lest it be supposed that some allowance for the yearly swarms of immigrants and floating population has been made, he informs us, (p. 27 pamphlet, p. 129 Southern Reports):

"To make up this table (table D) I have not been able to deduct from it the accidents and the numerous causes of deaths other than diseases, nor have I deducted the epidemics, or been able to ascertain what portion of the population, native or immigrant, have fallen victims; but I have taken the *whole mortality* as I procured it, and have computed the per centage as usual. If the showing is a bad one, the greater will be the need to remedy it."

The showing is not a bad one at all, but highly favorable to New Orleans as the most healthy city in the United States, if he had made the calculations upon the actual population, as found by the census, added the immigrants from the records of the Custom House, and made sufficient allowance for the transient population. For ten years in succession he charges the whole mortality of that period to 7,020 inhabitants, makes no deduction for immigrants and visitors, and thereby gets a high ratio, near 7 per. cent., which vitiates the whole of his deductions. If the citizens of New Orleans were immortal, Dr. Barton and Dr.

Simonds' method of drawing deductions from statistical data would make the world believe, that they died faster than any other people. Thus, according to the census, as given in table F, New Orleans, Lafayette and Jefferson parish contain 144,419 inhabitants. Let us suppose them all to be immortal, and not subject to any kind of ailment or sickness, yet there were 18,676 cases of disease admitted into the Charity Hospital for the year 1850. (See Southern Reports, p. 288.) Of these 18,676 patients only 264 came from the State of Louisiana. (See p. 289.) Of this number 1884 died. By deducting this number from the aggregate mortality, as given by the census in table F, there are left only 2142 deaths. In taking the census the 144,419 living inhabitants were interrogated how many deaths had occurred among them for the past twelve months. Their aggregate responses gave 2,142 as the number, besides the 1,884 deaths in the Hospital among the foreigners. But as we have supposed them to be immortal, let us consider the 2142 as still living. Dr. Barton, (see chart. No. ij.), has estimated the mortality at 8,019 for the year 1850. This would leave 3993 deaths among persons whom none of the 144,491 inhabitants of New Orleans and Lafayette knew anything about. Of course these deaths must have occurred among strangers, transient persons, and the straggling population. They could not have been citizens, or some one of the 144,419 citizens would have known them. Add these deaths, occurring among the unknown, to the 1884 deaths in the Hospital, the number would be 5877. Suppose all the Louisianians who went to the Hospital had died —their number was only 264—these subtracted from the 5877 would leave 5,613, not one of whom was a citizen, or ever had been, of either New Orleans or Lafayette. Now, let us reduce the population, as Dr. Barton has done in table D, to 109,693 for the year 1850. This would give a mortality of upwards of 5 per cent., on the supposition that the entire population of both New Orleans and Lafayette were immortal. Suppose, however, that of the 264 Louisianians admitted into the Charity Hospital no greater proportion died than foreigners; there would only be 26. This number added to the number of deaths reported by the 144,419 inhabitants, when the census was taken, would give 2,168 deaths as the actual amount of mortality of our citizens. This would give a ratio of mortality in New Orleans, Lafayette, and Jefferson parish, of nearly one and a half per cent, which is about the true ratio—a mortality less than that of any city in the United States, or Montpelier in France. Even this small ratio of mortality is double that afforded by the tables of the insurance companies, owing, no doubt, to the fact, that policies are seldom granted to any other than *temperate* persons of

good habits and free from chronic ailments. Dr. Barton is correct in saying that the insured generally belong to that class of persons in middle life, most liable to death. But the fact he states, that the mortality among the insured in this city is only 0.77 of 1 per cent. among white persons, speaks volumes in favor of its being the most healthy location anywhere else to be found. That the annual average mortality does not exceed one and a half per cent. is substantiated by the tables he has given us of the ratio of mortality in all the parishes of lower Louisiana. In 18 of these parishes it averages even less than one and a half per cent, thus proving that New Orleans is not only the most healthy city, but is situated in the most healthy country in the world, viz.: lower Louisiana. Dr. Barton has himself hinted at the causes, (see page 25 pamphlet, page 125 Southern Reports,) why lower Louisiana is so much more healthy than any other portion of the United States. The secret of its healthfulness lies in the fact "of the wonderful provision of Nature for the speedy oxydation of organic matter in water and air, that is caused by the temparature and the hygrometic state of the atmosphere, resulting from the peculiarities of its topographical location." Matter here, when resolved into its original elements, does not become noxious malaria as in other localities further north, but immediately enters into new combinations of life. Stagnant water itself, instead of becoming putrid, as it does in other places, is speedily covered with aquatic plants, the Jussicua Grandiflora, and others, which keep it pure and sweet, preventing it from forming those noxious vapors that hang round millponds and other stagnant waters in the Northern States. (See article on the health preserving properties of the Jussicua Grandiflora of lower Louisiana.) That there is a great mortality among the intemperate, scorbutic immigrants and houseless paupers that Europe annually disgorges upon this city, on their way to all parts of the Mississippi valley, is very true. The mortality among that class of people is great everywhere. It is particularly great here, not only because their numbers are so numerous, but because their blood is generally in a bad scorbutic condition from the privations of a long sea voyage. They often stop here, destitute of money, and have nothing but their manual labor to rely on for support. Wehave few or no manufacturing establishments, or work to be done, where they could be protected from the heat of the solar rays. They undertake outdoor work, where they are necessarily exposed to a heat much more intense, than they would be if we had workshops and manufacturing establishments to give them employment. The consequence is, that, as the warm season advances, they are apt to fall victims to the complaint known as the acclimating fever, commonly called yellow

fever—a disease which would be almost unknown among us, if it were not for this extensive class of unacclimated persons. It is true, that persons from the Northern States, and even from the surrounding country, are once in their lives subject to it, but it is equally true that it is not a complaint to be dreaded among them, if their habits are good, and they have the necessary comforts of life, in addition to medical advice. Although the utmost vigilance should be used in removing all known or suspected causes of disease, whether in the streets, or the back lots, or in the cisterns, hydrants, or soda water, no improvements that Drs. Barton and Simonds have suggested would do much, if any, good in preventing the mortality among the population that Europe throws upon us. As an awning over the whole city to protect them from the fierce solar rays, when working in the streets, digging ditches or making roads, would be impracticable, some kind of work should be provided for them in the shade where they could make a good living, enjoy their health, and at the same time convert New Orleans into a great city, rivaling the Northern cities in her manufacturing establishments and handicraft employments. In such establishments they could be supplied with a good diet, consisting of an abundance and great variety of wholesome vegetables and fruits, with anti-scorbutic beverages in place of poisonous alcoholic drinks, which would free their blood of its scorbutic taint, and insure them against all the ills they at present suffer from change of climate. It is the war they wage against Nature by making negroes of themselves in laboring in the sun, or beasts of themselves by intoxicating drinks, and living in idleness, that kills them.

When we turn to the charts that Dr. Fenner regretted that he could not publish in his Southern Reports, we find in chart No 3 the mortality among the white population rated at 11.24 per cent. This extravagant ratio is arrived at by reducing the white population to 71.028, by subtracting upwards of forty-seven thousand for the colored population, whereas in the other chart for 1850, the year afterwards, the slave population is estimated at only 18,350. At pages 22 and 23 of the pamphlet (pp. 122 and 123 of Southern Reports,) it is intimated that the mortality would be still greater, if the wealthy did not take "the wings of the morning and fly from the city *during the forbidden months—the dead season.*" The lines on the charts point to the highest figures of mortality during and near the month of September, when so many citizens are absent. This is adduced as a triumphant argument against the healthfulness of the city. But it is an argument that may be used to prove almost every place in the world unhealthy, as in or about the month of September is the sickly season almost everywhere, as well as

in New Orleans. The number of citizens, who leave the city for the country in the sickly season, would not add anything of consequence to the mortality if they remained, inasmuch as they are mostly well acclimated. This is positively proved by the fact, that the mortality is not so great in the First Municipality where the citizens remain at home all the year, as it is in the Second Municipality and Lafayette, where the most of the citizens reside, who leave the city in the summer. Dr. Barton's tables are very valuable. Table F (pp. 52 and 53 of pamphlet, pp. 152 and 153 Southern Reports) proves, that the total mortality in the First Municipality, where the people stay at home all the year round, is actually less than one and a half per cent, and somewhat greater in that part of the city occupied by the absentees. His deductions are well calculated to frighten away the resident citizens, during the summer months, while the facts which he has collected in his tables prove, that they would do equally well, if not better, by remaining at home. Nor is it to be wondered at, that the portion of the city, deserted by the wealthy in the hot season, should be more unhealthy to the poor, who are left, as they are unable or indifferent to keeping it clean. An abandoned house and lot may infect a dozen houses in its vicinity from accumulations of filth, that would be speedily removed, if the owners were at home.

Those, who have underrated the population of New Orleans and made it appear very sickly, by charging it with three times the number of deaths than what properly belong to it, speak very flippantly against the immorality of alluring the unwary to their destruction by holding up the false light of health and security. Such sentiments would be praiseworthy, if scientific investigations—the lessons of experience and Dr. Barton's tables did not teach, that *less* risk to life is incurred by a residence in New Orleans, all the year round, from diseases incident to the climate, including yellow fever, than is incurred at the North from consumption, typhus fever, and inflammatory affections. If it be a false light that would allure the unwary to choose the *lesser risk*, it would be a sickly theoretical sentimentality, unwarranted by the principles of either morality or science, that would frighten them into *a greater*.

It is to be regretted that Dr. Barton should have spoiled his valuable statistical tables and much other valuable matter to be found in his book, with deductions not warranted by his own data. The great mortality had evidently frightened him, and made him too intent in trying to ferret out its causes, (which he took for granted were to be found at home), to see that it came from abroad. He overlooked entirely the important fact, that putting roofs over Melpomene canal, covering up the gutters,

and adopting the other expensive, if not impracticable, works of making jars and barrels, he suggested, would not prevent famishing Europe from pouring a large portion of her surplus population through our city on their way to the Mississippi valley, the land of promise and plenty —leaving as they went many of their dead among us, and filling our hospitals with their sick. Nor would his suggestions, if acted on, prevent the Californians from going and coming through this city, and leaving many of their dead among us. Nor would they destroy the reputation of Dr. Stone and other distinguished physicians, which attracts so many invalids here from all parts of the valley to be treated for complaints of a rebellious character, and consequently some of them incurable; nor would they destroy the reputation our citizens have for generosity and almsgiving, which attracts so many beggars, sick, disabled, and destitute persons from almost every country and State in the Union to this city as the great asylum of the unfortunate, and whose infirmities would make their days short anywhere. How erroneous, therefore, must that philosophy be, which would press into its service our unrivaled geographical position, our immense charitable institutions, the eminent skill of our physicians, and the proverbial benevolence of our people, and bring them all to bear in making out a long black catalogue of death to frighten every one, both at home and abroad, against this locality. Yet this is the philosophy, which has been published to the world under the caption of "*Vital Statistics and Hygiene of New Orleans*," by one of her own favorite citizens and endorsed, it is thought, without due consideration, by a great many more alike influential and intelligent, but whose judgment had been swayed by the fears that this very erroneous method of philosophizing had itself created;—men who were willing to give up every thing for the cause of truth and science, leading them to endorse a work containing many things of value, but interspersed with deductions, drawn from the same ideal source, but not harmless as a sailor's yarn. Dr. Dowler, extensively and favorably known to the Profession of the United States, took ground in direct opposition to those who coincided with Dr. Barton, and whose deductions, in their own language, "justified the worst opinions existing abroad in regard to the health of this city. He showed the fallacy of such deductions, and proved that they were drawn from the ideal, and not from anything solid. His paper was published in Dr. Hester's Medical Journal of November last, and if it had been re-published in the second volume of the Southern Reports, there would have been but little left *undemolished* of the voluminous papers found in that volume on the other side of the question. He refuted all the metaphysical, statistical,

wire drawn deductions, which made New Orleans a deadly abode, by going to the different cemeteries and ascertaining from the inscriptions on the tombs of the old and the young at what age the people actually died. The result was, that notwithstanding the yellow fever, and all the deductions drawn from the aggregate mortality, that the inhabitants live longer than almost any other people. The average age at death in the First Municipality being 47 years. The average age at death of the citizens of Boston, (see Southern Reports, vol. 1, p. 88, containing Dr. Barton's statistics), does not reach 22 years, London 27, England 29. Thus in the First Municipality, where the inhabitants remain at home all the year, the people live longer than in Boston, London, New York, Paris, France or England. If it be said, that these are people of French extraction, how does it happen, if New Orleans be an unfavorable location for a permanent residence, that its citizens live longer than the French in France? In the 4 years ending 1844, one in every 44, buried in the Catholic Cemetery in the First Municipality, had reached the age of 100 years, whereas in all France only one in 250,000 attain that age. In 1849, (see Southern Reports, vol. 1, p. 99) twenty citizens died in New Orleans, each aged 100 years, one aged 105, one 110, and one aged 130 years. Even in Potter's Field, where the Irish population are buried, centenarians were found, and 991 observations made the average duration of life equal to Ireland and England. He also appealed to history, and quoted a great many authors, all of whom coincided in representing the city of New Orleans as most favorable to health and longevity, from the first year of its foundation through one hundred years. Even Dr. Barton still admits, that it is more healthy for children under 15, and adults over 50 years, than any of our Northern cities. It seems, that he has only changed his opinion in regard to those between 15 and 50 years, being led to believe that the mortality must be very great among them, on deductions drawn from the total mortality. Dr. Dowler gave due warning to all those who were deceiving themselves with unexplained and doubtful statistical data: "Figures," says he, "are like tongues, at once the best and the worst things in the scientific mart, for they may be sometimes arranged, apparently in the simplest and fairest manner, so as to prove New Orleans the most insalubrious city on earth, even though it may be the least so of any place known." But his admonitions were unheeded, and his able essay was passed over in the Southern Reports without being published or noticed. It belonged to the Profession, to science and to truth, and it is to be regretted that it was not published, for the use of the Profession, in a Southern work, as it was on an important Southern

subject, written by a distinguished Southern writer, and would have well represented the Southern Profession, as it was all sparkling with the fire of Southern genius. Besides, he was the only person who had ventured to confront the popular delusion of the day, by striking the foundation of that medical logic (showing that there was nothing solid or substantial in it), which made New Orleans the "*aceldema*" of the South—a mere swamp grave yard, if not an *ager sanguinis*. The question in regard to the salubrity or insalubrity of this city, the door to the Mississippi valley and to the Pacific settlement, concerns not only the people in it, but the world at large—particularly the people of the upper and middle portions of the Mississippi valley, who are tapping it by railroads and canals, and many of whom are under fears of perishing almost necessarily with disease, if they come to this market. The question is too important a one for only one side to be discussed, in volumes intended for information and historical references in the medical libraries of the physicians of this country. Physicians are usually interrogated in regard to the health or sickness of distant places, and they very naturally consult their libraries. In all important questions in medicine, as in everything else, the truth should be heard on both sides. In vain do we look in the volumes above mentioned for anything in defence of the salubrity of this city, or in refutation of the erroneous deductions of Dr. Barton and others. The omission can only be accounted for on the supposition, that the learned, laborious, popular and indefatigable editor had himself become infected with the panic and popular delusion that seized on so many, after Dr. Barton, in his official capacity as Chairman of the Board of Health, announced the astounding mortality of 9,862 deaths in the year 1849, without due explanations of the sources from which it had been derived. Although New Orleans, Louisiana and the United States contributed but 1,308 white persons to that mortality, yet the Report was worded in such a way, as to charge the whole to the account of this city. It created a panic so great and a delusion so perfect, that it was looked upon by many as a sin, in the face of such a mortality, to utter a word in defence of the health of the city, although there scarcely ever was a time when doctors had less to do. Hence Dr. Dowler's paper touched a principle of conscience, as it strongly advised standing fast with folded arms, in what appeared to the terrified a second Sodom and Gomorrah. That the editor of the Southern Reports partook of the alarm and went with the popular current, is not only evident from his not touching or noticing Dr. Dowler's essay, but is made plain from his preface introducing Dr. Simonds' Report on the same side of the question with Dr. Barton (only

out-heroding Herod) as one "demanded by a due regard for the safety and happiness of the present inhabitants," "as placed on a basis of *recorded figures*, that entitles them to profound consideration," "as a writer who has not ventured to draw hypothetical deductions from imaginary premises," and "if any one questions either the facts or figures, *let him show their fallacy.* The facts and figures which led Dr. Simonds, who some years ago so nobly defended the character of this city for salubrity, in the Medical Convention assembled in Boston, to change his opinion, have led him to give a stronger argument, than even Dr. Dowler has given, of the nothingness and unsubstantiality of the foundation and whole superstructure of that logic which has arrived at the conclusion, that "the mortality of New Orleans is twice as great as it ought to be, compared with other places." The hobby called Vital Statistics, laden with facts and figures, which carried Dr. Barton to that conclusion, was accused by Dr. Dowler of being a winged Pegasus, that could take him to any other conclusion his will directed, and was not only unserviceable and unmanageable, but could not be restrained by the reins of science from leaving terrestrial things for the ærial and ideal regions. Where has this abstract ideal philosophy, likened to the winged Pegasus, which led Dr. Barton to the conclusion "that the mortality of this city was twice as great as it ought to be, compared with other places," carried Dr. Simonds ? It has carried him to conclusions so high up in the ærial regions, that any one can see its fallacy ; any one can see that it is not the true philosophy, the inductive method, which never leaves the solid earth. Precisely the same facts and recorded figures of the new and imperfect science of Vital Statistics, which led Dr. Barton to the conclusion, that the mortality of New Orleans was double, treble or quadruple that of Boston, New York, and other cities, precisely the same hobby, on being rode a little harder by a harder rider, proved what Dr. Dowler said of it to be true, that it had wings, and could go anywhere, as it brought him to the conclusion, that the citizens of New Orleans had lost by sickness and death, the last $4\frac{1}{3}$ years, no less than 45,437,700 dollars. This conclusion is a legitimate one from the premises. It is perfectly logical, yet the basis of the logic is proved to be unsound, because it makes our citizens lose more than they ever had to lose. The whole assessed value of taxable property being only twenty-four millions for the First Municipality, forty for the Second, and seven for the third—seventy-one millions in all. He also arrived at the conclusion, that in the last $4\frac{1}{3}$ years, preceding the present, that there have been in New Orleans 755,700 cases of disease, each case averaging 14 days, equal to 10,579,800 days of

sickness." (See p. 236, Southern Reports, vol. 2. This must be true, if Dr. Barton's deductions be correct. The reasoning is fair, and the whole process perfectly logical and within bounds rather than over. If each of these patients or cases of sickness was visited only twice a day, it would require 500 physicians, each making 25 visits per diem for 4⅓ years, to make an approach towards accomplishing the mighty work, that a medical logic, founded on Dr. Barton's Vital Statistics, had given them to do, and there would still be left 1,133,000 visits to be made, over and above what the 500 physicians in 4⅓ years could do. These visits at $2 each, being one dollar less than the usual charge, would give each of the 500 physicians upwards of $84,600, throwing in, without charge, the 1,133,000 visits they were unable to perform. The sum paid to the physicians, added to the amount lost by sickness and death, would amount to $87,756,900, exceeding the assessment of all the taxable property in the three municipalities, added together, by upwards of sixteen and a half millions. It is merely necessary to state the results of the facts and recorded figures forming the basis of the logic that has made New Orleans the most sickly city in the Union, to show the fallacy of its foundation and whole superstructure. Truly did Dr. Barton say, that this city is not sickly "*per se*," and he might have added that its insalubrity can only be proved by that kind of logic, which gives the doctors all the money, and leaves all the rest of the population perfectly pennyless and sixteen and a half millions in debt.

New Orleans, August 11th, 1851.

Part Fourth.

MISCELLANEOUS MEDICAL INTELLIGENCE.

I.—SOUTH CAROLINA, AND DR. CLARK.

Complimentary to the Profession.

To prove that medical men do not always go unrewarded by those to whom important services may have been rendered, we give the following instance as an exception. The State of South Carolina has recently presented to her distinguished son, Dr. C. J. Clark, a gold medal, weighing two and a half oz., upon one side of which is a representation of the landing at Vera Cruz; and on the other, the South Carolina "Coat of Arms." This honor has been conferred in consideration of the valuable services rendered by Dr. Clark to her brave sons who fought, and many of whom fell, upon the bloody plains of Mexico, in maintaining the honor of the State and in defending our common country. South Carolina knows how to encourage talent, and to reward true merit—and in this she has given us many noble examples worthy of her distinguished name.

We hope Dr. Clark will not feel envious when he hears in what manner we were rewarded for three months' services on the Rio Bravo, Mexico. Ours came from head-quarters—Washington city. In turning over to the Quartermaster at this place the medicine and hospital stores in our charge, one or two silver-washed catheters were missing; these were promptly reported to headquarters, and in due time a bill of $40 was returned to us, claiming indemnity for that which was loaned and used up in the service of the country!

From that day to this our thirst for military glory has been on the wane, and we wish henceforward to be regarded as an uncompromising advocate for the "Peace Congress." (*Ed.*)

II.—TREATMENT OF URTICARIA BY THE SULPHATE OF QUININE.

This is an eruptive disease, usually distinguished by elevations of the cuticle in the form of *wheals*; it is sometimes exceedingly obstinate, resisting all the means that may be brought to bear against it. We are induced to notice

this affection, because recently we have met with two or three cases that yielded only to large doses of quinine.

It is often quite simple in its nature, yielding readily to tepid baths, mild cathartics, and a restricted diet; but again, it is accompanied with much febrile disturbance, pain in the epigastrium, nausea, fulness in the head, and a burning sensation over the surface of the body; the face, hands and feet swell; the eyes are almost closed; the tongue is loaded with a white coat, and the itching is intolerable at times. Again, the eruption is accompanied with severe articular pains, all of which phenomena serve to complicate the exanthema, and augment the difficulties of the case. Dr. Wickham and M. Legrouse of the Hospital Beaujon report some cases of the worst forms of Urticaria, which were promptly cured by full doses of quinine, continued for two or three days.

Treated with quinine the articular pains, the painful tumefaction of the face, feet and hands, the eruption itself, rapidly disappeared, together with the nausea, febrile excitement, and indeed all the distressing symptoms. (*Ed.*)

III.—JOURNAL DES CONNAISANCES MEDICO-CHIRURGICALES. PARIS, 1851.

We are regularly in receipt of several Parisian Medical Journals, and shall translate from them such articles, in an abbreviated form, as may seem to convey useful, practical information. From some late numbers of the *Journal des Connaissances Medico-Chirurgicales* we condense the following items:

IV.—CHLOROFORM EXTERNALLY APPLIED IN THE TREATMENT OF CHOREA.

M. Gassier has reported three interesting cases of Chorea, induced by fright, in children, of the respective ages, seven, twelve and seven years. The muscles of the face were horribly distorted, and the movement of the limbs was greatly disordered, manifesting in each unequivocal evidences of a violent attack of chorea. M. Grassier prescribed a liniment composed of equal parts of chloroform and the oil of sweet almonds. With this liniment the spine was rubbed diligently, night and morning; the cervical division of the spine was particularly attended to. The first frictions brought about marked ameliorations of all the choreic symptoms, and on the sixth, the first, on the second the second, and on the seventh the third case was cured.

V.—CHLOROFORM IN THE TREATMENT OF COLICA PICTONUM.

The pains attending an attack of painters' colic are so harassing, both to patient and physician, that we feel justified in reporting any successful plan of treatment which may seem to be entitled to confidence. The following facts are worth a translation.

At the morning visits M. Aran adopts this practice in cases of lead colic: if the pains are severe, he takes a compress large enough to cover the seat of pain, moistens it with chloroform, (requiring from half an ounce to an ounce of the fluid), and applies it thus saturated over the abdomen, and maintains it in contact with the skin for fifteen or thirty minutes. About the same time he orders the following potion internally, viz.:

R. Chloroform, gutt. 40.
Gum Dragon, 4 grammes.
Syrup, 30 grammes.
Water, 100 grammes.

Dose: tablespoonful at short intervals.

In order to disembarass the large intestines of any accumulations, an enema is administered, after the action of which he orders the following lavement, viz.:

R. Chloroform, 20 drops.
Gum, 8 grammes.
Vitelli Ovi, No. 1.
Aqua Dist., 125 grammes. (M.

The above is administered at once, and on the day succeeding this treatment the patient is almost invariably completely relieved of all pain and uneasiness in the bowels; but should this not be the case, the same treatment is repeated, as far as the enemas are concerned, and always with success. The immediate sufferings over, M. Aran administers for several days sulphur and alkaline baths, in order, says he, to purge the surface of the body of any lead, which may be attached to it. It is but fair to state that others, who have made trial of M. Aran's plan of treating Colica Pictonum, have not met with equal success. The purgative treatment is still advocated, as the best, by a number of sound and experienced practitioners.

VI.—ANNALS AND BULLETIN OF THE MEDICAL SOCIETY OF GHENT.

Eclampsia; various incisions of the neck of the Uterus; delivery; recovery.

Doctor de Beule, of Lokeren, has communicated to the Medical Society of Ghent a very remarkable case, which has been itself the subject of an excellent report by M. Fraeys. It was a case of violent eclampsia, occurring between the sixth and seventh month of pregnancy, in a woman with her first child, and who presented undoubted symptoms of labor. Indeed, from the commencement of the disease she complained of heaviness in the lower belly, of continued or bearing down pain in the region of the loins; the neck of the uterus, effaced and slightly opened, admitted the end of the finger. The first attack of eclampsia was in the morning just as she awoke, having had the evening before some premonitory symptoms. Notwithstanding the active treatment which was adopted, the attacks became more and more frequent, and more and more intense, leaving the woman, in consequence, in a comatose state more and more profound and prolonged. Towards the evening the death of the fœtus was almost certain, and the condition of the patient was so critical, that M. de Beule and the attending physicians, seeing her life in imminent danger, considered it necessary to terminate the accouchement. M. de Beule, by means of a straight bistoury furnished with a button, made, not without some difficulty, four incisions in the neck of the uterus, which was but little more dilated than at the commencement of the disease. Two of these incisions were made at the sides; the other two in front and behind. The accouchement was then rapidly terminated by the abstraction of a dead fœtus, by means of the lever; and the convulsions ceased. The next day the woman was restored to consciousness; the consequences of the confinement were natural, and the re-establishment of health was speedy.

The unbridling (débridement) of the neck of the uterus, sometimes desig-

nated under the pretending and even inexact name of hysterotomy or vaginal cæsarean operation, has already been practiced a great number of times either for the extraction of uterine polypi, or in case of occlusion, complete or incomplete, of the neck, or to make the extraction of the fœtus more easy in case of sudden or apparent death of the mother, or in case of rigidity, organic alteration or spasmodic contraction of the neck of the uterus, or, finally, to replace forced accouchement under the different circumstances which may require it, among which figures eclampsia.

Confining ourselves to this latter, the cases in which it has been combatted by the unbridling of the neck, are still not very numerous. The first report of this kind is due to Duboise, who addressed it to the Royal Academy of Surgery. The operation was followed in five or six minutes by the spontaneous delivery of a dead child; but calmness was immediately restored to the mother, and she had a favorable confinement.

Contonly was more fortunate in a case of this kind; after the operation he delivered with the hand an infant apparently dead, but which they succeeded in recalling to life.

M. P. Dubois performed the same operation, in 1840, at the Clinical Hospital, on a woman affected with eclampsia. He afterwards applied the forceps, and delivered a living child. The woman, carried back to her bed without consciousness, had, nevertheless, renewed convulsive attacks, which were met by the application of thirty leeches to the mastoïdal apophyses. About ten o'clock in the evening consciousness returned, and the next day the woman was in a satisfactory condition.

M. Godemer has published two private cases of his in which he was enabled, thanks to this operation, to terminate the accouchement speedily, in the midst of attacks of eclampsia, and to save the two mothers. The children lived but a few hours.

Lastly, M. Hubert, Professor of Midwifery at the University of Louvain, has performed the same operation under similar circumstances, and with equally fortunate results to the mother.

Accoucheurs are still divided in opinion as to whether, in a case of eclampsia, which resists the ordinary remedies, (bloody evacuations), and this is the case most frequently, it is proper to resort to forced delivery. Some, and they number among them high names in the Profession, think, that the operation of forced delivery adds still more to the nervous excitement, and only serves to increase the liability to accidents. Others, and they are becoming more numerous every day, contend that the delivery, forced or spontaneous, is the best means of arresting the convulsions of the mother. Notwithstanding the example of Dubose and Contonly, the unbridling of the neck was not resorted to in order to produce forced delivery, and Mr. Velpeau, after having delivered a woman, but with great suffering, by the introduction of the hand into the womb, regretted that he had not incised the neck. This operation, he afterwards said, is neither very painful, nor very dangerous in such a case; and the result has since justified his prediction.

The very remarkable case reported by Mr de Beule, and those which M. Fraeys has mentioned, are certainly a powerful encouragement to resort in case of need to the unbridling of the neck and artificial delivery in puerperal convulsions, although delivery, natural or provoked, does not always terminate the eclampsia, as the case reported by M. Dubois suffices to prove. But, as an operation of this kind is always a serious matter, we will mention a remedy which has already succeeded twice in similar cases, that is: inhalations of chloroform.

VII.—NEW TREATMENT OF LUPUS.

Professor Hebra extols greatly the internal application of Codliver oil in all the forms of Lupus, in doses of from 4 to 6 spoonfuls per day.

Doctor Hersfelder affirms, that he has found the external application of essence of lemon, repeated from two to six times a day, to succeed better with the *lupus exulcerans.* There is no reason why both should not be used at the same time.

VIII.—PUERPERAL FEVER.

M. Arneth read before the Academy of Medicine a note on a hygienic and preservative means used in the Hospital of *La Maternite* at Vienna, Austria, to prevent the developement of epidemic puerperal fever. This means, discovered by M. Semmeïloeis, chief of the Clinical Department of Accouchements, consists in lotions of chloride of lime for the hands of the pupils and physicians, who are engaged in dissections and anatomo-pathological researches. M. Semmeïloeis has discovered that puerperal fever was produced principally by contact with cadaveric molecules, which always remain on the hands of the students, whatever they may do to prevent it, unless they wash with chloride of lime. In that part of the clinical department of accouchement where no pupils are received except midwives, (who are not engaged in anatomical investigations), the number of cases of puerperal fever is much less than in that department in which medical students are admitted. Moreover, in the latter department, which is separated from the other only by a door, puerperal fevers have diminished considerably since the pupils have made use of chloride of lime.

IX.—MEDICAL STATISTICS OF PARIS.

The number of physicians at Paris has diminished this year, but in a less proportion than in the year 1849. There are still at Paris, 1,351 Doctors of Medicine. In 1849 there were 1,389; diminution for 1851, 38. Of the 1,389 doctors mentioned in the general list of 1849, 65 are dead, and 86 have left Paris. Of these 86, 12 have gone to California.

Of the 1,351 composing the list of 1851, there are 113 new names; there were 114 in the list of 1849.

There are still 178 health officers in Paris, more than there were of doctors under Louis XIV. There are 381 apothecaries, a number evidently disproportioned to the necessities of the population. There are 380 midwives.

The number of admissions to the Faculty of Paris has slightly increased this year. There were 236 doctors (there were 230 in 1849), and 30 health officers, (28 in 1849.)

X.—NECROLOGY.

M. Labarraque, Member of the Academy of Medicine, formerly an apothecary, has recently died at the age of 74 years. His name remains attached to the discovery of the disinfecting properties of liquid chloride of soda, which is distinguished sometimes by the name of *liqueur de Labarraque.*

The Academy of Medicine has lost, almost at the same time, Dr. Espiand, Chevalier of the Legion of Honor and of the Order of the Two Sicilies, who died at the age of 65 years.

The Academy has thus lost four of its members, within a few months: M. Fouquier first, then, one after the other, MM. Royer-Collard, Labarraque and Espiand.

M. Leuvet, Chief Physician of the Hospital of Bicêtre died, on the 6th of January, at Nancy, his native place, where he had gone in the hope of recovering from a lingering disease, which he thought was approaching a convalescence.

XI.—LUXATION OF THE HUMERUS REDUCED BY MEANS OF A NEW METHOD.

Doctor Lebert, of Nogent-le-Rotrou, was called by a brother physician, who had tried in vain, by all the known means, to reduce a luxation of the right arm, which had occurred twenty hours before, to a man of 68 years. M. Lebert first raised the arm directly up, and afterwards extended it in the same direction, giving it at the same time a slight rotatory motion. The head of the bone entered immediately into its natural cavity, which was manifested by a certain peculiar sound produced by the shock.

XII.—AMMONIACAL INJECTIONS IN AMENORRHŒA.

Professor Broussonnet, of Montpelier, has rescued from oblivion ammoniacal injections, formerly so much recommended for amenorrhœa, but which had fallen into disuse, we know not why. The following is the method of administering them: the patient is injected three or four times a day, through the vagina, with 10 to 12 drops of ammonia diluted in three or four spoonsful of milk. These injections do not succeed without producing a little pain. The dose of ammonia should be increased, if pain is not produced, and diminished if too painful. The injections are not to be commenced until two or three days before the period of the courses, and are to be suspended as soon as they have appeared, or as soon as the period has passed.

Case.—A young woman of 20 years, perfectly regular for four years, found her courses suspended, in consequence of a residence of four months at the hospital, where she led a sedentary life; and, during six months, the ordinary means of bringing them on were tried in vain. M. Broussonnet then prescribed injections of milk and ammonia, repeated twice a day. They were retained in the vagina, each time, with the aid of a syringe, until the patient experienced a sensation of heat and of pricking. At the end of the fourth day there was a slight exudation of blood. The following month the same means was resorted to with like effect. The third month three injections sufficed to bring on the courses, which this time were very abundant. The fourth month the discharges came on naturally, and since that time they have occurred regularly.

XIII.—THE FIBRIN OF THE BLOOD NOT DIMINISHED BY VENESECTION.

Mr. Simon has published a work recently on "*General Pathology*," and which we find noticed in a London Med. Review—in which he boldly maintains the following points, in opposition to the views of writers, generally, on the blood. (*Ed.*)

"First, I find that fibrin is undiminished by bleeding, however frequently repeated; nay, that it often, or even usually, increases under this debilitating treatment: its highest figure given in Andral's book (10.2) was at a fourth-bleeding; and Scherer found it as high as 12.7 at the third venesection in a case of pneumonia. I find that under many other circumstances of exhaustion and weakness and inanition, during the progress of starvation,* during diseases essentially anæmic, during violent fatigue, and the like, its proportion has been found at least as high, perhaps higher, than in the inflammatory process. And as in these respects I find its proceeding to be in direct contrast to that of the red globules (which we know to be potential elements in the blood, and which are at once reduced by bleeding and starvation), so also do I find a similar contrast in another striking particular. Messrs. Andral and Gavarret, in the course of their extensive researches in the comparative physiology of the blood, ascertained that an improvement in the breed of an animal tended always (*cæteris paribus*) to increase the proportion of its colored blood-corpuscles; they found that the same improvement tended likewise to diminish the proportion of its fibrin. And I find further indications of the same inverse ratio between the fibrinousness and the perfection of the blood, in the facts—that there is little or no fibrin in the blood of the fœtus, none in the egg, none in the chyme, and less in the blood of the carnivora (who feed on it) than in that of the herbivora.

"Some of these facts derived from very different sources, appear quite inexplicable on the theory that fibrin is essential to the progressive developement of the tissues; and the opposite inference seems unavoidable, that it must be considered an excrementitious product, derived from the wastes of the tissues or the oxidation of the blood, and in progress of elimination from the system. This conclusion, carried into the domain of pathology, would lead us to suppose, that an augmented proportion of fibrin in the blood (whether occurring in active disease, or within the limits of apparent health) can be taken as an indication only of increased labor and waste in certain elements of the body, not of an increased developement in the resources and nutrition of the blood. And on the same ground it would appear that a super-fibrination of the blood, in acute inflammatory diseasee, must be regarded as a consequence and effect of those diseases, not as their cause, and not as a primary affection."

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*"In analysing the blood of seventeen healthy horses, Andral and Gavarret found the maximum of fibrin to be 5 per 1000; the mininum to be 3; the mean to be 4 In dealing with diseased horses, many of them meagre and half-starved, Dr. Franz Simon found this proportion increased to 11 or 12 per 1000. In one case, particularly, of experimental starvation of a horse, after four days' total abstinence, this observer found that the animal's proportion of fibrin had risen from 5 to 9."

We select the following practical papers from the London Medico-Chirurgical Transactions, republished in a late number of the British and Foreign Med. Review. (*Ed.*)

XIV.–A CASE OF GUNSHOT WOUND, AND SUBSEQUENT EXTRACTION OF A BULLET FROM THE BLADDER.

BY E. M. MACPHERSON, M .D.

At the battle of Chillianwallah, a soldier received a bullet in the situation of the left ischiatic notch, which could not be found at the time, but occasioned no impediment to the healing of the wound. Soon after the wound had been received, the man began to pass ropy mucus from the bladder, with great accompanying pain, and other symptoms of a foreign body in the bladder. The sound detecting a hard substance in that viscus, it was successfully extracted by the lateral operation, and proved to be an iron ball weighing one ounce and thirty-eight grains, covered with a thin sandy deposit. Mr. Dixon adds to this paper a table of eighteen other cases, in which bullets made their way into the bladder, the details of which, scattered through different works, are thus rendered easy of reference.

XV.—CASE OF DISARTICULATION OF THE LEFT CONDYLE OF THE LOWER JAW, WITH EXCISION OF NEARLY THE LEFT HALF OF THE BONE, ON ACCOUNT OF A VERY LARGE CARTILAGINOUS TUMOUR GROWING FROM, AND OCCUPYING THE SITE OF ALL THIS PART OF THE BONE, SAVE THE CONDYLE AND NECK.

BY WILLIAM BEAUMONT, M. D.

The lower jaw has been so often removed, both in successive portions, and in its entirety, that the *mere operation* is not calculated to excite any great amount of surprise or attention ; and as the case related by Mr. Beaumont has nothing remarkable in it, we do not know that it presents any feature deserving of an extended notice from us. Indeed, we must regard the case itself as of very little value in a practical point of view, for the tumour, whose removal required this formidable operation, is stated to have been but three months in its growth ; and a very little longer period had elapsed since its removal when the account was published ; so that it is impossible to say whether the disease is malignant and will return, or not ; and that to us seems the most important question in the matter.

XVI.—A CASE OF STRICTURE OF THE RECTUM, WHEREIN AN ARTIFICIAL ANUS WAS SUCCESSFULLY ESTABLISHED IN THE LEFT LUMBAR REGION.

BY J. WILSON CROKER PENNELL, M. R. C. S., ETC.

This is a case of obstinate stricture of the rectum, in which the sufferings of the patient for several years were of a most intolerable description, and were greatly increased by the existence of a false passage into the urethra and

bladder, through which the intestinal contents almost entirely escaped. The colon was opened in the left loin, as in the preceding cases related in an earlier part of the volume, and with great relief to the sufferer; but the ultimate result, of course, remains doubtful. The operation itself was not attended with difficulty, and will soon become an established one in surgery.

XVII.—ON THE USE OF THE SPECULUM IN THE DIAGNOSIS AND TREATMENT OF UTERINE DISEASES.

BY ROBERT LEE, M. D.

We are sorry to state, that while we deplore the low state of morals of those practitioners who are daily degrading themselves and bringing discredit on our Profession by the most disgusting abuse of the speculum, we do not think Dr. Lee's paper is likely to correct, though it is certain to irritate them. Some of the circumstances which he related are startling enough; and one history, communicated to him by Dr. Copland, is so shocking as to be almost incredible; but there is in the whole paper an evidence of partizanship and special pleading, which will go far to neutralise the good it might otherwise have done. An essay of this kind should not be what Dr. Lee's paper has elsewhere been called, "A counterblast against the speculum," but a calm inquiry into its real value, founded not upon isolated cases and gossiping reports, but upon severely sifted facts and numerical details. The practitioner alluded to by the author may make erroneous diagnoses, or he may wilfully deceive his patients,—unfortunately in every department of the Profession such conduct is too common; but we cannot admit that this exposure has done anything towards settling the question or that it altogether brings conviction home to our own minds. There are very different estimates among the best informed as to the value of the speculum but we are inclined to think there are few who find it so little necessary as Dr. Lee; and it was evident enough during the discussion which followed the reading of the paper, that some of the first obstetricians in London have come to different conclusions as to the necessity of employing it in the diagnosis of uterine disease.

The paper commences by an historical sketch of the rise and progress of the speculum, from which it appears that a trivalve speculum, of which an engraving is given, was dug up among other surgical instruments in the ruins of Pompeii, and that it was sparingly employed at all times by the ancient surgeons. It is in France, however, that the abuse of the speculum originated; and the history of its employment is indeed a melancholy one. Whether the system has ever been carried to the same extent in this country, we are not aware; but we incline to think it has not, and that the cases related by Dr. Lee are at all events not very common ones.

XVIII.—TO THE MEDICAL PROFESSION.

The undersigned having been appointed, at the last meeting of the Medical Association, Chairman of the committee on the "Results of Surgical Operations in Malignant Diseases," respectfully solicits contributions to the subject, ounded upon personal observations. To place the subject in as tangible a form s possible, he begs leave to direct attention to the following points:

1. The difference between cancerous and cancroid diseases, or those affections which are truly malignant, and those which are only partially so. In the former category are comprised schirrus, encephaloid, and melanosis; in the latter, certain maladies of the skin and mucous tissues, as lupus, cheloid, eiloid, and cancer of the lip.

2. The precise seat of the disease, as the skin and subcutanes cellular tissue; the eye, ears, nose, face, lips, tongue, salivary glands, jaws and gums; the lymphatic ganglions of the neck, axilla, groin, and other regions; the mammary gland, uterus, ovary, vulva and vagina, penis and testis; the anus and rectum; and, finally, the extremities.

3. The age, sex, temperament, residence, and occupation of the patient.

4. The cause of the disease, its progress, and the state of the part and of the system at the time of the operation.

5. Mode of operation; whether by the knife, caustic or ligature.

6. Time of death, or relapse after operation.

7. Examination of the morbid product; how conducted—whether by the unassisted eye alone, or by means of the microscope, and chemical tests.

The undersigned hopes that the importance of the subject confided to him, as chairman of the committee above referred to, will be sufficiently appreciated by his professional brethren to induce them to aid him in carrying out the wishes of the American Medical Association. The subject is one of absorbing interest, and cannat fail, if properly treated, to elicit matter of the greatest benefit. It is very necessary that all communications on the subject should be sent to the chairman of the committee by the 1st of January, 1852.

Medical journals, and newspapers friendly to the interests of medical science, will confer a favor upon the undersigned by inserting the above notice.

S. D. GROSS, M. D.

University of Louisville, June 29, 1851.

XIX.—AMERICAN MEDICAL PRODUCTIONS AND THE ENGLISH CRITICS.

In the April number for 1851, of the *British and Foreign Medical Review*, is contained an elaborate review and criticism of Prof. Drake's great work on the Principal Diseases of North America. This review, taken as a whole, is decidedly complimentary of the work, and it is so rare for our trans-atlantic ancestors to speak well of any *American* literary productions, that we cannot withhold the expression of both our surprise and satisfaction at this change of sentiments.

In medical literature, we must, to be honest, plead guilty to the serious charge laid at our doors, in the following quotation from the above work; but Dr. Drake has produced a book which will, in all probability, give a new direction to the medical literature of this country, and tend to reprove, if not repress, the bitter, but just sarcasm levelled at the Profession of America. The Reviewer concludes his notice of Dr. D.'s book in these words: (*Ed.*)

"We sincerely hope, however, that there is no danger of so useful a work, (alluding to the author's doubts about the success of his book,) not meeting with sufficient encouragement in America, to induce its veteran author to complete it without delay. We have had occasion to observe of late upon the dearth of medical works in that country, having pretensions to originality and research; native talent seeming to be wholly expended in dishing up and garnishing the productions of European pens, and it will, indeed, be melancholy to find an author, who has had the courage to produce a work of this magnitude, and one which would do honor to any country, left the sole consolation of a posthumous reputation." (Page 332.)

The foregoing strictures are well merited, as applied to book-makers; but when we come to speak of the character and spirit of the *original* articles published in *American Medical Journals*, we cannot see that we are much behind, in practical knowledge and originality of thought, our medical brethren on the other side of the Atlantic. The *cui bono* is the first thought with the American physician; he always takes the most direct route to gain an end, in despite of obstacles that might baffle and discomfit the more cautious and circumspect physician. Feats in surgery, obstetrics, and practical medicine, are being almost daily achieved in the wild woods of our almost boundless Union, which, if performed by a Londoner, might induce Her Majesty to confer upon him the title of Baronet. (*Ed.*)

The New-Orleans Medical and Surgical Journal.

Vol. VIII.] NEW-ORLEANS, SEPTEMBER 1, 1851. [No. 2.

The summer just closed has been oppressive in the extreme, and yet, strange to say, the health of the city has been preserved. During the months of May, June, and a part of July, scarcely any rain fell, and the earth became parched and cracked from very dryness. About the latter part of July and up to the middle of August, showers began to fall almost daily, and vegetation which previously wilted and drooped before a burning sun, began to revive and flourish with more than its usual freshness and beauty.

In consequence of thise excessive heat, many skilled in the "signs" began to espy evidences of an approaching epidemic; some pretended to read coming events in the multitude of flies and other insects which loaded the atmosphere; others, more superstitious, regarded the odd year '51 as the certain criterion of a "sickly season;" lastly, some, combining all the above "certain" evidences, ventured to predict our fate with all the self-sufficiency of a soothsayer of the Homeric epoch. Up to this time, thank heaven, all evil predictions have been utterly falsified in regard to public health. True, our population has been reduced by absenteeism to its minimum figure, yet many strangers and unacclimated individuals contiuue to visit the city, either on account of business or recreation, but in no instance, as far as we can learn, have they contracted any other than the ordinary diseases of summer. The Charity Hospital, the great receptacle for sick strangers, and malignant forms of disease, remains entirely exempt from every class of endemic and epidemic disease. But as we shall continue our weekly mortality, from the July No., it is unnecessary to dwell any longer on the universal prevalence of good health.

From these figures it will appear that our weekly mortality has greatly declined during the last month; this may be ascribed, in part, to the great abundance and excellent quality of fruit, with which all our markets are flooded, and the cleanly state of the streets, etc., which are now under the supervision of the Board of Health.

Deaths in New Orleans and Lafayette for the week ending—

1851,	June	28—	Total,	169—	Cholera,	43—	Fevers,	36
"	July	5—	"	175—	"	34—	"	19
"	"	12—	"	147—	"	16—	"	18
"	"	19—	"	174—	"	43—	"	19
"	"	26—	"	136—	"	20—	"	10
"	Aug.	2—	"	103—	"	12—	"	14
"	"	9—	"	113—	"	5—	"	13
			Totals,	1017		173		129

The rapid declention of deaths during the last three weeks embraced in the above table is as gratifying as it is inexplicable, and speaks well for the sanitary

condition of this community. Not only have the deaths from cholera, but from fevers also, been greatly reduced, and from every evidence before us, we may confidently predict the speedy extinction of the former disease in this city. This is another conclusive argument against the influence of heat in developing the cholera, as the deaths from this disease have diminished as the mercury rose in the thermometer. Such undeniable facts should have more weight with medical men than a thousand speculative theories, be they ever so well argued and sustained on hypothetical grounds.

To be more explicit—let it be remembered, that just before the middle of August, when the mercury stood at 95 in the shade, the cholera suddenly gave way, and scarcely a case was to be seen in any part of the city! It is a little singular to note the gradual diminution of deaths from a*ll* forms of *fevers*, as the summer advanced. This is directly at variance with our preconceived speculations on the influence of heat, as *one* of the exciting causes of fever.

To conclude this subject—some years of observation and an impartial examination of the writings and speculations of others, have led us to regard the vexed question of ætiology as still in its infancy, and we must await further accumulations of facts on this subject before we can expect to arrive at any degree of certainty.

Below we publish a classified table of the deaths in New Orleans and Lafayette, from the 1st January to the last day of June, 1851, inclusive. The classification was made at the request of the Board of Health, after the one recommended and adopted by the National Medical Association. The deaths and the diseases were obtained from the official records of the Board of Health, and may be depended on as correct. We endeavored to follow the classification in every essential, laid down by the National Medical Asscciation, as already stated, without, however, approving the divisions and subdivisions that learned body thought proper to adopt.

At another time and place we propose to examine this classification, and state in detail our objections to many of its features.

The reader must be struck with the number of deaths in the table below, the certificates of which were returned to the Board of Health, by commissaries, citizens, etc. Of the 3892 deaths, 817 died, it is fair to assume, without medical aid, or the "benefit of clergy," and add this number to those who died in the Charity Hospital, and we have 2262 deaths, leaving 1630 as the number that died under medical treatment and in private practice for the six months ending June, 1851. This fact, while it reflects much credit on the skill and success of our medical friends, at the same time indicates a low rate of mortality among our resident and respectable population.

We do not include in the above list perhaps 150 deceased persons over whose bodies an inquest is held, and who perish, almost invariably, by some accidental, external cause, and should be included in the number of those who die without medical aid; but as we cannot speak positively of the precise number of Coroner's inquest, held during the six months included in the Table, we cannot speak more definitely on this point, at present.

Mortality from different Diseases in New-Orleans and Lafayette for the months of Jan., Feb., March, April, May, and June of 1851.

(CLASSIFIED.)

DISEASES.	Jan.	Feb.	Mar.	April.	May.	June.	Totals.
I. *Zymotics.*							
Angina Maligna			1				1
Aptha						1	1
Cholera	30	29	11	108	121	131	430
do. Infantum	2	2	5	12	18	16	55
do. Morbus		1		3	2	4	10
Diarrhœa	33	28	27	35	23	21	167
Dysentery	35	32	36	34	44	43	224
Erysipelas	1	1	2	1	2	1	8
Fever	1	3	4	6	1		15
Do. Adynamic		1	1				2
Do. Ataxic		1	1				2
Do. Bilious	1	2		2		5	10
Do. Congestive	1	4	1	3	10	15	34
Do. Hectic		1	1		1	1	4
Do. Intermittent	1			1	1	10	13
Do. Pernicious			1	4	7	12	24
Do. Remittent	1	1		1	2	3	8
Do. Scarlet			2	10	12	5	29
Do. Typhoid	11	25	23	18	15	11	103
Do. Typhus	37	40	51	61	30	9	228
Influenza				1			1
Measles	4	2	5	4	6	5	26
Small Pox	6	10	4	8	8	2	38
Hooping Cough		4	7	2	2		15
Totals.	164	187.	183	314	305	295	1,448
II. *Sporadics.*							
Abscess		1				1	2
Anasarca				1	1		2
Cancer		1	1	4			6
Cancer of Breast		2	1		1		4
Carbuncle				1	1		2
Cramps					2		2
Croup	2	6	7	3	4	1	23
Debility	18	17	16	16	17	22	106
Dropsy	7	12	6	7	4	2	38
Fungus Hæmatodes				1			1
Gangrene	2	1		2		1	6
Gout				1			1
Necrosis	1		1			1	3
Scrofula	1	1	1	1	1		5
Scurvy			1				1
Suppuration of Parotid Gland			1				1
Tumor of Jaw					1		1
Totals.	31	41	35	37	32	28	204

DISEASES.	Jan.	Feb.	Mar.	April.	May.	June.	TOTALS.
III. *Nervous System.*							
Apoplexy	11	8	14	6	6	8	53
Cerebritis	2	6	3	4	8	11	34
Cerebro-Spinal Meningitis						1	1
Congestion of Brain	3	10	11	13	11	9	57
Convulsions	25	32	39	32	31	32	191
Delirium Tremens	7	7	12	9	10	3	48
Disease of Spine	1	2	1				4
Eclampsia				1		2	3
Effusion on Brain	1	1		2			4
Encephalitis	1	1					2
Epilepsy	3		2	3	2		10
Fever, Nervous	1	2	1		1	1	6
Hydrocephalus		1	2	6	5	3	17
Hysteria		1					1
Meningitis	3	3	2	3	9	6	26
Myelitis			1				1
Neuralgia			1				1
Paralysis	2	4		1	1	2	10
Phrenitis					1		1
Soft'g of Brain	2	1	1	1			5
Spasms	1			1			2
Sun Stroke						5	5
Tetanus.	5	3	5	7	6	3	29
Do. (Idiophatic)			1				1
Do. (Traumatic)	2		1				3
Trismus Nascentium	15	11	14	8	14	8	70
Totals.	85	93	111	97	105	94	585
IV. *Respirative System.*							
Apoplexy of Lungs			1				1
Asphyxia						1	1
Asthma	1						1
Bronchitis	9	5	9	3		2	28
Broncho-Pneumonia				1			1
Catarrh	2	3	12	7	3	1	28
Congestion of Lungs	1	2		2	1		6
Consumption	86	75	84	56	56	50	407
Cynanche Trachealis	1		1				2
Gangrene of Lungs	1			1	1		3
Hæmoptisis	2			2			4
Hydro-Pneumo-Thorax		1					1
Hydro-Thorax		3	1		1		5
Laryngitis			1	2	1		4
Œdema of the Glottis	1						1
Pleuritis	3	1	3	2	1		10
Pleuro-Pneumonia	2		1	2	1	2	8
Pneumonia	9	9	18	17	12	8	73
Pneumonia Typhoides	2		3	3	1		9
Totals.	120	99	134	98	78	64	593

DISEASES.	Jan.	Feb.	Mar.	April.	May.	June.	TOTALS.
V. *Circulative System.*							
Anæmia	1	1	3	2	2		9
Carditis		1					1
Congestion						2	2
Disease of Heart	6	2	8	7	4	4	31
Endocarditis	2			1			3
Hemorrhage	1	2		2		1	6
Hypertrophy of Heart	1	3	1	2	3	1	11
Ossification of Heart	1						1
Pericarditis		1	2		1		4
Wound of Heart	1						
Totals.	13	10	14	14	10	8	69
VI. *Digestive System.*							
Ascites	3	2	2			1	8
Abscess (hepatic)	2	1					3
Cancer of Stomach			1	3			4
Colica		1		3	1		5
Dentition	9	9	9	16	11	39	93
Enteritis	13	9	15	17	10	24	88
Entero-Colitis	3				2		5
Gastritis	1	1	2		8	3	15
Gastro-Cerebritis					2		2
Gastro-Enteritis	8	6	8	11	5	15	53
Hepatitis	3	3	13	9	7	4	39
Hernia (strangulated)					1		1
Indigestion						1	1
Jaundice				1	2		3
Marasmus	5	2	6	3	10	5	31
Mortification of Bowels					2		2
Peritonitis		1	2	2	1	1	7
Scorbutis		2					2
Stomatitis						1	1
Stricture of Œsophagus						1	1
Worms	1	1	1		1	1	5
Totals.	48	38	59	65	63	96	369
VII. *Urinative System.*							
Albuminuria			3				3
Disease of Bladder	1						1
Do. of Prostate Gland			1				1
Stricture of Urethra			1				1
Totals.	1		5				6
VIII. *Generative System*							
Accouchement	2	1	2	1	2	1	9
Amenorrhœa			1		1		2
Cancer of Uterus		2	1				3
Fever Puerperal		1		2	1	1	5
Metritis						1	1

DISEASES.	Jan.	Feb.	Mar.	April.	May.	June.	TOTALS.
Ovarian Dropsy				1			1
Peritonitis (Puerperal)				1		1	2
Totals.	2	4	4	5	4	4	23
IX. *Locomotive System.*							
Rheumatism	1	1	1	1	2	1	7
X. *Integumentive System.*							0
XI. *Of Age.*							
Senile	17	9	8	8	2	3	47
Infantil		1	1	6	1	2	11
Totals.	17	10	9	14	3	5	58
XII. *External Causes.*							
Accidental.	5	2			3	3	13
Amputation of Leg	1	1	2		1		5
Burn	2	2	1	4	3	2	14
Drowned	2	4	5	12	12	14	51
Fracture of Leg	1						1
Do. of Scull	2	2	4	1	2	1	12
Homicide				1			1
Injury of Chest		1				2	3
" " Head	3	1				1	5
" " Hip				1			1
" " Spine					1		1
" " Stomach				1			1
Intemperance	2		2	1	2	1	8
Poisoned (by Laudanum)	1						1
Rupture of Mitral Valve				1			1
Scald	1		1		2		4
Suffocation	1		1				2
Suicide	1	2	1	2	1		7
Wound	2			3	3	1	9
" of Neck	1			1	1		3
Totals.	27	15	17	28	31	25	143
XIII. *Not Specified.*							
At Sea			1				1
Caries of Vertebra	1						1
Out of City			3		6	1	10
Still Born	32	28	14	16	29	17	136
Uncertain	57	34	50	36	32	30	239
Totals.	90	62	68	52	67	48	387

RECAPITULATION.

CLASSES OF DISEASES.	Jan.	Feb.	March.	April.	May.	June.	TOTALS.
I. Zymotics	164	187	183	314	305	295	1448
II. Sporadics	31	41	35	37	32	28	204
III. Nervous System	85	93	111	97	105	94	585
IV. Respiratory "	120	99	134	98	78	64	593
V. Circulative "	13	10	14	14	10	8	69
VI. Digestive "	48	38	59	65	63	96	369
VII. Urinative "	1		5				6
VIII. Generative "	2	4	4	5	4	4	23
IX. Locomotive "	1	1	1	1	2	1	7
X. Integumentive "							0
XI. Of Age	17	10	9	14	3	5	58
XII. External Causes	27	15	17	28	31	25	143
XIII. Not Specified	90	62	68	52	67	48	387
Total.	599	560	640	725	700	668	3,892

Of these Certificates for burial were given as follows, viz:

Commissaries, Witnesses, etc., - - - - - -	817	
Died in Charity Hospital - - - - - - -	1445	2356
Certificates given by Physicians - - - - -		1536
Making a Total -		3,892

ABSTRACT OF A METEOROLOGICAL JOURNAL FOR 1851.

By D. T. LILLIE & Co., at the City of New-Orleans.

Latitude, 29 deg. 57 min; Longitude, 90 deg. 07 min. West of Greenwich.

WEEKLY. — 1851.	THERMOMETER.			BAROMETER.			COURSE OF THE WIND.	FORCE OF THE WIND, Ratio 1 to 10.	Number of Rainy Days.	Quantity of RAIN — Inches.
	Max.	Min.	Range.	Max.	Min.	Range.				
June..26	91.0	77.0	14 0	30.15	29.94	0.21	E.	2.30	1	0.110
July... 3	91.0	77.0	14.0	30.15	30.04	0.11	S. E.	2.00	4	0.065
" 10	93.0	79.0	14.0	30.20	30.05	0.15	S. W.	1.86	1	0.640
" 17	94.0	79.0	15.0	30.20	30.05	0.15	S.	2.00	1	0.005
" 24	92.5	76.0	16.5	30.19	30.08	0.09	S. BY E.	2.25	3	0.830
" 31	93.0	78.0	15.0	30.20	30.10	0.10	E.	2.14	4	1.240
August 7	91.0	77.0	14.0	30.25	30.10	0.15	S. E.	2.30	6	0.970
" 14	94.5	79.0	15.5	30.20	30.10	0.10	S.	1.57	4	1.205

REMARKS—The Thermometer used for these observations, is a self registering one, placed in a fair exposure. Regular hours of observation, 8 A. M., 2 P. M., and 8 P. M.

MOBILE PREPARATORY MEDICAL SCHOOL.

We invite the attention of Medical Students to the circular of Drs. Ketchum, Hamilton and Anderson, of Mobile, contained in the advertising department of the Journal.

These gentlemen in a very modest and unpretending card, (quite different in this respect from many we have seen), offer their services to medical students as teachers in the various branches of the healing art. They will undertake to prepare students for entering our Colleges and Universities—to teach them the elements and principles of our science, and to qualify them for the degree of Doctor of Medicine, after they shall have passed the *curriculum* of a course of lectures in our chartered Medical Institutions.

Mobile is a delightful city—healthy and refined, and can truly boast of much medical and scientific talent. She has some excellent hospitals, where clinical medicine will be taught by the above named gentlemen to their class.

Of the qualifications of Drs. Ketchum, Hamilton and Anderson, the Medical Periodicals of the South bear ample testimony, and we take great pleasure in recommending them to such of our young men, as really feel desirous of qualifying themselves for the arduous and responsible duties of medical practitioners.

SOUTHERN MEDICAL REPORTS.

EDITED BY E. D. FENNER, M. D., ETC., NEW ORLEANS.

The *second* volume of these valuable Reports has been published by Davis, Son & Co., of this city, and this number is a decided improvement, both in typography and material, on the first issue. The volume reflects great credit on the Medical Profession of the South, and the amiable and indefatigable editor is entitled to the thanks of the whole community for his noble, but as yet unrewarded efforts to give shape and durability to the experience and observations of the Medical Profession in this latitude. The work embraces valuable statistical medical information from almost every State south of the Blue Ridge, including California on the Pacific.

As most of the matter contained in these Reports is obtained from those portions of the country from which many of our communications are received, we scarcely deem it necessary (had we room), to enter into the merits and particular doctrines of any of the papers printed in this volume. The experience, tact, talent and sound discrimination of the Editor guarantee to the Professsion orthodox principles and correct views on the various medical questions touched upon in these Reports.

In another number we may have something to say on the merits of certain papers contained in this number of the Reports; but as some of them have

been critically examined by an able writer in this issue, we shall conclude these few remarks by urging upon every Physician of the South—indeed, of the country, to take the work. It embraces over 500 pages, mostly of original matter, and will be furnished to subscribers and others at $2 50 per copy. The price is certainly low enough for the poorest and most economical, and we hope to see an enlightened and liberal Profession extend to the work a patronage commensurate with the enterprise of the Editor, and the intrinsic value of the book.

UNIVERSITY OF LOUISIANA.

MEDICAL DEPARTMENT.

The Lectures in this School will commence on Monday, the 17th of November, and continue four months. For further information see July number of the Journal.

CHARITY HOSPITAL,

Report for June and July, 1851.

By J. V. Loubere, Asst. Clerk.

		JUNE.	JULY.
Admissions	Males	733	1126
Do.	Females	280	249
		1013	1375
Discharges	Males	612	789
Do.	Females	278	291
		890	1080
Deaths	Males	86	88
Do.	Females	28	40
		114	128

TABLE OF DEATHS DURING THE SAME PERIOD.

	JUNE.	JULY.	TOTAL.
Cholera Asiatic	26	33	59
Dysentery	14	13	27
Diarrhœa	9	6	15
Fever Typhus	9	11	20
Do. Pernicious Intermittent	8	8	16
Phthisis Pulmonalis	6	10	16
Other Diseases	42	47	89
Total	114	128	242

AN ANALYTICAL REPORT OF THE UNITED STATES MARINE HOSPITAL,

FOR THE QUARTER ENDING JUNE 30, 1851. BY P. B. MCKELVEY, SURG.

DISEASES.	Discharged in April.	May.	June.	TOTAL.	DISEASES.	Discharged in April.	May.	June.	TOTAL.
Anchylosis	2	0	0	2	Brought up	39	44	99	137
Amaurosis	2	2	0	4	Icterus	2	0	0	2
Ascites	1	0	0	1	Insanity, partial	0	1	0	1
Aphonia	0	0	1	1	Necrosis	2	1	0	3
Bronchitis	2	2	2	6	Orchitis	2	1	1	4
Burn	0	0	1	1	Ortorrhæa	1	0	0	1
Conjunctivitis	1	0	0	1	Paronychia	1	2	2	5
Contusion	1	5	3	9	Paralysis, partial	3	3	0	6
Cephalalgia	0	1	0	1	Pleuro-Pneumonia	1	0	0	1
Cholera Morbus	0	0	1	1	Pneumonia	2	0	0	2
Diarrhœa	2	3	6	11	Phthisis pulmonalis	1	2	1	4
Dysentery,	3	0	1	4	Psoriasis	0	1	0	1
Debility, general	1	0	0	1	Rheumatism,	12	8	15	35
Dislocation, humerus	1	0	0	1	Rupia	0	0	1	1
Delirium Tremens	0	2	0	2	Sprain. ankle	0	0	1	1
Fever, typhoid	3	5	1	9	Syphilis	24	20	15	59
" intermittent	12	7	14	33	Spleen, enlarged	1	0	0	1
" remittent	1	4	6	11	Scirrhous Testicle	0	0	1	1
" Chagres	0	0	2	2	Ulcer	5	2	9	16
Fistula in perineo	1	0	0	1	Urine, retention of	0	1	0	1
" in ano	2	0	1	3	Variola, confluent.	0	1	0	1
Fracture, fore-arm	1	0	0	1	Wound, incised	0	0	1	1
" leg	0	1	0	1	" contused	0	2	0	2
" infer. maxilla	0	0	1	1					
" cranium	0	0	1	1	TOTAL	96	89	98	283
Gonorrhœa	1	7	3	11	**DIED OF**				
Gastralgia	0	1	0	1	Apoplexy	0	0	1	1
Gastrodynia	0	0	2	2	Diarrhœa	1	0	0	1
Ganglia	0	0	1	1	Enteritis	0	1	0	1
Hepatitis	0	1	0	1	Fever, typhoid	1	0	0	1
Heart, function. disease of	0	1	0	1	Gastro-enteritis	0	0	1	1
Hæmoptysis	0	0	1	1	Heart, valvular disease of	0	0	1	1
Intemperance	1	1	1	3	Phthisis Pulmonalis	1	2	1	4
Iritis	1	1	0	2	Ulceration of Intestines	1	0	0	1
Carried up	39	44	99	137	TOTAL	4	3	4	11

RECAPITULATION.

REMAINING in the Institution, April 1st, 1851 - - 93

	APRIL.	MAY.	JUNE.	
ADMITTED	103	81	96	=373
DISCHARGED	96	89	98 = 283	
DIED	4	3	4 = 11	
				= 294
REMAINING July 1st, 1851				79

J. W. BREEDLOVE, M. D., Resident Surgeon.

THE NEW-ORLEANS

MEDICAL AND SURGICAL JOURNAL.

NOVEMBER, 1851.

Part First.

ORIGINAL COMMUNICATIONS.

I.—REMARKS ON THE USE OF ANÆSTHETIC AGENTS, MORE ESPECIALLY IN PARTURITION.

Read before the Sydenham Medical Society, of Montgomery, Ala.

BY WM. M. BOLING, M. D.,

President of the Society; and late Professor of Obstetrics, &c., in Transylvania University.

Nothing could more conclusively demonstrate the inaccuracy of the hackneyed charge so often made by *soi disant* reformers and their satellites, against the Medical Professsion, that generally its members are found arrayed in opposition to discovery and improvement in their art, than the rapid spread of the practice, and the almost unanimous admission, in so short a time, of the benefits and utility of Etherization.

At the suggestion, it would seem, of Dr. C. T. Jackson, Dr. Morton, in September, 1846, made practical application of Etherization on a patient for whom he extracted a tooth; and, in October, of the same year, on a patient on whom a surgical operation was to be performed, by Dr. John C. Warren, of Boston. Its first application in Obstetrical practice was made by Professor Simpson, of Edinburg, so late as the 19th of January, 1847. Its first use in Boston, indeed, in the United States, in Obstetrics, was by Dr. N. C. Keep, on the 7th of April, 1847. But about four years, then, have elapsed since the announcement of the discovery, and yet, throughout the civilized world, by the members of

the medical Profession very generally, whether in the refined and populous cities of Europe, and our older States, or in the remote village of our frontier settlements, the importance of the discovery is admitted, and the remedy freely recommended and used. How much physical suffering has already, both in Obstetrical and Surgical practice, been prevented by it, it would be difficult to estimate. It is true, that a portion of the members of the medical Profession, for various reasons, refrain from its use, or even condemn or object to it entirely. A few remain, as yet, unconvinced of its utility; more are sceptical in regard to its safety, while there is still left an occasional example, rare and almost solitary, it is to be hoped for the sake of common sense, of individuals who are not entirely satisfied of the propriety of the practice, on moral or religious grounds. It may be that there are also a few, who, having at an early period, made up and expressed an adverse opinion, deem it due to their character for consistency, that they should still be found in the ranks of the opposition. Of such, of course, the opinions are not predicated upon any practical knowledge of the subject, but often, it is not improbable, upon no better foundation than the current newspaper gossip. They condemn it as very dangerous,—so much so, that *they have never used it.* "Men have tried Etherization," says Doctor Channing, "and they who have done this the most, whether in Surgery or Midwifery, have most advocated it. Men have not tried it at all, and it would seem from the tone of their avowal, they do not mean to try it. These show it little favor."

But it should be remembered, I repeat, that about four years only have elapsed since the discovery, and instead of surprise that some scepticism should yet remain, or that early prejudices should not in all instances have been removed, we might, rather, wonder that in so short a time such an extensive and general adoption of the remedy should have taken place.

Among the people generally, too, some little prejudice, and a good deal of vague and undefined apprehension still exist, which, however, are rapidly disappearing. And it is gratifying to observe how quickly the latter, at least, is removed on witnessing the administration and effects of either of the agents. No person who has ever been submitted to the influence of Etherization once, in parturition, that I have met with, or heard of, would be willing again to pass through the same process without it.*

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*Since the above was written, I have heard of one exception: but the time has not yet been made.

In regard to the various grounds of objection to its use in Obstetrical practice, just alluded to, the only one of the present hour worthy of the least consideration, is the question of its safety. To moot the question in a religious point of view, (and indeed this is an objection rather of the the priesthood, than the medical profession,) would be ridiculous. That of its utility, is settled, in the proof of its power safely to annul pain,—so long as, and wherever, physical pain may be regarded as an evil. As may be shown, however, its usefulness in Obstetrical practice does not depend entirely upon the mere suspension of pain, which it produces; but, in many cases—regarding the safety of mother and child as paramount—it is susceptible of application for a still more important purpose. It has been thought by many, (and, indeed, at an early period of my experience with Anæthetics, such was my own impression,) that there was not an actual suspension of pain produced by them, but a state of stupor merely, during which, pain, to a considerable extent, might be endured, but of which, as of other things occurring during this state, the patient was merely oblivious. The early name, Letheon, given to the first anæsthetic used, was calculated to suggest such an impression. The idea, however, as regards the vast majority of cases at least, is erroneous; for, as is well known, the degree of anæsthesia does not always depend upon, nor is it proportionate to, the degree of stupor induced. It is not uncommon, for example, to meet with cases in which, in parturition, and in surgical operations, all pain is actually annulled by the use of anæsthetics, without the induction of sleep or stupor, the patients retaining their consciousness all the time, and having afterwards a perfect recollection of everything that transpired while under the influence of the remedy. A committee of the Medico-chirurgical Society of Edinburg, in their report, seem to have fallen into an error on this point. "It is questionable," says the report, "whether Chloroform or Ether should be denominated anæsthetic agents; because anæsthesia is generally understood to mean loss of sensibility in a part, whereas, in point of fact, it is suspension of the faculties of the mind, and unconsciousness of existing stimuli, that they produce." But the experiments of the committee must have been limited in number on the human subject, or imperfectly observed, or it would have been ascertained that total insensibility to pain—true and complete anæsthesia—might be produced without "suspension of the faculties of the mind." On the other hand, however, exceptional cases do occur, in which there are evident manifestations of pain while the patients are deeply stupified, yet, of which, on recovery, no recollection exists. Mere distortion or contraction of the features, however, of a patient under the influence of an

anæsthetic, during the uterine contractions, is, by no means, conclusive evidence that she is suffering pain. Recently, a patient to whom I administered Chloroform, in parturition, before the anæsthetic influence was fully induced, gave, as far as could be evinced by contractions of the features, slight moans and writhings of her body: indications which led me to suppose she was still suffering, but the impression was corrected by the significant remark: "Now I have a pain—but it don't hurt." Authors speak of cases of the former kind. And in a case which occurred in my own practice, (at an early period, and while it was still, even when requested by the patient, doubtingly and hesitatingly, and watching the while with the utmost solicitude least some untoward effect should result, that I ventured to resort to the use of an anæsthetic,) the lady, though suffering not the least pain, retained her consciousness during the whole period; was, as well as usual, aware of the progress of labor; conversed fluently; and indeed, was quite voluble in her thanks for the relief afforded. The anæsthetic used, was Sulphuric Ether.

The distinguished Professor Meigs, of Philadelphia, says: "Chloroform is not a soporific; and I see in the anæsthesia it superinduces a state of the nervous system in no wise differing from the anæsthetic results of alcoholic potations, save in the suddenness and transitiveness of its influence." Yet, surely, the anæsthesia resulting from the operation of Ether or Chloroform, during which the patient retains his consciousness and is aware of passing events, is manifestly different from the anæsthesia resulting from alcoholic potations, in which, that evidences of suffering should not be manifested under any usually painful operation, or memory of it retained, it is necessary that the patient should be deeply stupified, and his sense of passing events entirely annulled. What resemblance, for example, does that state of anæsthesia from Chloroform, spoken of by Professor Meigs himself, in which "the seeing brain enables the patient to *look* upon the application of cautery that *he does not feel*, while it sears him, or a bistoury, whose edge gives him no pain," and the stupor of alcoholic intoxication, bear to each other.

Professor Meigs further observes: If he "could believe that Chloroformal insensibility is sleep indeed, the most considerable of his objections would vanish." But is not this condition of Chloroformal insensibility to pain, of which mention has been made as often occurring without either sleep or stupor, preferable to even sleep itself, during which, as in dreams, pain may be, and often is endured? And is not the existence of the condition alluded to, evidence presumptive that generally in other cases—the influence of the remedy being carried

further, and sleep induced—there is the same absence of sensibility to what would otherwise be painful impressions; and that the patient is not merely in a *mental* stupor, with the function of the *sensitive* nerves to some extent unimpaired, as is probably the case in mere sleep, however induced? I would not claim this to be invariably the case, however, in the Chloroformal sleep or stupor.

It is the opinion of M. Flourens, deduced from experiments on animals, that Ether operates on the nervous centres in the following order: "First, on the cerebral hemispheres; second, on the cerebellum; third, on the spinal chord; and, lastly, on the medulla oblongata: destroying successively intelligence, regular movements, sensibility, and life." This, however, it is well known, is not the invariable order; for in some instances sensibility is suspended, while intelligence remains. The exact order of succession of the action of anæsthetics on the several parts of the brain and nervous system, is but imperfectly understood. There are, as yet, it must be admitted, some curious, unexplained phases in their operation. In the case, for example, of a negro boy about twelve years old, to whom I administered Chloroform while he was undergoing an operation, by my friend, Dr. Baldwin, for necrosis of the tibia, with a deeply encased sequestrum, during the first incisions, although the patient seemed deeply under the Chloroformal influence and soundly asleep, evidences of pain, slight to be sure, were manifested by writhings of the body and distortions of the features; whereas, in a subsequent stage of the operation, the patient having apparently passed to a considerable extent from under the influence of the anæsthetic, so that he awoke and consciouness returned, not the slightest manifestation of pain was evinced, during a period of at least fifteen minutes, his eyes the while being directed to the operator and following his movements with an expression of interest and curiosity. This was, too, during a painful part of the operation—the uncovering of the sequestrum with a chisel and mallet, and efforts with the forceps for its removal. Subsequently, for a short time, sensation returned, the patient's movements evincing pain; though but a slight increase in the dose of the Chloroform seemed necessary for its removal.

In the case of a negro man, about twenty-five years old, on whom my friend, Dr. Sims, was preparing to perform the operation of castration, the nervous sensibility seemed greatly exalted by the use of Ether. And, though it was inhaled to such an extent as to affect decidedly, his pulse and respiration, even to a somewhat alarming degree, the mere touch of the scalpel was followed by screams indicative of the most extreme agony. In an article copied into the London Lancet, from the

Gazette des Hospitaux, a case is mentioned which occurred at the Hospital du Mèdi, "in which the sensibility seemed to have been greatly exalted by the inhalation."

Preparatory to the operation of amputation below the knee, for necrosis of the tibia, with chronic ulceration, &c., on a man about thirty-five years old, last summer, I ordered the inhalation of Chloroform. After he was partially under its influence, because, either from a voluntary effort to avoid the inhalation, or involuntarily, the respirations occurred at somewhat lengthened intervals, we desisted from its use. In this case, it was the opinion of the gentlemen present, that the nervous sensibility was greatly exalted by the use of the Chloroform; such exaggerated manifestations of suffering did he evince during the operation. In particular, he thought the water with which the stump was sponged was boiling, though it was cool, nor could we by any means convince him of his mistake.

A case is mentioned in the London Lancet for 1847, of a patient whose leg was amputated by M. Henry James Johnson, under the influence of Ether, and who was insensible to every part of the process except the application of cold water to the stump; which he could "not support without exclamations of suffering." Such cases would seem to suggest the propriety of resorting, in instances requiring it after operations, to the application of cold water to the wounded surface, as a resuscitative measure.

But, to return, persons may differ in opinion as to the evil of pain, as there are differences in the ability to endure it,—as, also, in different individuals, different degrees of sensibility, in consequence of which the same causes in operation will result in different degrees of suffering. The fact, (of which all are aware,) that in parturition, as a general rule, recovery follows, and all goes on well—as also, the impression of its "inevitable necessity," as remarked by Professor Simpson—notwithstanding the excessive suffering at the time endured, have led to the habit of regarding less seriously than they deserve, the pains attendant on the process. What would be the impression of the observer on witnessing suffering from any other cause, equal in duration and degree to that resulting from even a moderately severe case of labor? To what a different degree would sympathy be enlisted.

Whether "*physiological*" or pathological, how pain, when extreme, can be regarded otherwise than as an evil to be, if possible with safety, avoided, seems strange. But, "c'est peu de chose de souffrier," very coolly observes M. Magendie, referring, we must believe, to his patients,

and not to himself.* By Professor Meigs, one of the ablest and most respectable of the yet remaining opponents of Etherization in parturition, the fact that the pain experienced in the process is *physiological*, is dwelt upon as a reason for its patient endurance. Its mere physiological character would scarcely seem a valid objection, however, to its avoidance, when this may be accomplished with safety, but might rather be presented as an argument against the probability of such a result. Of course, the question could only be determined by experience; but having been thus determined, all preconceived theoretical objections should at once give way. The propriety of making the necessary experiments or the prudence of submitting to them is another affair.

But is the excessive suffering so generally endured in the process of parturition, entirely physiological? When every thing is in the most favorable condition for the termination of the process, it is true, the pains of parturition may be endured without any great complaint by a female possessing a reasonable share of firmness, and they may with propriety be denominated physiological: say, for example, where the pelvis is of proper size and well formed; the child of proportionate developement, and properly presenting; the soft parts of the mother in a relaxed and dilatable condition; her bodily health in all respects good, and the nervous sensibility not exalted. But, where it is in any respect otherwise—where the general health of the mother is not perfect; where a high degree of nervous sensibility, (the result, it is presumable, of the refined and luxurious habits of civilized life,) is present; where the soft parts are in an irritable, rigid and unyielding state; the presentation unfavorable, or any decided disproportion exists between the pelvis of the mother and the child, so as to augment to any considerable degree the resistance offered under the most favorable circumstances to the transit of the latter;—the suffering is almost invariably of the most excruciating character; nor do I see why it should not be regarded as pathological, rather than physiological. It would be, at least in many instances, a delicate point to decide, where, in parturition, physiological pain terminates, and pathological commences. But, how rare are the cases, among the civilized at least, in which all the favorable conditions

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*We will indulge in an anecdote, somewhat in point, which we have somewhere read or heard. A medical gentleman during an attack of illness had a blister applied. A professional friend, in making preparation to dress it, tore off somewhat roughly the cuticle from the tender surface. The sick doctor complained of this. The other reminded him that it was his own custom to act thus towards his patients. So it is, was the reply, "but there is a difference between skinning, and being skinned."

above enumerated are present, compared to those in which some one or more of the disturbing agencies mentioned, does not exist.

Professor Meigs is disposed to speak, I am inclined to think, somewhat lightly of the pains of parturition, or, rather, as if the statements of others in regard to their severity were exaggerated; though in a work on the subject of Obstetrics, written by himself some years ago, and prior to the discovery of anæsthesia, he uses the common language of authors as to their severity. More recently, he writes: "I have always regarded a labor pain as a salutary and conservative manifestation of life force." Why does he regard such a *manifestation* as desirable? surely, it would seem more desirable to have the "life force," as we can, through the agency of Etherization, without, to the patient, so unpleasant a "manifestation." But, to proceed with our first intended quotation: "I have," says he, "found that women, provided they were sustained by cheering counsel and promises, and carefully freed from the distressing element of terror, could in general be made to endure, without great complaint, those labor pains which the friends of anæsthesia desire so earnestly to abolish and nullify for all the fair daughters of Eve." But, as every practitioner is aware, it behooves the accoucheur especially, to be somewhat chary of "promises," or disappointment the most disheartening and depressing will be the result at times when little expected. This language of Doctor Meigs is most assuredly, too, only applicable to exceptional cases—the few in which all favoring circumstances and conditions are found combined. As to the generality of cases met with in practice, what is the common language of the most able and experienced practitioners in regard to the attendant suffering? We quote from several Obstetrical authorities, as they present: Churchill says: "A singular deviation from mental integrity, apparently from *extreme suffering*, has been the subject of a valuable essay by my friend, Doctor Montgomery: I allude to a temporary *delirium* which occurs occasionally, just as the head is passing through the os uteri, or os uterum." Dr. W. Tyler Smith remarks: "No human suffering, perhaps, exceeds in intensity the piercing agonies of child-bearing." Dr. Protheroe Smith, (who, however, is an advocate of Etherization,) speaks of the pains of labor as "*incomparably* the greatest which human nature is called upon to bear." Cazeaux, speaking of the pains of the first stage of labor, says: "Pendant leur durée le poulse devient dur, fréquent, élevé. Le visage se colore, la chaleur augmente, la langue se désèche, * * * la femme pleure, se désespère, devient très irritable, &c." Of the second stage: "L'agitation est extrème, et dans certain cas, il y a même trouble marqué des fonctions intellectuelles. * * * Enfin une *douleur attroce*, qui arrache des cris à la femme * * * amène d'abord

les bosses pariètales au niveau, &c." Madame Boivin, (and notwithstanding the high respect and admiration in which Doctor Meigs is deservedly held, she at least should be deemed on such a question, better authority than he,) speaks of parturition as "un état d'angoisses." Blundell says: "The passage of the child through the pelvis is attended with a great deal of pain; * * * and so certain is this, that the efforts are usually denominated *the pains*. The sensations are described as of various kinds—dislocation, bursting, incision, &c." Capuron says: "Mais à mesure que le travail avance, elles [the pains] acquièrent plus de force; elles durent long temps, et n'ont prèsque pas d'interruption; *ce sont alors de vrais tourmens; des angoisses*. Il faut avoir vu une femme en travail, pour concevoir et pour peindre ses efforts, ses agitations, ses souffrances." A more extended examination, (without adducing Doctor Meigs in testimony against himself,) would show, I presume, but similar opinions.

As to the safety of Anæsthetics, more especially in parturition.—Up to the time of the publication of the work of Professor Channing, in 1848, there had not, he says, been reported "a case in which, during *Etherization in labor*, any untoward circumstance had occurred." Of course, the case of M. Skey, of cæsarian section, cannot be regarded as opposed to this statement. Up to the present time even, in not a single instance has a fatal result been attributed to Etherization in parturition, though three instances have been collected, in which insanity of several months duration was ascribed to the use of Chloroform. But we know that a form of mental derangement—puerperal mania—is by no means an unfrequent occurrence after parturition, in some way connected with, or induced by, the puerperal state. May this not have been the case in the instances under consideration? Indeed, it is rather surprizing that, of the vast multitude of cases of Etherization in parturition, such a small number of cases of puerperal mania are reported as having followed. Is this proportion probably greater—is it as great as the proportion of cases of the same disease, during the same period, occurring in the puerperal state, where Etherization has not been used? Notwithstanding the "post hoc ergo propter hoc," method of ratiocination, by which only the affirmative conclusion has been reached, it does not follow, that, because the insanity succeeded the use of Chloroform, it was caused by it. On the contrary, Etherization has been extensively used, with marked benefit, not only in other forms, but in puerperal insanity itself.

Etherization has been tried in the New York Lunatic Asylum, in *various* forms of insanity, with beneficial effects. "To none," says the

American Journal of Insanity,) "has it proved the least injurious." Dr. Skoe, Physician to the Royal Edinburg Asylum, states, that by the use of Chloroform, the most violent and excited have been almost invariably reduced to a state of calm and profound repose." I quote from the Medical Examiner for July, 1849, the following remarks, copied into it from the Journal of Psychological Medicine: "As it is a great object to break the sleeplessness of insanity, the occasional use of Chloroform vapor will be found valuable. We have had an opportunity of seeing more than one case in which it not only induced sleep, which had previously been absent four or five nights and days, but the patient on recovering from its effects, was found to be quite tractable and free from violence. The inhalation of Ether has been tried by M. Cazenave, of Pau, in the case of a lunatic female who had rested neither night nor day for five months, and in which it induced tranquility. M. Jobert, in a similar case, exhibited it with the good effect of inducing sleep, and restoring, temporarily, a state of rationality. M. Bouvier tried Ether, also, in a case of puerperal mania, with very beneficial results." Dr. Protheroe Smith mentions a case of puerperal mania, which was quickly and permanently relieved by Etherization. Dr. J. H. Lane communicated to Dr. Channing an interesting case in point: "I attended," says he, "a lady in confinement, who has been insane for some years. She was confined about three years ago, and was then exceedingly noisy and boisterous for some hours, but at length was confined, and did well. In the last confinement, she was growing quite troublesome as before, when I resorted to the use of Chloroform, which tranquilized her speedily." Dr. Channing makes the following judicious comments on the above case: "It shows how useful is Etherization; and more than this, and infinitely more important—does it not show, that the mental excitement, to which I shall next refer as an effect of Etherization, depends on circumstances wholly removed from those which lead to insanity, as it ordinarily shows itself, and from which we need have no apprehension as to the effect on the mind." The same author in another place remarks: "The only cases of puerperal mania which have come under my direct observation or knowledge since the introduction of Etherization, have occurred in cases in which this was not used." And his experience and observation in regard to the subject, have been by no means inconsiderable. Dr. Simpson, notwithstanding the immense number of cases in which he has used Etherization in Obstetrics, mentions not one of puerperal insanity as following. We are warranted, I think, not merely in doubting the agency of Etherization in the production of insanity in the cases just referred to, but in

totally excluding them from the list of cases of dangerous or unfavorable effects resulting from the use of Chloroform.

But to return. Though in no instance reported, up to the present time, has death resulted from Etherization in Obstetrical practice, still, if, in but a small proportion of the cases reported in which death during its administration for surgical operations, &c., is supposed to have been produced by it, such was really the fact, it would be more than we are authorized to expect, that death would not result from its use in parturition. There may be, and there probably is, (considering this hitherto exemption of the parturient female,) something in the parturient condition calculated to mitigate the noxious influence of anæsthetics to a considerable extent, though we can scarcely hope to counteract it entirely in all cases. If death has resulted from its influence in surgery, we should be prepared for the possibility of similar accidents in Obstetrics. But, considering the immense number of cases, (and to attempt an estimate would be useless,) in which, since their discovery, the various anæsthetic agents have been administered, how very small a proportion do even the reported cases of mischief, from their use resulting, bear to the whole; for there is scarcely a city, town, or village, in the civilized world, as stated, in which numbers have not been, for various purposes, submitted to their influence—in Surgical operations, in Dentistry, in parturition, in medical practice, in the amusements of the drawing room, and in the street sports of the schoolboy. The distinguished Surgeon, M. Lawrence, mentioned, in a note to Dr. Warren of Boston, in the spring of 1848, that Ether inhalation had been employed in St. Bartholemew's Hospital in all descriptions of operative proceedings, from the slightest to the most serious, between two and three thousand times, *without a single unpleasant result.* The cases of Professor Simpson, in which Chloroform has been used with a like result, are *legion.* Dr. Edwards, in the report of the Committee of the House of Representatives, on the "petition," &c., of Dr. Morton, in 1849, remarks: "*Among the hundreds of thousands* of cases of various diseases in which Ether has been used, no case has terminated fatally in which any injurious effect could be traced to Ether." "I freely admit, for I know it," says Dr. Meigs, perhaps the most influential of all the opponents of Etherization, "that *many thousands* of persons are daily subjected to its power." Dr. Suddard, of Philadelphia, writing from Paris, December 1st, 1847, says: "To show the estimation in which it is held I need only mention, that I have not seen a *single* operation during the whole *five months* of my residence, in which Etherization was not employed, and *always* with complete success. Not an accident has happened, nor anything occurred to mar its happy effects."

The novelty of the effects produced by anæsthetic agents; the facility, suddenness, and cerrtainty of their development; their marked, decided, and remarkable character; the paucity of knowledge as to their *modus operandi*, were powerfully calculated to lead to the apprehension of evil results. No one, perhaps, of the vast number who have resorted to their administration, has done so at first without decided feelings of anxiety—a vague fear as to what might follow; and which has but slowly worn off with their repeated, successful application. This frame of mind (which, too, has been equally partaken in all cases by surrounding witnesses,) is scarcely a favorable one for appreciating properly such phenomena as might arise. Consequently, in many instances effects justly attributable to other causes, have been ascribed by physicians and spectators to the anæsthetic used. Indeed, cases have been reported, of death, or alarming symptoms, from Chloroform, Ether, &c., in which the result was so obviously otherwise brought about, that it is wonderful that the agent in question could have been once suspected; and the circumstance can only be accounted for by the probable state of mind of the parties witnessing or engaged in the administration. Fearful that *it* might kill, and death resulting, all other agencies and influences were entirely unconsidered. In other instances, under the predominant influence of the existing state of apprehension, phenomena, which the experience of others, perhaps the subsequent experience of the observer himself, has shown to be of trifling import, have loomed into the most fearful forms, and additional reports in consequence have gone forth, of the dangerous character of the remedy. To one fearfully upon the watch for ghosts or witches, in a suitable locality and under favorable circumstances, even a thing so little to be feared as a bush, or a harmless hare, may appear such. By alarm, consequent on symptoms which we know to be harmless, physicians have been deterred from a second administration of anæsthetics.

The Editor of the Monthly Journal of Medical Science makes a remark which I may quote as apposite: "In many persons, however, we are bound to say, very grave symptoms have been only hazardous in appearance. We have seen it (Ether) produce stertorous breathing, foaming at the mouth, tetanic rigidity, and rapid and alarming fall of the pulse; and yet, such individuals have recovered as well and with as little inconvenience as those who have been thrown into tranquil sleep." Notwithstanding the recovery in such cases, the quotation shows, that everything connected with Etherization, especially to one of but limited experience in its use, is *not* "coleur de rose."

Let us now, however, in imagination, abstract from the reported cases

of death, or alarming symptoms, attributed to the use of anæsthetic agents, what, under the circumstances, to the disinterested enquirer for truth, might seem a reasonable proportion referable fairly to the influences mentioned. And again, the cases (and there are at least a few such) in which trifling phenomena (in some instances the common symptoms of anæsthetic influence) have been exaggerated into indications of terrible import to the ignorant witnesses or listeners, by avowed opponents of the practice, and how very small indeed, I repeat, the proportion of cases remaining, as compared with the number in which they have been used, will appear, in which death or really alarming symptoms actually resulted, and were not merely coincident, or bug-bears of a heated fancy.

But, if it is proper that we should refrain from the administration of a remedial agent, however valuable and favorable its influence in the generality of cases, because a possibility exists that mischief may follow, how limited indeed would be our materia medica! On similar grounds, too, we should decline the performance of any surgical operation not absolutely necessary for the preservation of life, since there is none so innocuous that it may not result in death. The mere prick of a needle has led to such a termination. To say that any particular remedy is without danger—is entirely safe, is almost equivalent to saying that it is of but little value. At least, almost every article of the materia medica,—every one perhaps,—capable of producing a decided and immediate, or prompt curative influence, is more or less dangerous—poisonous, if administered beyond a given quantity, varying somewhat with the condition of the system at the time. Any of them, from numerous circumstances connected with the patient—as difference of age, of susceptibility to its action independent of age, the modifying influence of disease, idiosyncracy, errors in administration, &c.—may be, occasionally, productive of mischief: as also from variations, unavoidable to some extent at least, in the quality or strength of many of the articles themselves. And more especially does this last remark hold good in regard to the narcotic vegetable extracts. When we speak, then, of the safety of anæsthetics, we do not mean to assert that they have not at times been, and may not again be, the cause of death, or alarming symptoms; but have reference to them merely as compared to the other more powerful and valuable articles of the materia medica. It would be exceedingly difficult, or impossible, perhaps, to collect the necessary material for instituting a strict statistical comparison between the results in a sufficient given number of cases of the use of anæsthetics and any other powerful article of the materia medica, with all the attendant

circumstances of importance bearing on each case stated, to enable us to determine precisely their relative safety or danger; and, as yet, only our general impressions after reflection, can be used as data—uncertain and inexact it must be confessed—for reasoning upon the subject. How much to the disadvantage of anæsthetics, in this respect, does the present watchful and excited state of the public mind operate? Generally, yet, in many communities, (and such a stage of public feeling or curiosity has at some time existed in every community in which the agents have been introduced, till the excitement and novelty have worn off, and apprehension has been calmed,) numbers of witnesses watch with eager curiosity and dread, every case in which they are used, only to give exaggerated statements of what they may see, or have seen, and to magnify trifling symptoms, of which they know not the import, into effects the most serious and alarming. It is not probable, then, that any really alarming effects have often been produced by them, which have not gone forth with heightened colors, or any death occurred which has not been reported to the world; while it is but reasonable to suppose that, in many instances, untoward symptoms have been attributed to them, and even death, as indeed has been shown in more than one instance, which were otherwise brought about. In the Medical Examiner for May, 1847, is an article copied from the Monthly Journal of Medical Sciences, in which allusion is made to two cases in the Royal Edinburg Infirmary, which were dying of secondary purulent deposits, after surgical operations during which Ether was inhaled: and the question is asked in all seriousness, "Is this result the effect of Ether?' We find it also stated in the same article, that "Professor Lyme has abandoned the use of Ether in his surgical clinique." But, in reality, Professor Lyme had at his time but very imperfectly adopted it, if we are to judge from the tone of some scathing paragraphs which we find in relation to the subject, in the Journals. And subsequently we find him "strongly advocating the use of Chloroform in surgery generally."

A lady, residing about a mile from town, who had previously determined to take Chloroform, sent for me at the commencement of labor that I might administer it to her. She was, however, delivered before I reached her residence, and consequently no Chloroform was given. A series of disasters befell her, and during and after the puerperal state, resulting in a protracted condition of impaired health. First, she had metritis. This was succeeded by phlegmasia dolens; and during convalescence from this she was attacked by typhoid fever. Recovery from this latter was scarcely complete before she was severely seized

with pleuro-pneumonia. Paralysis next succeeded; and this was followed by a severe attack of facial neuralgia. Her intention to take Chloroform was known. It was supposed by such as were not better informed in regard to the matter, that she really did take it; and the impression went forth, that this was the cause of her varied and protracted illness.

Dr. Channing gives the following case, which found its way into the newspapers, as one of death from the use of Chloroform. The particulars as here presented, were given by one of the attending physicians, Dr. Townsend. "Mr. Oliver was severely injured by a stone falling on his thigh, producing fracture of the bone and extensive laceration of the muscles. Chloroform was administered before the operation, that the wound might be properly examined. From this he experienced so much relief that he desired that it might again be given him, when the limb was removed. After the amputation, which was performed very near the body, he so far recovered as to frequently complain of severe pain in the lower part of the bowels, from which he had not been relieved when I left him. The opinion I then expressed to the attending physician was, that there was a rupture of some internal organ, which would eventually cause his death."

A case in point, which recently occurred in my own practice, may be briefly mentioned. A little boy, about eight years of age, had his hand caught in a cotton gin, and it, with his arm, was drawn in so far that his side was severely contused against some part of the machine. The hand was crushed and sawed to pieces in a terrible manner, and the forearm, and arm nearly to the shoulder, severely injured. I hoped that the arm might be saved, though the loss of the hand was manifestly necessary, and I determined to amputate immediately above the wrist joint. I did not propose to give Chloroform to this patient, simply because, in the hurry of preparation for the visit, as he lived some ten miles from town, I had neglected to provide myself with a supply. His father, however, an intelligent gentleman, proposed it, and fortunately having it in the house, administered it himself during the operation. He bore the amputation well, gave no manifestations of pain, and awoke much relived, but unaware, till his attention was directed to the fact, that the operation had been performed. On the third night after the operation, he was taken, and rapidly grew, much worse; and on examination the arm was found, at the different points of severest injury, in an incipient state of gangrene. The general symptoms were alarming, and he was rapidly tending to a state of stupor and incoherence. In consultation with Doctors Holt and Baldwin, it was determined that the arm should be immediately amputated near the shoulder

joint. In the meantime the symptoms were increasing in gravity with fearful progress. It was also determined to give him Chloroform, as we all believed that without it he would inevitably sink during the operation. The case was stated to the father—that the amputation was a *dernier resort*, the only chance for his son's life, as we believed; and that there was but slight ground of hope even from it; that he might even die during the operation. He was prepared for the event, and, though shocked, was not surprised. About twelve o'clock, he was placed under the influence of Chloroform, by Dr. Holt, his pulse and the temperature of his extremities even improving for a time from its effect. In this state the operation was performed. He gave no indications of pain, nor did he lose more than half an ounce of blood. After the operation, the influence of Chloroform was allowed to subside. For a short time he was more rational and his countenance more intelligent than before the operation; his pulse, however, soon began to sink, and continued to do so at about the same rate of progress as before the operation, and at half past two o'clock, P. M., he died. It was pretty generally reported in the place, that this patient died from the operation of Chloroform. We were all (I mean Doctors Holt, Baldwin, and myself,) well aware of his extreme danger, and of the probability that, should the result be unfortunate, it would be, by many, attributed to the Chloroform. Yet, we felt it our duty to give it.

In the present connection it may not be amiss to quote, from the work of Dr. Channing, a paragraph in which allusion is made to a fact admitted by every intelligent member of the profession. "There can be no sort of doubt," he observes, "that the condition which is produced by sudden violence—the crushing of a limb by a railroad car, by external injuries from powder explosions, &c.—is most unfavorable to the successful performance of a grave surgical operation, whether during Etherization or not. It is not Ether or Chloroform which kills here. It is the shock to the nervous system, which first periled life; and the operation, which gave the only chance of recovery, would probably have been followed by death, let the circumstances under which it was done have been what they may." In the Transactions of the American Medical Association, which met in Baltimore, in May, 1848, 154 cases of Etherization are reported, in surgical operations of various kinds, in the Massachusetts General Hospital, to April, 1848. Of the patients, eleven died; and of the eleven, four required operations in consequence of railroad accidents. In the British and Foreign Medico-Chirurgical Review, for 1847, we find the following apposite remarks, in allusion to the exaggerated statements in regard to the fatal effects of anæsthet-

ics: "One day, we had death from asphyxia; another, from coma; another, from hæmoptysis; some from convulsions, a few from pneumonia, and one or two from actual incremation or explosion through the accidental firing of the etherial vapor within the air passages. We have not had time to investigate all these terrible cases, but we may state, that we traced the one which seemed to be the best authenticated—that from hæmoptysis—from its full blown majesty in after dinner gossip, to its humble source in the hospital. And this was the case, as the man himself detailed it us: A day or two after a successful operation for hernia, under Etherization, the man pricked his gums while picking his teeth with a pin; and it was the product of *this* operation, not of the Ether, seen in the spitting-box by the patient's bedside, that was bruited about town, as of itself sufficient to settle the question in all future time."

Death after operations, however, is by no means very rare, under circumstances even where we have no explanation to fall back on but the shock produced. Many examples of such might be adduced, but one or two in point may suffice. Dr. J. H. Bennett mentions the case of a strong, robust woman, operated on by Velpeau. No vital organ was wounded, nor did she lose a pint of blood, but the operation was painful, and lasted half an hour. *She never rallied, and died in twelve hours.* M. Civiale introduced a catheter into the bladder of a patient of M. Honorè, while in severe pain from stone; but the introduction was scarcely completed "when the patient suddenly died." Now, had Chloroform been used in this case, its most confident advocates would scarcely have thought of questioning its agency in the result.

But to resume, suppose now the public and professional mind to be as much on the *qui vive* in regard to any other active and important article in the materia medica; each case in which it might be administered watched by numerous witnesses, some of them already prejudiced; every symptom following, distorted into an unpleasant effect—every unpleasant effect exaggerated; almost every death following, regarded as a consequence;—and to what impression with regard to it, without caution, would we be led? Surely, every trifling symptom might thus readily have attached to it an undeserved importance. Then, again, let us inquire, what would be the result should the effect of any other powerful and valuable article of the materia medica become the subject of evenings' amusement among the giddy occupants of the drawing-room, or of the schoolboy in his street sports? Let them attempt the same pranks with Morphine, Strychnine, Quinine, Belladonna, Stramonium, Aconite, Prussic Acid, Cicuta, Emetine, Eleterium, the prepara-

tions of Antimony or Mercury, &c., and the cases, not only of unpleasant consequence, but of death, would be by no means rare. But recently a case fell under my observation, in which it was with great difficulty I could save the life of a child from the action of a dose of Laudanum given by the mother, but a trifle larger than doses it had previously taken in safety—but little more than what would be regarded by physicians as a medium dose for a child of its age, under ordinary circumstances, and far, far short of the quantity that might have been given it with the most perfect safety under certain conditions of disease.

Last summer, I prescribed for a patient laboring under a neuralgic affection, the Extract of Belladonna, to be taken at intervals in divided doses, such as I had been almost in the daily habit of giving, and without any unpleasant result; and yet, either because the patient was unusually susceptible to the influence of the agent, or that the prescription had been made up by the apothecary from a new specimen of a better quality of the article, when I returned the next morning, (the remedy having been taken during the night,) I found my patient covered with an almost crimson rash, her pupils excessively dilated, and her vision, for the time, almost entirely lost. These effects wore off in the course of the next twenty-four hours. Of the former case, perhaps not more than a dozen persons in the place knew anything. Of the latter I think it probable that no one out of the family circle, with the exception of a few professional friends to whom I mentioned it, ever heard. But, had symptoms of equal gravity, or singularity, and continuing for so long a time, occurred in connection with the use of Chloroform or Ether, to what an amount of exaggerative gossip would they not have given origin? According to the returns of the Register General, there were official reports of *more than a thousand persons who died* in England and Wales, in 1840, from the effects of Opium, perhaps the most valuable article, notwithstanding, of the materia medica.

As to the comparative value and safety of the different Anæsthetic agents principally in use:—Chloric Ether, Sulphuric Ether, Compound Ether, and Chloroform.

First, in regard to Chloric Ether.—This is merely a solution or combination of one part of Chloroform, with nine parts of Alcohol. As yet, no fatal cases have been reported, resulting from its administration. Its use, however, has not been by any means extensive, having been confined principally to a few of the Profession in Boston. I have used it in a few instances, but have not been satisfied that it possesses any advantages.

Considering its composition, until a more extended experience has settled the question of its safety and value, what are the probable advantages and disadvantages to be expected from its use?

In the first place, the state of dilution of the Chloroform will almost certainly prevent its administration in a very concentrated vapor, and consequently diminish the danger which might arise from the incautious administration of the agent in a state of purity. Is this an advantage, however? for it should not be given without the utmost caution, and by proper caution the Chloroform vapor, in its purity, may, generally with certainty almost, be administered in a sufficient state of dilution with atmospheric air, rather than alcoholic vapors,—for instance, by using but little at first, and holding the sponge or handkerchief, compressed or folded, a considerable distance from the nostrils. We also have it in our power to increase the quantity at pleasure, so as to bring with certainty the less susceptible under its influence; which the diluted state of Chloric Ether prevents. I failed, in a case of "oozing tumor," (of one of the labia pudendi of a patient,) to which I some six or eight times applied the Acid Nitrate of Mercury, to throw the subject into such a state of anæsthesia, by *any* quantity of either Chloric or Sulphuric Ether which I was able to administer, as to prevent the utmost agony, manifested by screams continued for several hours; yet, without difficulty, I afterwards succeeded with the Chloroform so as to keep her in a perfect state of quiescence, both during the application and for several hours after, till the severity of the pain from the application might reasonably be expected to have subsided had Chloroform not been used.

Setting aside for the time the advantage and disadvantage suggested, are there any others arising from the inhalation of the alcoholic with the Chloroform vapor? It is not unreasonable to suppose that, in an irritable condition of the pulmonary and bronchial mucous tissues, the contact of the alcoholic vapor might produce locally a much more unfavorable effect than Chloroform alone, or, where any predisposition to inflammation existed, develop it into action.

We do not, it is still not too much to say, well understand the mode in which, when its operation is fatal, Chloroform produces this result; the nature and primary seat of its noxious influence; nor the order in which it acts on the different parts. The action is, probably, in its nature, one of sedation. May the alcoholic vapor inhaled in combination with it in Chloric Ether, while not modifying its anæsthetic power, except in the way already suggested—by dilution, and rendering it more difficult to administer in full doses, not have the effect of counteracting, to some extent, by its stimulant influence, this particular operation? Is

the impurity, or apparent impurity, with which it has hitherto been used, owing merely to the limited number of cases in which it has been given? to greater discretion and skill in the administration, by the gentlemen of Boston, by whom it has chiefly been used? to its state of dilution? or, to the supposed possible counteracting agency just suggested? Or may several of these circumstances have an influence?

It possesses this advantage over Sulphuric Ether, that its vapors are less pungent and irritating perhaps, so that it may be inhaled with less inconvenience, while its odor is much less offensive. But, says Dr. Hayward, "it is more apt to produce vomiting, and greater disturbance of the brain and nervous system, causing headache, restlessness and vigilance, which not unfrequently continue for many hours after its exhibition. Perhaps these last symptoms may be owing to the great amount of alcohol it contains." My own experience does not confirm this statement.

The Compound Ether, which is a combination of Chloroform and Sulphuric Ether, we have no reason to suppose possesses any peculiar or newly developed properties, but partakes of the combined advantages and disadvantages of the two agents. Like the Chloric Ether, because the Chloroform is in a state of dilution, the agent is less powerful, and perhaps, under an incautious administration, less dangerous than the Chloroform alone. We might reasonably expect, therefore, that in certain cases we might fail to produce anæsthesia by it, when the Chloroform would succeed. It is more irritating to the respiratory organs; more difficult, therefore, of administration, and more offensive to the olfactories than pure chloroform. We can discover no advantage it possesses over Chloroform, except the probable diminished danger arising from the state of dilution in which the chloroform vapors are of necessity almost, received into the lungs.

Sulphuric Ether, as regards the strength of its impression, or the dose necessary to produce the anæsthetic state, bears much the same relation to Chloroform, as has been observed, that paregoric does to laudanum. Under certain circumstances—as for instance in parturition, where the uterine contractions are energetic, the resistance considerable, and the sensibility acute—it is exceedingly difficult to bring the patient under its anæsthetic influence, by any quantity that can be conveniently administered. And indeed, so insusceptible are certain persons to its weaker action, that even when not, at the time of its administration, in pain, they cannot be brought into the necessary state of insensibility to undergo any painful operation without suffering. Such a case has already been mentioned. Other disadvantages of Sulphuric

Ether, in comparison with Chloroform, which have already been incidentally alluded to, are, the longer time necessary to induce its influence; its disagreeable odor; and, in some cases, the difficulty attending its administration, owing to the temporary irritation which it produces in the air passages. Dr. Hayward, in his paper "on the comparative value of anæsthetic agents," claims a preference for it, on the ground of its comparative safety. With the cautious and judicious, however, if its toxic action is the same, except in degree—if the seat of its primary noxious operation, and the order of succession of its impressions on the different parts of the nervous system, are the same as of Chloroform, it merits no very great preference on this account; for, with the proper care, it is difficult to see why the influence of the latter may not be so gradually induced, and its operation so cautiously watched as to enable us to stop short of a fatal effect, whenever such would not have been induced by the required freer administration of the former. If not, however—if the toxic action of the two agents should be shown to differ in nature, as in power, each possessing a peculiar poisonous action of its own, then, of course, no caution can remove the inherent differences which may exist, so as to reduce them to an equality of safety. Under the latter supposition, however, I do not think the question of their comparative safety is entirely settled: and time, with accumulated facts, only can do it satisfactorily. The weight of testimony, however, so far, is altogether in favor of Ether. Up to the time of the publication of the interesting paper of Dr. Hayward, in 1850, but one case of death, so far as he could ascertain, had been reported as resulting from Sulphuric Ether. This occurred in the Hospital of Auxene, in France, August, 1847, "before the best mode of administering it was adopted. And the post mortem appearances indicated, so far as any opinion could be formed from them, that death was caused by asphyxia," resulting, of course, from the too entire exclusion, by the method of inhalation pursued, of atmospheric air. He further states, that he had "never known its inhalation followed by a fatal or alarming effect, and there is reason to doubt whether death has in a single instance been produced by it *when it has been properly administered.*"

The generally admitted comparative advantages of Chloroform are, the facility of administration, (owing to the slight degree of irritation of the air passages which it produces, and its less offensive odor and taste,) and the greater certainty and promptitude of its anæsthetic operation. The latter quality, as will be shown further on, is one of great importance in certain obstetrical cases. With these advantages,

equal safety is claimed for it by some, or, rather, that the dangers attending its use are so slight as scarcely to merit consideration. Thus, Dr. Simpson, writing to Dr. Meigs under date of January 23d, 1848, says: "*As yet no accidents* have happened under its use, though *several hundred thousands* must have already been under the influence of Chloroform."

The principal objection that has been suggested to the use of Chloroform, is its greater, or supposed greater, danger as compared with Sulphuric Ether, admitted by a majority of the Profession, and which, at first glance, would seem to be established by the results of practice with the two agents. Thus, as has already been stated, up to the early part of the past year, 1850, Dr. Hayward had been able to find no more than one reported case, and this he regards as doubtful, of death from Sulphuric Ether; while he asserts that there are at least twenty cases reported of death from Chloroform. It may be safely said, however, that several of these should be excluded, at least as constituting a valid objection to the use of Chloroform—as being, some, mere coincidences, the death being otherwise produced, as from the disease or operation for which the agent was administered; while a considerable number of those cases in which the probability is strong that the death did result from the Chloroform, occurred in its early history, during its use with various forms of complicated and imperfect apparatus, before the simplest and best mode of administration was in general use, and the necessity for a free dilution of the vapor with atmospheric air known or acted upon. Dr. Hayward, as already stated, tells us that no case has occurred in his practice, of death or alarming symptoms from Ether. Professor Simpson tells us the same of Chloroform; and also informs us, that no such case has occured in Edinburg in all the vast numbers in which it has there been used. While Dr. Hayward's Ether cases, including with them the entire anæsthetic practice of Boston, might properly, it is probable, be limited to hundreds, the cases of Professor Simpson, including the practice of Edinburg, with Chloroform, extends to thousands. Though more recently introduced into practice than Sulphuric Ether, Chloroform has unquestionably become in much more general use; so that the number of cases of the latter vastly exceed the former, indeed, is beyond comparison almost, greater. In weighing too, the actual, rather than the relative safety of Chloroform, as administered at present, it is important to bear in mind the fact just stated, that a number of the reported fatal cases from its use, occurred prior to the general adoption of the present more simple and improved mode of administration. It would also be proper to take into consideration,

the probable share, in the early fatality more especially, of the use of an impure or badly prepared article. Dr. Simpson speaks of specimens found in the market, which were mixed with Aldehyde, Hydrochloric Ether, Hypochlorous Acid, &c. Of a particular specimen he says, "it was impossible to breathe it without feeling great irritation in the throat and chest. It emitted fumes that at once reddened litmus paper, and which on examination proved to be Muriatic Acid. Is it wonderful that bronchitis, coughs, and more serious disasters, should have followed the inhalation of such an improper and dangerous article?" The inportance of care in the selection of the particular specimen to be used may be hence inferred.

Should it be admitted, however, or rather should it be established by further experience, that Chloroform is really a more dangerous agent than Ether, because the mode of action in producing death, is one of character, and not merely of degree—of strength or power, notwithstanding the minor objections to Ether, as its more offensive odor, &c., it would be well to adopt it as the anæsthetic for *general* use, and reserve the Chloroform for the exceptional cases in which the former may fail to produce the desired influence, or from some other cause may be strongly objectionable—as would be the case whenever a very prompt anæsthesia might be imperative. The course here suggested is not the one as yet pursued by myself, such is my personal confidence in the safety of Chloroform, administered with due precaution, though a more extended experience may perhaps lead me to adopt it. While it would seem almost irrational to controvert the assertion of Professor Lindsey, of Washington, that "there can be no doubt that Chloroform, like all other narcotics, *can* be given in doses that are unquestionably safe," it does not follow that doses so small as to be unquestionably safe, will in all cases produce the desired anæsthesia.

It has been objected to Chloroform, that it will produce soreness of the parts with which it may come in contact in a fluid form during its administration;—an effect attributed by Souberaine, to impurity of the article. But the objection can scarcely be regarded as a serious one, because the cases are rare indeed in which to produce the desired effect it is necessary to apply the napkin or sponge immediately in contact with the face of the patient. And even here the accident may be avoided by the previous application of oil or cerate to the surface. I have seen one case in which, this precaution being neglected, and the napkin allowed to remain a considerable time in contact with the skin of the patient, a slight excoriation of the cuticle of the nose succeeded.

Dr. Hayward, who gives the preference to Sulphuric Ether, states,

as an objection to Chloroform, that "its administration is generally followed by vomiting and headache, which continue for several hours, attended by a great degree of restlessness and want of sleep." But, surely, Dr. Hayward is the only one who has observed such effects to occur *generally*, as consequences of the use of Chloroform ; such, at least, has not been the result of my own experience, cases of the character alluded to being altogether rare and exceptional, and proportionably not more frequent than after the use of Sulphuric Ether.

Mr. Thomas Nunnelly, in the London Lancet, 1849, speaks with much confidence of the article known under the different appellations of Chloride of Olefiant gas, Oil of Olefiant gas, &c., as an anæsthetic superior to Chloroform, though I do not find that it has been at all generally or extensively adopted. The recommendation was probably premature. However, he says of it : "While a smaller quantity of it than Chloroform will produce a sufficient degree of insensibility, a large quantity may be given with impunity." * * * "The animal may be recovered from a more deathlike condition than where this is induced by Chloroform." But animals have been recovered from a state induced by Chloroform, in which apparently they were absolutely dead.

As to the modus operandi of Anæsthetics? and do the *various agents act in the same manner?* These questions have not been settled. Some of those whose experience has been greatest, are silent, or almost so, in regard to them. Is it through decomposition of the anæsthetic vapors in the system, chemical change or combination with the fluids of the body, that the effect is produced? By Dr. Snow, they are supposed to operate merely by their *presence*, "impeding those combinations between the oxygen of the arterial blood and the nervous tissues, on which the functions of the nervous system depend." According to this explanation, in mere anæsthesia the arterial blood should not be found darkened, since the process of de-oxygenation is retarded by the presence of the vapor.

By a gentleman of New York, Dr. A. L. Cox, it is suggested that the etherized condition is one of mere coma, resulting from "a certain degree of dilatation of the vessels of the brain." But anæsthesia, as has been already stated, is often induced without stupor, narcotism, coma, or anything of the kind being present, the patients retaining their consciousness and ability to converse during the entire continuance of this state.

Dr. Searles, and others, including the Editor of the Medical News and Library, regards the condition of one under the influence of Ethe-

rial vapor, as that of asphyxia. But the same objection applies to this opinion.

The Editor of the Medical Times seems to regard the insensibility to pain, produced by anæsthetics, as clearly analogous to that from concussion or ordinary narcotic poisoning. But again the same objection is applicable. Many others, and among them M. Roux, M. Magendie, Professor Meigs, and the Editor of the London Medical Gazette, look upon it it as a condition similar to the insensibility attending intoxication. But, as remarked on a previous occasion, the condition is very different.

It is the opinion of M. Amussat, that the insensibility produced by Ether, is owing to an alteration in the arterial blood; and that the "degree of insensibility is in direct ratio to the extent of this alteration," —the alteration consisting in the conversion of color to the dark hue of venous blood.

Dr. Snow tells us, that "Chloroform acts by its narcotic properties alone, * * * and paralyzes the heart at the same time as the respiratory movements." He regards anæsthesia from Ether, as a state very different from asphyxia; and believes, that in the former, the blood is changed in the lungs from venous to arterial, but that the changes which take place in the capillaries of the system are probably interfered with.

It, Chloroform, occasions death, says the report of the Committee of the Edinburg Medico-chirurgical Society, "by producing, first, coma; secondly, asphyxia; and lastly, by cessation of the heart's movements."

According to Mr. Nunnelly, the action of anæsthetics is immediately and primarily upon the nerves; the heart, respiration, circulation, the blood and the muscles, being secondarily affected. This is probably true in every respect, if he has reference, so far as the blood is concerned, to the dark and fluid appearance which it has so generally been found to present; though the more common belief would be, that it is incorrect if he means that the anæsthetic does not act upon the nerves through the medium of the blood.

It will be found, I am inclined to think, at least such is the opinion to which my own observation leads me—and a somewhat similar view is expressed by Dr. Snow—that, even with subjects on whom the operation of anæsthetics is otherwise equally favorable, a larger quantity is necessary, as a general rule, to bring and maintain large and plethoric persons under their influence, than the small and spare. A larger quantity of circulating fluid has to be impregnated to a given point—the extent necessary to impress the nervous system; and it is but rea-

sonable to suppose that a larger quantity of the agent selected would be required.

As to the particular cause, and manner, of death resulting from Anæsthetics.

To one conclusion we are irresistibly led by an examination of the cases: that the fatal result from the use of Chloroform has neither been owing, in all instances, to the exclusion of atmospheric air, nor yet to what might be regarded as an excessive quantity of the vapor, judging by what we know may generally be safely given. It will be seen, that in several cases the fatal result was almost instantaneous; that in a considerable proportion a mere handkerchief or sponge was used as the instrument; while, in regard to quantity, in a number of cases less than ℥ i was used, in some, but a few drops.

Death, in the reported cases, was probably brought about in two different ways. *First*, not so much from any toxic action of the anæsthetic used, as from asphyxia, the result of the exclusion of a sufficient quantity of atmospheric air for the oxygenation of the blood, owing to the improper or imperfect method of administration. *Second*, from paralysis of the lungs, and heart more especially: the result of the reception of the vapor in the system in a high state of concentration, and its direct action on the organs named, the fatal operation being favored by idiosyncracy or organic disease. We do not consider it necessary that the administration should be protracted to bring about a fatal result in the latter way; but that a few inspirations might suffice, the volume inhaled in a concentrated form reaching the heart with the passing current. Under the former circumstances, the blood, after death, would of course be found of a dark venous hue; while under the latter, the general mass might be but little changed, as it has been observed in a few instances, and as was the fact in two experiments spoken of by Dr. Snow. The animals were speedily destroyed by a highly concentrated vapor, and on examination he found "the blood in the lungs still florid, immediately after death."

Although by the use of the sponge, or handkerchief, with *great care*, it is probable a fatal result in either way may with certainty be avoided, still without this it is otherwise, and the possibility of such an occurrence, more especially by a too concentrated vapor, not at all improbable. Although the same objection applies, *a fortiori*, I am inclined to believe, to all the various forms of apparatus which have been proposed, to all at least which I have seen, we may still reasonably expect that one will be invented, by which the danger of death, in either mode, may be

in a great measure obviated; by which it will be impossible to exclude the atmosphere to such an extent as to de-oxidize the blood, and thus produce asphyxia, and which shall *insure* such a dilution of the anæsthetic vapor as will prevent its direct toxic operation; in short, one which will give to the physicians the power to regulate with precision the degree of concentration of the vapor. Dr. Snow claims to have invented an instrument possessing these advantages; but, as it has not been generally adopted by his countrymen, there is reason to fear that the desirable degree of perfection has not been attained. I have not seen it.

To guard with certainty against the induction of the toxic influence of Anæsthetics, (and on this point reference is had, for obvious reasons, mainly to Chloroform,) or to counteract it when developed, it is important that our knowledge in regard to the character of this influence should be extended, and the primary seat, and order of its impression on the parts of the nervous system, more clearly understood than they are. Unfortunately, of these points, as yet, we know but little.

To the impressions of all medicinal agents, it is well known that in different individuals different degrees of susceptibility exist: in some cases natural, in others acquired—as from the habitual use of an article; while it is also known, that the susceptibility is greatly modified in individual cases, by the particular condition of the system at the time. Thus, while in one individual, ptyalism may follow the use of a single grain of a mercurial preparation, drachms may not induce it in another. The dose of Opium which would prove fatal to one, might have but little effect on another. I recently treated an adult female for acute dysentery, who was thrown into quite a deep state of narcotism, with slow respiration and stertorous breathing, by the eighth of a grain of Morphia, every four hours. Judging, however, from the reported cases of death from Chloroform, to no other article of the materia medica are the extremes in the degrees of susceptibility in different individuals, so widely asunder. If some of the cases are reported truly, death would seem to have been occasioned by a quantity in comparison wonderfully small; while in others, I can say from my own observation, that a quantity but little short of what it would seem possible to exhibit conveniently by inhalation, (so concentrated was it given,) and continued several hours, has failed to produce any other than the most desirable effects. A very common rate of administration is, an ounce an hour. Often it is given in much larger quantity without any unpleasant effect. And yet, Dr. Heslop, the resident medical

officer of the Birmingham General Hospital, reports a case in which sound sleep was induced in one second by breathing through an inhaler containing thirty minims of Chloroform. Is this seeming diversity of susceptibility dependent on, or in some way connected with, the mode of administration entirely? and to the article administered in the ordinary way of therapeutic agents, does not exist in a greater degree than to other powerful remedies? This is probable; for, so far as I am aware, no case has yet been reported of untoward symptoms resulting from the administration of Chloroform by the stomach. It is proper to remark, however, that in no instance, probably, has anything like a proportionate quantity been used in this way. Still, if reports are true, death, where it has occurred from Chloroform, by inhalation, has not been produced in all cases by large quantities. On the contrary, where this result has taken place it has, with few exceptions, occurred early, before any considerable quantity has been introduced into the system.

Whatever the nature of the poisonous action of Chloroform, it would seem probable that its gradual introduction into the circulation diminishes the susceptibility of the system to its toxic influence. We may readily conceive, that the Chloroform particles, carried in minute quantity at first, and disseminated in the circulating current to the different parts of the organism, (the brain and heart more especially, it is probable,) might, by their contact, induce a power of resistance, or rather, a state favorable to a tolerance of the large quantities which, subsequently, it might be necessary by degrees to introduce, so as to bring about the anæsthetic influence. Such a supposition would seem less plausible, under the view that the primary noxious impression is produced upon the blood itself; and not at all satisfactory, or rather, incompatible with the view, that it is merely an exaggeration of the ordinary anæsthetic state. This would imply merely a question of time and repetition—viewed in comparison with other remedies; for we know, as has been stated, that a tolerance of their noxious influence is induced by use.

It is true, however, that deaths have been reported from the use of Chloroform, since the pretty general abandonment of the inhaler; and in but small quantities, under circumstances rendering probable its gradual introduction. But, though but a small quantity of the article might have been applied to the sponge,—when we remember the greater specific gravity of the Chloroform vapor than atmospheric air,—might it not in some instances, under favoring circumstances, (as of a strong and sudden inspiratory effort at the moment of application, the position of the patient on the back, &c.,) have been introduced, though, I repeat,

in small quantity, in a higher state of concentration than was contemplated? Can we account, by the supposition of such an accidental combination of circumstances, for some of the reported deaths? Otherwise, how can we explain the fatal event resulting from the limited quantity applied?

We know, it must be admitted, but little of the *modus operandi* of Chloroform, in the production of a fatal result. Can we, or rather have we as yet, derived any important practical information from the post mortem appearances? But little, I fear, and that chiefly of a negative character. No great number of post mortem examinations has been made. They are highly desirable, should opportunities hereafter present; for important information, it is not unreasonable to suppose, may yet be obtained in this way, which may enable us to guard more effectually against a fatal termination; as we can scarcely hope, that already are we possessed of such a knowledge of the operation, and of the best mode of administration and management of anæsthetics, as to warrant us in claiming to have attained such a desideratum.

Post Mortem Appearances.

In fifteen cases of death, following the use of Chloroform, in which the post mortem appearances are more or less perfectly given, we find it stated that the heart was healthy in one; the lungs, in three; and the brain, in six; that the brain was congested in four, and the lungs in eight.

The most interesting of the post mortem appearances, in reference to the mortality, perhaps, are those indicative of previously existing disease, which may have aided in producing the fatal termination, or in deciding it, where, in a healthy state of the organs, such would not have been the result. Among the least important of these, were, in four cases, pleural adhesions; and in one, enlargement of the bronchial glands. Among the more important were, tubercles and abscesses in the lungs, in one case; and in several, various morbid conditions of the heart. In seven cases, we find it stated that this organ was *flaccid* or *flabby*. Though I have set this down as a morbid condition existing prior to the administration, I do not feel at all confident that it was not owing to the operation of the Chloroform. In three cases, the heart was pale and soft; in three cases, it was affected with fatty deposition; in four, the walls were thin; in two, the organ was enlarged; in one, it was small; and in one, it is merely stated that there existed "a diseased state of the heart." In most of the cases, the heart was found empty, or nearly so—an effect, in all probability, of the artificial respiration.

In no case is it stated that the blood was natural. In five cases, it was frothy, or there were bubbles of air in the heart or some of the blood-vessels. In ten cases, we are told, it was dark colored and fluid. Small coagula were found in only two cases. This dark and fluid condition of the blood is perhaps the most common post mortem appearance in the human subject; and in experiments on animals has also been found by Mr. Thomas Wakely, M. Amussat, and others. It is stated too, by Mr. T. B. Todd, that "one circumstance which particularly arrested his attention," in a patient whose leg he amputated while under the influence of Chloroform, "was the highly venous appearance of the blood issuing from the arteries."

Notwithstanding, however, the frequency of this appearance of the blood after death from Chloroform, there is room for doubt as to whether such a change is an essential pre-requisite to the anæsthetic state. Indeed we have sufficient evidence that it is not invariably present. In an account of an experiment performed on a horse, by M. M. Gerardin and Verrier, (the animal being reduced to such a state of insensibility "that the most painful operations were performed without any appearance of consciousness,) we find it stated, that "one of the carotid arteries was kept exposed during the experiment, but at no period could there be detected any change in the characters of the contained blood." In other experiments, by the same observers, we are told that "blood obtained from wounds made during the continuance of the insensibility, had all the characters of ordinary arterial blood. While M. Blandin asserts, that, in surgical operations performed under the influence of anæsthetics, the arterial blood is found of a venous hue. M. Laugier states that no change of color is observable. M. Grubly, after a series of experiments on dogs and rabbits, states, that during the inhalation of Chloroform, "the arterial blood retains its florid color," (though it grew dark under the use of Ether,) "and if under asphyxia it assumes the dark, venous character, the red color is speedily restored." Further, that "Chloroform, far from rendering the hue of the arterial blood venous, augments the intensity of its red color; and more than this, that it imparts the arterial color to venous blood." In the examination of a dog killed by M. Plouvier with Chloroform, there was found "nothing to indicate the cause of death." M. Jobert, speaking of a case of amputation, at the thigh, while the patient was under the influence of Chloroform, observes, that the "blood had lost somewhat of its ordinary bright tint, but was not so deeply colored as was observed to be the case after the inhalation of Ether." In cases of anæsthesia from the use of Ether, reported by Dr. Snow, on the other hand, it is stated that the "blood co-

agulated firmly in every case, and the jets of blood from divided arteries in every case had the usual vermillion hue." M. Gore found that the blood drawn just before death, from a rabbit killed with Chloroform, *coagulated* quickly and firmly. In the veins and arteries of rabbits under the influence of Ether, he also found the blood of the proper venous and arterial hue, and to coagulate firmly when drawn. In two experiments spoken of by Dr. Snow, in which death was quickly produced by a highly concentrated vapor of Chloroform, he found "the blood in the lungs still florid immediately after death." In the report of a committee of the Medico-chirurgical Society of Edinburg, on the properties of Chloroform, it is stated, that on examining, thirty hours after death, a pigeon which was killed in three minutes and a half by being placed in a jar containing ʒ i of Chloroform; a rabbit killed in four minutes by breathing through a hankerchief wet with ʒ ii of Chloroform; and a dog killed in nine and a half minutes by breathing through a hankerchief wet with ʒ iii of Chloroform, "it was found that the *right* cavities of the heart were distended with blood, which was *firmly coagulated*, the lungs and other organs being healthy." Another rabbit examined four hours ofter death, presented the same appearance. Indeed, the statement is made in general terms, that "*firm coagula* were found in the heart in every case where Chloroform was inhaled, except one, in which it was also injected directly into the veins. Two experiments performed by Dr. Bennett, satisfied him in regard to Ether:—"that it does not destroy the coagulability of the blood." Thus, in the examination after the first experiment, it is stated that the "right side of the heart was gorged with blood well coagulated." In the second, "the right side of the heart and venous trunks were distended with firmly coagulated blood." In no case of operation performed by myself have I noted any material change in the characters of the arterial blood.

In view then, of such contradictory statements, such opposite conditions of the blood as observed by different experimenters, are we not almost warranted in the supposition that the dark and liquid condition of this fluid spoken of, is not a necessary requisite to the anæsthetic state, but a secondary result merely, in some instances of the asphyxia, produced by the inhalation being continued to an unnecessary extent after insensibility has been established; in others, to the exclusion of the necessary quantity of pure atmospheric air? Do we not find circumstances connected with the modes of administration, to some extent confirmatory of this view? In the experiment of M. M. Gerardin and Verrier on the horse, just mentioned, the Chloroform was administered by placing pieces of saturated sponge in the nostrils "in such a manner

as to allow the free access of air during respiration." In their experiments on smaller animals, these were placed in "a large wooden box perforated with apertures to *allow of the free access of air.*" The quantity of the anæsthetic used was small, so that the influence was slowly and gradually produced; the atmosphere, therefore, being neither excluded by mechanical contrivance, nor by excessive saturation with the vapor. For instance the quantity used on the horse was fifteen grammes, (less than ℥ ss,) and the time required to produce insensibility was seventeen minutes. In his experiments, (in which, it will be remembered, the hue of the blood was *not* darkened,) M. Gueby tells us that "he was *careful* to use an instrument which allowed a due supply of atmospheric air to mix with the vapor." In most of the experiments of Mr. Wakely, in which the blood was found dark and fluid, an inhaling apparatus was used, or the animals were destroyed by placing *them under a bell glass*, with the anæsthetic. It will be borne in mind, however, that in an experiment of M. Amussat, on a dog, on which in part his opinion of the dark coloration of the blood is based, the Chloroform was given from a sponge.

The presence of air in the veins has not been accounted for in an entirely satisfactory manner. The supposition of commencing decomposition, is not sufficient in regard to some of the cases at least; because in several instances air was found under circumstances rendering the existence of the necessary degree of putrefaction, to say the least, exceedingly improbable—as in early post mortem examinations in mid-winter. The most probable explanation as yet offered, is, that in most instances the air was introduced in the attempts made to resuscitate by artificial respiration. And I am not aware that it has been found in any case where it is directy stated that such attempts were not made. But then, in several instances it is stated that, in operating, air bubbles escaped from the blood vessels while the patients were yet alive. It has been suggested, that the phenomenon is owing to some peculiar "unexplained action of Ether on the blood."

(*To be continued.*)

II.—AN INTERESTING CASE OF SEMIMAS—HERMAPHRODITE.

BY J. C. MASSIE, M. D.

Of Galveston, Texas.

The following description of an Hermaphrodite is so interesting that we cheerfully make room for it, to the exclusion of other matter.

If we are not mistaken, the subject here described fell under our observation some two years since in this city, and we published in the Journal, a short and very imperfect account of it at the time. But the description by our intelligent correspondent, Dr. Massie, is so much more complete and scientific, that we shall give it entire. (Ed.)

Doctor Hester:

Sir.—I was present with my friends, Drs. Parker and Sigismund, and made a thorough examination of this case, and flatter myself that a full detail will be interesting to you, as well as your readers.

We have the term from the well known mythological fable of the union or confluence of the bodies of the nymph Salmacis, and Hermaphroditos, the son of Mercury and Venus—an organised body, in which there is either a real or apparent combination of the characteristics of the two sexes." The first is the true, the second the spurious hermaphrodite. Hermaphrodites are also natural or preternatural.

I believe it is a settled principle, that the animals in which the organs of the two sexes are naturally combined in the same individual, are confined to the invertebrate division, and are most common in the molluscous and radiate classes. If the term *hermaphrodite* may be applied to those species which propagate without the concourse of the sexes, but in which no male organ can be detected, as well as to those in which both male and female organs are present in the same body, then there may be distinguished three kinds of hermaphroditism.

1st. The Cryptandrous, or in which the female or productive organs are alone developed. *Ex:* The Cystic Entozoa, the Hydrostatic Acalephes, some Polypes, and Sponges.

2d. The Heantanarous, or in which the male organs are developed, but so disposed as to fecundate the ova of the same individual. *Ex:* The Cirripeds, the Rotifiers, Trematode and Cestoid Entozoa, and some Acephala, as the Cyclas.

3d. The Allotriandrous, or in which the male organs are so disposed as not to fecundate the ova of the same body, but where the concourse of two individuals is required, notwithstanding the coexistence in each, of the organs of the two sexes. *Ex:* The Gastropodous Mollusks, with the exception of the Pectinibranchiate order, and class Annellida.

All the other invertebrates—as the Cephalopods and Pectinibranchiate Gastropods, most of the Acephalous Mollusks, the insects, Arachnidans and Crustaceans, the Epizoa and the Nematoid Entezoa, the Echinodernis and Medusæ—are, like the vertebrate classes, dioecious, or composed of male and female individuals.

The unnatural hermaphrodites may be divided into those in which the parts peculiar to the two sexes are blended together in different proportions, and the whole body participates of a neutral character, tending towards the male and female as the respective organs predominate; and into those in which the female and the male organs occupy respectively, separate halves of the body, and impress in each portion the characteristics of the sex.

This latter and very peculiar kind of hermaphroditism has hitherto been found only in insects and crustaceans. But I have just been informed by a female friend, whose veracity is unquestionable, and whose intelligence is far above mediocrity, that she once saw a case of this kind in the human species,—and, also, by a friend, a gentleman of this city, of fine intelligence, and whose probity or veracity would not under any circumstances be questioned. This case presented the forms and colors of both sexes, divided by a longitudinal line on the body. In the extracts from the minute book of the Linnæan Society, printed in the 10th vol. of their Transactions, it is stated, that Alexander Macleay, Esq., exhibited a specimen, showing that two papiliones, referred to distinct families by Fabricius, are in reality, the male and female of the same species. This specimen presented the forms and colors of both sexes, divided by a longitudinal line on the body.

In London's Magazine of Natural History, an experimental entomologist, Mr. I. O. Westwood, has given descriptions and figures, not only of dimidiat hermaphrodites, (the example is the bombyx penii,) but also of quartered hermaphrodites.

The subject of this case is about twenty years of age, born in England, weighs about 180 pounds, and has always enjoyed remarkably good health; his voice participates more of the feminine than the masculine, the hair is very luxuriant upon his head, and, without being tedious as to his general formation, I will state, that his shoulders, pelvis, and thighs, in an anatomical point of view, were entirely those of a female. He has no evidence of beard.

His pelvis is extremely large, and the adipose substance, immediately anterior to the symphisis pubis, and on each side of it, which forms a considerable prominence in females, which, at the age of puberty, is covered with hair—this is his precise situation, with this

difference : he has only about one-sixth portion of the hair on mons veneris that females usually have. The penis was about the size of a child's four or five years of age, say from an inch and a half to two inches, a little larger in diameter than children's generally; the scrotum hardly the usual size of a child's of this age, and the testes about the size of a buck-shot, immediately under the scrotum. And, along the perinæum, there is a well marked vulva, it has the labia externa, which has some hair upon them. The fourchette is well marked, with this difference, it has not the delicate duplicature of the lining membrane, which forms the posterior commissure of the labia externa; the cuticle, in this situation, from its peculiar folds, presents to the eye, a complete vagina, which in depth is from three-fourths to an inch, without any internal orifice, the fourchette terminating within a quarter of an inch of the anus. The greatest peculiarity of this case is the fact, that the subject has regular catamenial discharges during the months of March, April, and May, lasting from six days to two weeks, and a desire to gratify his animal propensities, both as a male and female. The catamenial takes place from the urethra.

The mammæ are perfect, about the size of a healthy virgin's of sixteen; the areola well marked; the nipples not so large, they become painful during the full of the moon, and the secretion of milk is very abundant. I do not attach so much importance to this fact, as there has been some instances in which it has secreted milk in adult males.

This is a plain and truthful statement of this singular case ; I leave you and your readers to draw your deductions therefrom. I regret that the condition of the internal organs of generation have not been fully ascertained in cases of a similar character; but this deficiency is in some degree supplied by the results of Dr. Nicholl's dissection of an hermaphrodite lobster, in which a testes was found in its proper position, which exhibited externally the male characteristics, and an ovarium on the opposite side.

III.—REMARKS ON CHARBON, OR CARBUNCLE.

BY JAMES T. SMITH, SURGEON, LA.

This disease goes under the common name of *Charbone* or *Carbuncle ;* and, as is frequently the case, received its cognomen from an external symptom, which, of course, is not disease—and, as will be afterwards shown, a symptom which is by no means an invariable con-

comitant of the malady. What the name of a disease may be, is a matter of little consequence, if it does not, as it has done in the present case, lead to false pathology, and consequently to a false treatment.

We shall begin by defining the pathology of the disease, and give what we consider its proper medical treatment, giving afterwards its history, as it has made its appearance at various times, with the personal experience of the author and his friends.

The name *charbone*, or *carbuncle*, is not a universal name of the disease: it has been called Maligne Epidemic, Epidemic Catarrh, Murrain and Malignant Pustule, by the continental writers of Europe; and by French authors "Fièvre Pernicieuse Carbonculaire." The last appellation, as it expresses more the pathology of the disease, we will adopt, and call it Malignant Carbunculous Fever.

All authors agree, that the first stage of the disease is one of fever. (See Youatt, on Cattle, p. 379.) There is, undoubtedly, inflammation in the beginning; sometimes not perceptible to the common observer, as in many cases the disease assumes decidedly a congestive form. All my own dissections have shown inflammation in some one of the mucous membranes. And this is really the true pathology of the disease: inflammation of the mucous membranes from some unknown cause, (or malaria,) producing a malignant and epidemic fever.

This fact accounts at once for the various names given. When the mucous membranes of the throat and fauces were attacked, it was called Epidemic Catarrh; when those of the stomach and bowels, it was called Murrain; and when the skin, or external mucous membrane was involved, (for the skin and the lining membranes of the lungs, stomach and bowels, are but the same tissue,) then it assumed a form most easily recognised, and was called by the various surgical names of Anthrax, Charbone, Malignant Pustule, and Anthracion.

From the above pathology of the disease, it is evident that the first indication to be encountered is the Malignant Fever. For this, if there be any thing the least like a specific, the active principle of the cinchona lancifolia is one. I therefore recommend quinine, for the purpose of establishing another fever less malign. The dose for a horse is not less than 50 to 60 grains.

The next indication to be met is the inflammation of the mucous membrane. In this, balsam of copaiva is decidedly the best remedy which we possess, and therefore should be resorted to, in doses of about an ounce at a time.

In confirmation of the above remarks in regard to inflammation of the mucous tissue being always present, I quote the following cases from Rayer on Diseases of the Skin:

Sectio Cadaveris.—"When the abdomen was laid open, about a pint of yellowish fluid made its escape. The mucous membrane was separated from the subjacent cellular tissue by a thick black fluid. The disorganised patches were surrounded by a yellowish areola of varying breadths, where the mucous membrane was more consistent. The mucous membrane generally tore with ease, its natural wrinkles were effaced, and it could be worked or traced upon with a very slight degree of pressure." Page 218.

In case of Anthrax of the Eyelids, producing gangrene and death, there were no great or marked symptoms of change of structure. But "in the mouth an oval patch of the mucous membrane on the affected side, was destroyed, and the parts with which these were in connection were green or colored. * * The stomach presented numerous dotted, red patches—an appearance which was also remarked on the smaller intestines and colon. Nothing remarkable was discerned in any other part of the body." Case 97, p. 219.

These most decided proofs of inflammation in the mucous membrane, would, most certainly, indicate the use of the lancet, and in many cases it should be first resorted to, but only in such cases. When the pulse is full, and a general inflammatory tendency of the system perceptible, the great indication is, changing the malignant fever into one of an innocent character; which can first be accomplished by the sulphate of quinine.

The use of purgatives in inflammation of mucous membranes of the stomach and bowels, is not indicated, and is, in fact, much feared by the generality of medical prctitioners. I have not found purgatives, however, in my own practice, judiciously used, as dangerous as might be anticipated, and, in very many cases, have found the greatest benefit from their exhibition: here the judgment and tact of the physician require to be exercised. But be this as it may, in the disease we are now treating of, there is no more favorable indication than a free discharge from the bowels. Nature seems to intend curing the disease by that process, (see Youatt, Malignant Epidemics,) and the judicious practitioner will not fail to follow his example. It is on this account that purgatives have been prescribed, and their practical effects have been found fully to justify their propriety, as theoretically indicated.

After all, there seems to be few diseases of which the pathology is more plain and evident, and, consequently, the treatment. But the external appearance of the anthrax or carbuncle is very much calculated to mislead the uninitiated, whether members of the medical pro-

fession or not; for even many of the profession are apt to treat symptoms for diseases, and counteract with all their power, the means nature uses for the cure of the malady—as was the case of the fashionable old lady's procedure, of giving morphine in diarrhœa, and indeed for every variety of pain that can be felt, externally or internally, in the head or the heart, the brain or in the lungs, in the stomach or the bowels. Whatever may be the cause, is a matter of not the least consequence, if the patient is in pain, *give him morphine.* The great fault in the treatment of Charbon, is, treating it as an external malady. It is a fever of a typhus type, and as such should be treated. I have been asked: Do you think the fever infectious? I certainly do; and believe that it can be propagated by inoculation—and even by the inoculation of insects that have been feeding on the diseased. But that does not make it the less a fever to be treated by constitutional means. The virus of Small Pox is applied externally; an inflammatory spot appears; an ulcer is formed, (and by the way, the ulcer of the Charbon is remarkably like one,) and great constitutional fever follows. In this case it might be thought, that the fever is the effect of the ulcer; but this is not the case, for the ulcer is not formed until the constitution takes up the virus, and the fever is generated. This is plain enough; for, if the constitution refuses the virus, from any cause, the ulcer is never formed. But, as is sometimes the case, should the constitutional symptoms be very severe, would we rip up the hard and inflamed spot, fill it full of calomel, and sear it with a red hot iron? why certainly not—none but a most consummate fool would do that. Yet that is just what you and your knowing friends have ever done, and are doing, with a completely analogous disease—the Charbon.

We do not mean by this, that the ulcer should be neglected. It should be treated, but not as the primary disease. And, then, suppuration should be encouraged, by all means; for this is one of the means used by nature to divert the disease from forming ulcers on the mucous surface of the stomach and bowels. One great indication, then, in the treatment of this disease, is counter-irritation, by means of any kind that may be deemed most convenient.

The medical treatment of Charbon may, then, be summed up as follows:

A strong febrifuge mixture: means to counteract a tendency to inflammation and ulceration of the mucous membranes. And mercury, to restore the suspended functions of the biliary apparatus.

The early history of the disease of Charbon, or Malignant Carbunculous Fever, is, like most other histories, a matter of conjecture.

Some consider it as one of the plagues of Egypt called Murrain, a name by which it was afterwards distinguished in England; and others, that it was the disease referred to by Homer, allegorically, as having been produced by the shafts of Apollo,—by which were meant the rays of the sun extracting pestilence from the stagnant pools and carrion of the battle field. As Apollo was a physician, it is a pity, for the honor of the profession, that he has left no cure for this disease of his generating; and, to confess the truth, the only legacy that he seems to have left his sons of the medical profession, is his *long silvery bow* of which newspaper editors hear the twang, and credulous patients not unfrequently feel the shafts.

The description given by Virgil, in his Georgics, is, however, very distinct and minute, and easily recognised. Nothing can be better described than the tendency to fluidity of the blood, in the following lines:

> "Strange death! for when the thirsty fire had drunk
> Their vital blood, and the dry nerves were shrunk,
> When the contracted limbs were couped, e'en then
> A waterish humor swelled and oozed again,
> Converting into bane the friendly juice
> Ordained by Nature for a better use."

We have scarcely an account of the disease to be much relied on, till the year 1711, when it was investigated by two Italian physicians, Rammanzani and Lancisi. Their dissections showed gangrene in the intestines, and general destruction of the mucous membrane. "Lancisi says, that he found no medicines effectual against this complaint. Setons and actual cautery were sometimes serviceable."

"As might be supposed, the most absurd notions were entertained of its natural cause." It was confidently asserted, that a great proportion of the cases of Murrain may be traced to the empoisoned stings of those insects which had fed upon the putrid flesh of the animals that had died the year previous. (See Library of Useful Knowledge, article Cattle.) This idea of the disease being communicated by a fly or hornet is here characterized as "most absurd;" but it has taken firm possession of the vulgar mind, and some have named the very "bold faced fly," which, they say, is the real germinator of the malady—(the teterrima causa morbi). The vulgar mind naturally looks for material causes, and it would be of little consequence what they supposed the cause, did it not lead them to consider it a *local* disease, and treat it as such. It has, at various periods, made its appearance in Europe, and the ravages committed by it have been enormous. There seems, however, as yet, to

have been no treatment discovered, which has been successful enough to entitle it to the confidence of the public.

In the year 1834, in the Attakapas, I treated many cases with caustic, bleeding, and all the usual disinfecting agents of tar, assafœtida, &c. &c., with no success; and not until I found the great value of the sulphate of quinine in the acclimating fever of cattle, did it occur to me that it might be serviceable in the epidemic of Charbon. In the years 1842 and 1843, I used the quinine with such decided advantage that I then determined, on the first re-appearance of the disease, to make known my experience with regard to it.

If the above suggestions prove of any advantage to the class of quadrupeds, I shall feel gratified; for, during life I have always found them less selfish, less sneaking, and very frequently, less ignorant than their more vain and conceited fellow mortals, defined as being "bipeds without feathers."

IV.—MEDICAL EDUCATION, &C.

A. Hester, m. d.

Dear Doctor.—If you think that the following selection from the address made before the *Medical State Convention*, by the Committee on the subject of Medical Education, &c., at its last meeting in this city, will interest your readers, it is at your service.

Sincerely yours, &c.,

WM. P. HORT, M. D.

Of the chairs of importance which are established in the European medical colleges, and which are rarely, if ever, to be found in the medical institutions of the United States, we would notice, particularly, the subject of Medical Jurisprudence, which is of great importance on account of the large and precise amount of knowledge which it requires, and the weighty consequences often depending upon the accuracy of that knowledge.

This branch of medical education includes Toxicology, which requires a knowledge of the various animal, vegetable, mineral, and mechanical poisons; of the peculiar symptoms to which each one gives rise; of the antidotes best calculated to counteract, or relieve the deleterious effects of each kind of poison; and of the chemical tests by which they may be detected in the dead body. It also requires an accurate knowledge of the lesions produced in the stomach and bowels by cer-

tain agents ; the appearance of the lesion to an experienced eye, going far to indicate the particular poison used in the case ; at any rate, it may serve to confirm a judgment or resolve a doubt, when, by the use of chemical tests, we may have occasion to hesitate.

Next in importance to the foregoing professorship, we would recommend a Chair of Chemistry, specially devoted to demonstrate the importance of chemistry as applied to arts, sciences, manufactures, and to that branch denominated *actinic* chemistry.

And lastly, we would advocate a professorship of general and fossil Mineralogy, of Geology, and of Metallurgy, generally and in connection with the phenomena of volcanic regions and volcanic origin, with an application of the whole subject to the development and progress of the earth in its gradual formation, and in its adaptation to the existence of the various successive series of reptiles, plants, fishes, birds, and animals.

Nothing could prove more fatal to the reputation of a physician as a man of science, which he is presumed to be, and which he ought to be, than the want of the particular knowledge that may be derived from the three foregoing professorships.

A physician residing in the country knows not the day that he may be summoned by the coroner to examine a dead body, and to determine what was the cause of death. Too often it happens that the physician so called on for a decision, which may involve the reputation of a respectable citizen or family, and even lead to disgrace and capital punishment, is deficient in that very kind of knowledge necessary to form a correct opinion ; and he must either avow his ignorance, or hazard a conjecture, which may be dangerous to himself, as well as to others.

The coroner may be satisfied ; the body may be formally and legally interred, and no more may be said about it, the time for discovery or correction, (should the case admit of such,) having passed away forever ; but the physician may be called into a court of justice to give his testimony. It may be a case of infanticide, or of poisoning, or of death by violent means—as shooting, stabbing, &c. And here he will in truth stand greatly in need of accurate knowledge connected with the case ; for he will be examined by a lawyer who by severe preparatory study, has made himself familiar with the whole subject, and from whose searching enquiries there will be no escape : he must either sustain himself, or be publicly disgraced.

We can testify that on more occasions than one, a stomach has been sent to this city from the country, for examination and analysis, with

the view of detecting poison. In each case a human life depended on the result. And why was this appeal made to the city? evidently, because the able and experienced physicians in the neighborhood where a suspicious death had occurred, possessed, in these particular instances, neither the confidence of the court nor of the public; and simply because they were deficient in the requisite *special* knowledge—which does not cast any imputation or disparagement on them, since they probably had no opportunity to make themselves familiar with the subject when students in college, and possibly from want of time their attention was never subsequently directed to it.

How few of the hundreds, we might say, thousands, who annually graduate and swell the ranks of the profession, know anything worth speaking of more than their neighbors about the analysis of mineral ores and mineral waters; and, above all, of soils: whereby we can ascertain what particular crop or staple certain lands are best calculated to produce;—whether they require much or little rain;—what kind of cultivation is most beneficial for both the planter and the land;—also what manure is best adapted to the crops. All these are practical questions of great importance and interest to every intelligent planter or farmer; and if the physician, to whom they naturally look, and to whom they apply for correct information, is unable to give it, the reflection occurs to the planter, that, after all, the doctor does not know much more than other men, notwithstanding his collegiate education, his diploma, and his high pretensions. His position as a man of scientific knowledge is necessarily forfeited, and the confidence once implicitly reposed in him is greatly impaired, if not entirely withdrawn.

Taking a candid and deliberate view of the circumstances to which we have just alluded, we should not be surprised at the ever increasing number of irregular practitioners of medicine. Nor is it strange that they should enjoy the confidence and the patronage of the community as much as the regular faculty. We have, indeed, neither reason nor right to complain. The scriptural proverb, "first take the beam from thine own eye, and then thou wilt see clearly to remove the mote from thy brother's eye," may be more applicable to us than we are willing to acknowledge. To a certain extent it unquestionably is; for it is our own fault that these things are so, and the remedy is in our hands. Legislation will avail us nothing, as we shall soon make apparent, and whatever there may be of responsibility we have to bear it alone.

Is it not a fact, that we often meet with men denominated Quack Doctors, who, in point of intelligence and scientific knowledge, are superior to many of the regular practitioners. All the Beachites,

Thompsonians, Eclectics, Biologists, Hydropathists, Homœpathists, &c. &c., are not ignorant men. We find in their ranks well educated and well informed men, who are gentlemen in every sense of the word. For it must be remembered that in many of the States there are no legal restraints on the subject of practising medicine; in which case, it is knowledge, talents, moral character, diligence and perseverence, which alone command the respect and the confidence of the public. Diplomas and licenses are not, in that case, the passports to public favor.

Again, we say the remedy is with ourselves, and the sooner each one puts his shoulder to the wheel the better. *Here*, our complaints excite ridicule and contempt, and create no sympathy. We may appeal to the Legislature for more stringent laws, and more effectual protection; and should we succeed in persuading the Legislature, which is exceedingly doubtful, *still, that will not carry public opinion with us. And all such laws, enacted in opposition to public opinion, ever have remained, and ever will remain, dead letters on the statute book.* The reform must begin with us. The standard of medical education in the United States, must be raised to the level, or nearly so, of the European colleges. It cannot be done all at once. It must be a slow and gradual process.

And it affords us great satisfaction to know that this subject was agitated several years ago by our professional brethren in other parts of the Union, and that their efforts have been well seconded. And the reform that has been commenced must ultimately prove successful, if the General Medical Convention and the State Coventions are sustained with zeal and perseverance. Let their decisions be respected by every member of the profession, and let their proposed reforms, which are the result of their anxious deliberations and matured experience, become, to all our medical schools, a *moral law*, as imperative and binding as any earthly law.

We therefore earnestly recommend, that young men be required to be better prepared by education and preliminary study, than they are generally at present, before they are admitted as students into our medical colleges; that the term of the session be extended; and that additional professors be appointed, so as to make each course as full and complete as may be practicable. The final examination should be *deliberate*, *practical*, and *rigid*.

It may be remarked, as a general rule, that most students think that they have completed their medical education when they have obtained a diploma. This is a fatal error; for, in truth, they have only passed the threshhold of the temple of science. And there is no rule more

sound, that, unless we are advancing in knowledge, we are inevitably losing ground; an aphorism applicable to all members of the profession, including professors as well as students.

We believe that it will be almost impossible, from circumstances not under our control, for probably not less than a quarter of a century, to constrain students to receive such a preparatory education as would enable them to study medicine thoroughly and intelligibly in all its branches, and in its intimate connection with the whole range of natural sciences. This consideration should by no means discourage us. It should, rather, stimulate to active and persevering exertion, by demonstrating the necessity of immediate action and reform.

In our discussion of the expediency and efficacy of the law of license, we shall necessarily have to recur to some of the ideas we already suggested. We will therefore conclude this branch of the subject by embodying in our report the practical views on medical education drawn up and published by the Medical Faculty of Havard University.

"1. Medical instruction should be adapted to the power of the students to receive and retain what is communicated to them, and should be confined to what is important to them in their subsequent life.

"2. In modern times, the constituent branches of medical science are so expanded that they are not acquired by any physician in a lifetime, much less by a student, during his pupilage. The same is true even of many individual branches. It is not, therefore, to be conceded that 'a scheme of scientific instruction should embrace the whole science, and no part should be omitted;' nor that 'a well digested plan of lectures embraces all that is to be known and taught.' Medical science has, at this day, become so unwieldly, and contains so much that is unnecessary, at least to beginners, that the attempt to explain to students the whole, is likely to involve the result of his learning but little.

"3. In Chemistry, at the present time, a thorough adept is unknown. No man living knows all the recorded facts, or all that is to be known and taught, in that science. Organic Chemistry, alone, fills large volumes, though yet in its infancy.

"4. In Materia Medica there are some thousand of substances and their compounds, which possess what is called a medicinal power, yet it is not probable that any physician effectively reads the one half, or remembers one quarter, or employs in his yearly practice one tenth, of the contents of common dispensatories.

"5. In Pathology, so complicated and various are the conditions attendant on the individual forms of disease, and their relations with idiosyncrascy, temporal condition, and external agency, with organic

lesions and functional disturbances, that few, of the most experienced pathologists, can be said to understand the whole science, or to be always competent to its successful application.

"6. In Etiology, the theoretical literature of causes has spread itself out to an extent which is burdensome and unprofitable. It is true, that 'man, from his nature, is subject to suffering, disease, and death;' but it is not equally apparent, that 'the causes by which these conditions are produced, are attainable.' We know nothing of the vehicle of Cholera, or influenza; nor is it probably in the power of any physician, by any art, or application of his knowledge, to produce in a given healthy man, a case of common Pneumonia, or of acute Rheumatism, of Diabetes, or Bright's Kidney, of Hypertrophy or Cancer, or even of common Boil or Wart.

"7. In Therapeutics, many hundred volumes exist, such as would not have existed could a knowledge of the cure of diseases be made so easily tangible that it could be spread before the student in the three or five years of his pupilage.

"8. In Anatomy, general and special, microscopic and transcendental; in Physiology, with it intricate ramifications; in Surgery, of which several subordinate specialities constitute distinct, living professions;—it is not to be admitted that the means or time of any ordinary course of lectures, can furnish full and complete instruction. Certainly, it must be difficult to arrange a course of lectures on any of the extensive sciences which now constitute medicine, if it be indeed true, that 'teachers are not justifiable in suppressing any portion.'

"9. It is the business of lecturers in medical schools, to condense and abridge the sciences which they respectively teach; to distinguish their essential and elementary principles; to sift carefully the useful from the superfluous; and to confine the scope of their teachings, as far as possible, to what is true and profitable, and likely to be remembered and used by their hearers. It is, unfortunately, too true that, 'in an extended system of instruction, there is much that the student will not master; much that will have escaped his attention; much that he ought to know, that he has not learned." The remedy appears to be, to teach him well what he can and should master, and briefly to point out to him the sources—fortunately abundant—from which he may obtain the rest.

"10. Much injury is done to the cause of true learning by medical assumption, amplification, and exaggeration; by premature adoption of novelties, and by tenacity of theories, personal or espoused. Students in all former years have expended much time in learning what it afterwards cost them both time and trouble to unlearn—in acquiring, not

merely the truths of science, but the crude announcements and plausible doctrines of sanguine or ingenious men. How much time has been wasted in some of our distinguished seminaries, in acquiring the visionary and now neglected theories of Rush and Broussais.

"11. The most commonly exaggerated branch of medical science is Therapeutics. Enlightened physicians well know that many diseases are incurable, and that others are subject to laws of duration which cannot be interrupted by art; yet students sometimes return from medical schools persuaded that their instructors know how to cure a large part of these diseases, and that if others are less fortunate, it is attributable to their own fault.

"12. Medical teachers should keep pace with the progress of their respective sciences. Yet in their haste for the promulgation of novelties, they should not omit to give the proper consideration to the older and more settled principles of science. Medical men are liable to commit the error of adopting premature opinions, unsound practice, and inconvenient changes of language and nomenclature, sometimes from a love of display, and sometimes from a want of self reliance, and a fear of being thought behind the literature of their time.

"13. The length of a course of lectures is not the measure of its value to the student. A course of lectures should not out-last the curiosity of its hearers, nor their average pecuniary ability to attend. Custom in this country has fixed the limits of these things at about four months. A comprehensive and judicious course, confined to the enforcing of necessary points, is far more profitable than a mere discursive course to a wearied and diminishing audience.

"14. Lectures are chiefly wanted to impress by demonstration the practical branches of science; and they are most effective in places where the facilities for such demonstrations can be commanded. Anatomy requires extensive exhibitions by the teacher, and personal dissections by the student. Chemistry and Materia Medica require illustrations by specimens and experiments. Pathology needs the aid of autopsies, museums, and the clinical demonstrations of large hospitals. A knowledge of Obstetrics is not perfected without apparatus and practice. Surgery is acquired by witnessing numerous operations, surgical diseases, illustrated explanations, and by personal practice on the dead body. Physical exploration is wholly demonstrative. A knowledge of auscultation can no more be acquired from books, or abstract lectures, than a knowledge of music or of individual physiognomy.

"15. The intermediate period between lectures should be spent by students in active and original study, approved and confirmed by regular

recitations, and by such opportunities as can be commanded, for practical personal experience. Private schools for small classes, and the private teachings of individuals who are suitably qualified and situated, are more advantageous for two-thirds of the year than either the fatiguing jostle of over crowded rooms, or the listless routine kept up by the survivors of a passive class.

"16. The usefulness of a Medical School depends not so much upon the length of its session, as upon the amount of education, preliminary and ultimate, which it requires; the fidelity with which it exacts its own professed requisitions; and the train of healthy exertion, active enquiry, and rigid, methodical, self-regulating study to which it introduces its pupils. The longest lectures are of little use to students who want a common education, and whose medical education does not qualify them afterwards to observe, to enquire, and to discriminate. The exacted evidence of three years of well conducted study, is better than the exhibited ticket of a six months' course.

"17. The subjects most important to be well taught in medical schools, are the elementary principles which constitute the frame work of medical sciences, and the mode of thought and enquiry which leads to just reasoning upon them. After these, most attention should be given to selecting and enforcing such practical truths as will most certainly be wanted by the young practitioner in his future career of responsibility.

"18. The things to be avoided by medical teachers are, technicalities, which are unintelligible to beginners; gratuitous assumptions and citations of doubtful authorities; prolix dissertations on speculative topics; excessive minuteness in regard to subjects, which are intricate and but little used, and therefore destined to be speedily forgotten. To these may be added controversies, superfluous personal eulogiums and criminations, and self-exaggeration, personal or local."

(Signed by the seven Professors.)

We seldom meet with more sensible and well timed observations than what are contained in the foregoing practical remarks, yet we cannot pass them by without one or two observations.

In the 1st section, they speak of adapting medical instruction to the power of the students to receive and retain what is communicated to them. Instead of this, we propose that students should be so prepared by natural endowment and preparatory study as to be capable of receiving and digesting whatever the Professor may deem it necessary to teach, or be able to communicate. Instead of giving way to errors and abuses because time may have sanctified, and custom justified them, we should endeavor to correct all that is erroneous in our system of

medical education, and not rest satisfied with anything, so long as we believe there is room for improvement.

In the 13th section, they say, when speaking of the length of a course of lectures, "custom in this country has fixed the limits of these things at about four months."

Experience has proved that this time is too short for any system of teaching, no matter how skilfully subjects may be "selected and condensed." We sincerely trust, that the period of six months, as recommended by the National Medical Convention, and established in the Medical Department of the University of Pennsylvania, will be universally adopted in all the medical schools in the United States. This change of time would enable much more to be accomplished, even if additional Professorships should not be established. Pharmacy might conveniently be added to the subject of Therapeutics; and the Professor of Chemistry could add to his usual course much that would prove extremely useful and interesting to the students.

We have now concluded our remarks on the subject of Medical Education, and we proceed to dispose of the remaining part of our report,

THE LAW OF LICENSE.

In this discussion we immediately perceived how necessary and important it was to ascertain, in the first place, to what extent laws regulating the practice of medicine in the United States had been enacted; in how many States they are now in force; also, in what States such laws have been repealed. And, in the second place, to observe attentively *how far public opinion stands affected towards them.*

We take for granted the statement respecting these facts, which was published some time during last spring, in the Boston Med. and Surgical Journal. It would be tedious and unprofitable to read so long an article; we have, however, copied it, so that any member of the Convention who may desire more full or specific information, may be gratified.*

From this statement, it appears that laws regulating the practice of medicine are in existence in only three States:—New Jersey, Louisiana, and Michigan; and in the District of Columbia.

In twelve States—Maine, Vermont, Connecticut, New York, Maryland, Delaware, South Carolina, Georgia, Alabama, Mississippi, Indiana, and Ohio—salutary laws that were once enacted and enforced, *have been repealed*, and the field is open to one and to all.

*Ten pages are here omitted, which present, in detail, the acts of the Legislatures of the different States: 1st, such as have never legislated on the subject; 2d, such as have enacted laws which have been subsequently repealed; and, 3d, Those States where such laws are at least *nominally* in force.

And in the fourteen following States—New Hampshire, Massachusetts, Rhode Island, Pennsylvania, Virginia, North Carolina, Tennessee, Kentucky, Illinois, Missouri, Wisconsin, Iowa, Arkansas, and Texas—it appears that no laws regulating the practice of medicine have ever been enacted.

Louisiana is ranked amongst the very few States that have laws in force for the protection of the regular Faculty, and for the proper regulation of the practice of Medicine and Pharmacy. The editor of the Boston Journal affirms, that "No State in the Union is better protected against impositions of all kinds than Louisiana." Let us see, however, how this opinion accords with known facts. The law requires Apothecaries to be examined by a Board of Physicians duly appointed, and from them they must receive a license before they can legally carry on their business. Physicians wishing to practice in the State must present a diploma to the Board, in order to obtain a license. "But medical diplomas, (says the Boston Editor,) having become of late as plenty as pocket knives, the Board have assumed to themselves the right of examining all applicants, without any respect whatever to certificates and diplomas."

Now, however useful this legislation might prove in regulating the practice of medicine, &c., in the State of Louisiana, *if rigidly enforced*, we know that it is almost as inoperative as any obsolete law. There are Physicians and Apothecaries, and Midwives, in this City, who have applied for, and obtained, the legal authority to practise their Profession, or carry on their business. But this was a voluntary act, prompted by a sense of duty, and not by legal compulsion ; for it is notorious, that as many, and *probably more*, Physicians, Apothecaries, and Midwives are carrying on business without either diploma or license. And they openly bid defiance to the law. Now, these facts, it is presumed, must be known to the Board; and yet, we see no one prosecuted according to law. And why? There would appear to be but one inference : *they are apprehensive that public opinion would not sustain them.* We are informed that two or three months ago, four members resigned at one time ; and that a quorum for the transaction of business could not be procured for months together, so that many applicants for licenses were either obliged to leave the State, or practise without the authority of law. We think, therefore, that, so far as legislation on the subject of the practice of medicine is concerned, Louisiana will soon be ranked amongst the repudiating States. The City and the State are overrun with irregular practitioners just as much as though no law on the subject existed on the Statute Book. We would not cast the slightest im-

putation on the persons constituting the Board of Medical Examiners, either in the Western or Eastern departments of the State. But they cannot contend against public opinion, and facts justify the inference which we have drawn.

We wish to be plain on this subject, and particularly so, as when the Legislature was last in session, an attempt was made to induce that body to make the existing and almost obsolete laws still more stringent. But, if the laws at present in force are not sufficient to afford protection and suppress imposition,—laws which are considered the best for such purposes of any State in the Union,—the same public opinion which now renders them inoperative, would be roused to firmer decision and stronger opposition against the more stringent law.

Thirteen States, then, including Louisiana, have directly or indirectly repealed all restrictions on the practice of medicine, after having fairly tried their effect; fourteen States have never legislated on the subject: leaving but two States and one District in which the laws in question are still enforced, and Florida and California doubtful.*

To the advocates of diplomas, licenses, and legal protection and restriction, this is a gloomy prospect: and so it will remain until the system of Medical Education in the United States, in all our Medical schools and colleges, is raised to the European standard. It is the ambition of our countrymen generally, to *excel* all other nations in the useful arts and sciences; and why should Physicians, (seeing that their fellow citizens in other pursuits in life are successful,) manifest less pride and less ambition?

It is in vain, we repeat, to look to Legislatures for relief or redress on this subject. The Legislatures reflect the public opinion and the public will; and the fact, that twenty six Legislatures are unwilling to pass any laws to regulate the practice of medicine, is conclusive proof that such is the decision of an overwhelming majority of the people of the United States.

Our system has been radically wrong from the begining, if the *necessity* for legal protection and restriction is *unconditionally* affirmed. Nature has not made all men alike and equal. Some are largely, and others moderately endowed with native intelligence. Some are by organization qualified for one, and others for another pursuit. And these tendencies are of early development. At school we see a boy making small wheels, and cranks, and shafts; a second, cutting out and rigging

* The opinion of the Committee is, that there is no legislation on the subject in those States.

a minature ship; a third, plodding over Euclid and algebra; a fourth, an idler, devoted to pleasure; a fifth, pregnant with military ideas, who, on a small scale, marshalls armies, and manœuvres cavalry and artillery:—and we might extend this kind of illustration of the original and primitive development of the tendencies and peculiar qualifications of youthful minds. We shall, however, content ourselves with observing, that, in the first instance, we see the embryo mechanic and machinist; in the second, the sailor, or the ship-builder; in the third, the mathematician; in the fourth, the votary and devotee of pleasure; and in the fifth, the professional soldier. And in the same way are some minds preëminently qualified for the attainment of medical science, and the successful practice of medicine, whilst others are better designed, by nature, for anything else. Hence, the wisdom of the preliminary examination in reference to this matter, in some of the European schools.

No labor, or pains, or education, not even the best system ever devised by human wit and experience, can enable a man to comprehend medical science and practice, with credit to himself and to the profession, if nature has not endowed him with the necessary qualifications.

Let this be made a *sine qua non* in all our schools and colleges:—to dissuade, if possible, such as are not by nature qualified for the study of medicine from attempting that which must involve the loss of both time and money; and on no occasion whatever to grant a diploma to one whom the Faculty do not sincerely believe to be qualified naturally, morally, and intellectually, to maintain the dignity, and honor, and reputation of the Profession.

Let this be done, and a generation will not have passed away before public opinion will be prepared to discriminate between the pretensions and qualifications of man and man, and to call for, and sustain such laws as we now in vain demand.

Such a reform may be very unpopular, and the responsibility may be deemed too great. But the attempt must be made, and the responsibility be assumed, or let the whole matter drop,—let the field be open to one and all, and the motto be, "*palmam qui meruit ferat.*"

Where Physicians have established a high reputation for science and skill, and well earned the reward of ample compensation and public respect, in States where no protection is afforded by law, it has been owing to their natural, original capacity for the profession; to their unsullied moral character; to their scientific attainments; and to their general success.

But, where *one* has been so endorsed, and, consequently, successful,

one hundred have probably fallen short of the tests established by enlightened public opinion. What is it in one of those States where the practice of medicine is not regulated by law, to an intelligent man, whether he is entertained, informed, or relieved from pain and disease, by an irregular or regular practitioner? He looks to the ability to enlighten or to relieve, and not to the diploma.

In conclusion, we shall have but one more remark to make. Attempts are often made to prejudice the public mind against the regular practitioner by the bold and unwarranted assertion, that all such have but one system of practice, to which they confine themselves with more than religious scruples, and which they derived from the Professors of the college where they graduated; that this system is handed down from generation to generation, unchanged amidst all the progress and improvements constantly going on in the world. At the same time, complaint is made of the folly and injustice of endeavoring by legislative action, to compel irregular practitioners to conform, against their judgment and experience, to the *one* system of the regular Faculty, denominated the *Allopathic.*

In all this there is not one word of truth. All we want is, that men should be properly educated and prepared for the practice of medicine. To be assured of this, a collegiate course is necessary,—to be followed by a severe examination, which proving satisfactory, a diploma is granted; after which, the graduate may test, and adopt, whatever system he pleases: he may practise as a Biologist, Hydropathist, Homœopathist, or otherwise. We, however, have a just cause of complaint. Why do not the irregular practitioners comply with the law? There are amongst them men of liberal education and intelligence, and admit that a diploma or license would neither add dignity to their profession, authority to their acts, nor success to their practice, under existing circumstances; yet, their example misleads and sanctions the course of hundreds of ignorant men, who, as practitioners of medicine or surgery, are nuisances in a community.

As good citizens, we should feel bound to comply with a law, so long as it remains in force. Yet, if public opinion is opposed to it, and it consequently cannot be enforced, it is better to repeal it at once. Our conclusion, therefore, is thorough, radical reform in our collegiate system, or the repeal of all legislation on the subject.

CONCLUSION.

Thus, we have shown: 1. What is the system of Medical Education in Europe. (Omitted in this article.)

2. What are the features of the same in the United States. (Omitted in this article.)

3. Wherein consists the superiority of the former, over the latter. (Omitted in this article.)

4. That public opinion has, through the Legislatures of twenty-six States, for successive years, *emphatically condemned our system of Medical Education.*

And we have endeavored to prove: That legislation, whether special or general, is always useless and inoperative when opposed to, or by, public opinion.

That, therefore, if the standard of Medical Education be not raised to, or very near to, the European level, it would be better to repeal all legislation on the subject, and leave the distinctions, and honors, and emoluments of the profession, to be contended for in an open field of intellectual, moral, and physical action.

P. S. Since the above was written, and read before the State Medical Society, the expressed opinion of the Committee, respecting the operation of the law regulating the practice of Medicine, &c., in the State of Louisiana, has been abundantly confirmed. Attorneys, after receiving a fee, have neglected to do their duty; and Members of the Board of Examiners have stated that the law could not be enforced, because the empirics constituted too strong an opposition. Under such circumstances, with what propriety can fees be received from persons who are sufficiently conscientious to come before the Board of Examiners, undergo a severe ordeal, and pay a fee of twenty dollars? It is manifest injustice done to such individuals so long as the law is not enforced in the case of the so-called empirics, who, in the practice of medicine, in Pharmacy, and in Midwifery, are reaping thousands, where many of the regular Faculty collect but hundreds. If the law cannot be enforced because Lawyers cannot be induced to sue; and if it is the deliberate opinion of members of the Board of Examiners, that it is impolitic to enforce the law, we then must say, that strict justice, and propriety, and expediency, should induce the members of the Board of Examiners to resign at once; and that, it should be recommended to the next Legislature to repeal the law, and abolish both Boards of Examiners. There is nothing fair in the present system, and the sooner it is got rid of the better. If the *fine* cannot be imposed, the *fee* should not be demanded.

V.—REPORT OF A CASE OF STRANGULATED INGUINAL HERNIA.—OPERATION.

BY W. D. BARNETT, M. D.,

Of Arkansas.

Dr. HESTER: I send you a report of the following case, hoping that it may not prove uninteresting to the readers of your excellent Journal. The subject was a negro boy, the property of Mr. E——, æt. 26.

HISTORY.

He has been subject to Hernia since his earliest recollection, and at various times it has passed down into the scrotum, but never found any difficulty in returning it until now. This time it was brought about by lifting at cotton bales; and, as soon as he discovered it, efforts were made to reduce it, but did not succeed. In a short time the swelling became very painful, and he went home, where he was examined and the tumor was pronounced to be Hernia Humoralis, or swelled testicle. Accordingly, he was subjected to the patent Arkansas remedy, "Pepper," in the form of poultices. An old gentleman of the neighborhood, by chance passing by, pronounced it, very justly, intestinal Hernia, and made several ineffectual efforts to reduce it. The treatment with the Red Pepper poultices was diligently continued for three days, at the end of which time I saw the patient. At this time the tumor was extremely tender, and of enormous size; abdomen distended and tympanitic; skin cold and clammy; pulse, 125; hiccough, and vomiting of a dark colored fluid. I immediately informed the owner, of the dangerous situation of his boy, and made an effort, after using the warm bath, Tartar Emetic, &c., to reduce the Hernia, but failed. I then asked the assistance of Dr. Brownlee, who, on examination of the case, agreed with me in the propriety and immediate necessity of an operation. Accordingly, I made a free incision down upon the tumor, terminating it a little below the neck. The different fasciæ were now successively laid bare, and finally the intestine came in view, presenting a dark brownish color, and emitting an offensive odor. The external ring was laid open, and the internal one examined, where an extreme contraction of the tendon of the transversalis was found, so narrow that with difficulty a probe pointed bistoury was introduced and the stricture divided in an upward and inward direction. Considerable adhesions existed throughout the entire canal and scrotal sac. These were with difficulty broken up, and the bowel returned—the intestine was not in a complete state of gangrene, and therefore I returned it as I found it. The wound being closed, Calomel, 5 grs., Opium, 1 gr., was administered at

once, to be repeated every three hours, until four doses were taken, when a dose of Castor Oil and Turpentine was to be given. Cold applications to the wound, and mucilaginous drinks allowed. In six hours the patient had ceased to hiccough and vomit; pulse down to 100; skin warm. Thus I left my patient. My residence was thirty miles distant, I could not visit him any more. On the eighth day Dr. Brownlee discharged him convalescent, and his master left him without any fears of his recovery. But, unfortunately at this time, in stepped "Pepper and Lobelia:" the *alarm* was induced from which the poor negro never recovered.

June 3d, 1851.

Observation.—The above case is only interesting as illustrating the great strength of the vital principle under desperate circumstances. The operation for incarcerated hernia is not at all dangerous; *per se* it is the delay that jeopardized the life of the patient.

(Ed.)

VI.—A BRIEF ACCOUNT OF THE ASIATIC CHOLERA, AS IT OCCURRED ON THE PLANTATION OF JNO. TRIGG, ESQ., SOME TWENTY MILES ABOVE MEMPHIS, ON THE MISSISSIPPI RIVER.

BY W. J. TUCK, M. D.

Of Memphis, Tennessee.

The following are a few hasty notes and observations made on cases of Cholera occurring on the Plantation of Jno. Trigg, Esq. I regret that I did not have time, amidst the confusion and my constant attendance on the sick, to preserve a more faithful and accurate account of the cases.

Mr. T.'s Plantation is situated some twenty miles above Memphis, on the Mississippi, and as well located, perhaps, for health, as most of the farms on the river. It is above overflow, except a small portion of it. A bayou passes through it some 150 yards from the cabins, through which waters run into the river during winter and spring, but is stagnant in low water, and at times emits a disagreeable offensive odor. The weather in July, 1850, the time of the occurrence of the epidemic, was very hot and dry, and the River at its lowest mark. Just before the appearance of the first cases of Cholera, the overseer informed me that the fish in the bayou died in great quantities and floated upon the surface, and that some few days previous to this, on Sunday, some of the negroes caught and ate of the fish contained in this bayou. Whether

the locality or influence of this bayou had anything to do with the production of this epidemic, it is difficult to say: and one of the arguments against it is, that the same causes existed among some of the neighboring farms, without any of the effects—the bayou alluded to passing through them, and no disease occurring. The presumption, however, is pretty strong in favor of some local cause, as the disease appeared on the same plantation some twelve months before, eighteen or twenty of the negroes having died of Cholera at that time. There is, however, no accounting for this inscrutible disease.

Leaving Memphis on Saturday morning, 20th July, I reached the plantation about two o'clock, P. M. I was informed that four of the negroes had already died of the disease; two had been attacked on Thursday previous, and were collapsed in a few hours; two more on Friday, with the same result; two more on Saturday morning, who were in "articulo mortis" when I reached them. Dr. Kirby, an intelligent physician in the neighborhood, was in attendance, and had employed the usual active remedies exhibited for Cholera, but with no effect. It is, however, in proper place here, to state that two of the cases were yielding to the remedies employed by Dr. K., and with great care and attention, finally recovered in the course of eight or ten days. In all the cases alluded to, which terminated fatally, I was informed that hopeless collapse came on in a few hours; that medicines had no effect whatever, and death supervened after a lapse of ten or twelve hours.

With regard to the two cases alluded to as being in "articulo mortis" when I arrived at the farm—one was a negro man, 30 years of age, of fine constitution. He was seized with the disease on Saturday morning at ten o'clock, and was in collapse when I saw him at two o'clock the same day. Dr. K. had given Calomel, Cayenne, Camphor, and Opium, and used frictions freely, but without any effect. When I saw him he was entirely pulseless, cold—no pulsation at the heart, cold tongue, shriveled skin, &c., and yet he retained considerable strength, could sit up, talk, and take nourishment, (surely, this is a most stange disease,) and lived until the following morning, 10 o'clock. Knowing that mustard emetics were reported as powerful in promoting reaction in some cases of apparently hopeless cases of collapse, this article was administered, as soon as I saw the patient, in large doses, and repeated several times, but did not have the slightest effect in producing re-action or emesis.

I once used the mustard in a similar way last summer, in another case under similar circumstances, but with no benefit. Ether was also employed freely, both "by stomach" and inhalations, but with no effect.

The other case, a negro girl, died in a much shorter time, with the usual symptoms characterizing the disease.

Some hour or two after reaching Mr. T.'s plantation, a negro woman, age 25, was attacked suddenly. The first discharge from her bowels was thin, but not watery, and of a yellowish appearance, a little white on the surface. The next operation, occurring about an hour afterwards, was of the rice-water character; a short time after, patient vomited a thin fluid, a little dark in appearance; cramps and collapse soon supervened, and the patient was in hopeless collapse a few hours after the first symptoms occurred. The most active stimulants, such as Ether, brandy, &c., were immediately given, without any effect. Full doses of Calomel, Capsicum, Camphor, and Opium, were alike useless: the patient was a doomed victim from the beginning, as was likewise the following. Boy Billy, likely young yellow man, had been complaining a little during the day, but I was not aware of it, and did not prescribe for him until about sunset or after. About this time, boy walked out and had an operation of a thin, muddy color; on his way to the cabin, had another of the same character, but not copious. Ordered him to lie down, when I examined his pulse, and found it sinking and apprehended a speedy collapse, which occurred in less than an hour. The usual stimulants and remedial appliances were employed, but with no effect; violent cramps soon came on, from which he appeared to suffer excruciating agony. Rubbing, or friction, afforded the only relief to this condition, and this was only temporary and partial. Vomited thin fluid, and stomach soon became so irritable as to tolerate but little medicine after the first few doses. This patient retained an unusual degree of strength—almost as strong as one in perfect health, even when he was pulseless, skin and tongue cold, and other symptoms of collapse, except the peculiar "vox cholera," which so far as I have observed, is one of the most uniform and unerring indications of a hopeless case of collapse. His voice was strong, and he begged stoutly for help, and seemed anxious to get well, which symptom, in the range of my observation, is a very rare one with those affected with this anomalous disease. Every physician who has seen much of Cholera, must have been struck with the extraordinary indifference of the patient to everything and to every body. While his intelligence is apparently as clear and as good as when in health, he seems to regard death—the most solemn of all events—with perfect indifference, and evinces the same extraordinary apathy in regard to every subject that may be presented to him. But I am digressing and must return.

The patient under notice remained pretty much in the same condi-

tion as referred to, until late in the night, when, supposing that his stomach, after resting some hours, would retain medicine, I gave him Quinine in pretty large doses, all other remedies having failed; and a slight reaction occurred, whether from the effect of the medicine or not, I am unable to determine. But this condition continued but a short time, and the patient died next morning at nine o'clock.

Under the circumstances, I felt it my duty to advise Mr. T. to remove the negroes from the infected region as speedily as possible, otherwise he might lose them all, and that our own lives were in great danger. New cases were occurring every hour or two, running rapidly to a fatal termination. Accordingly, about twelve o'clock the following day, Sunday, all of them, the sick and well, being placed upon a large wood-boat, sheltered from the sun by bushes, we left for Memphis with the view of removing the negroes to Mr. T.'s house, two miles distant from the City. About five o'clock, P. M., we landed at C. Stockley's farm, and took on his negroes, some 12 or 14, in company, one of his men having died of Cholera a few days previous. Two of the number were affected at the time of their embarking, with violent Cholera symptoms—one an old negro man, and the other a boy about nineteen: the former dying the following morning, the latter lived some weeks, but finally died of Typhoid Fever, associated with inflammation of the stomach and bowels. A negro child some three years old, was seized, while on the boat, with the usual symptoms of the disease, but recovered. We had a very unpleasant trip down the river; (distance some 40 miles;) from the unskilfulness of the helmsman, we were near being sunk several times in the current of the river, and with great difficulty avoided running against large snags which are frequent in the channel during low water. We were very imperfectly protected from the intense heat of the sun, and I suffered severely from headache and fever produced by want of rest, fatigue, and exposure to the sun's rays. Young Trigg, the only white person with me, was also sick with premonitory symptoms of Cholera.

We reached Memphis about 3 o'clock in the morning. The negroes were all taken out to Mr. T.'s residence, and I continued to attend them until the disease disappeared. Soon after arriving at their place of destination, two old negro men, who were sick on the boat, died. Milder cases were constantly occurring, but most of them recovered. The following is a brief report of some of these cases: negro man Ellmore, who was our helmsman, was seized the day after our arrival, with Cholera symptoms; watery discharges in large quantity, vomiting, and cramps; collapse, however, did not occur. Calomel and Opium were

exhibited, also brandy; injections of starch, Laudanum, and Sugar of Lead, were also employed. The symptoms were soon checked, and the boy recovered rapidly. I have omitted to mention that Quinine was also given in large doses. On Thursday, following, the 25th, three new cases occurred. One, a large fleshy woman about 40 years of age, complained in the morning of disordered condition of the bowels—said she had a copious watery passage. Upon examination, however, she did not seem seriously sick: pulse was good, also the tongue and skin, and she complained of no pain. Prescribed Calomel and Opium, and left to visit a patient several miles distant, and returned in the course of a couple of hours. During my absence, she had several rice-water discharges,—vomiting and cramps. Mr. T. had given her several large doses of Calomel and Opium. On examination, I found her rapidly sinking into collapse, and no remedy applied had any effect in arresting it. And after a short time patient obstinately refused to take medicine of any kind; called constantly for water; would not permit a particle of clothing to remain on her; and died the following morning.

Another woman was attacked the same morning, but with somewhat milder symptoms. She had watery operations and vomiting, and threw up several very large worms. The discharges were checked by the exhibition of Calomel and Opium, and by the use of injections of Laudanum and Sugar of Lead. Late at night, about 11 o'clock, symptoms of collapse made their appearance: pulse became almost imperceptible, skin cold, &c. A mixture of brandy, Ether and Ammonia was given during the night, and bottles containing hot water were placed about the legs and body; and by morning considerable re-action had occurred. Quinine was then given during the day, a blister applied over the stomach, and the patient rapidly recovered.

Late the same evening, a very likely negro man, Gabriel, was attacked with violent symptoms of the disease. He was a carpenter, and a very intelligent negro. He was the first of the servants who had the disease, among those who lived at Mr. T.'s place near the city. He was nursing and carrying medicine to the sick when he was taken. The attack, I think, was induced by eating a hearty meal of cabbage, onions, and other vegetables, combined with exposure and fatigue. He complained of derangement of the bowels late in the afternoon. I prescribed a large dose of Paregoric, which afforded temporary relief. In an hour or so, was seized with vomiting and purging of a rice-water character, and collapse rapidly supervened. This case deserves more particular attention, from the fact that the patient recovered after an apparently hopeless collapse of some twelve hours. Some new remedies

were also introduced—or rather remedies which I could not employ while on the plantation. Whether the recovery in this case was a "post hoc," or "propter hoc," is, of course, a matter which I am unable to determine. Calomel, Opium, Capsicum, and Quinine, were given to the boy during the night. Friction was employed to relieve the cramps, external stimulating applications, &c. Being overcome by fatigue, I retired to sleep a few hours, leaving the medicines to be administered by a nurse. Before this, however, Dr. Young, an experienced and prominent practitioner of Memphis, was called in consultation. He approved of the treatment employed, but thought there was little or no hope of the boy's recovery. His skin was as cold as a corpse—tongue cold; perspiration cold and colliquative; the peculiar "vox cholera" was distinctly developed. And here I may remark, that this is the first instance, in the range of my observation and experience, in which the patient has recovered, after the distinct development of such threatening and usually fatal symptoms. Next morning, finding the boy pretty much in the same condition, I determined to try the effect of frictions with ice, and permit him to eat as much of it as he wished. When I mentioned ice, the boy's countenance brightened up, and in a sepulchral, unearthly sort of voice, as if proceeding from the throat of a corpse, he observed that he believed ice would cure him. As soon as the ice could be procured two negro men were ordered to rub him all over with it for some fifteen minutes, and then rub dry with warm flannels—the same course repeated in an hour. In a short time the patient's symptoms were much improved: partial re-action came on, pulse distinctly perceptible, some warmth of the skin, copious bilious operations were discharged, and in a few hours I regarded the boy as out of danger, provided consecutive fever could be avoided—to prevent which Quinine was exhibited. In a few days patient was walking about: had no fever, but was slightly salivated. I omitted to mention, that about the time ice was employed, according to a suggestion made by a gentleman of Kentucky, who had seen the treatment adopted by some of the most eminent physicians of that State,* I had the rectum plugged with a solid piece of Opium. Whether any benefit resulted from this, I cannot determine. I only employed it in one other case, but the pa-

*We had flattered ourself with the belief, that the first suggestion for the application of ice in collapsed Cholera originated in Louisiana; but it appears from the remarks of our esteemed correspondent, that Kentucky claims the credit.

Vide vol. viii, No. 1, (July, 1851,) of N. O. Med. and Surg. Journal, p. 136. (Ed.)

tient did not recover. I had more faith in the ice than anything else. Dr. Fenner, of New Orleans, had written to me some time before, that some remarkable cases of reaction from collapse had occurred in the Charity Hospital, by the use of frictions with this article. This boy certainly presented less hope of a recovery than any case I have ever met with; and, although I think the instances are very rare in which an intelligent and observing physician can be mistaken in regard to the symptoms of approaching and inevitable dissolution, yet the few cases that do occur make the old motto a good one to be governed by: to wit, "that there is always hope as long as there is life."

On Monday morning, 29th, the sick all being convalescent, I was preparing to return to town when three new cases made their appearance, all presenting the usual premonitions of Cholera, induced, I think, chiefly by imprudent eating, on Sunday—particularly of Irish potatoes which were not well cooked, and which passed away from the stomach and bowels in an undigested state.

Negro boy Abram, about fourteen years of age, without much purging or vomiting, sank almost suddenly into collapse, and no remedies employed had any effect in affording relief. He was a doomed victim from the beginning, and nothing I believe but Divine power could have restored him.

Negro girl Daphne, sixteen years of age, likely, and of fine constitution, was seized with vomiting and purging of a watery character, containing lumps of undigested potatoes. In an hour or so, skin and tongue cold—"vox cholera"—colliquative perspiration—pulse imperceptible—and every other symptom of hopeless collapse. I saw at once the case was a "desperate" one, and felt myself justified in employing the boldest, and what would be considered by many as the most "desperate," treatment: gave, first, Calomel, some 20 gr.; Laudanum, ʒ ii; and Quinine, gr. xx; applied sinapisms, and used brandy freely. In an hour, there being no improvement, gave tablespoonful of Quinine, with about fifty grains of Calomel. About this time we had procured ice and commenced using it in the form of frictions. In a short time the symptoms were better, pulse became perceptible, partial warmth returned to the skin, bowels were checked, but still some vomiting. Continued the Calomel, Opium, and Quinine, in pretty full doses, and by next morning patient was convalescent. Not less than one-hundred grains of Calomel were given during the day, but no salivation occurred; about the same quantity of Quinine was also given, with the effect, I thought, of

diminishing the frequency of the pulse, which was very frequent and feeble when reaction commenced. Under the influence of Quinine and Opium the pulse became fuller and less frequent, and the circulation equalized. The Calomel seemed to have the effect of increasing the bilious secretion and producing copious bilious operations, after the rice-water discharges were checked. The ice, as in the case of Gabriel, seemed to have a fine effect in this case. Patient begged for it constantly, and was permitted to eat it in small quantities. Cold water was poured on the breast and body, which afforded much relief and assisted in producing reaction. No consecutive fever occurred; Quinine was continued next day; appetite good, and the patient rapidly recovered.

Negro man Jim, attacked with symptoms of a similar character and treated pretty much the same. This boy recovered, but the disease assumed a dysenteric form in a few days, attended with violent pain in the lower part of the bowels, with bloody and mucous discharges. This condition was chiefly relieved by injections of Slippery Elm water with ice in it—cupping, and poultices. This is the only case in which salivation, to any injurious extent, occurred, although large and frequent doses of Calomel were given to many of the patients. The disease was relieved by application of lunar caustic, blistering the jaws, and a wash of Sugar of Lead and Opium.

It may be here proper to remark, that none of the cases terminated fatally except among those negroes who were brought from the infected plantation, and that Gabriel and Jim were the only cases which occurred among those who resided at Mr. T.'s place near Memphis; and one of them (Jim) I did not consider a well marked case of Cholera.

I could not satisfy myself that there was any evidence of contagion, most of the negroes at the "home house" being constantly exposed to the disease—sleeping in the same apartments and not having a symptom of it. Nearly, if not all of the negroes who were exposed to the original cause of the epidemic on the plantation, were more or less affected with derangement of the stomach and bowels. I was exposed to the disease constantly for two weeks; was with the sick day and night; came down the river on a crowded flatboat with the negroes and their bed-clothing, all huddled together, but I never had a symptom of the disease. Twelve months previously, when the epidemic was prevailing in Memphis, I had severe symptoms of Cholera, although but little exposed at the time to the contagion, as I was visiting patients in the country when attacked.

I will not, however, here trespass upon the already tired patience of the reader, by discussing the question of contagion.

My time was so much occupied while attending the sick, that I did not have an opportunity to make full memoranda of the cases, and now write chiefly from memory, which always must be imperfect under such circumstances.

In conclusion, permit me to observe, (and my opinion, I believe, corresponds with all the most experienced and intelligent physicians on this subject,) that no specific—no successful treatment has ever been indicated for this remarkable and inscrutable disease. Its cause, its mode of progress, its nature, and the best means of treatment,—still remain, and perhaps will ever remain, a mystery to the Profession; and for aught we know, it may be the will of God that such should be the case. Still, it is the duty of medical men to employ all the faculties which God has given them, to investigate the nature of the disease, and endeavor to relieve it as far as in their power lies. And although in violent and fully developed cases it may be entirely beyond the control of human skill to cure or relieve, yet in mild cases and incipient stages it is probable that judicious and well timed remedies may do much good: and these it is the duty of the physician to search out and apply, and both for his own, and the benefit of others, to record the results of his observation and experience.

Sept. 23d, 1851.

Part Second.

EXCERPTA.

I.—OBSTRUCTION OF THE INTESTINES.

BY JOAN BURNE, M. D.,

Fellow of the Royal College of Physicians, late Physician of the Westminster Hospital, Lecturer on the Practice of Medicine, &c. &c.—Read at the Quaterly Meeting of the Bath and Bristol Branch, March 26th., 1851.

The frequency of obstructions of the intestinal canal, the variety of causes, the difficulty of diagnosis, the diversity of opinion as to treatment, and the imperfect consideration given to the subject hitherto, have without doubt determined the Royal College of Surgeons to select for competition "The Causes, Diagnosis, and Treatment of Obstructions of the Intestines within the Abdomen."

The causes of obstruction may be divided into—

1st. Intrinsic, or those causes which affect the intestine from within.

2nd. Extrinsic, or those causes which affect the intestine from without.

3rd. Those causes which do not range themselves under either of the foregoing divisions.

The intrinsic causes embrace—

a. Accumulations of ingesta, taken as food or otherwise.

b. Pathological, or, more correctly speaking, patho-anatomical conditions of the intestines, namely, intra-intestinal tumours, stricture from scirrhus or other organic cause, and organized bands stretching across the channel of the bowel.

c. Enteroliths, or intestinal concretions.

The accumulation of ingesta, in the form of residuary alimentary matter or fæces, may be seated in the small intestine, in the cæcum, the colon, or the rectum; in the cæcum more commonly as an impacted mass, in the colon as a mere accumulation, in the rectum as a tough or friable hard ball; the last more generally in females. In addition to these causes are ingesta of an insoluble indigestible character, as pieces of bone, of sinew, of apple, fruit stones, seeds, magnesia, sulphur, and the like; also hard substances accidentally or intentionally swallowed, of which medical records furnish a catalogue of extraordinary instances.

Of the pathological causes stricture from scirrhus is the most frequent, and is located more generally at the termination of the sigmoid colon in the rectum, often indeed in the rectum itself, but here, though it narrows, it rarely obstructs the channel of the bowel completely.

In the cæcum, too, disease is not uncommon, the morbid condition being contraction of its cavity from thickening and induration of the submucous and subserous areolar tissue, the product of previous inflammation ; but this contraction, again, seldom leads to complete obstruction.

The most remarkable cause of obstruction from morbid growth is that of organised bands stretching across the cavity of the gut, like a net-work, entangling the fæces, and producing sooner or later a total obstruction. These bands are met with in the rectum likewise, and are supposed to result from a muco-enteritis with effusion of fibrin and consequent adhesions, which, acted on by the peristaltic power of the bowel and the fæculent matter, become elongated, and persist thereafter in the shape of organised bands. Obstructions in the rectum from this cause may be only partial, in the cæcum complete, of which a remarkable case is related in my first "Memoir on the Cæcum and Appendix," in the 20th vol. of the Medico-Chirurgical Transactions."

Enteroliths are formed either in the intestinal canal itself, and are true intestinal concretions, or they are formed on contiguous viscera, and find their way into the intestinal canal ; as gall-stones and pancreatic calculi. Those originating in the intestinal canal may form upon a nucleus of effused fibrin or blood ; or around some foreign body by the aggregation of the salts of lime and other matters ; or may be formed of indigestible fragments of food, as woody fibre, the husks of fruit, and the like. So in countries where oatmeal is a common article of diet—Scotland for instance—they are made up of the husks and beards of oats.

According to the authority of the Munros, many concretions have been found in the same individual. A single concretion may lodge and produce a complete and fatal obstruction ; or may become impacted in a diverticulum, or in the appendix vermiformis cæci, where, by continued irritation, it may produce a perforative ulceration, followed by peritonitis and obstruction, in this case sympathetic.

The extrinsic causes embrace—

Strangulated hernia.

Adhesion of a convolution of intestine, after the operation for strangulated hernia.

Twist of the sigmoid flexure of the colon.

Diverticula.

Pseudo-membranous bands attached to the mesentery and peritoneum.

A punch or hole in the mesentery.

Tumours extra-enteric.

The adhesion of the opposite free surfaces of a convolution of intestine, previously strangulated and relieved by operation, has been witnessed by myself iu one instance. It is rare, because of the precaution taken by surgeons after the stricture has been divided to draw out the gut, and to separate any adhesions before returning it into the abdomen. In the instance mentioned, the operation had been performed by an excellent surgeon, the late Mr. White, and it is probable, that agglutination may have again taken place after the return of the gut. It is worthy of remark, moreover, how slight an agglutination, separable by the least force, may be sufficient to obstruct the action of the bowel, and prevent recovery.

Twist of the sigmoid colon, with or without laceration, is favoured by a relaxed state of the meso-colon, and may be caused by a sudden blow or movement ; or, as O'Beirne suggests, by the sudden propulsion into it of excrementitious matter from above. The twist may be half a rotation, or, it may be a turn and a half, sufficient in either case to produce an invincible obstruction.

Twist of the small intestine, the axis being the mesentery, occurs also as a cause.

The diverticulum is an abnormal appendix to the small intestine, often several

inches in length and wide as the bowel itself, communicating openly with the gut, but closed at its distal extremity. When congenital, it often hangs unattached to the abdomen, but occasionally a band proceeds from its blind extremity and adheres to some point of the mesentery or peritoneum, and under this band convolutions of intestine may become strangulated and cause obstruction.

Pseudo-membranous formations in the shape of organised bands, the product of previous inflammation, may also incarcerate the intestine. To these the female sex, in the opinion of Rokitansky, is more prone than the male, the pseudo-membranes being frequently attached to the internal sexual organs.

The third division of causes includes—

Intus susception.

Enteritis.

Colica a plumbo, and

Spasm of the intestine.

A spasmodic constriction, though rare, must be recognised as a cause of obstruction. In a case which occurred to Dr. Todd, and proved fatal in about thirty hours, there was found a contraction in the lower portion of the ileum, from which the transition to the dilated portion above was abrupt, and there was no mark of external compression of any kind.

Of 169 cases of obstruction, collected with great industry by Mr. Benjamin Phillips—

63 were instances of invagination.

16 were tumours pressing from without.

19 were the result of stricture from disease of the parietes.

11 were the result of intra-intestinal tumours, hardened fæces, or concretions; and

60 were caused either by constriction, by bands, by adhesion, by the passage of the intestine through some abnormal opening, or by the twisting of the intestine upon itself.

Of the 169 cases, 133 terminated fatally, viz. 7 out of 9, or about 78.7 per cent.

Seeing that the causes of obstruction are so many and various, the diagnosis becomes a question for our earnest consideration, as upon it the principle of treatment much depends. In the exploration of the abdomen, by touch and by percussion, too great pains cannot be bestowed; the attention, at the same time, being alive to the fact that disease is prone to establish itself at those parts of the intestinal canal where the dimensions vary and the organization changes.

Holding in mind all the causes of obstruction, we may best guard ourselves against overlooking any; and by comparing the symptoms present in any particular case with those which are known to be proper to some and common to several, we shall be able to cast out from the list one after the other till we arrive at the single true cause, or reduce the number to a narrow limit of remaining causes, which have much in common, and to which the same treatment is applicable. By pursuing this plan of analysis the risk and fatal error of overlooking a strangulated hernia may assuredly be avoided.

In our enquiry into the special symptoms of each cause, or group of causes, we should be exact in our examination of the situations of hernia, not forgetting that strangulation may exist at the inner ring of the inguinal canal, and offer but slight evidence of tumour, especially in a stout person. Or, tumour being present in a hernial site, doubt may exist as to whether there is or there is not strangulation, and an exploratory operation be required. A case of this nature occurred to myself, in which, in consultation with Mr. James, of Exeter, it was deemed advisable to explore by incision an elastic swelling at the navel.

Intus-susception, internal strangulation, and twist of the sigmoid colon, rank in the same category and have signs in common; as sudden attack and great

suffering, perhaps after some strain or exertion, the patient having up to the moment of seizure been in his usual health. Signs referred to the left ilio-inguinal region may point to the sigmoid colon, while deep-seated circumscribed tenderness, with resistance to the touch and dullness on percussion, may point to strangulation or invagination, to the latter especially if blood is voided from the intestine, a sign in this case almost pathognomonic. Yet doubt will exist.

Impaction of fæces in the cæcum may be recognised by a distinct circumscribed tumour in the the right ilio-inguinal region, in conjunction with a costive habit; accumulation in the colon by a solid feel in the course of the gut, with dulness on percussion; impaction in the rectum by urgent tenesmus, verified by digital exploration.

Scirrhous disease at the termination of the colon in the rectum, may form and exist without any other symptoms than those of dyspepsia, attended often with a diptheretic or apthous state of the mouth—a suspicious sign; the action of the bowels, formerly regular, having become difficult and uncertain, the dejections at the same time being scanty, soft, and very offensive; followed sooner or later, by complete obstruction. Pains of a neuralgic character in the abdomen and about the trunk of the body are the frequent attendants of organic disease of the intestine tending to occlusion of the canal.

The symptoms described may excite suspicion, and suggest the necessity of examining the gut itself, in doing which tact is required, for if the course of the rectum be followed the finger will be lost in the hollow of the sacrum. To reach the colic extremity of the rectum the index finger should be introduced up to the knuckle, and direct across the pelvis from the coccyx to the projection of the sacrum. Not holding in mind these particulars, two persons failed to detect scirrhus in the case of a gentleman who had been under my care, and in whom these symptoms led me to suspect disease, which on examination I was just able to detect with the tip of the finger at the colic extremity of the rectum. On this being announced a cousultation was desired, and another physician was called in. He failed to reach the disease; upon which a surgeon was requested to meet us. It happened that the surgeon, not being able to keep his appointment, visited the patient alone, and, having made an examination, assured him that there was no disease. Next day we all met, when both these gentlemen were able to satisfy themselves of the existence of a scirrhous stricture.

The existence of spasm as a cause is indicated by intense acerbating pain, restlessness, the absence of febrile movement and the other symptoms of inflammation, and by the successive development of the signs of obstruction.

The signs common to all obstructions are constipation, pain, vomiting, and depression of the powers of life; and in direct proportion as these are sudden and violent, so is the danger. So tight sometimes is the strangulation from a diverticulum, that gangrene and death will ensue in less than forty hours. The violence of the symptoms may in some degree assist our diagnosis. In the obstructions from fæcal accumulation the countenance does not betray extreme suffering, nor is the general aspect that of imminent danger; accordingly, these cases will hold on day after day, yielding at length on the fourth or sixth, or as late as the tenth day.

A sign of some interest, and in part diagnostic, is the powerful peristaltic action often observed, so powerful as to be obvious to the touch and sight, like a snake coiling and moving in the abdomen. This effort of nature to overcome the obstacle is a sign common to most obstructions where the cause is mechanical; with the exception, however, of strangulation, in which, as in enteritis, there is a perfect stillness in the abdomen. This differential sign, if verified by others would determine between obstruction from strangulation and from other mechanical causes.

Tenesmus and resistance to the passage of enemata point to the rectum or sigmoid colon as the seat.

Blood voided per alvum indicates invagination.

Tumour, deap-seated resistance to the touch, with dulness on percussion, and

pain and tenderness, indicate the point of obstruction; also the point is indicated when injections reach a certain spot snd there stop, and the intestines propel their contents downward to the same spot and no further. It is said that the vomiting and pain is more severe when the obstruction occurs in the small than in the large intestines, and there may be some truth in the remark, but the exceptions to the rule are many. It has also been said that if the urinary secretions be copious the obstacle must be far removed from the stomach, and *vice versa*: but the exceptions to this rule are also many.

With every aid that our present knowledge can supply, the diagnosis will often be perplexed in consequence of the great diversity in the situation of the colon, and of other abnormalities in the cavity of the abdomen.

The treatment of obstruction of the intestines will depend much on the opinion formed of its cause. Should a strangulated hernia be discovered, the established remedies leave no doubt as to the course to be pursued. Should the symptoms favor the belief that the obstruction is caused by an accumulation of fæces, the question at once arises,—What, and to what extent, purgative medicines should be administered? a question to be determined partly by the acute character of the symptoms and partly by the manner in which purgatives are borne by the stomach.

In any case it may be proper, at the outset, to give purgatives in strong doses, as colocynth, calomel and opium, followed by senna and salts, the dose to be repeated in six hours. But these proving ineffectual, are we to persist in the further and frequent use of them?

The presence of fæcal obstruction seems so naturally to call for the aid of purgatives, that one is tempted almost irresistably to persevere in their administration, even though the stomach reject them; and such has been the too general practice. But observation and experience teach us to pause in this course, so frequently do we find that the strongest purgatives, resolutely administered, are not only given in vain, but have a prejudicial effect, which compels us to desist; and yet, by and bye, the bowels act and the patient recovers. To what extent then are we called upon to prescribe purgatives? My own experience decides in favor of limiting their use, and the experience of the Profession is fast tending in that direction.

It must be remembered, that often the intestine above the obstruction is itself making the most powerful efforts to overcome the obstacle, as is evidenced by the striving action of the convolutions attended with acute suffering. Can good, then, arise from urging the intestine to greater efforts? We may truly answer—No. On the contrary, serious harm; for the irritation of purgatives may aggravate the tendency to inflammation, a tendency always present; and certain it is, that they aggravate the irritability of the stomach, encourage and increase the vomiting, and combine with the disease to exhaust the powers of the patient. This they do by exciting not merely more frequent vomiting, but by actually inducing a secretion from the stomach and upper portion of the intestinal canal to an extent which drains the blood of its more fluid constituent, exactly as does the Asiatic Cholera. The continued use of purgatives, then, is objectionable on this score, besides that it is ineffectual.

On what remedies then are we to rely? Calomel may be admissable once in twelve hours, in full dose, if the stomach do not reject it; but the remedy that gains favor by experience, and promises the best results, is opium, crude in the first instance, afterwards in the form of salts of morphia.

The criterion of the extent to which opium should be given is the degree and frequency of the pain, and on this we may fairly rely. Opium in the dose, first of a quarter then of half a grain, and later the acetate of morphia in the dose of a quarter of a grain, may be repeated every four hours, so as effectually to relieve the pain; and, if it should narcotize the patient in any slight degree so much the better.

A very instructive example of the propriety of this treatment occurred at Tiverton, in January, 1850, my friends Mr. Jervis and Dr. Patterson, in conjunction with myself, being in attendance. In this case purgatives were given with perseverance till their ill effect in keeping up the vomiting and aggravating the throes of pain was so obvious, and the powers of life were sinking so rapidly that we were of one mind as to the necessity of suspending them and relying on opium. This course having been adopted, the vomiting diminished, the morphia soothed the pain, the patient slept during the night, and the obstruction yielded the following day.

In another case to which I was called in consultation, some years ago, every resource had been tried, fæculent vomiting was present, and the powers of life were at a low ebb, and all treatment was abondoned, morphia excepted, which, in doses of a quarter of a grain, was exhibited as the throes of pain returned. On the tenth day the obstruction yielded and the patient recovered. Very lately also, a case of obstruction has been treated at Guy's Hospital successfully with opium, to the exclusion of other means.

Although experience may decide us to abandon the frequent repetition of purgatives, it sanctions the occasional exhibition of a saline aperient,—as the sodæ potassio-tartras, in the state of effervescence, which salt in the dose of one drachm often proves grateful, and tends to liquify the fæces; but even this should not be repeated oftener than once in twelve hours, as, independent of other reasons, salts produce distressing thirst.

In obstruction from fæces impacted in the cæcum, there being seldom so much irritability of the stomach, purgatives are more admissable, and conjoined with calomel and opium, constitute the main treatment. Here, however, saline aperients are particularly valuable; and it does happen that the stronger purgatives of senna, salts, and jalap, are efficacious. Yet, as the impacted mass requires time to be liquified, purgatives should not be pressed too assiduously. When fæces are impacted in the rectum, the mass requires to be broken up, and extracted by mechanical means. When the symptoms lead to the inference that the obstruction is either from internal strangulation, twist of the bowel, or intus-susception, we recognize here invincible obstacles which forbid the use of purgatives in any form or dose. All the resources which medicine can supply avail nothing. Under these desperate circumstances, with no other prospect than prolonged torture and inevitable death, desperate remedies are justified, may we not say demanded? The obstruction admits of relief if the parts involved could be got at, and surgery has made the bold attempt. My friend Mr. Hilton has opened the abdomen twice, though unsuccessfully, and has had occasion to regret the omission of the operation several times, once in the last summer, where a post-mortem examination proved the diagnosis to have been correct.

However hazardous to life wounds of the peritonæum may be, the dread which formerly deterred surgeons from making incisions into the abdomen no longer exists; they are of constant occurrence in operations for hernia, and recovery after them is common. Dr. F. Bird has made small incisions into the abdomen in eighteen cases as a means of diagnosis or relief, and in no case did a bad result ensue from such incisions. Nor is recovery unfrequent after the incisions of great extent in the modern operation of ovariotomy. On this ground then, need we hesitate? That which makes men unwilling to risk an operation, is the doubt which involves every case as to the exact seat and nature of the obstruction. But doubt will ever remain. Weighing all the circumstances, and judging as best we may of the seat of the obstruction, and an operation having been determined on, is it advisable to open the abdomen at the particular spot? In cases where the nature of the obstruction is clearly indicated, the incision may be made as near as practicable to that spot; but where the point of obstruction is well defined, if the abdomen is opened on one side,

and the cause of obstruction proves to be on the other, the operation will have been performed in vain; and the probability of such a result is great. Only within a few weeks two of my friends differed in opinion, the one thinking the obstruction was near the cæcum, and the other in the sigmoid colon. The same difference of opinion existed between Recamier and Dupuytren, two eminent men. How then decide? In the midst of such difficulties would not the large incision on the median line, as practised in the Cæsarian section and in ovariotomy, be preferable? Would it not afford the best chance of discovering and removing the cause of obstruction, wherever seated?

This proceeding my own opinion would countenance; it has been practised on various occasions by eminent surgeons—by Messrs. Hilton and Erichsen recently, and is recommended by Mr. Phillips, but its propriety must be decided by experience.

Of the treatment of obstruction from scirrhus of the rectum much need not be said. Nor can relief be hoped for from attempts directed to the stricture itself, which force might lacerate, but could not dilate, and surgeons wisely desist. It may, perhaps, be possible to pass a gum-elastic catheter through the stricture, even when high up, though I have seen the late Sir Astley Cooper make the attempt and fail; but, supposing this accomplished, it would be hazardous to inject fluid with a view to liquefy the fæces and favor their escape, or force must be employed which would endanger the rupture of the colon, distended already to the utmost. One resource remains, scarcely preferable to death perhaps, but which it is our duty to suggest—the opening of the colon, after the plan proposed by Callisen and practised by Amusat and others. This may succeed, and an artificial anus being established in the left loin, life may be prolonged.

The feasibility of this operation is placed beyond doubt by no fewer than three successful cases, lately published in the 33rd volume of the Medico-Chirurgical Transactions; the operations having been performed respectively by Mr. Field, Mr. Clarkson, and Mr. Pennell. The region, the left lumbar, selected for this operation is most favorable, there being a space on the outer margin of the quadratus lumborum muscle, where the wall of the abdomen is thin, and admits of the colon being opened without wounding the peritoneum. By Mr. Field and Mr. Clarkson, the operation by transverse incision was preferred; by Mr. Pennell, that by the vertical incision. By Mr. Field difficulty was experienced in distinguishing the gut, fascia having been mistaken for it, a difficulty to be obviated by recollecting that the tissues to be divided, as stated by Velpeau are—

The very thick skin.

The cellulo-adipose tissue.

The origin of the transversalis muscle or its aponeurosis, and a second layer of cellular-adipose tissue; of which a mass lying between the colon and transversalis must be dissected through, and much of the fat removed before the bowel can be reached.

The relief consequent upon this operation is complete. But, as time advances, a decided disposition in the outer orifice to contract manifests itself, and leads, eventually, to renewed difficulty and danger. Would tents of sponge densely compressed, as used by Dr. Simpson to dilate the uterus, have power by expansion, to keep the orifice patent?

The inflammation developed in cases of obstruction may call for the abstraction of blood, either from a vein or by leeches; but, inasmuch as the inflammation is the consequence, not the cause of the obstruction, blood should be drawn cautiously, with a view to its control, for it cannot be extinguished, the cause remaining. Moreover, when the cause of obstruction is not insuperable, the signs of tenderness and pain (which would seem to demand the loss of blood) are due to irritation and spasm rather than to inflammation, and are best relieved

by opium; and hence the value of this remedy. The alleviation of pain, indeed, is a main point in the treatment of obstruction from any cause, for pain may destroy life; and in proportion as pain is urgent so should opium be given. In a case related to me by the late Sir Astley Cooper, of obstruction caused by the lodgment of a concretion in the ileum, the excruciating pain destroyed life in eight hours.

If blood be drawn too freely at the outset it would leave the patient ill prepared to bear up against prolonged suffering with want of nourishment, and might in this way turn the balance against him. In case of intus-susception, not relieved by operation, the only chance of life is the separation of the invaginated portion of the gut, gangrene having first occurred; a process which requires time; so that if the powers of life have been reduced by excessive blood-letting, as well as by the disease, the patient will sink before nature can accomplish her task. Blood, therefore, should be drawn with circumspection.

Fomentations and warm baths are valuable adjuvants; they soothe pain, relax spasm, and, by diminishing suffering, save power.

Of all the remedies at our command enemas in conjunction with opium are perhaps the most essential, and where the obstruction is not invincible, contribute more than any others to bring about a happy termination. Enemas, composed of bland fluids, should be injected twice in the day, to the fullest extent the bowel will receive, by the aid of O'Beirne's colon tube, a most valuable instrument in these cases.

Among the other remedies employed, as a last resource, are tobacco, fluid mercury, the cold douche, and galvanism; the two last said to be successful occasionally. But mercury is of no use as far as I have seen, and is otherwise open to great objection. Tobacco is a valuable, because often a successful remedy; but on account of its poisonous properties it is administered only in the form of enema, the infusion for which, on the score of safety, should not be stronger than fifteen grains to a few ounces of boiling water.

Strychnia may deserve notice, and has been given in one case, in the dose of 1-16th of a grain dissolved in distilled vinegar with remarkable success.

(*Prov. Med. and Surg. Journ.*)

II.—MEDICAL REFORM.—HOW IT IS TO BE EFFECTED

In the September No. of the *N. J. Med. Reporter* we find some judicious remarks on "Medical Reform," by Dr. James H. Stuart. This is the second time he has directed the attention of the Profession to this important question, —and if the plan by which this "reform" is to be brought about, as suggested by Dr. S., be impracticable at the present time, we think the day is not remote when it may be adopted, with some modification. We give the Doctor's hints in his own words. (*Ed.*)

"In my last I endeavored to depict the *necessity* for medical reform; in my present, I purpose modestly to suggest the *means*. Legislative interference is, as before stated, for obvious reasons, manifestly out of the question. But we yet have left to us an unfailing resort. The great American Medical Association is, or ought to be in the medical world, a legislative body from whose decision there can be no appeal. It is composed of delegates, chosen for their competency, from all sections of the Union, and, of course, perfectly conversant with the wants and interests of their own peculiar district. Recommendations from it have heretofore had almost the weight of law. Witness the six months'

lecture term, which was immediately adopted by that noble old institution, the, University of Pennsylvania, and has been since gradually coming into vogue among the other respectable schools of our country. In fact, as anything emanating from that body is but an expression of the will of the educated practitioners throughout the Union, it is impossible to withstand it. Now let the delegates to this great power once fully understand the necessity of reform, thorough, and immediate, and what will be the result? The work will commence, and never cease until ignorance and charlatanry are banished from the regular Profession. Let but an edict be passed to the effect that diplomas from ordinary medical colleges are *not* sufficient guarantees of professional ability, and we will soon see a different state of things. Let an examining committee be appointed from among the best men in our country, connected or not, as the case may be, with schools, whose duty it shall be to examine thoroughly all candidates for the Profession. And let these examinations have reference to general education, intelligence, and scientific knowledge, as well as the mere practical details of anatomy, practice, etc., etc. Their qualifications as gentlemen should likewise be considered. Once a year would be sufficient for the examinations, which might be held in the presence of any stated number of non-professional witnesses. Let these, and these alone, be an index of ability, and let the Profession frown sternly upon all who pretend to practice without having passed the ordeal, and we would then have only the proper number of educated men practising, instead of the confused mass of educated, and ignorant blackguards and polished men which now crowd our ranks. There would then be no rivalry such as now exists among the schools, to induce the turning out of hundreds of ignoramuses every year to devastate the country with their murderous tide; but every man would feel that he had earned his position, and was interested in maintaining its dignity. Unless some such plan is speedily adopted, woe be to the man who studies medicine. Starvation and disgrace are his inevitable lot. But we hope for better things. The Profession is waking from its lethargy. The evil has become unendurable and *must* work out its own cure."

III.—ON OVARIAN IRRITATION.

BY FLEETWOOD CHURCHILL, M. D.

The following description relates to an affection which, although very common, is but little noticed in books. This has probably arisen from its having been placed among the symptoms of other diseases, although it is quite distinguishable from them.

It resembles most closely the disease discribed by Dr. Tilt under the name of subacute ovaritis; but the cases I have seen have led me to differ from that very intelligent writer, and to conclude that the affection to which I refer is not inflammatory. I have, therefore, preferred the term *Ovarian Irritation.*

I have met with it in women of all ages between the commencement and cessation of menstruation, so that I do not think age has much influence in the production of the disease; but I am quite certain that it is most frequent in women of a delicate, nervous temperament, though by no means confined to them.

The chief characteristic symptom is an uneasiness, amounting in the greater number of cases to pain, and in some cases to very severe pain, in one or both iliac or inguinal regions, but most frequently in the left, which Professor Simpson seems to think is owing to the propinquity of the left ovary to the rectum,

and the exposure to any irritation thence arising. This pain may be a constant dull aching, or it may be acute and occurring in paroxysms; it is greatly aggravated by standing, and generally by walking: indeed, in the severer cases, I have known the patient quite unable to walk.

There is generally some complaint of fulness about the iliac region, but upon careful examination I have rarely been able to satisfy myself that this was more then a sensation; I certainly never felt anything like a distinct tumour. There is, however, always considerable tenderness, which in some cases is extreme to the slightest touch. When the irritation is great, it may be extended to the bladder, giving rise to a desire to evacuate its contents frequently, and causing great pain in doing so. Hysterical paroxysms are by no means unfrequent. In two of the most violent cases of hysteria that I have seen for some time, there was extreme tenderness of the region of the left ovary, and pressure there aggravated the hysterical paroxysm.

If we make a vaginal or rectal examination, we shall most frequently discover nothing unusual, neither heat, nor tenderness, nor swelling; in a few cases, however, I have found that moving the uterus laterally caused uneasiness in the side affected. When speaking of a rectal examination in subacute ovaritis, Dr. Tilt remarks, that the ovaries are more or less painful on pressure, and that they are from twice to four times their original size.* This I have not found in the affection now under consideration, and it constitutes one reason for my doubting that it is the same disease as that described by Dr. Tilt.

These are the principal local and direct symptoms I have observed; they vary much in degree, and are in some cases so intense as to resemble an attack of acute ovaritis. They differ also more or less according to the circumstances in which the attack occurs; and in order to elucidate this point, I shall briefly enumerate the circumstances.

1. In patients who suffer occasionally from amenorrhœa, it is not uncommon to find ovarian irritation at these periods, and not altogether confined to them. Whether the ovarian irritation be the cause of the suppression of the catamenia, or merely a symptom, is a question not easily decided. In many cases I think it is probably the primary affection, but in some others it appears to be the result of the amenorrhœa. The suffering is often considerable, and may be prolonged until the next catamenial evacuation; if that be full and free, the pain and tenderness generally disappear.

2. Upon the sudden suppression of menstruation, it is not unusual for the ovaries to be almost instantly affected, either by the form of disease I have described, or by an acute inflammatory attack, which is more rare.

3. In dysmenorrhœa there is more or less ovarian irritation. If we examine the patient minutely as to the seat of the pain during the period, we shall find that it is principally in the region of one or both ovaries and often accompanied by tenderness on pressure. In the majority of these cases I am inclined to think that the ovaries are secondarily affected.

4. In menorrhagia, the ovaries may apparently preserve their integrity for a long time; but if the attacks be frequent, I have generally found that these organs, one or both, become affected, and that the irritation frequently continues long after the discharge has ceased.

5. I have repeatedly seen this ovarian irritation accompany congestion and erosion of the cervix uteri, but it most frequently comes on after the latter disease has persisted for some time, or after it is nearly or quite cured. The ovarian irritation, however, in these cases, very soon subsides.

6. I have already mentioned its occurrence in hysteria, both when the latter is evidently dependent upon catamenial disturbance, and when the periodical discharge is quite correct.

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*On Diseases of Menstruation, etc., p. 79.

7. In some few cases I have recognised ovarian irritation in cases where the uterine and ovarian monthly functions were apparently accurately performed, but the patients were of a highly nervous temperament, in delicate health, and without offspring.

These various classes include, I think, all or nearly all the examples of the disease which have come under my observation. In many cases it requires care to separate the ovarian symptoms from those caused by the concurrent disease, but in other instances this distinction is quite obvious. When uncomplicated, the disorder rarely gives rise to any general or constitutional symptoms. Many of the subjects of it are delicate and weak, and of course this attack keeps them so; but ordinarily the pulse is not quickened by it, and there is neither heat of skin nor thirst. The appetite is seldom good, but it is not worse than usual, and the bowels are generally irregular. I have examined the urinary secretion, and have repeatedly found it scanty, acid, and occasionally mixed with mucus.

As to the *pathology* of this affection there are several points of considerable interest. I think we can entertain no doubt that the ovaries, one or both, are the seat of the irritation; the peculiar and fixed locality of the pain, and its frequent connexion with the ovarian function of menstruation, all confirm this view. But the next question is more difficult to decide positively, viz., is the disorder an inflammatory affection of the ovaries, either acute or subacute? The disease described by Dr. Tilt certainly presents characteristics of inflammation, which I have never observed in the present disorder. The absence of tumefaction generally, and of a distinct tumour always, the negative results of an examination *per vaginam* and *per rectum*, the intermitting and paroxysmal character of the attack, the absence of all the ordinary results of inflammation (as abscess, accumulation of fluid, etc.), even in the severer cases, and the success of a certain line of treatment, are all, to my mind, very strong arguments for the non-inflammatory nature of the disease. In most of these particulars, it differs from the subacute ovaritis of Dr. Tilt. I have certainly seen some cases in which the point seemed doubtful, and it is probable that the one form of disease may, under certain circumstances, merge in the other; but I cannot resist the conviction, that the affection I have described is essentially neuralgic, and not inflammatory.

Again, it may be asked, is this ovarian irritation the cause of the menstrual disorder or its effect, or merely a concomitant symptom? No one acquainted with the present state of ovarian physiology could deny that the integrity of the menstrual function must be largely influenced by the condition of the ovaries. If this ovarian irritation always preceded the catamenial period, I should be inclined to attribute to it the subsequent distress; and in many cases it appeared to me that I could so trace it as the chief cause. But, in some cases, the ovarian irritation distinctly followed the menstrual disturbance or came on towards the termination of the monthly period; and lastly, in other cases, the irritation existed with no catamenial derangement at all. Without doubting, therefore, that ovarian irritation may disturb the menstrual functions in various ways, I cannot agree with those who think that it invariably does so, nor yet with those who are inclined to attribute all menstrual disorders to deviations from the normal condition of the ovaries.

I need not occupy time by enumerating many *causes* for its production; all those which act upon either the uterus or ovary and disturb their functions, may be considered as causes of ovarian irritation, and among these the most frequent, probably, is cold.

I believe that, in many cases, excess in sexual intercourse has given rise to it; and I am also inclined to think, that in a few cases I have known it originate from the entire deprivation of that stimulus. For some valuable remarks

upon this subject I shall refer my readers to Dr. Tilt's excellent work*, a review of which appeared in a late number of this Journal: all that he says upon this point is, I think, equally applicable to ovaritis and ovarian irritation.

The circumstances under which the attack occurs, I mean its relation to the menstrual functions, the symptoms, and the peculiar locality of the pain, render the *diagnosis* tolerably easy in most cases. It may, certainly, be mistaken for intestinal irritation; but, in general, there are no other symptoms than the pain to justisy such an opinion. The bowels, even if irregular, are free from irritability.

It will, however, require a little more trouble to render it certain that there is not acute ovaritis, which the tenderness might lead us to suspect. But this tenderness is *generally much greater than that resulting from inflammation;* it is a kind of a nervous tenderness which shrinks from the weight of a finger as much as from severe pressure. Moreover, in acute ovaritis, the organ is always swollen and enlarged, and it can generally be felt distinctly to be so by an internal examination.

In phlegmonous inflammation of the uterine appendages, or pelvic abscess, as it has been termed, the hard and painful tumefaction is quite plain at the brim of the pelvis, and, therefore, it cannot easily be confounded with the present disorder.

I shall not enter at any length into details of the *treatment* of this disease, inasmuch as I have only my own experience to which I can refer. The choice of remedies will be governed, to a certain extent, by the health, strength, and state of constitution of our patient. With strong, healthy women I have tried leeches to the ovarian region, with some benefit but not complete success, nor in all cases; from six to twelve may be applied at once, and repeated, if necessary, after an interval. Poultices after the leeching are of use; and indeed, when no leeches have been applied, I have seen much comfort and relief derived from repeated poulticing. With delicate women, and they are frequently the subjects of this disease, bleeding in any form has appeared to me rather injurious than beneficial.

I have tried the repeated application of small blisters with better results than leeching. The irritation of the surface certainly relieves the pain in many cases, and, if continued, may finally cure it; but I must confess I have seen it fail repeatedly.

Anodyne liniments and anodyne plasters occasionally seem to afford relief, but they are often of little or no use; I tried anodyne enemata several times with partial success.

In two or three cases I used the tincture of aconite, applied liberally to the iliac region, but I confess the result disappointed the expectations I had formed.

Having failed in affording any relief in two or three obstinate cases, I determined to try the effect of opium applied to the upper part of the vaginal surface. I accordingly ordered some balls or pessaries to be made, somewhat in the mode of Dr. Simpson's medicated pessaries, each ball to contain two grains of opium, half a drachm of white wax, and a drachm and a half of lard. The whole, when mixed together, formed a ball about the size of a large marble, and I placed it at the upper end of the vagina by means of the speculum, leaving the patient in bed for the rest of the day. The success was quite beyond my expectation; the relief was very speedy, and in most instances complete. Even when the pain did return after a few days, a second application removed it. The tenderness disappeared with the pain, and no unpleasant consequences have resulted in any instance.

I have now tried this remedy in a considerable number of cases, and with almost invariable success. I have rarely found it necessary to bleed or blister since I first adopted this plan; and I recommend it with considerable confidence

*On Diseases of Menstruation, etc., p. 53.

to the Profession. I may add that I have tried these pessaries in cases of dysmenorrhœa, applying one the day before the catamenia were expected, with decided benefit.

It is hardly necessary to say that, in this disease, the bowels should be regulated, and gently freed by medicine when necessary. If the appetite be bad, vegetable bitters may be given, and I have generally found it useful to combine some alkali with them.—*Dublin Quarterly Journal, Aug.* 1851.

IV.—DIGITALINE,—ITS ACTION AND EFFECTS UPON THE SYSTEM.

MM. Homolle and Quevenne, in a Report on the therapeutic properties of "Digitaline," sum up as follows:

"1. Digitaline (properly prepared) represents all the therapeutic properties of digitalis.

2. Digitaline exerts a regulating action upon the circulation, and retards its movements. This action, which is essential and nearly constant, requires only feeble doses, (ordinarily from two to five milligrammes in twenty-four hours, in adults.)

3. If we exceed the dose of four or five milligrammes in twenty-four hours, digitaline exerts an emetico-cathartic action, sometimes harsh and sudden, sometimes slow and gradual.

4. Digitaline produces a toxic action when it is absorbed in large doses. This action has been produced by injecting into the veins of a dog one centigramme of this substance. But, when administered by the stomach, the toxic action does not appear as dangerous as is generally supposed, the excess of the medicine being expelled from the economy, for the mere reason that it is not tolerated.

5. Compared with the powder of digitalis, which is considered as the best pharmaceutic preparation of this plant, digitaline should have the preference, since it offers greater facility of ingestion, a more certain action, and a more constant tolerance.

6. MM. Homolle and Quevenne add in a note that digitaline produces also two other order of phenomena; a diuretic action and an excitation of the nervous centres, but that this double action is far from being constant.

(*New York Journ. of Med.*)

V.—NEW ACTION OF CHLOROFORM.

This article seems destined to achieve new triumphs, by its sedative and relaxing influence over the sphincter muscles of the rectum and the accelerators of the bladder. It seems to modify the nervous system, in such a way as to favor the evacuation of the various excretions and secretions. In ilius it would doubtless prove a valuable adjunct to our usual means; whilst the passage of biliary calculi down the ureters might be rendered, by the administration of

this agent, easy and comparatively painless.—In the "*Union Medicale*," for July, 1851, M. Guisard reports the following singular case, in the person of his own son.

"My son," says M. Guisard, "aged 3 years, was affected with a painful phymosis and was either unable or disinclined to pass his water or evacuate his bowels, purely on account of the great sufferings which the muscular contractions necessary to accomplish these acts, determined in the parts affected.

Hence, the accumulation of urine in the bladder and the retention of the contents of the rectum.

On the 8th of July, M. Rigal was requested to perform an operation upon the boy, to relieve the phymosis; but to quiet the little patient and to save him from pain, he was brought under the influence of chloroform; and while fully under its sedative and relaxing influences, the urine began to flow freely, and in a short time both the bowels and bladder were completely emptied."

Both MM. Guisard and Rigal were astonished at the result—being convinced that they had accidentally discovered a new and precious therapeutic resource in cases of retention from spasmodic stricture either of the bladder or rectum.

On the day following, about 24 hours after the first experiment, the urine had again accumulated to a painful extent, and in despite of threats, promises, etc., he again refused to pass his water. The inhalation of chloroform was resorted to the second time, with equal success. The chloroform was continued from day to day, until all obstacles to the passage of water gave way. (*Ed.*)

VI.—MAGUEY, OR AGAVE AMERICANA,—A REMEDY FOR SCORBUTIS.

In the September No. of that excellent practical periodical, the *N. Y. Journal of Medicine*, Dr. G. Perin, Assist. Surgeon U. S. Army, has called the attention of the Profession to the Agave Americana as a remedy for Scorbutis. Whilst stationed at Fort McIntosh, *Loredo*, *Texas*, the command was attacked with, and suffered severely from, scurvy; and Dr. P. was led from the suggestions of the Curate of the town to try the virtues of the Maguey. He did not, however, resort to this remedy, until he had given a fair trial to lime-juice—a generous diet—milk, and such vegetables as he could command; but finding recovery slow and tedious under this plan, he put his patients upon the expressed juice of the *maguey*, in doses of two fluid ounces, three times daily, continuing the same diet. Dr. Perin places the juice of this plant far above all other remedies heretofore relied upon in the subjugation of this loathsome affection.

Those to whom the medicine was given became cheerful; their countenances lost the dejected and melancholy air, so peculiar to that disease, and hope seemed to animate and resuscitate the entire system.

The expressed juice is not unpalatable, and does not disagree with the stomach and bowels. The plant, from which the juice is obtained, is indigenous to some parts of Texas, New-Mexico, and California.—This communication was addressed to Surgeon-General Thos. Lawson, U. S. Army, Washington.

VII.—ABSENCE OF THE UTERUS AND VAGINA.

At a recent *seance* of the *Société Médicale D'Emulation de Paris*, M. Dupal laid before the Society the particulars of the following remarkable case:

In the service of M. Rostan, at the Hôtel-Dieu, M. Dupal found a female, aged 22 years, blonde, with well developed mammæ, and possessing *all* the external appearances of a fully formed woman. The external organs of generation were well formed; the labia majora et minora—the clitoris, and the meatus urinarius were of the normal size and situation, and the opening of the vagina was occupied by a simple depression. This individual had, of course, never been regular—in other words, never menstruated; but at the period, when it usually occurs, for the first time she experienced some pains and weight in the abdomen—tumefaction and pricking in the breast; and since that time, on the 15th of each month, all the symptoms of menstruation, except the sanguine discharge, invariably return. She experiences all the desires for sexual intercourse, and seems grieved (*désolée*), because they cannot be gratified. By the simultaneous introduction of the index finger into the anus, and a sound in the bladder, M. Dupal could not detect any body which bore the least resemblance to the uterus. He discovered at the upper part of the pelvic cavity, in the vicinity of the right sacro-iliac symphisis, a small rounded body, which he regarded as the right ovary.

M. Dupal thinks that this subject, although a unique example of a woman without a uterus and a vagina, with the existence of the ovaries, nevertheless really belonged to the female sex. (*L'Union Medicale.*)

VIII.—LUXATION OF THE CRYSTALLINE LENS.

At the Surgical Society of Paris, last July, M. Larrey presented to the members a boy, 13 years old, who had a remarkable luxation of the crystalline lens. The boy could not see clearly; and in the left eye, the cornea, iris, and pupil appeared normal; the crystalline had surmounted or escaped through the pupillary opening, and lodged in the anterior chamber. In spite of the displacement it appeared transparent,—a circumstance which is not usual; for in cases of this kind this organ most frequently looses its transparency. The crystalline lens was easily reduced, but the luxation immediately re-appeared; the eye was free of pain. This kind of luxation is extremely rare, and may be produced by violence, by a wound—and in the latter case the crystalline almost always remains in the posterior chamber of the eye; in this case the crystalline capsule is ruptured. The treatment consists in piercing the capsule with a needle, to facilitate the absorption of the crystalline.

(*Ib.*)

IX.—ON THE TREATMENT OF CONVULSIONS IN CHILDREN.

This disease is so common, and so often fatal, in spite of the best medical treatment, that we make no apology for introducing, from Ranking's Abstract the following hints by Dr. Merei on the management of this alarming affection.

(*Ed.*)

"The treatment of eclampsia is very difficult, and must vary exceedingly according to the various occasional causes and primary diseases of which the

convulsions are symptomatic. The practitioner meets with a similar difficulty in treating the hysterical convulsions of females. During the paroxysm medicine can do but little. In general there should be no haste in interfering, lest the interference should be hurtful. Many practitioners no sooner have a case of convulsions presented to them than they direct the application of leeches—the natural consequence of the general doctrine, that this neurosis proceeds from, or is conjoined with, congestion of the brain. The author's practice, which has been sufficiently extensive, has convinced him, that in the great majority of cases detraction of blood is useless and pernicious. He has explained his views on this subject under the head of *pathology*. He now opposes the indiscriminate application of the theory of congestion, and the corresponding use of leeches as a remedy in convulsions, having himself followed this practice for several years, and observed disastrous effects to result.

During the fit, if the child is feeble and anæmic, the author orders it to be placed in an inclined position, with the head downwards; if, on the contrary, it has an appearance of strength, the position of the head and trunk should be elevated. Gentle friction over the temples with aromatised vinegar, and the application of the same fluid to the nostrils, seem to exert sometimes a wholesome influence over the duration and violence of the fits. Enemata constitute a means of treatment which he never neglects. If the child be feeble and nervous, the lavement should be a warm infusion of chamomile flowers and valerian—if there be constipation, the warm infusion of chamomile, mixed with oil and sugar, may be employed—if there be flatulence, and more especially if the eclampsia has been preceded by abdominal spasms, an infusion may be substituted composed of chamomile and fennel seeds, with or without oil and sugar, according to the state of the bowels. If assured that there is no plethoric or congestive state of the encephalon, an attempt may be made to cut short the paroxysm by circular compression of the thighs. In weak infants the author has obtained evident advantage from this practice, though by no means uniformly.

Leeches are *indicated* when the child is robust, and has before the fit shown symptoms of cerebral congestion—such as heat and heaviness of the head. They may also be used in the case of a strong infant, when the fit continues, notwithstanding the use of a lavement, followed by the discharge of liquid stools. If there be signs of congestion from abnormal dentition, no time should be lost in making scarifications of sufficient depth upon the free margin of the gum.

Warm aromatised baths are decidedly useful in the idiopatic eclampsia of feeble anæmic infants; but in other conditions their effect is very equivocal—and if a robust child shows signs of the *congestive* form of difficult dentition or of vascular reaction before the paroxysm, it cannot be placed in a bath, without danger.

When the fit is over, the treatment must be regulated by the idiopathic or symptomatic nature of the disease—due consideration being paid to the primary and exciting cause, if any such be detected. When the child is feeble and nervous, a tonic treatment and generous regimen are applicable, as we have shown when treating of laryngeal spasm. If no congestive state follows the fit, the author always orders a spoonful of infusion of chamomile with one or two drops of sp. melissæ and a drop of tincture of castoreum, and this dose he causes to be repeated every three hours. If the child be feeble, pale, and of lymphatic constitution, the author prescribes a mixture sp. melissæ and tinct. ferri æther., and directs two to four drops to be given thrice a day till such time as there is appearance of improvement in the constitution of the patient. Other stimulant and roborant remedies have not appeared to me to act so beneficially. Cod-liver oil may also be necessary to give an impulse to retarded nutrition. Washing or affusion with cold water is a remedy very gene-

rally applicable and efficacious. The dry atmosphere of situations of moderate elevation usually exercises a beneficial influence upon infants prone to convulsions.

On the employment of calomel the author offers a few observations, for it is, he believes, far too commonly used in the treatment of children's diseases. As an *antiphlogistic*, it is not a remedy whose action is clear and demonstrated by the comparison and severe analysis of facts; and eclampsia, it has been seen, is but seldom associated with a phlogistic diathesis—as a *purgative*, its action is too slow to be indicated in convulsions, and as an *alterative* (vague expression), its effects upon the nervous system are obscure. The author has often employed it, and without evident advantage, in cases of eclampsia; and now no longer exposes his patients to the risk of its pernicious influences upon the blood, the digestion, and the bones."

X.—THEORY OF ABSORPTION AND NUTRITION.

M. Beclard, in a Memoir, recently laid before the French Academy of Sciences, avowed and maintained the following views on *absorption* and *nutrition*:

1st. That whenever two fluids become mixed together, in whole or in part, the mixture will take place even when we interpose between them an organic membrane.

2d. The mixture of liquids takes place by virtue of a molecular force, which is not the same for all liquids. * * * * The interposition of a membrane between two liquids which can be mixed, reveals the inequality of the attraction of these two fluids.

3d. The attractive force of liquids appears to vary with their specific heat. In the phenomena of endosmose, liquids which possess the greatest specific heat, approach those which have the least; in other language—liquids which have the least specific heat attract those which have the greatest. M. Beclard thus generalises these facts: the force, by virtue of which liquid molecules attract each other is in an inverse ratio to their constitutional heat.

4th. That which is true of liquids holds likewise in regard to gazes, in the same volume and under the same pressure.

5th. The action of endosmose may then be considered as the molecular phenomena of latent heat.

6th. This explains why water, which of all fluids has the greatest specific heat, is attracted towards all fluids by endosmosis; and why the hydration of liquids determines or changes the direction of the current; also, why animals, subjected to a perpetual renewal of matter, continually lose water by urinary secretion, cutaneous and pulmonary exhalation, in order to prepare the economy to receive into the organism the dissolved materials of nutrition and heat.

XI—GARGARISM FOR ANGINA MALIGNA.

The following Gargle has been in use from time immemorial among the Creoles of the Isle of France. Dr. Fleury, 1st class Surgeon of the Marine, who communicated the formula to the Society of Practical Medicine of Paris, assures us that he has employed it himself, with signal advantage, in more than 300 cases of Angina of various degrees of intensity. We give the formula:

R. Common Mustard, 25 grammes.
Table salt, 5 grammes.
Ordinary vinegar, 10 grammes.
Water, hot or cold, 190 grammes.

Filter, and use as a gargle. (*Journal des Conn. Med.*)

XII.—ON GONORRHŒA.

BY MR. CHIPPENDALE.

In a paper on this subject, the author remarked, that those who, for any lengthened period, have enjoyed the inestimable benefit of an extended field of observation, and who have duly availed themselves of so great an advantage, are aware that there are many diseases, concerning the origin and propagation of which they have occasionally a difficulty in reconciling the facts which come under their notice with the commonly received opinions. Among these diseases he classes gonorrhœa. The results of civil practice, he observed, are not of a nature to enable one to arrive at accurate conclusions; and it is only from the military practice in small towns on the continent, where all the inhabitants are known to each other, that satisfactory inquiries can be pursued. Such advantage the author had formerly possessed, and the conclusion he has drawn is, that gonorrhœa, for the most part, is not, as is commonly supposed, contracted by infection. In illustration of this position, he described the occurrence of gonorrhœa, after protracted intercourse, following a debauch, the victim using cold ablutions to the part to prevent infection. This he regards as a case of mucous membrane highly excited, and suddenly submitted to a depressing agent, which would naturally induce inflammation and a muco-purulent secretion, with all the attendant symptoms of gonorrhœa. As a counterpart to this, Mr. Chippendale next described the occurrence of a cold in the head, caught by exposure to a draught of cold air while heated. He says,—We have here two cases so far parallel as the dissimilarity of the organs affected will admit, in which we have a like disturbance set up by causes which are similar, though not identical. The author then sought to prove the spontaneous origin of gonorrhœa, by stating that in numerous cases of that disease among the French soldiery, the women with whom they had connexion were found, on examination, to be free from disease. Two cases were also given of married men, who, after drinking too much wine, and having protracted intercourse with their wives, had gonorrhœa. One of these cases, the author said, was fraught with suspicion, for the patient had had connexion with another woman about a week previously. With the other nothing of the kind had occurred. To these Mr. Chippendale added the case of a lad, about sixteen years of age, suffering from gonorrhœa, caused by onanism; and that of a boy, in whom the same disease was produced by passing the head of a pin down the urethra. Another case of gonorrhœa happened in a child five years old; but the cause could not be discovered. The author next expressed his surprise that virus could be effectually lodged in the urethra, because during connexion the canal is closed by pressure, while the lubricating secretion of its mucous membrane serves to defend it from noxious agencies, while the completion of the sexual act is of such a nature as to cleanse away all adventitious matter from the canal. Again, the author doubts the lacuna magna being the seat of the disease, and thinks it not improbable that there is frequently, although not always, an ulcer in that situation. He next proceeds to examine the alleged causes for orchitis and opthalmia, and, discarding them, regards gonorrhœa as of a rheumatic character, and those sequences of the disease as instances of genuine metastasis, and to strengthen this opinion, cites the occasional occurrence of gonorrhœal rheumatism. With respect to treatment, copaiba and cubebs he considers to act through the blood, and must be given at the commencement of the attack, or else they are of no avail. The author has observed that the disease lasts the longest in the young, and that the period of its existence, other things being equal, diminishes as individuals advance in life. (*Ranking's Abstract.*)

XIII.—ON AN EASY MODE OF REDUCING A DISLOCATED FEMUR.

BY DR. MAYR.

Dr. Fischer, of Cologne, published in *Casper's Wochenschrift*, Nov. 1, 1849, an account of his mode of reducing dislocation of the femur, and which consists in flexing the femur to an acute angle with the trunk, and impressing upon it gentle and rotary movement while in a state of abduction if dislocated on to the pubes, and of abduction if dislocated on to the ilium. Dr. Mayr, without being then aware of this procedure of Dr. Fischer, resorted to it in a case that occurred lately to himself. A man æt. 31, dislocated his right femur upwards and backwards; and, after repeated attempts at reduction, even by the pulleys, had been made, the author was called in on the 13th day after the accident. After he had in vain tried the ordinary plan of extension and counter extension, he resorted to the following means: The opposite limb and the pelvis were fixed, the operator flexed the femur upon the trunk, and, passing one arm under the ham while he grasped the calf with the other, he imparted rotary movements of gradually increased strength to the limb. As soon as he perceived a greater mobility of the head of the femur, he brought the limb into a state of strong abduction; and when, still continuing the rotation, the head had approached the acetabulum, he was able, by a rapid and strong pull inwards, to slide it into its pan, which it entered with a loud noise. The gentle rotary movements mentioned by Fischer did not succeed here, all his force being required in their production, which may be probably due to the time the bone had remained unreduced.

The anatomical structure of the parts also recommends this procedure. In front of the thick edge of the acetabulum, the under surface of the ilium forms a perceptible depression, and if the directions given in the manuals are followed, of making the traction obliquely from outwards inwards, and somewhat from behind forwards, be followed, the head of the bone must meet in this depression with a considerable obstacle to its progress. This sometimes even invincible obstacle appears to be avoidable by resorting to abduction.

Mr. Clark, of Southampton, in referring to the above communication, states that he published a similar process seven years since in the "Lancet" and "Provincial Medical Journal." The case was that of a muscular man, about 30 years of age, who, from an accident on shipboard, had dislocated the left femur backwards. The head of the bone seemed determinedly fixed on the dorsum ilii, so as to resist effectually all our attempts to dislodge it by continued traction in the usual way, when it occurred to Mr. Clark that the manipulation by which we disengage the leg of a fowl, for example, in carving, was just the kind of action wanted in this case. The same abduction which brought the head out of the acetabulum forwards in one case, would in the other raise it from behind the acetabulum, and place it in a position to fall readily into its natural cavity, and this without having any powerful muscular action to overcome.

He therefore placed the patient supine on the bed, and, by a towel round the pelvis, fixed to the opposite side of the bedstead, with the help of assistants, kept these bones immovable. He then drew up the left foot till it rested against the inside of the other knee, where an assistant held it.

In this state, it is obvious, that the head, neck and shaft of the femur are all on the same plane, which also intersects the acetabulum, so that any motion of the extremity of the bone outwards must necessarily move the head of the bone in the desired direction. Applying, then, his right hand upon trochanter major, he gradually abducted the knee with the left, using the slightest effort, when, with an audible start, the reduction was at once accomplished. (*Ib.*)

XIV.—NEW SIGN THAT A CHILD HAS BEEN BORN ALIVE.

Dr. Virchow has announced that the presence of uric acid in the kidney, which may be detected with the naked eye, is conclusive of a child having been born alive. His conclusions are—

1. That uric acid deposit is never found in children born dead, or who have died within forty-eight hours after birth.
2. That the deposit does not occur before forty-eight hours after birth.
3. That it is not generally found later than the twentieth day after birth.

(*Ib.*)

XV.—OF THE SYMPTOMS WHICH SHOULD INDUCE US TO PREFER ARSENIC OR QUINQUINA IN THE TREATMENT OF INTERMITTENT FEVERS.

Doctor Dufour of Lyons reports, in the Medico-Chirurgical Review, the result of experiments made in common by Teissier, Rodet, and himself. The following are the conclusions deduced from their researches:

1. Quinquina is greatly preferable to arsenic in the treatment of simple, quotidian, tertian and pernicious intermittents.
2. Arsenic is superior to quinquina in the treatment of fevers of a quartan type; of those, whatever may be their type, which are complicated with a state of irritation or sub-irritation of the stomach, of the intestines and of the biliary ducts, or in cases of saturation with quinine, accompanied with loss of appetite and languor in the digestive functions.

In the course of his experiments with arsenic, Teissier has observed that this agent was of great efficacy against Osteocopic affections, although it does not exert any special action on syphilis itself.

A memoir recently published in the Medical Gazette of Paris, by Doctor Cordier, travelling physician in Algiers, does not attach so much importance to arsenic in the treatment of fevers, or rather, it does not attach any, since it concludes that its action is insufficient in the fevers of Africa, as well as in those which are endemic in Corsica and Minorca.

XVI.—TREATMENT OF DIARRHŒA AND CHOLERA BY SULPHURIC ACID.

BY T. BUXTON.

Dear Sir—In compliance with your request, I beg to send you a few hasty remarks on my treatment of cholera by sulphuric acid *only*.

My attention to this treatment was first drawn some years ago in consequence of having read in a provincial paper that colica pictonum was cured by sulphuric acid; this led me to the use of sulphuric acid in diarrhæa.

I have for some time treated cholera with *sulphuric acid only*, and I find it a perfect specific. In common cases of cholera I gave a scruple of the diluted sulphuric acid in an ounce of water; my usual form is diluted sulphuric acid,

two drachms; compound tincture of cardamom two drachms; water five ounces and a half; with directions to take two tablespoonfuls directly, and to be repeated after every loose stool, or vomiting; and every four hours afterwards. The first dose seldom fails to stop the purging and vomiting, but still a little nausea may be felt at the stomach, with a little pain, for which reason I direct the dose to be repeated every four hours. I seldom have occasion to prescribe twice; the bowels in a day or two act of themselves, and the appetite quickly returns. In severer cases, where there is violent cramp, I give first a draught of half a drachm of the diluted sulphuric acid in one ounce of water, and then prescribe the above mixture. In cases of collapse, where the pulse is scarcely perceptible, with cold, clammy sweats, and a constant purging, &c., I give half a drachm of diluted sulphuric acid in a tablespoonful of water, and repeat it every quarter of an hour, till first warmth gradually returns, the purging stays, and the pulse becomes stronger, when I gradually give less doses at longer intervals.

In my first commencement of the use of sulphuric acid in cholera, I was afraid to use it alone, and I prescribed opium with it; though the purging stopped, the sickness frequently was but little abated, with often pains in the head, which induced me to leave out the opium, when I found the sulphuric acid was the better remedy without it. Occasionally I have given the sulphate of magnesia, or some other purgative, with the acid, on the day after, but I now find this needless. If my patient is weak, I frequently prescribe three grains of sulphate of quinine, with one scruple of diluted sulphuric acid, in one ounce of water, two or three times a day.

I have seen all the other usual remedies fail in the treatment of cholera. In 1832, calomel, in large doses, with and without opium, had its advocates; but the patients died. Oil of cajeput, though a powerful adjunct, failed. Transfusion of salt water, and of blood, I only saw once tried, when the patient died. In after years I have used colchicum with success, but all the cases were slight, so that I am unable to state its value in the stage of collapse. Brandy and opium, though powerful stimulants in the stage of collapse, often prove inert. The inhaling of sulphuric ether in the last stage, I have not used. Purgatives and astringents are also known to fail. Sulphuric acid I have never seen used but in my own practice, nor had I seen or heard of its use until you directed my attention this morning, in the library of the Royal College of Surgeons, to a communication of Dr. Cox on the subject. I have not yet found it to fail, although employed in the stage of collapse. The remedy is pleasant to take, produces not that dislike usual in taking medicines, and if once in the stomach is retained, though water given immediately before is ejected.

(*London Lancet.*)

In the diarrhœa of drunkards, and such as may have frequent attacks of looseness of the bowels, with nausea and vomiting, caused by the abuse of alcoholic drinks, *sulphuric acid*, given in the usual dose, will be found almost a certain cure. It restores the tone of the stomach and bowels—the loss of which seems to give rise to the *diarrhœa à potu*, and acts favorably on the liver, producing a free discharge of dark bilious matters. We might record several cases of this description, in which the use of this mineral acid had produced speedily a favorable effect. [*Ed.*

Part Third.

REVIEWS AND NOTICES OF NEW WORKS.

I.—*The Transactions of the New York Academy of Medicine.* Vol .I. Part I. 1851.

This, the first volume of the "Transactions", given to the public, contains the following original papers.

I. Historical Sketch of the Institutions for the Insane in the United States of America. By PLINY EARLE, M. D.

II. Report of a Committee, appointed by the Academy of Medicine, upon the comparative value of Milk formed from the slops of Distilleries, and other food. By AUG. K. GARDNER, M. D.

III. On the Diagnosis of Yellow and Bilious Fever. By ASHBEL SMITH, M. D., of Texas.

IV. Essay on the value of the Seton, as a remedy in ununited Fractures. Illustrated by cases. By VALENTINE MOTT, M. D.

V. Remarks on the importance of Anæsthesia from Chloroform in Surgical operations. Illustrated by two cases. By VALENTINE MOTT, M. D.

VI. Of Laceration of the Corpus Cavernosum, commonly called Fracture of the Penis. Illustrated by two cases. By VALENTINE MOTT, M. D.

VII. Cases of Tracheotomy. With observations. By W. H. VAN BUREN, M. D.

VIII. A case of Croup in which Tracheotomy was successfully performed. By GURDON BUCK, JR., M. D.

IX. Amputation of the Thigh, and subsequent amputation at the Hip-joint; followed by perfect recovery. By W. H. VAN BUREN, M. D.

X. On the purity and use of Chloroform. By J. T. METCALFE, M. D.

XI. A case of Aneurism, and Ligature of the left Subclavian Artery, attended with peculiar circumstances. By VALENTINE MOTT, M. D.

We now propose to furnish an analysis of such of the above papers as may offer some practical interest, passing over those of a speculative or narrative character.

The historical sketch of the Institutions for the Insane of the United States is carefully drawn up, and gives a flattering account of State liberality and individual benificence ; but as it contains little available information we shall not occupy the attention of the reader with the subject. From this "sketch" we learn that there are 36 Hospitals for the Insane now in operation in the United States. The Insane Hospital located at Jackson, in Louisiana, is omitted. The total then is 37, being nearly one for each State in the Union.

The Report of the Committee of the Academy of Medicine on the comparative value of "Milk" is of a more practical character, and deserves more than a passing notice. The chairman of this committee, Dr. Gardner, estimates the quantity of milk daily consumed in the city of New York to be nearly 20,000 gallons; and it is easy to perceive the deleterious influence this quantity of milk, if adulterated or impure, must exert upon the sanitary condition of the public, especially the infantile portion of it, by whom it is chiefly consumed.

This paper enters into an examination of the diet, diseases and general management of the cows ; and shows conclusively, that their milk is deteriorated or improved by the diet of this useful animal. That the milk is affected by the food of the animal is demonstrated by the smell and taste of the article consumed by the cow, as found in the milk a short time after she has eaten of it; this is particularly the case where the animal has been feeding on onions, carrots, and certain narcotics, which impart to the milk a stupifying effect. Every farmer, whose cattle roam over the wilds and prairies of the luxuriant West, knows that at certain seasons and in certain localities cattle obtain and devour certain weeds and vegetables, which impart to the milk not only a bitter, disagreeable taste, but also some poisonous property, which, when taken in any considerable quantity, determines nausea and vomiting. We have witnessed this effect, in several instances, and when a boy suffered ourself from this cause.—But we have to do with the practical part of this question. All the facts set forth in this Report tend to prove that the milk of cows fed on distillery slops is less nutritious, less coagulable, and contains fifteen per cent. less butter than that of cows fed on natural food and not too much confined. Now, the milk when it enters the human stomach coagulates in the first instance, in the second it be-

comes assimilated; but if it should fail to coagulate, it is less capable of assimilation, and therefore becomes indigestible; hence, in the case of an infant, indigestion, cholera morbus, or cholera infantum, is the frequent consequence of the indigestion of such milk.

Dr. Clark examined the milk of cows fed on the slop from distilleries, with a microscope, and found that the milk globules, from the specimens, showed but little tendency to conglomeration, whereas in other instances, where the cow was properly fed, the reverse of this obtained, the milk globules readily approached each other and adhered together with considerable force. He also found the epithelial cells more highly colored in "still-slop-milk," indicating thereby a diseased condition of the secreting glands.

About the year 1840, at the request of some respectable gentlemen, between forty and fifty of the most respectable medical gentlemen of New York drew up and signed the following certificate, in relation to this subject:

"The undersigned, physicians of the city of New York, being requested to express our opinion in relation to the milk of cows fed chiefly on distillery slop, have no hesitation in stating that they believe such milk to be extremely detrimental to the health, especially of young children, as it not only contains too little nutriment for the purposes of food, but appears to possess unhealthy and injurious properties, owing in part, probably, to the confinement of the cows, and the bad air which they consequently have to breathe, as well as the unnatural and pernicious nature of the slop on which they are fed."

Dr. Charles A. Lee, formerly Professor in the New York University, uses this emphatic language on the subject of bad milk:

"Children who are fed with 'still-slop-milk' have a pale,cachectic appearance, are extremely subject to scrofula, and are liable to take every epidemic disease prevalent. To scarlet-fever, measles, hooping-cough, they are particularly subject, and will take them upon the slightest exposure; such children being apt to sink under any serious disease with which they may be attacked. There is a laxity of the solids and a vitiated condition of the fluids, which predispose them to disease in its most malignant form, &c."

Again he says, "I could give you any number of cases where the health of children has been utterly destroyed by the use of still-slop milk; and I could convince you that the *cholera infantum* itself, the great scourge of our city, is in fact chiefly caused by the use of this milk, either by the mother or child, for it is a singular fact, that in the large cities of Europe, where other causes of disease, with the exception of this, are as prevalent as in New York, this disease is absolutely unknown. Hence the efficacy of a removal to the country; as a change of diet is the necessary consequence."

Dr. A. H. Stevens reports the case of a child under his observation, who, while in his own family, enjoyed uninterrupted health, but on its being transferred to a hotel, was soon attacked with obstinate vomiting, and was only relieved by cutting off his supply of milk from the hotel, and obtaining a better quality of this fluid from the Doctor's own dairy.

Several other instances are given by the Committee, all of which clearly establish the fact that many children are actually destroyed by the bad quality of the milk by which they are intended to be reared. Dr. Trudeau, after reporting a case of obstinate diarrhœa in a child, brought on by living almost exclusively on milk, and which was promptly cured by change of diet, expresses himself in these words:

"I am satisfied that distillery milk has done a deal of harm, and that the increased ratio of mortality among children within a few years has no other cause."

The Committee, after a most thorough and searching investigation of the "milk question," closed its Report with these resolutions:

Resolved, That, in the opinion of this Academy, the milk of cows shut up in stables and fed on distillery slops, is not only less nutritious than that of unconfined and well-fed animals, but is positively deleterious, especially to young children, and is a fruitful cause of many fatal diseases.

Resolved, That the Academy deems it proper to make known to the public authorities the existence of this evil, to the end that they may take such action in the premises as in their wisdom they may think fit."

In New Orleans we have often heard complaints made of the adulteration of milk; but the subject has not excited the attention of the authorities. We believe there are very few distilleries in operation in this city; it being cheaper to purchase the article already manufactured or distilled, than to obtain the *raw* material and elaborate it, at considerable expense, for the market. It has been charged upon our *marchandes du lait*, that they dilute their milk with water. This, although a fraud, is, nevertheless, harmless in its effects upon public health; and, if practiced at all, is borne by us as a matter of course. The cows, which supply our citizens with milk, are fed on hay, bran, oats, grit, etc., and are besides suffered to feed on the green sward that surrounds the city towards the lake-swamps. Hence the comparative purity of our milk *per se*, and the consequent good general health of our infantile population.

The *Third paper* is on the *Diagnosis of Yellow and Bilious Fevers*, by Ashbel Smith, of Texas, M. A.

The reputation of Dr. Smith both as a writer and observer—not to mention his merits as a *diplomate*—his opportunities for observing and comparing the two diseases, his scholarship and nice discrimination, all conspire to throw around anything emanating from his pen more than ordinary interest. We shall, therefore, look carefully into the merits of this paper, believing that it will repay us for the labor bestowed upon it.

The subject of this essay was suggested to the author, while in New-York, in 1848, we believe, when it was reported that "yellow fever"

was prevailing on Staten Island, near New York city. Dr. Smith, in company with Dr. Francis, President of the Academy, and Prof. Dickson, now of Charleston, visited the infected district, where they saw several cases of yellow fever, both in private practice and in the Quarantine Hospital on the Island. During the visit two autopsies were made. He declared the yellow fever of Staten Island to be identical, both in symptoms and pathology, with the same disease along our Mexican Gulf coast.

Dr. S. confines his remarks to his own personal observations, consults none of the books on the subject, repudiates, or rather disregards all that may have been penned on the subject. He sets out with the proposition that "many persons regard yellow fever as an aggravated form of bilious fever," or, at least, allied to it by many and close affinities. In reply to this belief Dr. Smith says:

"I believe the two diseases to be distinguished by differences as essential, as permanent, as uniform, and as appreciable as the differences which distinguish any two febrile diseases whatever. I propose on the present occasion to state some of the points wherein the two fevers in question are unlike, and which authorize us to regard them as being of a different nature or character. Some nosologists, wholly unacquainted with yellow fever by observation, have classed it under typhus; this error, now generally abandoned by the medical profession, will be disproved incidentally in the course of my remarks, without the necessity of special refutation.

By yellow fever I mean the disease which prevails in the seaports of the Southern portion of our Union, more rarely in Northern latitudes, and wherein the black vomit is a frequent symptom of cases which terminate fatally. By bilious fever I mean that disease which prevails more or less throughout different sections of the United States, as well in towns as in country districts, is generally, if not always, of an intermittent or remittent character, and is commonly referred to malaria or miasmata for its origin. Entertaining the opinion that malaria or miasmata exhaled from the earth are among the chief causes of this form of fever, I shall use the terms malarial, miasmatic, and bilious, indifferently, to signify the same disease; believing also that the malignant or congestive fever, whether remittent or intermittent, is only an aggravated type of the febrile affection now spoken of, I shall embrace it also under the same term."

To designate the *habitat* of particular diseases, to specify the favorite, the chosen spot of certain forms of fevers, does not furnish us any definite and precise ideas of that particular affection. If we say that the *plague* is indigenous to Alexandria, in Egypt, and the *yellow fever* to New Orleans, in Louisiana, have we furnished the reader any just and correct idea of the distinctive character of these two diseases? Certainly not; yet this is the only distinction sometimes laid down by writers in their attempts to distinguish one class of diseases from another. Dr. Smith admits the almost utter impossibility of conveying, in proper and precise language, to others, not practically acquainted with the disease, a distinct idea of the peculiar features—of the expression

of that assemblage of symptoms by which we are enabled to diagnosticate diseases. He also takes into consideration, in the investigation of this subject, the fact that there is no known symptom by which fevers are generally characterised, and that in addition to this difficulty we must also recollect that every symptom known to attach itself to any fever may be, and is often met with, in all forms of febrile disease. In answer to these difficult and embarassing questions, Dr. S. says :

"In discriminating between diseases, we must take the assemblage and physiognomy of symptoms, and pathological ravages ; the exceptional and accidental must be separated from that which is regular and uniform ; and where symptoms deemed regular and uniform are wanting, we can often explain their absence by the predominance of other symptoms overriding or overwhelming them, if I may so speak, or by circumstances or treatment rendering the cases ataxic.

I shall trace the differences between bilious and yellow fevers, first by reference to some general laws which govern these diseases, and afterwards by a comparison of their symptoms and pathology.

Those persons who maintain the identity of yellow and miasmatic fevers, generally hold the former to be an aggravated type of the latter. If this opinion be correct, then it would seem that every case of yellow fever should be necessarily of great severity or malignity. This is not the fact ; so far from it, that after the first period of a yellow fever epidemic a large proportion of the cases, often more than half, are of a very mild character, sometimes only a febricula of a few or several hour's duration, or a brisk ephemera. It would be scarcely accurate to say that these mild cases are only some general effects of the prevailing epidemic influences ; for such mild attacks afford immunity against the disease during the same epidemic, and also in subsequent epidemics, so far as my observation and information extend."

Dr. Smith traces a regular and uninterrupted gradation and connection between the mildest intermittent and the most ferocious congestive fever ; and in Texas it is common to witness in the same individual one grade of fever run into another—in other words, a mild intermittent or remittent may assume a congestive or malignant type of fever, and these latter again disappear in the shape of a common ague and fever. So, says Dr. S., in yellow fever there is a regular gradation from the exceedingly mild febricula through all stages of severity up to the most ferocious black vomit. By this declaration the author would lead one unaccustomed to treat yellow fever to believe, that apparently mild attacks are free from danger, that "ferocious" symptoms must always precede the terrible black vomit. If this is the idea sought to be conveyed, we beg to put in a demurrer to such doctrine. We have, in common with many other physicians of this city, seen a number of cases apparently so mild for the first three or four days, as to excite little or no apprehension for the safety of the patient,—but these cases suddenly assume alarming symptoms about the beginning of the fifth or sixth day, to the no small astonishment of the inexperienced practitioner. Dr.

Smith does not seem to embrace the doctrine of the convertibility of yellow fever into a remittent or malarial fever, as he choses to call it; but the two diseases, wholly different from each other, pass easily from a mild type into one of a very grave and fatal character. During the prevalence of epidemic yellow fever in the Charity Hospital of this city, we have often seen mild cases of remittent and intermittent fevers, contracted both *in* and *out* of the limits of the town, suddenly assume all the most formidable symptoms of the yellow fever, and terminate speedily in fatal black vomit. After admission they experienced, if not early relieved, one or more paroxysms; but after the second or third the disease was converted into bona fide yellow fever, and ran its career precisely as other cases of yellow fever in the adjoining beds.

Whilst we regret the issue, we at the same time feel it our duty to divulge the facts as they actually occurred under our observation: A man, aged about 30, and but a few hours in the city, entered the Hospital with a distinctly marked case of intermittent fever. For two days in succession, at 9 A. M., the chill returned, succeeded by fever, then a sweat, and finally a complete remission. Anxious to test the point, we did not interfere; we gave no medicine—no quinine. The third chill was followed by a fever which persisted for over 72 hours, with all the characteristic phenomena of yellow fever, in spite of the most active medication, and at the close of the 5th day, if we are not mistaken, the case terminated in fatal black vomit.

Dr. S. says, and truly too, that yellow fever generally prevails epidemically, although sporadic cases are sometimes witnessed. In Galveston he has never known a case of domestic origin in the absence of an epidemic in the city; whereas miasmatic diseases are endemic, and prevail more or less every season, "no year being wholly exempt from cases." From this, and the foregoing observations, the reader will perceive that Dr. Smith denies the malarial origin of yellow fever. He continues in this connection:

"Bilious or miasmatic fevers pervade broad districts of country, and persons residing anywhere therein are subject to attacks of the same. Yellow fever is confined to the narrow limits of towns, which limits may be easily learned, and the disease avoided. In the State of Texas, throughout the level prairie country, intermittents and remittents are endemic. Few, indeed, are the plantations and farms, if any, that have not been the *habitat* of this endemic; most of them present cases every year. But I never heard it even suspected by any medical gentleman that a case of yellow fever had originated anywhere in the interior out of the towns. If yellow fever were an aggravated or modified form of bilious fever, we should occasionally meet cases of the former in those sections of the interior country where bilious diseases in all their varieties prevail.

In my section of the Union, and I believe it is a general fact, villages and towns are more exempt from miasmatic disease, though not wholly so, than the

surrounding country; on the contrary, yellow fever affecting concentrated populations, the farm-house and plantation are perfectly secure from its visits. Indeed, yellow fever is still more circumscribed; it very generally makes its appearance in a particular quarter of a town, in a district consisting of a single street, or a few streets, to which for the time being it is confined, thence extending more or less gradually over adjacent districts, and so regularly that its progress can be pretty accurately marked. No such rule obtains in regard to intermittents and remittents."

These remarks in reference to the appearance of yellow fever in particular and circumscribed localities, are essentially correct; nevertheless, we have known it to break out simultaneously in a dozen different points or localities in this city, in Lafayette, above and adjoining New Orleans, in the Second, Third, and First Municipalities, and at various points in the three divisions of the city.

Dr. Smith is, however, not prepared to state what influence malaria or miasmata displays in the production and development of epidemic yellow fever, for this fever prevails where ague and other malarial fevers are scarcely known, as in Galveston; and again it occasionally rages where obstinate and even malignant remittents abound annually, as in Houston, Texas.

Our Author now approaches that part of his subject upon which much speculation has been lavished by writers: we allude to the paramount influence of temperature in generating yellow fever. He asserts that a high range of temperature (thermometer) is requisite—is, in fact, an essential condition for the first development of yellow fever. How high, the learned Doctor has not informed us.* Had the Doctor stated that a high range of temperature is *one* of the essential conditions for the generation of the disease, he would have echoed the sentiments of every well informed and observant physician in yellow fever regions. If a high range of temperature plays such an important part in generating yellow fever, how comes it, we ask, that this disease does not prevail every summer and fall in New Orleans, where the range of the thermometer varies but little one season with another. Indeed, our hottest summers are usually the most healthy, other things being equal. Instance 1841 and 1847—two seasons long to be remembered by our resident population, on account of the fearful epidemic yellow fever which swept over our city. During the former year the rain fell daily for six weeks, during which time the heavens were overshadowed with clouds, and the air was fresh, comparatively cool, and yet the yellow fever heeded none of these things; it progressed like an avalanche, gaining strength and virulence as the temperature fell and autumn approached.

We are bound, however, to admit, that intense and protracted heat is

*On the next page this omission is supplied. (Ed.)

one of the pre-requisites for the generation of yellow fever; yet this *alone* will not suffice. Heat is likewise necessary to originate and carry on fermentation, but the *yeast* must be present to impart activity to the mass. Something else, besides heat, is a *sine qua non* in the causation of this peculiar type of fever. Dr. Harrison charged it to animal putrefaction. Dr. Smith's observations induce him to believe "that the yellow fever prevails when the thermometer ranges, at 3 o'clock P. M., from 84 to 88 degrees, for several days in succession. This high rate of temperature is not, however, necessary to perpetuate the disease, after it once sets in, for it may continue to rage, although the thermometer may fall permanently to a point at which the disease could not originally be developed." This is all very true, and only proves what we have already tried to say in another part of this paper. On the other hand Dr. S. contends that bilious fevers constantly occur at temperatures too low to originate yellow fever, as during the greatest heat of summer and autumn." This remark is equally applicable to yellow fever, and as proof of this we have witnessed more than one case of black vomit as late as the 30th of December.

But we will pass over this point, and dwell a short time on such symptoms as "strongly and definitely distinguish yellow from bilious fever." Says Dr. Smith, "bilious fever is intermittent, remittent or continued; but it is never, strictly speaking, continued, there being exacerbation and remission at certain periods in the progress of the disease." "Yellow fever, on the contrary, is neither intermittent, remittent, nor continued; there are never two similar recurring paroxysms or exacerbations. It is essentially and uniformly a fever of one single paroxysm." We again quote from Dr. Smith:

"This paroxysm consists of states or stages, as follows: first, of depression; second, of vascular excitement, which subsides of itself, if not rendered ataxic by injudicious medication, into a state of apyrexia, terminating at once in convalescence or in the third stage of prostration with new and peculiar symptoms; this last is the stage of hæmorrhage or black vomit. The state of vascular excitement is never renewed or repeated any more than is the eruptive fever in the succeeding stages of small pox. I have indeed seen cases when the subsidence of the vascular excitement was prevented, and the disease converted into a fierce continued *causus*, *obviously* the effect of injudicious medication. Frequently also, there is a feverish state continuing to the close of the disease, but it bears no likeness to the stage of vascular excitement alluded to. On the contrary, if an artificial febricula is not kept up by medication, the patient falls into a condition the most opposite to pyrectic. In many hundreds of cases of yellow fever which have fallen under my observation, I have never witnessed a second febrile paroxysm in the same case, like the first. I have indeed seen yellow fever supervene on an intermittent in persons affected with the latter coming into a district where the former prevailed; but in these cases the yellow fever occupied at once the whole ground, if I may so speak, and marched to its termination, regardless of the paroxysmal disposition of the disease which it had thrust out. In like manner I have seen the malignant miasmatic or con-

gestive fever seize a person convalescent from yellow fever, who had been previously exposed to concentrated miasmata in the country districts; but the march of the two diseases was distinct, nor could they be confounded. Yellow fever, as has been stated, is sometimes rendered ataxic by injudicious treatment or neglect; but a second paroxysm similar to the first is not reproduced. To sum up: *bilious fever consists of similar paroxysms or similar exacerbations; yellow fever never repeats itself, is not paroxysmal, has no character of periodicity.*"

Passing over much of the preceeding singular views of the Author, we propose to examine the latter part of the quotation which Dr. S. has italicised for our especial benefit: "*yellow fever never repeats itself;*" this is not very intelligible; if it means that after the disease has run through one stage, it never recurs again, the Doctor is in some measure correct; but the same may be said of bilious fevers, and, indeed, of many other diseases. "*Yellow fever is not paroxysmal;*" to this declaration we object, and we are prepared to demonstrate that it exhibits many of the essential elements of a paroxysmal disease. It was upon the discovery of this single element in the character of the disease that the Practitioners of this city ventured to administer large doses of quinine in the treatment of this fever.

We know it has been asserted that yellow fever is a disease of one single paroxysm, persisting usually from 50 to 72 hours; but let us examine this question, and see if we cannot detect an obvious abatement, not to say remission, of much of the excitement at some time during the 24 hours.

During the prevalence of some epidemics of this disease, the remission is not so obvious; but in other epidemics it is manifest to the most careless observer,—even nurses have called our attention to this fact. We have found this partial remission to take place some time between 12 o'clock at night and six or seven in the morning, and it is between these periods that we must throw in our heroic doses of quinine, if we wish to control the onward progress of the disease, and prevent those lesions of the blood which are sure to end in hæmorrhage and black vomit. This was the practice some years past in New Orleans; but our experience has emboldened us to give large doses of quinine (20 and 30 grains) during the very height of the fever, and so far from aggravating the fever, it positively acts as a direct sedative to the heart and arteries; indeed, its effects on this fever may be aptly compared to the influence of emetic tartar in pneumonia and other thoracic inflammations.

We are compelled to close at this point our "notice" of the very able paper written by Dr. Ashbel Smith; like all the efforts of that gentleman it bears striking evidence of great powers of observation, an aptitude for analysis, seldom witnessed in writers on medical subjects. We may hereafter return to the "Transactions of the New York Academy of Medicine," and furnish our readers with more interesting matter from the same source. (*Ed.*)

II.—*Report on the Diseases and Physical Peculiarities of the Negro Race.* By SAML. A. CARTWRIGHT, M. D.

The above Report, published in the May number of the N. O. Medical Journal, has stirred up the Abolitionists of the North, who call it "*an ingenious attempt to get a prediction of Negro Slavery in the country, from Noah's prophecy.*" (National Era, July 24, 1851.) Some of their ablest men have been put to work to review it. The most prominent of these, in the National Era, the leading Abolition organ in Washington City, has been forced to alter the Scriptures by giving a new version to the passage, which says: "God shall enlarge Japheth, he shall dwell in the tents of Shem, and Canaan shall be his servant." Others denounce the Bible, as containing too much pro-slavery doctrine for them. They have called on the Author of the Report to say when and how the negroes became black, and for proofs that the Canaanites were negroes.

He refers them to a paper published in the Southern Quarterly Review, entitled "Canaan identified with the Ethiopian." New Orleans, 1842.

The Canaanites were negroes, because that portion of them, called Gibeonites, sold themselves into slavery. No other race of people sell themselves into slavery but negroes. They were negroes, because blackness is attached in the languages of the East, to the descendants of Ham's household. In the Coptic, Ham means hot and black or burnt black. Hamites, Ethiopians, negroes and black men, are synonyms for the same people. The Canaanites were not only black, but slaves by nature, as their name is derived from a Hebrew word meaning "*to submit, to bend the knee.*"* The reviewer says it means "*humbled, brought down.*" So be it; there is no other race of men but negroes to whom the name, "*humbled or brought down,*" would be significative of their character. The reviewer admits, that "the Hebrew custom was to give names to children significative of their character," and that the Report has not attached too much importance to Hebrew names. He

* The correctness of Dr. Cartwright's quotation of Gesenius, in making the Hebrew verb *Canah*, from which the word Canaan is derived, mean, "*to bend the knee*," "*to submit*," &c., was called in question by a correspondent, Mr. James T. Smith, who in a review of Dr. C's paper in our September No., pages 229 and 234, asserted that Gesenius, the authority referred to by Dr. Cartwright, was directly opposed to him, and that the word from which Canaan was derived meant "*merchant*" and not "*knee bender.*" It is due to truth for us to state that Dr. Cartwright has furnished us with a copy of Gesenius's Hebrew Lexicon, in which it appears that the meaning he has given to the word is fully and perfectly correct. Indeed both seem to be correct. We have also been favored with the perusal of a letter from that eminent Hebrew scholar, the Rev. Mr. Beadle of this city, addressed to Prof. Jones, fully establishing the correctness of Dr. Cartwright's definition. (*Ed.*)

moreover admits that Shem's descendants constitute the Hyperborean, beardless or Mongolic race to which the American Indians, and most of the present Asiatics belong. That Japheth represents the Caucasian or bearded race—that Japheth has become enlarged by the discovery of America. Gomer, Japheth's son, is the progenitor of that family of nations, called by Josephus, Gomerians, which included the Celts and Goths, originally from Phœnecia and Galatia, who emigrated to Europe and made settlements in Great Britain, France, Ireland, &c. The Celts were white men, with dark eyes and hair,—the Goths light hair and eyes and ruddy white complexion ; and the Sclavonian branch of the sons of Japheth were white men with dark hair and eyes and red beards. There is only one other typical race to refer the Canaanites to ; natural historians call it *the woolly haired or Melanic race.* As this Melanic or negro race cannot, on the account of color, be referred to either Shem or Japheth, it must necessarily be referred to Ham. Canaan, being one of Ham's household and called his son, must therefore have been a negro. The Hebrew name given to Caanan is more expressive than the common English appellation *black* man, or colored gentleman of the Abolitionists, or the Latin Niger, or the Greek Ethiopian, as it not only expresses blackness in the patronymic Ham, but also the kind of climate most suitable to that race of people—Ham meaning hot and black ; but moreover in the given name, Canaan, the slave by nature is expressed. Thus the given name and the patronymic, taken together, declares Canaan to be "the black submissive knee bender of hot climates," which can by no possibility be any other kind of man than a negro.

The author of the Report on the peculiarities of the negro race has nothing to do with the theological question, whether the three typical races were from the sons of Noah or from three different types figuratively called his sons, as being saved by him from the cataclysm. Or the question, whether the so called sons, *one* or *more*, belonged to that race made by Elohim or Nature on the sixth day, when the beasts, ourang outangs, giants and dwarfs were made ; or to the Adamic or chosen race, made perhaps thousands of years afterwards—not by Nature only, but by Jehovah Elohim, the God of Nature, power and perfection ; or in other words by a special interfering Providence. He referred to the Scriptures to show that a slave race of people were described there, after having found by the peculiar anatomical structure of the negro and the laws governing his organism, that he was a slave by nature. Although bound, as a votary of science, to make known the important truths disclosed by Anatomy and Physiology that the negro is a slave by nature, he is not bound to enter into theological controversies lead-

ing beyond the limits of the inductive sciences. He leaves that for others to do. Besides the learned Reviewer, above mentioned, there is an ignorant, conceited set of critics, both in the North and the South, who have undertaken to review and criticise his Report. They are unworthy of notice. But as our northern people are under the delusion, that the negro is a white man painted black and can be washed white, and as this blind delusion is shaking the foundations of our Government, he wishes to caution the public against being deceived by the captious and unfair criticisms of those, who would break the force of the fact proving the negro to be a slave by nature, by throwing over them the mystifications of their own ignorance—thus giving aid and comfort to the mischievous doctrine that all the negro wants is liberty to make him equal to the white man. Some of these would-be critics, looking in glossaries and dictionaries, and finding the word Canaan rendered *merchant* or *trader*, have been simple enough to suppose that merchant or trader was the original meaning of the word Canaan, and in the plenitude of the little wisdom thus acquired have called in question the signification given to it in the Report. By studying the subject further they will find, that the term merchant or trader was applied to certain classes dwelling in the land of Canaan more than a thousand years after Canaan had received his name, and has no connexion with the derivation of the word. As an offset to the negro being the submissive knee bender, much is said about the exploits of Hannibal. Panegyrics on Hannibal may do for abolition societies, but are out of place when brought forward to controvert the facts in the Report; because Carthage was not founded by the Canaanites proper, but by the Phœnicians, who were white people, and the blacks of that part of Africa were not descendants of Canaan, the knee bender, but of Cush, Mizraim and Phut. Another class of critics would destroy the force of the facts contained in the Report by calling them *novelties*, matters partaking of the *fanciful*, and as scarcely worth the attention of any one not fond of "*curious research*"—regretting at the same time the want of *proof*,—which exists in abundance if they would look for it. Nearly all the small critics adopt the plan of misquoting the Report and placing the author in a false position, in order to give themselves room for drollery and ridicule, lacking the knowledge to meet it fairly with argument. Instead of snarling at the facts set forth in the Report and trying to stifle them with captious and jesuitical criticisms, it would be better for all classes, physicians, divines and politicians, to make themselves acquainted with the subject, as it is one of vital importance to the South. The author, conscious of his own weakness and unskilfulness, feels the need of aid

from the good and the great in bringing to light the important truth, revealed by Comparative Anatomy and Physiology, by History and by the Bible, that the negro is a slave by nature.

"The Hebrew verb *Canah*, from which the original name of the negro is derived, literally means to submit himself—*to bend the knee.* Gesenius, the best Hebrew scholar of modern times, renders both the Kal, Hiphil and Niphal form of the verb from which Canaan, the original name of the negro is derived, in the following Latin: *Genu flexit*—he bends the knee ; *in genua procidet*—he falls on his knees ; *depressus est animus*—his mind is depressed ; *submisse se gessit*—he deports himself submissively ; *fractus est*—he is crushed or broken ; in other words, slave by nature."* [See N. Orleans Med. and Surg. Journal, Vol. 7—page 698—Article, Cartwright on the Diseases, &c., of Negroes.]

In the article written by me, published in the Southern Quarterly Review, New Orleans, 1842, entitled "*Canaan identified with the Ethiopian,*" will be found the following passage: "I have been thus particular in quoting the highest Hebrew authority owing to the fact that some of the British commentators and glossary makers, in rendering the word Canaan into English, have adopted a late or more recent meaning of the word, and altogether overlooked its ancient and original signification. The words "*trader*" and "*merchant,*" which they put as the English meaning of the word Canaan, do not express its ancient Hebrew signification (when Moses wrote) at all. *Trader* and *merchant* were terms, which the heathen nations, a thousand years afterwards, applied to the Jews, who dwelt in the land of Canaan."

The question whether the verb Canah, from which the word Canaan is derived, means "*merchant*" or "*to bend the knee,*" (Gesenius being the authority) is not a matter of opinion in which there can be two sides, but a question of *fact* or *falsehood.* Have I quoted Gesenius correctly or not in regard to the meaning of the verb *Canah?* The question is not what the word *Canaan* now or formerly may mean, but what the verb *Canah*, from which the word is derived, means now and always meant. I say it means, to submit, to bend the knee, &c., and does not mean merchant or trader, and never did. I gave Gesenius as my authority. Have I quoted Gesenius *correctly* or *falsely* in regard to the meaning of the verb Canah, is the question ?

*Dr. C. has quoted Gesenius correctly. He showed us Gesenius' Hebrew Lexicon, which gives the identical meaning to the verb *Canah*, that he does. Besides, we have seen a letter from that eminent Hebrew scholar, the Rev. Mr. Beadle, addressed to Prof. Jones, fully confirming Dr. C.'s derivation.—*Ed.*

This is the important point or pivot on which the whole doctrine I have advanced in regard to the negro or Canaanitish race, turns. Hence, as I know that I have quoted Gesenius truly, I cannot and will not lie still and suffer any one to impeach the truth of the quotation. I would be false to myself and a traitor to the South and the cause of Science and Truth, if I did; particularly on a question so vitally important to the Union. SAML. A CARTWRIGHT.

August 19, 1851.

III.—*Bulwer and Forbes on the Water-Treatment: A compilation of papers on the subject of Hygiene and rational Hydropathy. Edited, with additional matter, by* Roland S. Houghton, A. M., M. D. *New and revised edition, stereotyped; with additions and improvements.* New York: Fowler & Wells, publishers, Clinton Hall, 131 Nassau street. 1851. 12mo. pp. 258.

We are indebted to the Publishers for a copy of this work, which, to say the least of it, consists of a series of well written papers by gentlemen of great intelligence and established character in other departments of learning and science.

The opening one is a letter from Sir Edward Bulwer Lytton, and is the same production that appeared in *Colbourn's New Monthly Magazine* for September, 1845. To say that it possesses very high literary merit is unnecessary; as it is mainly addressed to literary men *as a body.* For the rest, it exhibits to a great extent the same evidences of enthusiastic devotion to the "one idea," and the same determination to supplant all else in the department of remedial science that in every age has characterized the promulgators of new and ill-tried theories. It is indeed strange and worthy of more than a passing remark, when we see so much real learning and liberality, pass so lightly upon the undoubted attainments and laboriously acquired skill of the medical profession, as to institute an unfavorable comparison between its manifold resources and the meagre expedients of the Hydropathists.

Witness this specimen: "To such, then, as may listen to me, I give this recommendation: pause if you please—inquire if you will—but do not consult your doctor. I have no doubt he is an honest, excellent man—but you cannot expect a doctor of drugs to say other than that doctors of water are quacks. Do not consult your doctor whether you shall try Hydropathy, but find out some intelligent persons in whose shrewdness you can confide—who have been patients themselves at a hydropathic establishment." Advice as sound as if given by a Red-pepper, a Cancer, a King's Evil or an Indian Doctor. Again, listen to

the lofty enthusiasm of his faith, which, if it proves nothing else, at least satisfies us as to the fitness of the author for his thesis: "When I now see some tender mother coddling, physicing and preserving from every breath of air, and swaddling in flannels her pallid little ones, I long to pounce upon the callow brood, and bear them to the hills of Malvern, and the diamond fountain of St. Anne's—with what rosy faces and robust limbs I will promise they shall return—alas! I promise and preach in vain—the family apothecary is against me, and the progeny are doomed to rhubarb and the rickets." "The remedy is *not* desperate; it is simpler, I do not say than any *dose*, but than any *course* of medicine—it is infinitely more agreeable—it admits no remedies for the complaint which are inimical to the constitution. It bequeathes none of the maladies consequent on blue pill and mercury—on purgatives and drastics—on iodine and aconite—on leeches and the lancet. If it cures your complaint it will assuredly strengthen your whole frame; if it fails to cure your complaint it can scarcely fail to improve your general system."

But enough of this far famed letter, which has for years been to Hydropathists what the long and extravagant sarsaparilla, vermifuge and anti-syphilitic certificates of highly respectable gentlemen and ladies, have been to the vendors of those miraculous panaceas,—a golden gift.

The tone of remark adopted by Dr. Forbes, in the second paper of this compilation, is much more in accordance with that modest reserve which ever characterizes the expressions of true science when exploring a new and uncertain domain. He says: "If Hydropathy is, as we believe, a therapeutic agent of great power and value, it would be worse than absurd to exclude it from legitimate medicine; but, if it is to be adopted by the profession, it can only be adopted in a strictly professional manner. If distinct establishments are formed requisite for its complete and successful exhibition, the members of the medical profession can, of course, sanction and patronize those only which are conducted by legally qualified and competent practitioners. And they cannot be expected to show any countenance, even to those which, although under the superintendence of legally qualified persons, are conducted on empirical or absurdly exclusive principles." "In such a hospital, although drugs would, doubtless, be in but slight requisition, it would be contrary to all rational proceedings to exclude their use entirely." "The same scientific judgment and the same practical skill that prescribed the water-treatment as best calculated to fulfil the indications present at any one time, could alone determine whether, at

any other time, medicaments might be proper, either as auxiliaries or substitutes. Nothing but the blindest dogmatism or the wildest empiricism could maintain that, because the water-treatment is found useful, all other means must be useless ; or reversely, that because drugs are often found beneficial, therefore all other kind of treatment, Hydropathy included, must be injurious."

The limits of this notice preclude observations on the succeeding and less striking numbers of this series of articles by distinguished writers on the water-cure. Suffice it, they cannot fail to interest both the professional and non-professional reader, being, as they truly are, among the best efforts of the best minds that have investigated the subject, and presented it in a highly pleasing and popular style. J. S. C.

IV.—*The Practice of Taking Blood in Diseases.* By William Turner, M. D., of New York.

A petition to a Legislative Assembly, calling for special enactment against blood-letting, is as startling for its novelty, as it is remarkable for its pretension ! A perusal of the 4th lecture of Dr. Turner, the framer of the petition, in which the arguments of the writer are fully set forth, enables us to offer some comment. We would not for one moment impugn the motives of a venerable member of the profession in the cause which he has espoused, widely as we may differ from him as to the expediency of his course, or the soundness of his reasoning. To every reflecting mind it must be evident that in Medicine, in Politics, in Religion, there are powerful causes operating upon mankind in many parts of the civilized world, producing a restlessness of popular feeling, and a clamorous outcry for innovation of established principles, fixed usages, and time honored practices. Convulsions and revolutions have passed away, but the germ appears ready to shoot forth anew ; and novelty and delusion are so fondly cherished, that even in the nineteenth century we are scarcely ready to exclaim that reason is of age ! Fanatical schemes and popular error too often supply the place of sober judgment and calm reflection, with how much truth in our present subject we now proceed to pass in review.

The interference of any legislative body prescribing certain limits to an intelligent Physician, in which to exercise his skill, would surely be of less than doubtful propriety, unless "Honorable Members" were willing to assume the responsibility of *dead men's bones!* An *onus* which we imagine would be any thing but agreeable. If under any

circumstances such action were justifiable, the abolition by Parliament in 1840 throughout England of Inoculation, might be adduced—the cases are however widely dissimilar.

We will now proceed to consider, if "the practice of taking blood in diseases," of whatsoever kind, class, or charactor, be "contrary to common sense, to general experience, to enlightened reason, and to the manifest laws of the Divine Providence." From the days of Hippocrates down to our own, every age has produced men of eminence in medical science, obtained by deep research and untiring perseverance, yet have they not thought it right, or even expedient, to wage war to extermination of the lancet, nor to interrupt the gentle imbibition of the leech! "General experience" therefore of ages seems *not* to favor the theory, or the practice of our author, nor are we enabled to discover in the "enlightened" traces of his "reason" sufficient evidence for casting into oblivion the valued cupping glass.

Dr. Turner is much surprised that since we find in the Scriptures mention of various cures by "balms, balsams, baths," &c., there should be an entire omission of the loss of blood, had it been practiced by the Jews. Now as neither the Old nor the New Testament were written for our guidance in the Pathology of Disease, or the Practice of Medicine, we cannot understand why the Hebrew scholarship of "Judge Mordecai M. Noah" should have been invoked, especially when it is remembered that the circulation of the blood was not discovered till many centuries after the period to which our author refers. It is true St. Luke was a Physician, and in this relationship with Dr. Turner we take our leave of him, not being informed whether St. Luke ever abstracted blood, or what would be more to our purpose, whether he had cases requiring the loss of blood.

Again we are informed that every remedial agent possesses but one kind of influence—namely, the power of changing temperature. Dr. Turner surely cannot mean to inform us that the influence exerted upon the whole animal economy is the same, whether we take a dose of Prussic Acid or one of Jalap. An over dose of the former will be attended with almost instant death ; by an over dose of the latter we have a powerful *peristaltic persuader*. The "influence" of the agents is here *precisely the reverse*, yet have they most effectually changed the "*temperature!*" Here, then, we must find fault with the *logic* of the Doctor.

It is not our present purpose to advocate the once general practice of blood-letting ; such practice has, with much propriety, and the advancement of medical science, long since fallen into disuse ; to abandon it

under all conceivable circumstances would, we apprehend, be running into fatal error. In the initiatory fever of Small Pox, when antiphlogistic regimen, a brisk cathartic, and saline draughts, fail to relieve high fever, full and sharp pulse, with perhaps Epistaxis, or when irritability of the stomach, oppressed breathing, a laboring pulse and suffused eyes, are the too sure indications of approaching general or local congestion, what, we would ask Dr. Turner, more sound in principle, or more correct in practice, than to unload the lungs, the liver, or the brain, by the abstraction of blood! Dr. Huxham, in reference to this fever, holds the following language: "That you should bleed on the onset, for the same reason that you draw off part of a fermenting liquor,—to prevent the splitting of the vessel. By drawing off some blood, you prevent the over distending, inflaming and rending the vessels of the human body." A writer of the present day, Dr. Gregory, in a more *qualified* sense expresses similar opinions with regard to some other of the exanthemata and their complications. Dr. Watson, an approved writer, is only reiterating the generally entertained opinion when he says: "Of all the *direct remedies* of inflammation, the abstraction of blood, bleeding, or blood-letting, as it is called, is by much the most effectual and important. We should, I think, be prepared to expect this prior to any experience of it. Blood being the natural stimulus of the heart, we should deem it probable that the removal of a portion of that fluid would diminish the force with which the heart contracts."

But it is unnecessary to enumerate diseases, in which by common consent, and universality of opinion, the anti-blood-letting tendency of Dr. Turner would fail to meet with reputable advocates.

Our author significantly asks, "Will any practitioner be so bold as to tell me that inflammation of any organ of the body is beyond the control of internal remedies?" Not desiring to arrogate to ourself any great degree of *boldness*, we will allow the Doctor to answer his own question,—which he presently does after this wise: "With Emetics and Quinine I have seldom been at a loss; and with mercury and turpentine I have cured Pneumonia." An answer that would be as applicable to any other question, as that to which it is made to have special reference.

Dr. Turner says: "Since I embarked in private practice, I have improved upon my Army plan." Being profoundly ignorant of the Doctor's Army plan and practice, we are unable to state in what his improvements consist, and since we find no traces of such in the lecture before us, we are constrained to believe that they exist in his imagination only.

We regret that Dr. Turner has not favored us with a report of some of the "twelve thousand cases of disease," which have, within the last few years, fallen under his treatment, and in which he was not once compelled to deplete. Are we to infer that they are all living monuments of his skill, without "*diminution of their corporeal force?*" If so, we must congratulate him upon his great success in the abandonment of the lancet, the leech and the cups. Of the value of the "candid testimony" which is appended, it is unnecessary to speak, although we are informed the "testimonials were unsolicited by the party recommended." After the fashion of these things, there is a *modest oozing out of the puff direct, and the puff disguised*, which we must place to the amiable weakness of our author.

"Hundreds, thousands," have recovered who were never bled in any manner,—so says Dr. T., and to which we cheerfully assent, as many perhaps may have recovered without any treatment at all, and an equally large number in spite of every kind of treatment.

In his Army practice, Dr. Turner must surely have had abundant opportunity of witnessing extensive Hæmorrhages resulting in perfect recovery. Often in the primeval hour of our existence is the parent subjected to alarming loss of blood, and yet the patient is restored; why then the alarm of Dr. T. at the abstraction of blood, when to combat some formidable disease, in the opinions of enlightened Physicians of the past and present day, experience has taught its paramount importance?

The truth is, Dr. Turner, after having practised medicine in New York, his native city, for "nearly a third of a century," has arrived at the sage conclusion, "step by step," that the surest way to secure the *clamosa fama* of no inconsiderable a portion of mankind at the present day, is to devise some new theory, in which folly and ignorance play conspicuous parts, and in which all *sinister* motives are lost in the assumption of the general good.

But we hasten to the last sentence of the 4th lecture, reminding the reader that at some future time Dr Turner will "enter more fully into the manner of action of the various remedies," (none of which, he admits, are without danger in unskilful hands) which are the principal substitutes for his former practice. In this last sentence we are admonished to beware of carrying too far "abstinence or starvation" in the treatment of inflammation. "Abstinence engenders maladies," said the immortal Bard, and so says, some centuries after, Dr. Turner, but as we find man at the present day not over given to abstinence, but rather prone to enjoy the good things of Providence, we opine that Dr.

Dr. Turner will not be called upon to treat many cases of disease engendered by abstinence or starvation ; in all such, however, we would commend his anti-depleting practice.

Having not the slightest reason to doubt the sanity of the New York Legislative body, we need be under no apprehension as to the fate of the "Petition against blood-letting," and should it subject Dr. Turner to the same condemnation as the German Physician who some time ago petitioned the King of Prussia to make the employment of the lancet *penal*—vis : that of being laughed at from one end of Europe to the other, we will have the satisfaction of knowing that he was the *author*, if not the *finisher* of his own delusion. G. T. B.

V.—*A Practical Treatise on the Diseases and Injuries of the Urinary Bladder, the Prostrate Gland and the Urethra.* By S. D. Gross, M. D., Prof., &c., &c. With Illustrations. Blanchard & Lea. Philadelphia : 1851.

Operative Surgery. By Frederick C. Skey, F. R. S. Blanchard & Lea. Philadelphia : 1851.

Through the liberality of the Philadelphia Publishers, Messrs. Blanchard & Lea, we have been put in possession of the above works, the first of which was written by a distinguished Western Surgeon, and the second by an English Surgeon of some note as a writer and operator.

Our space is much too limited for a full and connected analysis of these excellent books. Works on the surgical diseases of special organs are much sought after by the profession, and will always, when well written, command the attention of the practitioner.

Prof. Gross is entitled to the thanks of the American surgeon for the large amount of practical information which he has digested and arranged in the present volume ; and we are much mistaken if this book does not greatly enhance his reputation as a sound, practical surgeon. A book treating fully of the diseases and derangements of the "Urinary Organs," has long been a desideratum in the profession,—first, because such a work does not exist in the English language ; second, because these diseases are imperfectly understood, and hence often mal-treated ; and third, because these organs are delicate in their structure, complicated in their functions, and above all, *very* frequently the seat of suffering and disease. We believe we would not be far from the truth to assert, that eight out of every ten men experience more or less derangement and disease of the genito-urinary organs before they reach the

age of thirty-five years, and in many instances such diseases impress the character of the individual, and give a certain bias to the mind and feelings as to affect injuriously the entire future of such victims. Many, entirely engrossed with the morbid feelings to which such afflictions too often give rise, strive to stifle their present sufferings in the intoxicating bowl; others, with less hope, and more recklessness, perhaps, end their troubles by committing suicide, unable, or rather unwilling

> 'To take up arms against
> A sea of troubles and by
> Opposing overcome them.'

Prof. Gross has had much experience in the treatment of the diseases peculiar to the genito-urinary organs, all of which, together with much of the experience of others, is clearly and intelligibly set forth and illustrated in the Treatise before us. As an *American* production, we feel proud of it, and do not hesitate to rank it above any book on a similar subject in the English language. We are truly pleased to learn that the author, so highly esteemed in the West, has returned to Louisville, the field of his early achievements and the arena on which he is destined to acquire more lasting fame.

The work, which has been brought out in handsome style and fully illustrated, may be obtained of T. L. White, 53 Canal street.

Of Mr. Skey's Operative Surgery, we have but little to say. It is eminently practical; and points out in a clear and concise manner the various operations required in the department of surgery. Without claiming for it any superiority over Liston's, Druitt's, &c., we may yet pronounce it, at least, equal to any of the above, and much better than many we could name, popular with the profession.

The science of Therapeutics—or the application of medicaments to the *cure* of diseases, has made such rapid strides in the last few years, that the operative—the *cutting* part of surgery, is seldom invoked, except in extreme cases. We hail this as positive evidence of the progress of the healing art, and trust that at no distant day the knife will be seldom abstracted from the surgeon's case, and limbs and organs, which even now call for prunning, will be restored to their normal state by a superior skill in diagnosis, and a more certain application of remedies.

Like the preceding, this work is well finished and handsomely illustrated, and will prove an acquisition to any medical library.

White has likewise copies of this for sale at 53 Canal street.

VI.—*On the Theory and Practice of Midwifery.* By Fleetwood Churchill, M. D., M. R. I. A., Hon. Fellow of the College of Physicians in Ireland; Corresponding Member of the American National Institute, etc., etc. With notes and additions by D. Francis Condie, M. D., Secretary to the College of Physicians, Member of the American Medical Association, of the American Philosophical Society, etc., etc. With one hundred and thirty-nine illustrations. A new American, from the last improved Dublin edition. Philadelphia: Blanchard & Lea. 1851. 8vo. pp. 510.

To the enterprize and courtesy of Mr. J. C. Morgan, Exchange Place, are we indebted for a copy of this new and excellent edition of a well known author. But few, if any works on Midwifery, can more imperatively challenge the scrutiny and claim the approbation of the profession, than this.

Previous editions, under the Editorial supervision of Prof. R. M. Huston, have been received with marked favor, and they deserved it: but this, reprinted from a very late Dublin Edition, carefully revised and brought up by the author to the present time, does present an unusually accurate and able exposition of every important particular embraced in the department of Midwifery.

Considering the amplitude of its plan, which is to offer to the student of Midwifery a work, embracing all the modern discoveries in the physiology of the uterine system, with all the recent improvements in practice, it is an eminently commendable specimen of condensation. The clearness, directness and precision of its teachings, together with the great amount of statistical research which its text exhibits, have served to place it already in the foremost rank of works in this department of remedial science. In these days of profusion in medical literature, when so much claims to be read, it is an act of goodness for which we desire to be duly thankful, when an author places before us such a *multum in parvo* as the present volume. True, in many of its parts it requires to be studied, for no words are wasted in amplifications; but so it is with the Analogy of Butler, one page of which is worth more to a manly and vigorous mind, than whole volumes of the misty theories and uncertain doctrines of his contemporaries.

Our author has entered more fully into the *Physiology* of the uterine and concomitant systems than Ramsbotham and Rigby, in their excellent treatises, have done; nor has he failed to present the theory and practice in such a light, as to render them convincing by their harmony, and as complete as possible.

The work, as may be seen by its title page, is amply, and we think judiciously illustrated, and the notes by both the present and former editors, while they Americanize, at the same time render this superior to all former editions for practitioners of this longitude.

Of some of these notes and additions by the American Editors we feel justly proud, and would gladly present them, did the limits of a passing notice of the volume admit it. We trust, however, this is the less necessary as the work, in its present form, is destined to be extensively read by the profession. C.

VII.—*Elements of General and Pathological Anatomy—Presenting a view of the present state of knowledge in these branches of science.* By David Craigie, M. D., F. R. S. E., Fellow of the Royal College of Physicians, and Honorary Consulting Physician to the Royal Infirmary. 1851. pp. 1072.

Through J. B. Steel, 60 Camp street, we received from the Publishers, Messrs. Lindsey and Blakiston, Philadelphia, a beautifully printed copy of the second edition of Dr. Craigie's great work on Pathological Anatomy. The only peculiarity we notice in the plan of the work before us, consists in the adoption of the elementary tissues as the basis of the treatise—not exactly after the example of Bichat, but his plan somewhat modified—somewhat amplified. In our opinion, this is the true method; for by adopting the outline proposed by the lamented Bichat, the student can travel, step by step, in regular progression,—from simple details up to generalizations, and thereby save much time by avoiding useless repetition. For this reason, and because the work is carefully revised, and embraces every point of interest connected with pathological science, we venture to commend it to the student and general practitioner.

VIII.—*The Remedial Properties of Alimentary Substances and the changes produced by Oxygen in health and disease*—is the title of an address delivered before the Illinois State Medical Society, by W. B. Herrick, M. D., President.

The chief point urged in this address is, that the time will soon come, when "Physicians will use as remedies such substances only as help to constitute, in health, the solids and fluids of the body."

Dr. Herrick briefly remarks upon the Pathology and treatment of two classes of disease, viz: those which are inflammatory, as Pneumonia, Pleurisy ,&c., being accompanied, according to the views of our author, by excessive oxydation of the blood,with constant and rapid increase of its fibrine, consequent upon defective action in the assimilative and excretive functions. In the treatment of inflammatory affections, Dr. Herrick suggests nothing new, depletion and opium forming the groundwork of his practice; Calomel does not receive a passing notice, although from its defibrinating effect upon the blood, Dr. Herrick might have introduced it amongst his remedies without doing violence to his theory. Blood-letting, says our author, should be avoided when there is a tendency to miasmatic diseases.

The second class of diseases referred to, the Pathology of which, in the words of Dr. Herrick is, "defective oxydation and an excess of carbonaceous matter in the blood and tissues"—embraces those of miasmatic origin, under which head are enumerated Yellow, Bilious, Remittent and Intermittent Fevers—that quality of the atmosphere which prevents the due oxydation of the blood favoring the development of diseases of this class, giving rise to the derangement of the nervous system, and defective mental action. The treatment readily suggested from the foregoing views by Dr. Herrick, is pure air, from its curative effect; and Iron acts a remedial agent, by favoring oxydation, and increasing the red globules of the blood. Quinine, Strychnine and Chloride of Sodium are not overlooked by our author, of which latter salt Professor Piorry has reported favorably to the Academy of Medicine, in Paris, for the cure of Intermittent Fever, in doses of two table spoonfuls; which, says the Professor, "will not only arrest the disease, but also exert upon the spleen as marked effect as does Quinine." Valuable as common salt is as a condiment, and still more valuable as it may hereafter become in the treatment of certain diseases, we are not prepared to assert with Dr. Herrick, that it "will prove ultimately one of the most valuable and efficient of remedial agents." B.

IX.—*Surgical Anatomy.* By Joseph Maclise, Surgeon. With Colored Plates. Part IV. Philadelphia: Blanchard & Lea. 1851.

Our thanks are due the liberal Publishers for Part IV. of the above splendid work, which, so far from falling off in the beauty, excellence, and perfection of the plates, really increases in value and interest, as

the work draws towards completion. Without exaggeration, we pronounce this the most elegant and finished production ever brought out in this country.

This work, with its magnificent plates, natural coloring and correct copying after nature, must be regarded as an ornament to the profession and a credit to the American publishers who undertook to bring it before the medical public. One more Part is yet due, which, when finished, will make it a complete picture of Surgical Anatomy; leaving nothing to be desired, on this point, by the Practitioner and Surgeon. No medical man *can* do without the entire work.

J. B. Steel, 60 Camp street, has the Plates for sale.

X.—*New Remedies: With Formulæ for their Administration.* By Robley Dunglison, M. D., Professor in Jefferson Medical College, Philadelphia. Sixth Edition, with extensive additions. Blanchard & Lea. 1851.

Every year, almost each day, develops some new therapeutic agent, or brings into notice some long-forgotten and neglected remedial substance. To keep the profession fully advised on this point, is to do the work of Sysiphus—to have the arms of Bryarius, and the eyes of Argus. Prof. Dunglison then represents these three mythological creations, by his incessant labors, his multitudinous occupations, and the vigilance with which he watches the development and application of our new remedies.

The list of new articles which he has introduced into this Edition numbers about thirty; formulas are also given for their officinal preparation, and directions for their therapeutical application. We have not space to notice all the novelties introduced into the work. Every practitioner should have a copy of this work in his library.

XI.—*Dr. Barton's Report on Meteorology, Vital Statistics, &c.*

Dr. Hester:

Dear Sir—The last number of your Journal contained a most virulent assault against my Report to the State Medical Society on Vital Statistics, &c., by some anonymous scribbler.* I had determined to

* It was well and generally known in the city that Dr. Saml. A Cartwright was the author of the criticism on Dr. Barton's *Report*, &c., published in our September Number. Dr. Cartwright *affixed his name* to the criticism, and it was through an error of the printer that it was suppressed. We make this correction both as an act of justice to Dr. C. and to inform Dr. Barton for the *second* time of the authorship of that review.

notice that article in detail, as to a reputable gentleman was imputed its paternity,—but self-respect and the advice of judicious friends have intervened to prevent it,—with the single remark, that the only correction required consists in "looking back" to *the actual reference to the very pages in the Report itself your Reviewer quotes!* which I guarantee will fully convince every impartial reader led astray by misquotation—misinterpretation and sophistry. There is not, I venture to say, an instance in which the Report is referred to, in which one of these does not apply.

Now, I am not only willing, but desirous to discuss the subject embraced in that Report—to defend every position and table, for they are all from *official sources*, (where these existed) open to every one,—and to prove more fully every point I have there alluded to, for it was obviously impossible, in the time usually allotted to a lecture to expand farther,—which, to do full justice either to myself or the subject, would require the amplitude of a volume.

For this purpose I propose a full discussion in your Journal with any fair opponent—1st. What has actually been the sanitary conditon of New Orleans for the last 30 or 40 or more years? 2d. The cause of that condition? 3d. Why and how is it that the public has been kept so long ignorant of that condition? and 4th. The remedies to remove it?

I remain, very respectfully, yours,

E. H. BARTON.

Part Fourth.

MISCELLANEOUS MEDICAL INTELLIGENCE.

I.—MUSCULAR CONTRACTION—CADAVERIC RIGIDITY—FRENCH AND AMERICAN EXPERIMENTS, &c.

It appears that the *Savans* of Paris have been very recently engaged in physiological experiments upon muscular contractility, and cadaveric rigidity, and they seem considerably elated, if not dazzled, by the new coruscations of light which these researches are supposed to shed in the realms of physiology. Whether this be, as it claims to be, a new burst of light, we will inquire into presently. In the meantime, we propose to give a translation from a French journal, narrating these discoveries, as reported by M. Léon Fourcault, on behalf of M. Brown-Sequard, as follows:

"According to the opinion generally received, post mortem rigidity, which takes possession of the cadaver some time after the last breath, is wholly due to the mechanical effect of the coagulation of the blood in the animal tissues. The reasons given have, at least, considerable plausibility. Among those individuals suddenly struck dead whose blood preserves its natural plasticity, rigidity of the muscles manifests itself with great force, whilst it is scarcely seen in those who die after protracted diseases, or after copious hæmorrhages*, and still less among those who die asphyxiated by deleterious gases, the specific action of which prevents the coagulation of the blood. This contraction of the muscular system always disappears in advance of decided putrefaction, which destroys the organism, and subjects it to the reign of inanimate matter.

Hence we are readily induced to admit two kinds of death: the one general, which supervenes first, at the moment when the heart ceases to beat, and which is in some sort only a displacement among the organic wheels of life, the intimate and harmonious action of which constitutes the unity of superior beings; the other variety of death supervenes subsequently in each individual wheel of the organism as the consequence of the primary variety. Thus the general life may be abolished with the existence of the feeling or sentient unity, while, nevertheless, each organ preserves, during a time, a life of its own, after life proper, the persistence of which sustains itself above, and for some moments contends against, the reign of inorganic matter. To this last phase

*This opinion is erroneous. The most copious hæmorrhage in the subjects of yellow fever does not prevent cadaveric rigidity. (*Ed.*)

of life cadaveric rigidity belongs, which so far from being considered as the result of a purely mechanical action bearing testimony to confirmed death, is, on the contrary, the last manifestation of muscular activity; at the moment of actual death the muscular functions act for the last time, without guidance or aim, until the vital principle is completely exhausted.

The system of experiment to which Mr. Brown-Sequard boldly (*audaci-eusement*) submits the living organism, seems to us to have been dictated by analogous considerations to those we have enumerated, and the results which he has obtained favor the opinion that cadaveric rigidity is but life manifested in its utmost or last limits.

Having at first incidentally observed that the parts affected with this *post mortem* rigidity, (the assumed evidence of death) may, under the influence of sanguineous injections, become again suple and give signs of irritability, M. Brown-Sequard entertained this particular question, and on varying his experiments, has arrived at the results which we are about to copy from him: In the dead bodies of rabbits and guinea-pigs (which become rigid in from ten to twenty minutes), he divided the aorta and cava, in the abdomen, just above the bifurcation of these vessels—that done, he put into the ends of these divided vessels quills or tubes of glass, and by means of these he connected the vessels of the dead with those of the living animals of the same species, so that the blood of the latter was injected into the arteries and veins of the former, thereby establishing the circulation in the inferior limbs of the dead. This transfusion resulted in the removal of cadaveric rigidity in from six to ten minutes, and two or three minutes later, the limbs responded by motions excited through muscular nerves.*

It is then proved by these experiments, that the nerves and muscles which have lost their excitability, may have the latter reproduced by the influence of the blood, and even for a quarter of an hour after *post mortem* rigidity had pervaded and ruled the muscles.

The same result was obtained by operating in another mode more simple and more easily repeated: A rabbit or guinea-pig was divided transversely on a level with the inferior borders of the kidneys—a ligature was applied on the aorta, which suppressed the vascular communication between the two sets of vessels; little by little the muscular activity declined in the inferior limbs, and was replaced, ordinarily, in less than half an hour, by rigidity. After having been abandoned to this state for fifteen or twenty minutes, the ligature was removed, whereupon the circulation was re-established, and then, as in the preceding case, rigidity was removed and excitability reappeared in the muscles and motor nerves.

Finally, in another series of experiments, M. Brown-Sequard investigated the voluntary motions and sensibility, with a view to ascertain whether they might not be re-established in limbs which, without having been separated from the nervous centres, could nevertheless be reduced to rigidity from the suspension of the circulation. With this view he tied the aorta below the renal arteries, in vigorous rabbits; in less than ten minutes sensibility was abolished in the parts below, and in two minutes longer voluntary motion ceased; irritability still continued for nearly half an hour; afterwards rigidity took place and was allowed to persist a quarter of an hour; at which time the ligature was removed, the circulation was restored, and as had been expected, the blood brought back voluntary motion and sensibility.

These new researches bear out the following conclusions:

1st. That rigidity in the cadaver does not prove that the muscles are dead.

2d. That the motory and sensory nerves lose in the limbs all power to act where there is no circulation, but recover their functions from the action of the blood.

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* The exciting agent used was, as usual, electricity.

3d. That the limbs of mammiferous animals, after having been kept for fifteen or twenty minutes in a state of rigidity analogous to that in dead bodies, can be restored to their normal state, that is, to irritability, sensibility, and voluntary motion. LEON FOUCAULT."

The following account, translated by an individual unknown to us, is evidently a continuation of the experiments of M. Brown-Sequard, though the name is spelled differently. We correct the orthography in this particular:

"On the 18th of June, at eight o'clock in the morning, an assassin condemned to death for murder, was executed at the Barrier St. Jacques. His headless body was given to a celebrated physiologist, M. Brown-Sequard, for the purpose of trying an experiment on the transfusion of blood. He had, in operations upon animals, noticed that the muscles which were just becoming rigid, seemed to resuscitate under the influence of fresh blood injected into the veins. The dead body preserved its muscular irritability until seven in the evening, when the stiffness always consequent on death seized upon the whole muscular system. As it was too late to obtain blood from the hospitals, and as that of animals seemed to promise but little success, M. Brown-Sequard caused an assistant to make an incision in his arm, from which he took about half a pound of blood. This was passed through a linen cloth, and injected into the radial artery of the subject, a little above the wrist. The corresponding vein was opened, and the natural blood of the dead man, now perfectly black from want of oxygen, was made to yield its place to the fresh blood injected. By continuing the injection, it passed through the capillary vessels from the arteries to the veins, and flowed up through the orifice cut to allow the old blood to escape. Though it entered of a brilliant red color, it came out as black as the natural blood of the subject. But being moved about in the air, it soon recovered its red hue, when it was again injected, to be still again disgorged by the opened vein. In about half an hour the hand became sensitive and moved convulsively under the discharge of an electric battery, which previously produced no effect. Out of the nineteen muscles of the hand, twelve recovered their natural irritability or sensitiveness, and three of them contracted or expanded throughout their whole length. This state lasted from nine o'clock till midnight, when it began to yield to the rigidity natural to all bodies deprived of life. At six in the morning another experiment was tried, but neither the battery nor a fresh infusion of blood excited the least appearance of motion. The experiment seemed to decide beyond a doubt, that in the human body, as well as in animals, the approach of rigidity may be deferred for a considerable period by the injection of fresh blood, and that by the further application of electricity the muscles may be made to move as in the living subject."

In another Journal we have met with a statement showing that the French *savans* regard artificial circulation as restoring to the dead both sensibility and motion, in part, at least. But what is the test used to prove "this high argument?" Electricity! "Sous l'influence de cette circulation et au bout d'une demi-heure, la main du supplicié, par une sorte de résurrection partielle, *redevint sensible et s'agita aux chocs réitérés des décharges électriques.* Cependant tous les muscles ne se montrèrent pas également *sensibles.*" (See 2d. *L'Illustration, Journal Universel*, Aug. 14th, 1851.)

The fundamental propositions advanced in the above report, so far from being original and altogether new, are comparatively old. It is now a half a score of years since Dr. Bennet Dowler, of New Orleans, not only investigated experimentally, and preoccupied the grounds recently taken by the French *savans*,

but a vast deal more, without the aid of electricity, (vulgarly called thunder and lightning). He has not restricted his experiments to the inferior animals, as dead guinea-pigs and rabbits (used by the French physiologists), nor wholly to vivisections, but has experimented on hundreds of men, women, and children, without the all-powerful, but unphysiological forces generated by electrical batteries.

The general views of Life and Death presented in the above report, were long since brought forward in Dr. Dowler's essays on contractility, animal heat, capillary circulation, natural history of death, and, in other papers, with copious experimental illustrations. His ideas, and terms, (so far as the two languages will allow) seem to have been adopted by MM. Foucault and Brown-Sequard, as novelties.

It is unnecessary to allude to Dr. Dowler's vast collection of unpublished researches upon these subjects. Soon after his experiments began, he published various extended monographs with experiments illustrative of the duration, degrees, progress, renewal and decline of contractility and muscular motion, including the conditions that might be supposed to influence the muscles, as the nerves, the blood, hæmorrhagies, the temperature, rigidity, diseases, and under the most varied manipulations and modifying circumstances. The reader and the French savans have only to look into the Medical Journals of Louisville, New York, New Orleans, and of other cities at home and abroad, to be convinced that the news from Paris is old, ("*trop tard*"), and that Dr. Dowler's claims to priority of discovery are entirely indisputable. It is now more than five years since Dr. Dowler, (as he informs us), forwarded a number of copies of a pamphlet of 39 pages, ("Experimental Researches on the post mortem Contractility of the Muscles") to several members of the Academy of Medicine, and of the Academy of Sciences. Indeed, Dr. Dowler's discoveries in the muscular functions must have been known as early as the 5th of August, 1843. We have now before us a letter addressed to Dr. Dowler from the illustrious Louis, which we are permitted to use, and of which we will give a translation, showing that Dr. Dowler's paper entitled "Post mortem Researches" had been received in that city more than eight years ago. Now, in this very paper is announced Dr. Dowler's discovery of the excitation of post mortem contractility, by percussion, as well as several other discoveries, as post mortem caloricity, post mortem circulation, capillary action, etc., etc.

[TRANSLATION.]

Sir and honored confrère :—I know not how to thank you sufficiently for the extreme kindness with which you honor me, in addressing to me the two pamphlets which you have printed; one on pathological anatomy, and the other on what you call, sun-stroke.

As to the subject of pathological anatomy, you have done, without doubt, that which no other physician has done till now; for it has been given to no person to make post mortem examinations a few minutes only after death, when cadaveric rigidity (one of the most certain signs of death,) exists as yet to no great degree. You have been able to see that which few persons have seen,—to establish lesions susceptible of changing quickly; and, if you have been able

to collect in detail, and until the last hour of the patients, the symptoms which they have experienced, you will do a thing very useful to science to publish what you have seen.

As to what you call sun-stroke, the medical public cannot but read with a great deal of interest what you say, and, for my part, sir and honored confrère, I dare require you to pursue your researches, in order to have complete certainty that the facts observed by you, or rather the deaths of which you speak, are truly connected with the consequence of the insolation.

Permit me, in conclusion, to persuade you to continue your valuable labors, to study rigorously the facts which you have collected, as you yourself propose. Have enough confidence in yourself to make them known to the medical public to whom they will be serviceable, and please accept,

Sir and honored confrère,
The assurance of my grateful
and devoted sentiments,

Paris, Aug. 5, 1843. LOUIS.

Dr. Dowler's method (percussion) and results are alike original. Physiologists had used, and they still use, electricity as the means of exciting muscular action! an agent of great power—one that produces irregular and convulsed motions in dead animals. Sir Charles Bell himself admits that results thus obtained are fallacious: "for the nerves, dead or alive, may convey the galvanic power, like a wet cord."*

It is unnecessary to reiterate in this Journal the results of Dr. Dowler's researches upon these subjects. It is sufficient to say that he has shown that the muscular force may be repeatedly excited, exhausted, and regenerated for many hours, and even after the appearance of post mortem rigidity, without electricity, and after the removal of the nerves and blood. Cadaveric rigidity is often readily removed by art; and then, in many cases, muscular contractions will follow with perfect regularity, the cadaver raising his arm from the floor to his breast, carrying weights in his hand,—after, as well as before, the removal of the brain, cord, nerves and blood.

The French *savans* have doubtlessly been deceived, as well in the nature as in the originality of their experiments. They had exhausted, temporarily, the muscular by the electrical force; they then set about injecting the blood-vessels with fresh living blood; in the meanwhile, the regeneration of the muscular force had been progressing, and had the operators injected no blood whatever, but delayed for an equal period, contractility would have returned; for the amputation of a limb, and the removal of the blood and blood-vessels, will not in the least diminish the contractility, though in the living state, Dr. Dowler has admitted that the blood and the nerves may contribute as auxiliary to the inherent forces of the muscles, being rather the essential conditions than the essential agents of motion, both voluntary and involuntary.

We venture to suggest another source of error into which the French *savans* have probably fallen. They tell us that cadaveric rigidity having manifested itself in the guinea-pig, blood was thereupon injected, rigidity disappeared, and contractility returned. Now, we incline to think that it was the incidental ma-

*New Syst. 180.

nipulation of the animal, not the blood, that removed the rigidity; for Dr. Dowler's researches show, that in man, and in the alligator, how much soever they may be mutilated, rigidity may be, by forced motions, removed repeatedly, after which contraction can be excited for hours, and in the latter for three days! The rigidity will take place repeatedly, if the body be left perfectly undisturbed for a suitable time.

Dr. Dowler's researches prove that sensation and voluntary motion may exist independently of the brain. The French experimentalists seem to show that both of these fundamental functions can be revived, for a time, by the transfusion of blood from the living into the dead, even after the *rigor mortis*. We wait for further proof, as the subject is not sufficiently ripe for safe speculation.

Let the French *savans* look at page 54 of the July number of this Journal, where they will see in Dr. D.'s last contribution a summary statement of the principal laws of muscular contractility, cadaveric rigidity, etc., deduced from experiments commenced eleven years ago.

With respect to this last contribution of Dr. D., (so fundamental, not to say revolutionary, in its bearings), we may remark, that, judging from sundry letters and from notices of the medical press, so far as we have seen, its reception has been very flattering.

It has been urged as an objection to Dr. D.'s papers and essays, that they are not sufficiently practical in their spirit and bearing. To this we reply, that the writings of Hunter, Harvey and some others, were looked upon by the less sagacious of their cotemporaries as of little practical utility at the time, and too speculative in their tone for the age; but the lapse of years and the researches of organic chemistry have established as indisputable truths many of these then supposed speculations, and mankind are at this moment receiving the benefits and blessings derived from the experiments of those illustrious minds. So, in like manner, we anticipate glorious results, at some future day, from the untiring labors and ingenious experiments of Dr. D.; and if we cannot apply to practical purposes—to the coining of money—the important discoveries in physiological science, which our confrère has from time to time published to the world, we indulge the pleasing hope that another generation will reap the full benefits of his labors, and render homage to his name.

II.—TO THE PHYSICIANS OF SOUTH CAROLINA, GEORGIA, FLORIDA AND ALABAMA.

The undersigned having been appointed, at the last meeting of the American Medical Association, Chairman of a Committee to report, at the next meeting of the Association, on the Epidemics of South Carolina, Georgia, Florida and Alabama, earnestly requests the assistance of his professional brethren within the limits named, in carrying out the object of the Association. To this end, he requests, from all, brief histories of such Epidemics as may occur under their observation.

It is proposed to confine the report to such Epidemics as may occur between the 1st January, 1851 and the 1st of January, 1852; and though it is desirable that accounts should be at once given of such Epidemics as may have occurred already during the first half of the year, and of the last half, immediately after the 1st January next, for any or each particular section or locality,—still some may find it more convenient to confine their observations to a single communication at the termination of the period, for the entire year. This indeed, perhaps, would be the better plan, where any Epidemic, commencing during the first half of the year, may extend into the second.

The main points only need be given in regard to each particular Epidemic; as for instance, the date of its occurrence, its duration, supposed cause, circumstances favoring its progress, circumstances tending to arrest or retard its progress, proportion of the population attacked, age, sex and race most liable, proportionate mortality, remedies which more particularly seemed to have a favorable effect, and perhaps the medical topography of the locality, &c.

Very respectfully, WM. M. BOLING, M. D.

Montgomery, Ala., August 29th, 1851.

III.—CÆSARIAN OPERATION PERFORMED WITH SUCCESS BOTH FOR THE MOTHER AND THE CHILD.

Dr. Bouchacourt, chief Surgeon of the Charity Hospital at Lyons, has recently performed hysterotomy under the following circumstances:

Eugenie Hurel, aged 32 years, affected since her sixth year, in consequence of convulsions, with incurvation of the limbs and inflection of the vertebral column, had her first pregnancy in 1848. After three days of ineffectual labor, she entered the Charity Hospital. The natural expulsion of the infant being found impossible, and the beating of the heart being no longer perceptible, Dr. Colvat, then the Chief Surgeon, practiced craniotomy successfully. Becoming pregnant a second time, she again entered the Hospital on the 12th October last. We shall not follow the author in the detail he gives of the deformity of his patient. Suffice it to say that the antero-posterior diameter of the posterior *strait* was only from 6 to 7 centimeters. The pains commenced on the 16th October, at eight in the morning. At five in the evening the dilatation was scarcely 12 centimeters. The waters broke at ten o'clock. At midnight the dilatation was complete. At half after one the cord became entangled with the head, and it was soon followed by the arm. Dr. Bouchacourt, called in at this moment, asked the advice of Dr. Richard of Nancy, and of Dr. Valette. The idea of the cæsarian operation had not yet occurred. Auscultation dissipated all doubt; the infant was still living. The patient having been first subjected to the inhalation of chloroform, was operated on at five o'clock in the morning of the 16th (17th ?) October. The incision extended from two finger breadths above the navel to the upper edge of the pubis. The uterus was greatly deflected to the right; an assistant restored it to the upright position, in order that it might be incised in its turn. The infant, seized by the head in the inclined position of the vertex, was withdrawn alive. The delivery was effected through the wound, and the uterus immediately closed of itself. The reunion was made by the first intention with the aid of three stitches of (*enchevillée*) suture. On it were placed pledgets of lint and compresses, kept in place by the aid of Scultetus' bandage. Afterwards a potion was prescribed for the patient, with 25 drops of laudanum and one grain of acetate of ammoniæ. On the 17th (18th ?) the traumatic fever made its appearance, about eleven o'clock. About

four in the evening the pulse became full and less compressible. On the 18th (19th ?) she took a little claret. On the 19th (20th ?) she commenced taking nourishment, which was increased from day to day. The infant died on the fifth day of Erysipelas. The mother left the hospital on the 20th, a few days after the operation, perfectly cured.(*)

Dr. Bouchacourt follows up this case with certain reflections relative : 1st, to the indications of the cæsarian operation ; 2d, to the manner of performing the operation ; 3d, to the consequences and the subsequent treatment.

1st. In the preceding case, there was only a choice between embryotomy and the cæsarian operation. Although the English doctrine is making new progress in France every day, it is evident that the ideal of the art never will be, in order to facilitate an accouchment, to take away the fœtus in pieces when it is still living. Doubtless in embryotomy the woman incurs less risk ; but nevertheless she incurs some. Beside, have we not the right to invoke, in favor of the cæsarian operation, the same arguments as for the other serious operations ? Do we not know, for example, that the operation for strangulated hernia, performed in time, succeeds better than when it is postponed ? Almost always hysterotomy is resorted to after the labor has continued for some time, and when the woman has become exhausted by long and fruitless efforts.

2d. Notwithstanding the decided inclination of the uterus, Dr. Bouchacourt incised the white line. The result was that the opening of the abdominal walls and that of the uterus did not correspond, a fortunate circumstance, attended with some of the advantages of sub-cutaneous wounds. The matrix closing of itself, it was not necessary to suture it.

3d. The taking off of the first dressing was done late and at several different times. Alimentation was commenced early. Under its influence the pulse was promptly increased. It was not until the fifth day that the patient perceived that she was delivered in a different manner than the first time. The sleep produced by the chloroform had spared her at the same time all suffering from the labor and from fear. Dr. Bouchacourt does not doubt that the anæsthetic method is entitled to some credit for the success of the operation.

Jour. des Connaissances.

IV.—THE TRANSFUSION OF BLOOD.

We find in the *Ami de L'Ordre* of Grenoble, of the 30th November, the following cure, as to the authenticity of which we reserve our opinion until further informed :

" For some days the journals of Paris have been very much occupied with a surgical operation, known by the name of the transfusion of blood, which was performed at the Hospital of St. Louis by one of the ablest physicians. The same operation has just succeeded completely in a village near Grenoble. We think it our duty to give certain details of the circumstances attending this operation, which were transmitted to us by a correspondent at Domene.

After an unfortunate accouchment, the wife of Mallet, a butcher at Saucey, aged 30 years, experienced a hæmorrhage so abundant, that in a few minutes she was reduced to extreme feebleness. It was then decided to call in medical aid. Dr. Marmontier of Domene was sent for ; but he did not reach the bedside of the patient until two hours after the accident, when the illness had made considerable progress. The midwife and several other women who surrounded

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(*) We copy the figures as we find them in the journal from which this article is translated; but we think they are erroneous. It is impossible that the woman should have left on the fifth day after the operation, *and perfectly cured ;* and at the utmost she could only have been transported from the bed in the hospital to her own bed.

the patient, saw her motionless, without consciousness, and did not doubt for a moment that her death was approaching. The Doctor determined to try the transfusion of blood. He satisfied himself that there was still feeble circulation. Immediately he laid bare the basilic vein of the right arm to the extent of one or two centimeters: he opened it, and inserted the pipe of a small syringe, with all the precaution which the gravity of the circumstances required. A neighbor, Miss Fagnet, consented to be bled. In a few moments, the blood which had been taken from her veins was flowing in those of the patient, and carried new life into her heart, which had almost been stilled. The transfusion was so successful, that in a few minutes after Mrs. Mallet was restored to consciousness, and was able to make some slight movements. The cure commenced immediately, and with every prospect of being complete. Her strength returned with astonishing rapidity, and now the woman has entirely recovered her health. Her feebleness was so great at the time of the operation, that she was not aware of it except by a kind of tickling in the arm that was incised.

Jour. des Connaissances.

V.—CITRATE OF CAFEINE A REMEDY IN NEURALGIC AFFECTIONS, ESPECIALLY IN MIGRAINE, OR NERVOUS HEADACHE.

The Parisian Medical Journals of a late date, eulogise this new preparation in certain nervous affections; and as this class of complaints is confessedly the most difficult to relieve and the most vexatious to the physician, we shall make it our duty to bring to the notice of the profession every medicinal means which promises to add any thing to our therapeutical resources. Among a series of experiments made by M. Hanon, with citrate of caféine, we condense the following:

Madame S. was afflicted for a number of years with a nervous head-ache of irregular paroxysms—coming on three or four times during the week; with this exception her health was apparently excellent. Just before the paroxysm came on Madame S. experienced a feeling of sadness—of lassitude, and sometimes partial surdity. The nervous agitation augmented as the accession was near, and sparks flashed before her eyes, and she experienced buzzing in the ears. When the cephalalgia was fully developed, the pupils were greatly dilated, and the pain was excrutiating in the right eye; gradually, however, it spread itself over the temples. At this stage of the case, the features became contracted and the countenance extremely pale. The paroxysm commenced with the rising of the sun, and gradually subsided as evening approached—then the patient was seized with vomiting, and the paroxysm passed off.

Case second was Madame V., who was subject to periodic attacks of nervous headache, which generally came on every five days. The access was preceded by general malaise, horripilations, &c.

Several other cases similar to the preceding are reported by M. Hanon—all of which were promptly relieved by the *citrate of caféine*. This salt is made by combining directly citric acid, sufficiently diluted, with caféine and then exposing the mixture to a temperature of 50 deg. cent. When the caféine is dissolved, it is slowly evaporated and the citrate crystalises.

The salt thus prepared is very soluble in water, and the stomach assimilates it in proportion to the purity of the caféine. Thus prepared, the salt contains one equivalent of caféine and two equivalents of water, for three equivalents of citric acid.

The citrate of caféine may be given in several grain doses, according to the effect sought to be produced, either in the form of pills, potion or syrup. The dose must be small; a few grains at first, to be gradually increased until the full influence of the medicine is obtained. It promotes the biliary secretion, imparts energy to the vital forces, and exalts the intellectual faculties. We trust the profession will give this article a fair trial, for to us it seems to promise much good. In another number we shall have more to say of the citrate of caféine.

We have translated and condensed the foregoing observations from the Journal des Connaiss. Med. Chirg. April, 1851.

VI.—A PREVENTIVE OF SYPHILITIC CONTAGION.

Dr. Langebert communicated to the Academy, at the sitting of July 22, 1851, that he believed he had discovered a mixture capable of destroying the effects of syphilitic virus. The following is the formula for this specific, viz.:

℞. Alcohol, 40 grammes.
Soft soap of potassa, with an excess of base, 40 grammes.

Dissolve and filter, then add Essential oil of Citron, 20 grammes.

This liquid does not act as a caustic. Applied in large quantity upon the mucous membrane of the genital organs, it determines only a slight sensation of heat in the part. It should be applied for two minutes only, then the parts must be washed with fresh water. The author has attested the anti-syphilitic properties of this liquid, by producing slight abrasions of the arm with a lancet charged with the venereal virus, which had been previously tested in other cases. Six minutes after the application the specific fluid was applied and no infection took place.

The object of M. L., in causing a slight abrasion of the skin, was to imitate as near as possible the manner in which syphilitic inoculation takes place in the act of copulation.

VII.—SYPHILISATION IN MAN.

This term has been recently adopted by M. Auzias to indicate the complete saturation of the human system with the venereal virus. This gentleman reported to the Royal Medical Society of Turin the result of his experiments by syphilitic inoculation on 52 prostitutes, all of whom were affected either with primary or constitutional symptoms of that disease. It was found that as often as the inoculation was repeated, the less active, and consequently less virulent, became the chancres in the same individual; and, finally, by repeating the inoculation, until the females became (*syphilisées*) or saturated with the virus, it was found impossible to produce in any part of their bodies the least evidence

of syphilitic chancre! The author adds: "*Il n'y a pas eu d'exception à cette règle.*"

These astounding developments do not stop here, for the writer observes that it has been definitely ascertained that serpiginous chancres, obstinate venereal ulcers of the throat and pharynx, specific buboes even in the suppurating stage, blotches on the skin, and finally, all the grave accidents attending this disease, may be made to yield to the powerful—the pervading "action of their own specific virus, without the use of a particle of iodine or mercury! Let our Hœmoepathic friends test this question.

VIII.—CHLOROFORM ON THE LOWER ANIMALS.

A California bear, (grisly), confined in the Zoological Gardens of London, was afflicted with a cataract, of which it was difficult to relieve this animal without putting him to sleep. At the request of the Secretary of the Society, Mr. Snow succeeded in bringing him fully under the soporific influence of this fluid, when Mr. W. Cooper, occulist, promptly operated on the eye, and so far succeeded that it has been proposed to extend the benefits of this operation to other ferocious animals, many of which are afflicted with cataract.

IX.—REPORT OF CASES ADMITTED INTO THE MARINE HOSPITAL, (MOBILE, ALA.)

For the quarter ending October 1, 1851.

BY HENRY S. LEVERT, SURGEON.

Diseases.	*Admit.*	*Dis.*	*Died.*	*Rem.*	*Diseases.*	*Admit.*	*Dis.*	*Died.*	*Rem.*
Int. Fever	78	71	00	7	Brought for'd	171	140	3	28
Remit. Fever	39	31	00	8	Dengue	2	2	00	0
Ty. Fever	4	3	00	1	Debility	5	5	00	0
Bil. Colic	12	10	00	2	Indigestion	1	1	00	0
Bil. Fever	5	3	00	2	Anthrax	1	0	00	1
Pernicious Fever	1	00	00	1	Bronchitis	2	1	00	0
Syphilis	3	3	00	0	Ulcers	2	2	00	0
Bubo	1	1	00	0	Abcess	1	1	00	0
Yellow Fever	1	0	1	0	Rheumatism	3	3	00	0
Scald	2	1	00	1	Gonorrhæa	1	1	00	0
Cold	5	4	00	1	Cong. Fever	1	1	00	0
Fract. Scull	1	0	1	0	Constipation	4	4	00	0
Dysentery	4	1	1	2	Phthisis	1	0	00	1
Diarrhœa	4	3	00	1	Herpes	1	1	00	0
Injury	6	5	00	1	Scrofula	1	1	00	0
Enlarged Spleen	3	2	00	1	Urticaria	1	1	00	0
Pleurisy	1	1	00	0	Paralysis	1	0	00	1
Inflam. Bladder	1	1	00	0					
Carried up	171	140	3	28		199	164	3	32
Remaining from quarter ending 1st July, 1851,						17	14	3	00
					Total	216	178	6	32

X.—SUICIDE BY CHLOROFORM.

In L'Union Medicale, for August, 1851 a case of suicide is reported which was effected by the use of chloroform. It is not a little singular that the first victim we are called upon to report, is a medical man—Dr. Rayer, Physician *en chief* of the Royal Hospital of Vienna, terminated his earthly career, in the midst of his colleagues, by taking chloroform. Up to the time of his death, his health was good and his intellect sound. He was found dead in his chamber with his nose and mouth plunged into an ætherization sac filled with chloroform, which he had taken the precaution to fix with plaster of diachylon about his face.

XI.—KOUSSO IN TAPE-WORM.

Mr. Wm. Robertson related, to the Newcastle and Gateshead Pathological Society, a case of tape-worm, expelled by kousso, from a middleaged woman, who was treated by Dr. White, at the Gateshead Dispensary. She had passed portions of worm for four years, and had the usual unpleasant symptoms. Turpentine and other anthelmintics only brought a few living portions away. Tonics had likewise proved ineffectual. Three months after coming under treatment, ℥ ss of kousso was administered at 12 A. M.; it acted copiously on the bowels at 4 P. M., without any griping. The worm, which was upwards of twenty-seven feet long, passed with the motion. She was menstruating at the time she took the kousso, but that secretion was not affected in the least. Her dyspeptic symptoms disappeared at once; and during the four months that have since elapsed she has had no return of the symptoms.

Mr. W. Preston also exhibited a perfect tape-worm, expelled from a very stout man in four hours after the usual dose of kousso had been taken. He had passed portions of worms for many years, and had had numerous remedies administered without much effect. The kousso acted once freely without the aid of any other purgative, and produced no unpleasant symptoms.

(*Medical Gazette, June*, 1851.)

The New-Orleans Medical and Surgical Journal.

VOL. VIII.] NEW-ORLEANS, NOVEMBER 1, 1851. [No. 3.

The so called "sickly season" has passed, and our population, with thousands of strangers, are daily pouring in upon us from almost every quarter of the compass,—all eager to engage in the active scenes of life. We can assure them that our city, for the last six months, has enjoyed a degree of good health almost without a parallel in her history; indeed, but a few days since, an aged Creole of the First Municipality, long connected with our large cemeteries, assured us that New Orleans had been blessed with better health the past summer than any season for the last fifty years! From the signs and evidences before us we venture to predict, that the day is not very distant when epidemic yellow fever will cease to trouble this community, and to clothe half our citizens in the sombre habiliments of mourning for the victims of that dire scourge. Measures are being adopted—destined to be fully carried out—which we confidently believe will secure to this city a degree of public health equal to that enjoyed by any city in the Union of corresponding population.

Our attendance at the Charity Hospital throughout the season enables us to say, that the diseases generally met with in that great Institution have been of a mild and manageable character, and but little of a malignant or pernicious type has been seen in any of the wards of the Hospital. The deaths have, consequently, been few; the per centage being, perhaps, lower than any time since the Institution was established. Let us not forget, in this connection, to pay a passing compliment to the devotion and diligence with which the *medical officers* connected with the Hospital have discharged their arduous duties; to their attention, intelligence and assiduity, may, in some degree, be attributed the low rate of mortality witnessed in the Institution. We conclude our observations by introducing our weekly mortality, continued from our last number.

Deaths in New Orleans and Lafayette for the week ending—

1851, Aug.	16—	Total	175—	Fevers	32	(of yellow fever,	4)—	Cholera	7
"	"	23—	"	120—	"	24	"	2)—	"	2
"	"	30—	"	102—	"	22	"	2)—	"	0
"	Sept.	6—	"	127—	"	25	"	1)—	"	2
"	"	13—	"	129—	"	25	"	1)—	"	0
"	"	20—	"	127—	"	21	"	2)—	"	2
"	"	27—	"	153—	"	35	"	2)—	"	1
"	Oct.	4—	"	102—	"	21	"	2)—	"	0
"	"	11—	"	124—	"	22	"	0)—	"	1
"	"	18—	"	108—	"	14	"	0)—	"	1

It would appear from the above table, that some deaths were caused by yellow fever, but the reader must be informed that the Board of Health publishes the "returns" as received from the cemeteries, and many of the certificates are made (which implies a diagnosis of the case,) by non-professional persons, such as commissaries, citizens, etc., and hence many of the cases reported "yellow fever" are exceedingly questionable, not to say incorrect. Thus much by way of explanation. We again repeat, the city is perfectly healthy.

THE BOARD OF HEALTH, AND THE SANITARY CONDITION OF NEW ORLEANS.

We avail ourselves of the little space allowed us in this Number to notice the labors of the Board of Health throughout the past summer and fall. Quietly and without ostentation did the members assemble regularly every week to examine the cemetery reports, and the reports of Health Wardens, to learn the actual sanitary condition of New Orleans and Lafayette, and to suggest and have carried out every measure calculated to preserve the health of our population, and to ward off all epidemic diseases. Although the members of the Board receive no reward for such labors, and wield but little power, yet through evil as well as good report they have faithfully discharged their duty to the public and set an example in this respect, which some of our municipal bodies might emulate with credit to themselves and advantage to the public good.

It is a notorious fact that the health of the city during the past season has been better than for years previously; and we do not hesitate to ascribe it, in part, to the vigilance, assiduity, and watchfulness of the Board of Health. Although the Board has not, in every case, obtained the co-operation of the city authorities in carrying out the sanitary measures suggested, yet it has in numerous instances caused to be removed, through its Health Wardens, many obvious sources of disease, and stigmatized certain localities in the city limits as likely to prove obnoxious to public health. Without means, and with but limited power, the Board has done all it could, and continued to direct public attention, from time to time, to the thousand and one causes likely in a populous city to engender endemic and epidemic diseases. But we regret to say, that the fathers of the city—those to whom are entrusted the great interests of this community—have either regarded the suggestions of the Board with apathetic indifference, or positively declined to carry out the earnest wishes of that body.

Luckily for the Board of Health, and fortunately for the interest of New Orleans, no disease of an epidemic or endemic character has been witnessed in any portion of the city, during the past summer and fall; on the contrary, our population, both transient and permanent, has enjoyed a degree of health, rarely to be observed in the most salubrious cities either in this country, or in Europe. May we not, without awarding extravagant praise to the Board, claim for it, at least, an humble part in this great and happy result? Not being a member of that body we feel that we may, without any impropriety or indelicacy, allude to its labors during the season which has just passed.

In conclusion, we trust the next Legislature will so frame the law establishing the Board, as to confer upon it powers wholly independent of our city councils, and place means at its disposal, ample enough to carry out the sanitary measures demanded by a great and growing city.

CASE OF GENERAL PARALYSIS. PRODUCED BY USING SODA-WATER CONTAMINATED WITH LEAD.

Reported by D. MACGIBBON, M. D., *Visiting Physician Charity Hospital, New Orleans.*

Mrs. Louisa Becker, aged 29 years, married, came into the Hospital on the 11th June, 1851, suffering with paralysis of both upper and lower extremities; sensation in these parts was also somewhat defective. She represented that she had been in good health until two months preceding admission, when she had an attack of severe pain in the bowels, with much constipation. For this she was under medical treatment at the time, and in about a week after she was free of these ailments.

Shortly after this, she found that she was gradually losing the power of her hands and feet; and for the last three weeks she has not been able to make any use of these. In this condition she entered the Hospital, and came under my care. She can move the shoulder joints slightly, but the arms below this are completely powerless—the wrists drooping when her arms are held out. She cannot turn herself in bed without assistance. Has no tenderness whatever over spine when that is percussed, and, indeed, complains at present of no pain anywhere. Her bowels are costive. They have not been opened for the last five days; did not take any purgative within that period for them.

Not having succeeded in detecting any evident cause for her condition, I concluded it to be one of those cases, which sometimes occur, where no obvious cause can be assigned for the nervous derangement, during life, and, sometimes, none on inspection of the body, after death.

In the way of treatment the first matter to be attended to was to have her bowels opened, and for this she was ordered the following:

℞. Oleum Tiglii, gtt. vi., cum Sp. Vini, ℥ ss.

A teaspoonful to be taken every third hour till the bowels be freely moved. To have full diet allowed her.

13th. Bowels freely opened after two doses of the medicine. For the paralysis she was ordered the following pills:

℞. Strychnine, gr. i., cum Extr. Conii, ʒ ss.

Fiat pil. xii.

Take one, night and morning.

14th. While visiting her this morning, it was suggested by Dr. Williamson, whose attention had been awakened by the recently published statements of Dr. Fenner, that lead might be the cause of the paralysis, and soda water the source from which the mischief might be derived. The completeness of the paralysis, the absence of all abdominal pains, together with the circumstance of the patient being a female, who, for obvious reasons, are more rarely exposed to lead-poisoning than even males are, made me overlook this as a cause to be inquired into in her case. But, now that it was suggested, a short examination and inquiry into the history of her case were instituted, which soon satisfied me not only that lead was the cause of the paralysis, but that soda water was the medium through which it had obtained access into the system. A brief recapitulation here of these facts will, I think, bring the same conviction to the

mind of others. On the mouth being examined I found on both gums, most distinctly marked, the *blue lines* held to be the pathognomonic of the presence of lead in the system; and from herself the following facts, bearing upon the subject, were then obtained: She had a small store in Camp, near Julia street, in which since the warm season commenced she kept soda water for sale. The fountain had leaden tube attachments to it for drawing off the fluid; and on an average only one fountain of soda water was used in a week on the premises, thus leaving its contents a sufficiently long time for the free acid to act on the leaden pipe, and also for a portion of the carbonate of lead, thus formed, to be diffused throughout it. She was usually in the habit, when she arose in the morning, of drawing off a glass of this beverage and drinking it; the first portion which escaped she always threw away, having heard somewhere that this was not proper to be drank. She also throughout the day would usually drink two or three more glasses of this, which was about the amount she consumed, according to her own account.

Lead having been in so many instances lately detected by the most conclusive chemical tests in the soda water sold in the city, and that too where less favorable circumstances prevailed than above, that, taking all the circumstances of the case into account, little doubt remained on my mind but that the present was a case of paralysis produced by lead-poisoning; and that it could fairly be placed to the credit of using soda water contaminated with lead, was what I had as little doubt of.

I have little doubt too, that the colic pains and constipation, from which she suffered previous to admission, and which she was then treated for, were the result of lead, though not, as she says, deemed so by her attendant physician.

15th. To-day feels better; sits proped up in bed; bowels not opened since the former medicine operated. To open them ordered the following draught:

℞. Lemonade, oj., cum Sulph. Alum. et Potassæ, ℥ ss.

One-half to be taken immediately, the rest in three hours; and should that not operate, to have a teaspoonful of her former cathartic, at night. To have sulphuric acid drink freely.

16th. The first half of the alum solution caused her to vomit; the other was not taken; but at night she had the Ol. Tiglii solution, as directed, which opened her bowels freely. Considerable twitching felt in the lower extremities last night. The pills and drink to be continued.

19th. Moves the lower extremities a little better. Twitching, with considerable pain, experienced, last night, in lower extremities.

She gradually went on improving, though slowly, under this treatment. She got the use of her lower extremities sooner than those of the upper. The hands continued, after she was able to walk about, to droop more or less, though that too all but disappeared before she went out.

The strychnine, which was gradually increased, as well as the narcotic to relieve her pains and procure rest, were continued with slight intermissions as long as she remained in the house. To relieve the costiveness with which she was occasionally troubled, the same quantity of alum in lemonade, as previ-

ously prescribed, and to be taken in the same way, was the medicine usually ordered, and generally with the desired result,—one or two evacuations being usually procured by it. Whether it had any other effect by acting upon the lead in the system, such as some ascribe it to have, I am unable to say; but from having now used it in three cases of colica pictonum, taken in this quantity, I am satisfied that it may act as a cathartic; and, like the sulphuric acid drink, I am willing to believe it a useful addition to the treatment of this particular complaint. I may remark that except on the first occasion it did not again produce any vomiting in her case, nor did it in either of the others where it was used. The blue discoloration of the gums had all but disappeared before she left the Hospital, which she did on the 11th August.

That some peculiar susceptability to the action of lead may have existed here is what I am willing to believe; certain it is, that few of those who use the soda water sold in our shops, and fully as freely as she reports herself to have done, can have been affected in the same way, or otherwise we would have heard more of colic pains, and seen more of paralysis among these than have come of late years to the knowledge of the Profession. True, some of these may have been overlooked when they did occur, the complaint set down to some other than the real cause. Still, the very fact of such a susceptibility existing, though in a comparatively small number of those who in some way or other are constantly brought into contact with preparations of lead, is in itself a sufficiently valid reason why the risk of affecting injuriously even that small number should not be longer, in the case of soda water especially, encountered, when that can so readily be avoided, and at so little additional cost, by the substitution of tin for leaden tubes.

Soda water, like ice water, has been found such a pleasing luxury here throughout the greater number of months in the year, that we do not now care to contemplate the possible restriction of its use; and such an arrangement as the above, which has in several stores already been introduced, would, it is believed, render that beverage at once as really *innocent* to all who use it, as it is known to be agreeable.

LOUISIANA MEDICAL REVIEW.

C. DELERY, D. M. P., EDITOR, NEW ORLEANS.

We refer our readers for a *Prospectus*, in the advertising department, in which is set forth the plan of a new Medical Review, about to be published in the *French Language*, under the editorial charge of Chas. Deléry, D. M. P. The work will not be issued until the list of subscribers justifies the expense. Dr. D. is thoroughly educated, and writes with ease and elegance in his vernacular language. When the work appears we shall have more to say on the subject.

THE NEW ORLEANS MONTHLY MEDICAL REGISTER.

EDITED BY A. FORSTER AXSON, M. D.

This monthly Register made its appearance on the 1st of October, under the editorial charge of A. F. Axson, M. D., of this city. The Register, says the Editor, will consist of 12 pages of reading matter, comprised under the following heads:

I. *Original Communications.*

II. *Medical and Surgical Reports, including cases treated in our Hospitals, and in private practice.*

III. *Foreign and Domestic Professional Intelligence.*

IV. *Transactions from our Medical Societies, and Reports from the Board of Health, etc.*

V. *Bibliographical Notices of New Works on Medicine—of Lectures in Medical Schools, etc.*

Terms: one dollar a year, *always* in advance.

The first number is quite neat in its appearance, and contains a handsome "introductory," from the pen of the erudite and accomplished Editor. This issue contains articles and reports of cases from several of the Professors in the Medical College of this city; and we are truly gratified to perceive that they have been induced to give the Profession some of the fruits of their observations and experience. We hope they will continue to enrich the pages of the Register from the vast accumulations of facts which some of them must have in store for the Profession.

To the worthy and gifted Editor we extend a cordial greeting, and welcome him into the *Corps Editorial*, as an ally who is both willing and able to do battle against every form of quackery and empiricism, from whatever quarter they may come. Of him it may be truly said: *tetigit nihil quod non ornavit.* We hope the Profession will extend a liberal patronage to our neighbor, the Register.

ON THE SANITARY CONDITION OF NEW ORLEANS, AS ILLUSTRATED BY ITS MORTUARY STATISTICS.

BY J. C. SIMONDS, M. D., NEW ORLEANS.

The philosophical, logical, and able remarks on the subject of Vital Statistics, recently published by Drs. Dowler and Cartwright, in the New Orleans Medical and Surgical Journal, leave very little to be said on that subject at the present time. They have argued the question in such a way, as to carry conviction, one would suppose, to every impartial and unprejudiced mind.

At page 218 of Dr. Fenner's Southern Medical Reports, the author observes: "It is necessary for me to criticise rather severely the last annual report of the Board of Health. My strictures refer but to two topics, the tables accompanying the report, and so much of the report (about four pages) as summarily disposes of the important question of the sanitary condition of the city."

There is no fear that the strictures of this writer will give the least uneasiness to any member of the *late* Board of Health; and, probably, the members of the present Board are equally indifferent as to his opinions.

What are the gentleman's pretensions to the position which he has ventured to assume? He has availed himself on several occasions of the labor of others, and upon this borrowed capital he may have gained an ephemeral reputation. Where is the evidence on record to establish the superior learning and talents of this writer, which would authorise him to dictate to the members of the Medical Faculty of this city, to the Municipal Councils, and to the Board of Health? Even if his learning was most profound, and his talents of the highest order, courteous suggestions, and friendly admonition, would far more become him, than reckless assertion, gross personality, and an affected severity. But what must be thought of the man who charges his fellow-citizens with the most criminal acts, such as "*wilful concealment of the truth, reiterated falsehood, and the immolation of unsuspecting victims on the altar of Mammon*"? Such language is unbecoming a physician, and more likely to excite contempt than to provoke indignation.

We shall now endeavor to prove that his estimate of the per centage of the annual mortality in this city is erroneous and absurd, and that he is as wrong in his premises, as he is blundering in his conclusions.

The writer, at page 215, affirms that the mortality of New Orleans is nearly double that of Savannah, which is the highest on the list; two and four-fifths greater than that of New York; and more than three times greater than that of any other city! This affirmation is followed by a table to illustrate his position.

"*Average Mortality of various cities of the Union.*"

Boston,	39 years,	2.4572	per cent.	Baltimore,	14 "	2.4917	"
Lowell,	13 "	2.1194	"	Charleston,	27 "	2.5793	"
New York,	45 "	2.9622	"	Savannah,	8 "	4.1616	"
Philadelphia	34 "	2.5510	"	NewOrleans,	$4\frac{1}{2}$ "	8. 017	"

For the year 1850, the mortality is estimated by the writer at 6.4 per cent. The basis presented by the report of the Board of Health makes it less than 3 per cent. We shall endeavor to show which is the correct basis, and leave it to the Profession and an enlightened public to decide the question.

The writer's estimate is based on the actual resident population of the cities of New Orleans and Lafayette, as ascertained by the late census. This is set down at 130,000. It probably falls short of the actual resident population, for three reasons. First, there are in the city numerous houses of about four stories, filled with Dutch, or with immigrants from Alsace and Lorrain, each family occupying one story. The persons who take the census generally ascertain the number of occupants on the first or ground floor, omitting all the rest of the inhabitants. Secondly, in many families, and particularly amongst the laboring class of Irish, the actual number of persons is concealed, in consequence of an impression that the inquiry is in some way connected with taxation; and, lastly, for a reason assigned by Dr. Cartwright: that the census is taken at a

season of the year, when the population is at the lowest ebb, every one that can get away being over the Lake, or at the North, or in Europe.

The number of deaths is estimated to be 8086, *and this mortality is referred solely to the* 130,000 *resident population.* It is difficult to conceive how any person of common sense could commit such a glaring and preposterous error. Besides the writer's calculation on his own data is incorrect:

$$130{,}000 \div 8086 \div 100 = 6.22 \text{ instead of } 6.4 \text{ per cent.}$$

It appears that the admissions into the Charity Hospital in 1849 amounted to 15,558, of which number 13,766 were foreigners; 1,782 from the different States of the Union; 142 unknown, and only 147 from all Louisiana. Dr. Barton, in the Annual Report of the Board of Health for 1849, observes: "A line indicating the influence of this climate upon these diseases, every week of the year, is marked on the chart. This line conclusively shows that the increased mortality is only apparent during those months in which the city is mostly visited by immigrants and strangers." In 1850, the deaths from cholera and yellow fever amounted to 1015; of this number only *four* persons, citizens of Louisiana perished. The balance were strangers from various parts of the world; therefore 1011 deaths cannot be charged to the 130,000 permanent resident population. According to the calculation of the gentleman whose article we are reviewing, all this increased mortality must be charged to the permanent resident population. Can he see no difference between the permanent population and the immigrants and strangers that swell our bills of mortality? And yet he undertakes to lecture a whole community, and to enlighten those whom he assumes to be in darkness and ignorance. Dr. Barton states that 29 per cent. of the 9862 died in the various hospitals. This would account for 2859 *deaths.* By the *new method* of arriving at results from statistical details, the deaths of 2859 strangers, forming no part of our permanent resident population, must be credited to that population. This is sufficient to show how utterly untenable is the gentleman's position, and to develope the fatal error in his premises.

It is stated in the report of the Board of Health, that while Mr. Baldwin was Recorder, it was ascertained by the Police of the Second Municipality that *at least* 125,000 citizens from the various States bordering on the Mississippi river visit this city annually by means of the steamboats that are for ever pouring out, and taking in, this vast amount of floating population. Do none of these die in the city? Are there no diseases in winter as fatal as yellow fever? What shall we say of scarlet fever, of pleurisy, of typhus fever, and typhoid pneumonia; of acute rheumatism, which is almost always fatal, when by metastasis it attacks the heart; of malignant sore throat, of small pox, of cutaneous and sub-cutaneous erysipelas, involving the brain; of remittent and intermittent fevers, which prevail in winter and in the spring, and which are so often fatal when they run into a state of congestion; of various forms of pulmonary disease which rarely originate here, and which furnish between six and seven hundred annually to the record of the dead; of chronic diarrhœas, dysenteries, etc.? However deaths in the floating population may swell the bills of

mortality, they have nothing to do with the permanent resident population; yet, by the gentleman's calculation, *these are all charged to that population.*

Of the 1015 who died of cholera and yellow fever, in 1850, at the Charity Hospital, 454 perished in the first quarter, 111 during the second, 125 in the third, and 325 in the fourth quarter; the mortality from these two diseases was more than three times greater during the months of January, February, March, October, November and December, than during the intermediate months; and it is in the first and last quarters of the year that the floating population is in the city. Yet to prove that New Orleans is the most unhealthy city in the Union, these facts must be overlooked; and this bungling and unfair mode of making an estimate of the mortuary condition of New Orleans is called, in the Southern Medical Report, a "startling development." It had better be called a new and startling mode of calculation.

Besides the large number of citizens that come down the river in steamboats, we have arrivals from California, Texas, Alabama and Florida. Do none of these people die, especially of the Californians? To all this population, which is not the resident permanent population, we must add the thousands of immigrants that annually arrive from Germany and Ireland. These have their full share of sickness and death, and why should they be excluded from the gentleman's illustrations of the Vital Statistics of this city?

We will now concentrate the foregoing details: The floating population of New Orleans is furnished by the following States: California, Texas, Alabama, Florida, Louisiana, exclusive of the city of New Orleans, Arkansas, Missouri, Illinois, Indiana, Ohio, Wisconsin, Iowa, Tennessee, Kentucky and Mississippi. Do all the citizens from these States enjoy an immunity against disease and death? Then we have the Irish and German immigrants, besides a large number of Irish laborers who gain their living on the coast by digging canals and ditches. Working in mud and water with the hot sun beaming its fierce rays upon them, they are afflicted with much sickness, and when sick they come to this city to die, with few exceptions, in the Charity Hospital. What have they to do with our calculations of disease and death amongst the resident population in this city? They do not contract disease here, *but they come here to die;* and this again is charged to the *resident* population.

Having now alluded to all the floating population from every source, and who are much more liable to disease than the resident population, we shall proceed to make out our per centage of deaths, including all, resident or not resident, acclimated or not acclimated. We begin then with—

130,000 resident native, acclimated, or unacclimated population of New Orleans and Lafayette.
125,000 strangers from the Western States.
25,000 Californians,* going to, and returning from, California.
125,000 immigrants, and strangers from Texas, Florida, Alabama, West Indies, etc.

305,000 grand total, *subject* to disease and death. Then
305,000÷8086÷100=2.65 per cent, which will compare favorably with any of the other cities of the United States.

*Dr. Cartwrigth's estimate is more than double.

We do not pretend to say that this calculation is mathematically correct, but we believe it to be sufficiently approximative for all practical purposes. As before stated, the subject is left to the decision of the members of the Medical Profession, and to an enlightened public. If the gentleman is in error, which probably has been demonstrated, who can calculate the injury done to this city. Mobile, Charleston, Baltimore, New York and Boston are making every effort to divert the trade of two-thirds of the Mississippi river from the city of New Orleans. The gentleman's pamphlet has been circulated at the North to the great satisfaction of that community, who hope to enjoy and absorbe the benefit of the trade of the great Valley; and nothing can afford more pleasure to the Northern fanatics than to believe that a large Southern city, in a slaveholding State, is going to destruction on account of its *pestilential atmosphere*, and *unprecedented mortality.*

There are several other topics in the article in question, bearing principally on the Board of Health, but we do not deem them worthy of the least consideration. *W. P. H.*

P. S. When the foregoing was written, we had not seen the second part of the Doctor's Essay. It is published in full in the Charleston Medical Journal. The error complained of is there corrected: 6.22 instead of 6.44 per cent.

The gentleman asks, if it is supposed that Creoles never die? Who has said so? Is it Dr. Bennett Dowler? Is it to be found in the report of the Board of Health? It is surprising that such an insinuation should have escaped the writer, when he must have read the article of Dr. D. on the Necropolis of New Orleans, and the report of the Board of Health, where his own estimate of 130,000 is *included* in the estimate, on which the per centage of deaths is calculated.

TRANSPOSITION OF THE VISCERA—DISLOCATION OF THE LIVER.

An Irishman, aged about 40 years, entered ward No. 12, Charity Hospital, some time in the month of July, 1851. Phthisis pulmonalis being diagnosed, and the disease far advanced, palliative means only were adopted. In a few days after admission he died suddenly, greatly emaciated.

A *post mortem*, shortly after death, revealed the following singular state of things: The chest and abdomen being exposed, the right half of the diaphragm was found distended with gas and fluid to an extraordinary extent, extending down to within a few inches of the crest of the ilium of the same side. In consequence of the protrusion of this muscle, the liver was *dislocated*, and thrown completely over into the left hypochondrium, entirely to the left of the *linea alba.* The gall-bladder rested beneath and behind, and lay just over the spleen; the stomach was also displaced, and thrown considerably to the left of its usual position. The liver was natural, both in size, appearance and consistency. The mass of the intestines was passed as far to the left of the spine as the mesenteric attachments would permit.

The Chest. The lungs were a mass of disease, full of small cavities, communicating, through softened and broken down pulmonary tissue, one with another. But a fraction of both lungs were fit for the purposes of aeration; indeed, it was remarkable to find life sustained under such circumstances. The right pleural cavity cantained, besides atmospheric air, a large quantity of purulent matter, mixed up with sanguinolent fluid. About the middle of the right lower lobe, where it reposes upon the diaphragm, a fistulous opening was found as large as the end of the finger; on tracing it up, it was found to be connected with a number of small cavities, and these latter again communicated with the divisions of the bronchial tubes. It was through this channel that the atmosphere had made its way into the pleural cavity and forced the diaphragm down, pushing the liver, and everything that opposed it, out of place.

WALSH ON THE LUNGS AND HEART.

Dr. Rouanet, now of this city, but for many years a resident of Paris, France, will enrich the pages of the January Number of this Journal with a *critique* on the above work. This gentleman is, perhaps, without a superior in auscultation and percussion, in this country. His essay on the "*Sounds of the Heart*" received the commendation of Bouillaud, Cruveillièr, Andral, and others.

THE JOURNAL AND OUR SUBSCRIBERS.

Once more we appeal to our Subscribers, and ask them to remit *by mail* the sums due the Journal. This number brings us up to No. III of Vol. VIII, and although all payments are required *in advance*, yet we regret to find so few willing to comply with our terms. We toil incessantly to make the Journal acceptable and interesting to our Subscribers, and would gladly waive all such appeals; but we must have the means with which to meet the heavy claims constantly brought against us on account of the Journal. Our private exchequer has already suffered considerably on account of the delinquency of many of our oldest and best subscribers. Will they look to this matter?

UNIVERSITY OF LOUISIANA.—MEDICAL DEPARTMENT.

The Lectures in this School will commence on the 17th of November, and continue four months. Every preparation has been made, during the interregnum, for the accommodation of a large class; and if it equals in numbers the facilities for the acquisition of a practical medical education, the spacious lecture-rooms will be filled the approaching winter. As the city is perfectly healthy, students need not have any fears for their safety during the course of Lectures.

We direct the attention of those interested to the programme of the University, on the cover of the Journal.

AN ANALYTICAL REPORT OF THE UNITED STATES MARINE HOSPITAL,

FOR THE QUARTER ENDING SEPT. 30, 1851. BY P. B. MC'KELVEY, SURG.

DISEASES.	Discharged in			TOTAL.	DISEASES.	Discharged in			TOTAL.
	July.	Augt.	Sept.			July.	Augt.	Sept.	
Abscess	1	3	2	6	Brought up	47	70	105	222
" of the Knee	1	1	0	2	Ictus Solis	0	1	0	1
" in Perinæo	0	1	0	1	Insanity, partial	0	1	0	1
Ascites	1	1	2	4	Nyctalopia	0	1	0	1
Amaurosis	0	0	2	2	Orchitis	1	0	0	1
Ankle, Sprained	0	1	1	2	Opthalmia	0	1	1	2
Anasarca	0	2	0	2	Paronychia	1	0	0	1
Bronchitis	0	0	1	1	Parotitis	1	0	1	2
Colic, Bilious	0	2	3	5	Paralysis, partial	1	0	0	1
" Pictonum	0	1	1	2	Pleurodynia	2	1	0	3
Carbuncle	0	0	1	1	Phthisis pulmonalis	1	1	2	4
Contusion	0	4	4	8	Ptyalism	0	0	1	1
Constipation	1	0	0	1	Rheumatism	8	7	6	21
Cornea, Ulcer of	0	1	0	1	Syphilis	15	15	22	52
Diarrhœa	6	6	8	20	Stricture of Urethra	1	0	2	3
Dysentery,	3	1	0	4	Spleen, enlarged	0	1	1	2
Debility, general	2	0	2	4	Tumor	0	0	1	1
Delirium Tremens	0	0	0	0	Ulcer	4	2	3	9
Fever, intermittent	22	32	52	106	Wound, incised	2	0	1	3
" remittent	4	5	10	19	" contused	1	0	1	2
" bilious	0	0	2	2	" punct'd	0	0	1	1
" typhoid Chagres	0	0	2	2					
Fracture, radius	0	0	1	1	TOTAL	85	101	148	334
" cranium	0	0	1	1					
Fistula in ano	0	1	0	1	**DIED OF**				
Gastrodynia	0	0	1	1					
Gonorrhœa	1	6	7	14	Abcess of Brain	1	0	0	1
Heart, hypertrophy of	2	0	0	2	Brain, congestion of	1	1	0	2
Hernia	1	0	0	1	Cholera Asphyxia	1	0	0	1
Hepatitis, acute	1	0	0	1	Fever, bilious	0	1	0	1
Hydrocele	0	1	0	1	Gastro-duodenitis	1	0	0	1
Iritis	1	0	1	2	Hepatitis Chronic	1	0	0	1
Intemperance	0	0	1	1	Phthisis Pulmonalis	2	1	0	3
Icterus	0	1	0	1					
Carried up	47	70	105	222	TOTAL	7	3	0	10

RECAPITULATION.

REMAINING in the Institution, July 1st, 1851,				79	
	JULY.	AUGUST.	SEPT.		
ADMITTED IN	93	104	161 = 358	358	=437
DISCHARGED IN	85	101	149 = 335		
DIED IN	7	3	0 = 10		
			345	— 345	
TOTAL REMAINING in the Hospital, Oct, 1st, 1851.				92	

CHARITY HOSPITAL,
Report for August and September, 1851.

By J. V. Loubere, Asst. Clerk.

		AUGUST.	SEPT.
Admissions	Males	1541	1701
Do.	Females	571	616
		2112	2317
Discharges	Males	1287	1652
Do.	Females	521	576
		1808	2228
Deaths	Males	74	109
Do.	Females	24	29
		98	138
Remaining		845	826

TABLE OF DEATHS DURING THE SAME PERIOD.

	AUGT.	SEPT.	TOTAL.
Cholera Asiatic	1	0	1
Diarrhœa	9	3	12
Dysentery	10	23	33
Fever Yellow	0	2	2
Do. Typhus	9	22	31
Do. Pernicious Intermittent	2	4	6
Do. Congestive	10	10	20
Phthisis Pulmonalis	12	18	30
Other Diseases	45	56	101
Total	98	138	236

ABSTRACT OF A METEOROLOGICAL JOURNAL FOR 1851.

By D. T. LILLIE & Co., at the City of New-Orleans.

Latitude, 29 deg. 57 min; Longitude, 90 deg 07 min. West of Greenwich.

WEEKLY. — 1851.	THERMOMETER.			BAROMETER.			COURSE OF THE WIND.	FORCE OF THE WIND, Ratio 1 to 10.	Number of Rainy Days.	Quantity of RAIN — Inches.
	Max.	Min.	Range.	Max.	Min.	Range.				
Augt. 21	95.0	78.0	17.0	30.17	30.05	0.12	S. E.	2.60	5	5.735
" 28	92.5	76.0	16.0	30.13	29.78	0.35	S. E.	2.00	5	1.800
Sept. 4	92.0	76.0	16.0	30.25	30.12	0.13	N. E.	2.05	2	0.695
" 11	91.0	72.0	19.0	30.20	30.08	0.12	N.	2.65	5	3.055
" 18	91.0	72.0	19.0	30.30	30.06	0.24	N. E.	2.75	1	0.005
" 25	87.5	71.0	16.5	30.20	30.07	0.13	S. E.	3.00	2	0.790
Oct. 2	82.5	62.0	20.5	30.27	30.08	0.19	N. W.	2.43	0	0.000
" 9	85.5	70.0	15.5	30.20	30.05	0.15	N.	3.00	3	1.955
" 16	84.3	62.0	22.3	30.17	29.98	0.19	N.	2.55	3	0.890

Remarks.—The Thermometer used for these observations, is a self registering one, placed in a fair exposure. Regular hours of observation, 8 A. M., 2 P. M., and 8 P. M.

THE NEW-ORLEANS

MEDICAL AND SURGICAL JOURNAL.

JANUARY, 1852.

Part First.

ORIGINAL COMMUNICATIONS.

I.—REMARKS ON THE USE OF ANÆSTHETIC AGENTS, MORE ESPECIALLY IN PARTURITION.

Read before the Sydenham Medical Society, of Montgomery, Ala.

BY WM. M. BOLING, M. D.,

President of the Society; and late Professor of Obstetrics, &c., Transylvania University.

[Concluded.]

As to the preferable method of administration.—By pretty general consent, with scarcely an exception, every species of apparatus has been abandoned, and a sponge or handkerchief substituted. The former is perhaps preferable, though the latter is always at hand. The sponge should be cup shaped; or if the handkerchief be used, it should be formed into a hollow cone, in which the Chloroform may be placed. To avoid subsequent nausea and vomiting the Chloroform should only be inhaled when the stomach is empty; sickness generally following, when the inhalation is made soon after a meal. Indeed the mere sickness is not the only reason for observing this precaution, as danger might arise from the contents of the stomach, when rejected, passing into the paralyzed glottis; and it is to suffocation thus resulting, that Mr. Lizars is disposed to ascribe the fatal termination, in the greater number of cases of death, consequent on the inhalation of Chloroform.

Under either view of the fatal action of Chloroform; whether an exaggeration of the ordinary anæsthetic operation, or a peculiar and separate influence developed under circumstances of which as yet we have but an imperfect understanding, one important precaution is, that at first but the minutest quantity should be given, and the effect carefully watched, while gradually increasing it. This as a precautionary step is equally proper underthe supposition of the possible existence of an idiosyncracy unfavorable to its action; though the latter, (which at a first glance we might consider otherwise) is probably as rare, as in regard to other important and powerful therapeutic agents. In several of the sudden and mysterious deaths reported, the patients had previously taken Chloroform in larger quantity with no other than a favorable effect. I have heard the verbal report of a case* in which a delicate female, under the operation of the extraction of a tooth, in the afternoon was supposed by her attendant to have been thrown into an alarming state, by the inhalation of ℥ i.; and which failed to annul the pain, though she had inhaled without any bad effect in the morning of the same day as much as ℥ ii. In regard to another case, of which I have had a verbal report of the facts, the patient, a female, was also supposed by her attendant to have been thrown into an alarming condition, as indicated by coolness of the extremities, weak pulse &c., by the inhalation of ℥ ii administered with a view to preparation for the extraction of a tooth; though during the accouchement of the same lady a short time after, she was kept some four hours, by the use of 4 ounces of Chloroform, in a complete state of anæsthesia, without any alarming manifestation whatever.

But of the unquestionable fact, of the great difference in the degree of susceptibility to the influence of Chloroform; as also the possibility in any given case of the existence of an unfavorable idiosyncracy, is legitimately deducible the practical doctrine, that in all cases where the circumstances will possibly admit of it, the vapor should be introduced *gradually;* and that in all, however afterwards the dose might be rapidly increased, a tentative or experimental trial of a minute quantity, cautiously given, should be made. The fact too, that, in so large a proportion of the fatal cases, death has followed the use of but a moderate quantity, would seem to suggest still more imperatively the necessity of strict attention to this precautionary course. It is true, as will be shown as we proceed, that in different cases the time allowable for this pur-

* This case has been recently published in the New Orleans Medical and Surgical Journal.

pose will vary, and that in some instances to attain the desired object, the immediate and full anæsthetic influence is important. Such cases are, however, rare; and even when met with, though this experimental stage may be brief, it would scarcely be prudent to omit it entirely. Such cases I say are rare; and we may suppose therefore the probability of meeting, in the small number of cases which may occur in the practice of any one individual, with any in which a dangerous susceptibility to its action exists, (considering that these also bear so small a proportion to the whole number) is but slight. Still it is possible. Such a course too is not only proper in the first administration of the remedy to a patient, but (though no unfavorable phenomena should be developed,) in any subsequent trials, it would be prudent to adopt a similar course; for as will be remembered, in some of the reported fatal cases the unfavorable result was brought about, by a quantity, smaller than the patient had on some previous occasion taken with impunity; and at present, we know nothing of the indications, by which this change in the susceptibility to its operation is indicated. The wider the condition and circumstances of the patient, from those under which it was previously used with safety, of course the more necessary the precautions stated.

This is contrary to the course pursued by Professor Simpson, who advises that the Chloroform vapor should be administered, as rapidly and in as full strength as possible, from the beginning of the process. If there is danger in the remedy at all, this certainly cannot be as safe a procedure, as the cautious use of it in small quantity at first, with a progressive increase, rapid or slow according to circumstances; and few have had, or will have, reason to fear, the long course of successful practice with the article, which has been necessary to create that entire confidence in its safety, seemingly entertained by Professor Simpson. Few governed by their own individual experience, have reason for this, to any thing like the same extent; and it is only from the combined observation of many, with a careful exclusion as far as possible of irrelevant cases, that we may hope to arrive at such a result, as may be proper for the establishment of a correct practical principle. It is true, that, though the least safe, by adopting the course devised by Professor Simpson, we avoid a number of disagreeable accidents, (all however, really of but slight importance when weighed against the question of safety) attending the induction of the anæsthetic state. Such for example are the incoherence; the slight delerium; the general nervous excitation, &c. Otherwise, the directions of Professor Simpson, as regard, the proper manner of exhibiting Chloroform, I deem

highly judicious. It is above all important, as he directs, that the patient should be left as far as possible in a state of absolute quietude, and freedom from mental excitement, both during the induction of Etherization and recovery from it. Because such a condition cannot be secured, Etherization has been found inapplicable to operations on the field of battle. All perhaps who are familiar with the use of anæsthetic agents, have met with cases in which, not only were the difficulties of inducing the anæsthetic state, increased by mental or physical excitement on the part of the patient, but in which the process was attended with the development of phenomena more or less unpleasant, and which probably owed their existence to the circumstances stated. In the case of an active, plethoric, muscular young man, who was to undergo the operation of extirpation of an eye, by my friend Doctor Sims, and who entered the operating room hastily at the termination of a rapid walk through the streets,—there to meet with a number of spectators, before whom he seemed to have a morbid pride, if I may use the expression, to deport himself *manfully*, and with whom he kept up a random conversation, in reference to the operation, during most of the time of the attempted Chloroformization, such symptoms were developed, as to lead to an abandonment of the attempt—although the agent was administered in the most cautious manner. Considerable time and a good deal of Chloroform were consumed in the attempt—and before any thing like the desirable degree of anæsthesia was induced, the intervals between the respiratory movements became considerably lengthened, and a slight pallor of the face, and an equally slight lividity of the lips were manifest. There was no remarkable alteration in the pulse. No treatment was deemed necessary, and the symptoms disappeared immediately, on the withdrawal of the Chloroform. It is not, it is true, certain, that these untoward symptoms, were attributable to the circumstances to which I have referred them. There might have existed in the patient an idiosyncracy unfavorable to the action of Chloroform. The former supposition is however probable. Neither do we know what might have been the result of a continuation of the remedy ;—whether the particular symptoms alluded to would have deepened to a fatal degree, or cease to progress, or even subside under the favorable anæsthetic influence, which otherwise, at the time of the discontinuance seemed about to be superinduced. Doctor Snow, who has particularly noticed this occurrence, attaches very little importance to it, and speaks of "two or three cases, in which the breathing was interrupted till the face became quite purple ;" but in which the process of Etherization was favorably completed, on the proper commencement

again of respiration. In the case just mentioned, however, it was deemed prudent to suspend the Chloroform, and the operation was completed without it. More recently I have met with a somewhat similar case, in my own practice. The patient was a man of nervous temperament, about thirty-five years old; laboring under disease of the tibia &c., for which he was about to submit to amputation of the leg. After he was brought to a certain, but insufficient extent under the influence of Chloroform, either from volition, or involuntarily, the respiratory efforts became considerably prolonged; in consequence of which, it was found difficult to render the influence complete. Several efforts were made, but the intention was abandoned, and the operation proceeded within the waking and conscious state of the patient. There was some difference of opinion among the medical gentlemen present, as to whether the phenomenon was owing to voluntary or involuntary effort. The manifestations of pain, too, on proceeding with the operation, were so great, that it was a mooted question whether the small quantity of Chloroform given, failing to induce anæsthesia, had not produced rather an exalted state of the nervous sensibility. These two, are the only cases which have fallen under my own observation, in which any unfavorable symptoms whatever were induced by the use of Chloroform; if we except indeed the slight incoherence or delerium, not now regarded as such, though sufficiently startling when witnessed for the first time, which often occurs while the patient is as yet imperfectly under the influence of the agent; and in one or two instances restlessness, and greatly increased frequency of the pulse, the latter perhaps more properly attributable to the former than to the anæsthetic.

In plethoric subjects, a free bleeding should precede the administration of Chloroform. The precaution would seem proper, to obviate any unfavorable effect upon the brain; and the labor in all cases will proceed more favorably.

To insure safety then in the administration of Chloroform, it is, I conceive requisite, (such at least is the in ference fairly deducible from reported cases,) that it should be at first administered in small quantity, and in a state of considerable dilution, till a tolerance is ascertained or established. Any quantity, however small, may be applied to the sponge, so that the quantity of vapor inhaled shall not be great; but some management may be necessary to prevent the entrance even of this small quantity in a state of imperfect dilution. Thus, though but a small quantity should be applied to the sponge, and this held some distance from the mouth and nostrils, owing to the greater specific gravity of the Chloroform vapors, than atmospheric air, they may fall as it were

into the opening of the respiratory passage, in a concentrated form, and be thus carried by the inspiratory efforts, especially should a strong one at the moment be made, in contact with the pulmonary vesicles. According to our views, this course is unnecessary with sulphuric Ether. Is the circumstance which renders it so,—the less specific gravity of its vapor,—not one cause of the greater safety of this article? The plan I have pursued, and would suggest is, to apply but a few drops at first to the sponge, and instead of applying the moistened surface near or immediately to the nostrils, to double or fold the sponge upon itself, and approximate it in this way to the nostrils, so that the vapor, to attain the air passages, will have to pass through the pores of the sponge. This of course secures a diffusion, and free atmospheric dilution of the vapor. After a few inspirations in this way, the sponge may be spread out, and the moistened surface held near the nostrils, till the strength of the vapor given off begins to diminish. A fresh supply may now be added, and each time the quantity increased, and the sponge held nearer and nearer to the nostrils, till the desired effect is produced. In a few cases only, is it necessary to apply the margins of the sponge in contact with the face, so as to cover entirely the mouth and nose, and cause all the inspired air to pass through its meshes. It is probable, as stated by Doctor Snow, that temperature exerts a great influence, as regards the quantity of the vapor that the air will take up; and that an elevation of 15 degrees in the warmth of the apartment, would double the quantity which the patient would inhale in a given time, where proper precautions are not taken to regulate the supply. The desired effect having been once produced, may be kept up by the addition of a few drops, more or less according to circumstances, about every four or five minutes. In parturition, as a general rule, I have thought it better to apply the fresh Chloroform, shortly after the termination of each pain, by which course, if they do not come in very quick succession, the maximum effect of each dose, as it may be termed, is in operation, about the time of the occurrence of each succeeding contraction. This plan is preferable to that of Professor Simpson, which is to apply the Chloroform with each recurring contraction; suspending it entirely during the intervals. When the patient is once brought under the anæsthetic influence, in all cases in which it may be desirable to maintain this condition for any considerable time, it will be proper, every few minutes at least to remove the Chloroform, so that an occasional inspiration of unmixed air may be made. In the experiments of M. Gruby, the continued inhalation of Chloroform caused death in some of the animals in from three to five minutes, though similar animals inhaled it without

any bad effect for more than an hour and a half, if occasional inspirations of atmospheric air were allowed. The quantity used, of course must vary in different cases, according to circumstances, the duration of the case more especially, and the actual pain; for as a general rule, to a considerable extent, the difficulty of Chloroformization, is proportionate to the degree of existing pain. Still there are exceptional cases. As already stated, susceptibility to the Chloroformal influence greatly varies, even under the operation of causes calculated as we would judge to excite pain in an equal degree. Cases are now and then met with, in which, to keep up the desired state of anæsthesia, it is necessary that the patient should respire, almost without interruption, the Chloroform vapors highly concentrated; while Doctor Stephens of Ceres, Pennsylvania, speaks among other somewhat similar cases, of one, of a first labor, in which by the administration by inhalation of ten drops of Chloroform every half hour, the patient was kept in the anæsthetic state, "perfectly unconscious of pain or suffering."

In all cases in which operative measures are contemplated, care should be taken to have the patients completely anæsthetic, before advancing a step that may cause pain; otherwise it is much more difficult subsequently to induce this condition. I may mention a case somewhat in point. A lady requested me to keep her under the influence of Chloroform during the time necessary for the extraction of some twelve or fourteen teeth, which she wished removed, for the purpose of having an artificial set inserted. Some of them were small and quite loose, others large and firmly set. Having brought the patient moderately under the Chloroform influence, I directed the Dentist to proceed; expecting that he would first remove some of the smaller and loose teeth; and intending to produce a deeper effect to be kept up during the extraction of the larger and firmer ones. The Dentist, however, proceeded at once to extract the largest and most firmly fixed teeth; with the effect of causing considerable pain, and of arousing the patient in a great degree from her anæsthetic state. It was subsequently impossible, with any quantity of Chloroform that I could introduce conveniently, to produce complete anæsthesia; and she suffered, at least gave manifestations of pain more or less, during the extraction of each tooth. This would not have been the case, had a proper understanding existed between the Dentist and myself, in regard to the order in which the teeth should be removed.

The more reliable and available indications of a deep state of anæsthesia are, dilatation of the pupils, upward rolling of the eyes, the powerless falling of a limb, when raised and left unsupported; absence of

manifestations of pain, when pinched or pricked, stertorous respiration, etc.

Indications of the Toxic operation of Anæsthetics.

From the beginning, and at the beginning, more especially, the effect must be watched. What are the early indications of the toxic action of chloroform? Unfortunately, the fatal termination in a considerable number of the cases in which death has resulted, has been so sudden that none could be noted; and even, in some instances at least, when more time has been allowed, the occurrence has been so alarming, that the precursory phenomena have been, it is probable, but imperfectly remarked. It is, however, from changes in the respiration and circulation, that our earlier reliable indications of danger doubtless must be derived. In regard to the mind. We know that incoherence or delirium is unimportant, while changes in the color and temperature of the surface, arising from the unfavorable operation of the chloroform, are always, it is altogether probable, preceded by changes in the circulation or respiratory function. Coolness of the extremities, in nervous females, however, is not an uncommon occurrence, at the beginning of the administration (prior to it even in some cases); not as an effect of the chloroform, but of the mere mental agitation arising from the idea of inhaling it, and should be discriminated. Slight, indeed at times considerable, changes in the circulation, arising from the cause just stated, in many instances take place, before the patient is brought fairly into the anæsthetic state, which disappear after this is induced; the pulse now in most instances approaching the natural standard; though it may be a little more frequent, or a little slower, and less strong. Any remarkable change however in the pulse, especially if on the increase, should be carefully watched; and more especially if attended with any considerable change in the respiratory function. During the induction of the anæsthetic influence, should the pulse become greatly increased in frequency or volume, it should be regarded as a sufficient reason for not pushing, for the time, the dose further; for resting, as it were; and if the change in its character, of whatever kind, should continue to increase, for withdrawing it entirely, temporarily, or diminishing the quantity; the administration to be resumed or not, according to circumstances. The propriety of this precaution—(and the remark equally applies in regard to any remarkable change in the respiration) will appear manifest, if we bear in mind, that the functions of the brain and heart will probably become still further affected, than at the time the alteration is first observed, from the chloroform yet in the air passages, and mingled with the blood in the pulmonic vein, reaching them

in the course of circulation, and producing upon them an additional impression. The mere withdrawal of the chloroform does not prevent a further accumulation of its effects. An increase in the frequency of the pulse is of course of less importance, when it occurs, as is often the case, while the patient is struggling.

It is, however, from the manner of the performance of the respiratory function, more than any other, that we may judge of the commencing toxic action of chloroform; though even in this there are points requiring discrimination, and the statements of writers are somewhat contradictory. It is stated by M. Gruby, as a result of his experiments on animals, "that the number of respirations increases with the degree of insensibility produced;" while by Mr. Thomas Wakely we are told that "as the experiment advanced, the breathing became slow and laborious." I have seen the breathing affected in both of these ways, under what I supposed an equal degree of anæsthesia, and should equally regard a tendency to either in an extreme degree as a premonition of danger.

Any movements indicative of a suffocative sensation, require for the time at least the removal of the sponge. The feeling may arise merely from the inhalation of the vapor in a too concentrated form at first, before the air passages have become accustomed to its contact; in which case it subsides immediately on the admission of fresh air; when the administration may be resumed with the proper precautions. Or we may suppose it to be induced by the commencing toxic action; in which case, it will, in every fatal instance, probably increase; and even where recovery may take place, but slowly disappear. The supervention of any remarkable *quickening* of the respiratory movements (a not unfrequent occurrence, however, just as the patient is passing into a favorable state of anæsthesia) would also render proper, at least the temporary removal of the sponge; though it is probable as regards respiration, that the most common indication of an unfavorable operation of chloroform, is unusual slowness; an increase of the intervals between the respirations. Still, even in this particular we are liable to mistake a very simple affair for one more grave; for nothing is more common under the ordinary methods of administration, than for patients voluntarily to defer the respiratory effort, after having inhaled a portion of vapor not sufficiently diluted, on account of the unpleasant impression, which under these circumstances it often at first makes on the air passages. When the respiratory effort therefore is deferred, it is proper that the sponge should be removed; for an obvious reason, if the poisonous action of the agent is the cause; and if from the volition

of the patient, that after the function is resumed in a proper manner, a less concentrated vapor may be given, till the air passages have become more tolerant of its contact. If the suspension be owing to the latter cause, on the removal of the sponge, respiration will be immediately resumed in a more normal manner ; if not, it may be otherwise.

I have never seen *stertor* induced, by a small quantity of chloroform, nor under circumstances leading me to regard it with apprehension, but rather as an indication of a deep but favorable operation of the agent. Generally it does not supervene till the remedy has been continued some time. Still, should it in any instance come on early, and from the inhalation of but a small quantity, it would be proper to pause and watch the progress of the case momentarily before proceeding farther with the administration ; for if under the circumstances, not indicative of the peculiar and mysterious toxic chloroform action, it is so, of an unusual susceptibility to its ordinary operation, which might of itself be carried to a dangerous extent.

In what light are we to regard the convulsions in the various cases, in which, as reported, they have occurred? As in all, produced by the chloroform, or as the result or termination in some instances of the particular morbid state for which it was given ? Upon the solution of this question depends the value or importance to be attached to the symptom as an indication of the poisonous action of the agent. If the former, (in view of its remarkable controlling influence over so many convulsive and spasmodic affections) what is its modus operandi in producing such an effect ? I have seen it arrest in the most prompt and unequivocal manner, infantile and puerperal convulsions. Should convulsions supervene during its administration in parturition, without being preceded by any indications of its unfavorable operation, to what conclusion should we come ? To suspend an agent which we are not certain may not have produced them ; or, to augment the dose, in hopes of arresting a state which would probably have earlier supervened without it,and which the quantity as yet given has failed to prevent ? Some of the cases, perhaps, may properly belong to one, some to the other category ; but how to discriminate between them, we have not as yet the necessary data. Certainly should convulsions supervene in any case suddenly, under circumstances where such an effect might not from the attendant circumstances have reasonably been expected, the remedy should immediately be withdrawn and the effect watched. This course would appear still more imperative, where the convulsions supervened in connection with any other symptom of its unfavorable action. The propriety of the suspension of the remedy might be questionable under opposite circum-

stances; where for example convulsions should supervene, unattended with any other unfavorable symptom of the action of chloroform, in a parturient female moderately under its influence, who during previous labors may have suffered from similar attacks. Here should it be determined to withdraw it, it should be to observe the effect, with the view in all probability of resuming its use more freely, while resorting to other required remedial agents.

With regard to the method of proceeding on the development of alarming symptoms under the use of Chloroform.

Doctor Snow attaches very little importance to the various resuscitative measures. "When the patient," he says, "is sufficiently etherized to feel nothing of a surgical operation, he is far beyond the reach of stimulation by ammonia, cold affusion, or any thing else; and when he is so far recovered that these things would make an impression, there is not long to wait for his complete recovery." The Doctor, however, has here reference to depth of anæsthesia merely; though even with this view of the case I consider his position erroneous. But we must remember that grave symptoms, requiring counteracting measures, sometimes supervene, in consequence of the use of anæsthetics; not from an extreme degree of anæsthesia merely, in which the various methods of stimulation would be unfelt; but while consciousness and sensibility are still retained. The symptoms then developed at least require attention.

Should *convulsions* supervene, with a full pulse, and especially with apparent determination to the head, of course venesection would be proper; while, if in connection with an opposite state—pallor, a weak pulse, and coolness of the extremities—stimulant applications would be preferable. Hysterical phenomena sometimes occur; and if to such an extent as to require the suspension of the chloroform, they may be treated in the ordinary manner. They are more frequently however produced by the operative measures (as in the extraction of teeth) themselves, for which the chloroform is given, than by this agent; often creating great alarm, and reports of poisoning from chloroform. In either case, generally a full dose of laudanum and assafœtida is all that will be required. Coldness of the extremities and weakness of the pulse, as under other circumstances, indicate the necessity of stimulants; of which laudanum, ammonia and brandy are perhaps the best and most convenient. Sinapisms to the spine, epigastrium and extremities, are also proper. A state closely resembling ordinary syncope sometimes supervenes, and may be treated best as such, by the cold dash, lowering the head, stimulants, etc.

But it is through the respiratory function that some of the most dangerous symptoms of the poisonous operation of chloroform are manifested. So sudden it would seem, sometimes, are its effects in suspending the respiratory movements, that no reliable premonitory indications of the impending mischief are perceptible. Of course, whenever respiration is observed to be greatly affected, the chloroform should be immediately withdrawn, and the necessary measures resorted to, to preserve the integrity of the function. Where the respiratory movements are prolonged, or apparently suspended, immediately fresh pure air should be admitted, and cold water suddenly dashed on the patient's face and chest. These measures not succeeding, the vapor of ammonia, and even the water of ammonia in small quantity, may be applied to the nostrils; or the fauces may be tickled with a feather; or the fingers inserted deeply into the pharynx, with the view, as recommended and successfully practised by M. Essalier in two cases, of inducing an expiratory effort. Further exertions being required, it would be proper to practise artificial respiration; and in that event, an expiratory movement should first be made by pressure upon the diaphragm through the abdominal muscles, and upon the thoracic parietes, for the purpose of expelling as completely as possible the chloroform vapor from the air passages. But however important artificial respiration might be, difficulties may present themselves as to its performance, for want of the necessary means; as, in consequence generally of the unexpectedness of the occurrence, nothing suitable may be at hand. All who have had much experience in attempts to resuscitate still-born children, know how difficult it is to inflate the lungs by blowing into the mouth. Even with all the care that can possibly be taken to close the œsophagus by pressure, the air passes through it, and the stomach, as often perhaps as the lungs, is inflated. Unless compelled to do so through necessity, we should not attempt to perform artificial respiration by merely blowing in the mouth of the patient; as in all probability the attempt will fail, or we may be deceived by the inflation of the stomach; but if a suitable tube can be got, it should be passed into the glottis, and the inflation performed through it. An elastic catheter would answer, or a female catheter, or any similar tube might be curved to the proper shape, and introduced. In the absence of a suitable instrument, the larynx, as has been done in one or two instances, should I think be opened, to facilitate the inflation of the lungs, rather than depend on its performance, directly through the mouth. The measure is one of too much importance to be neglected or inefficiently performed. Doctor Snow, we are told in one place, was never able to restore an animal,

by *blowing into the lungs*, after respiration had ceased under the influence of chloroform ; and elsewhere we are informed, that in his experiments, when animals were rendered insensible by the respiration of air which did not contain more than about 5 per cent of chloroform vapor, the heart continued to pulsate for some little time after respiration had ceased, (a circumstance which has also been observed by Mr. Wakely and others) and that during this period the animals were easily resuscitated by *artificial respiration.* In the experiments of Mr. Plouvicy, with chloroform, in some cases after the animals had entirely ceased to breathe, and were apparently dead, resuscitation was produced, in various periods of from 30 seconds to 4 minutes, by the introduction of "air into the lungs in the same way as is done with persons who have been suffocated by the fumes of charcoal."

It is proper however in the present connection to call to mind two cases mentioned by M. Ricord, in which he "succeeded in reviving his patients after all ordinary means had failed, by placing his mouth upon theirs, and forcibly inflating the lungs." It is to direct insufflation, too, that recovery was attributed by Dr. Jackson, the attending physician, in the case of Mrs. S., recently published in the N. O. Medical and Surgical Journal.

Notwithstanding the importance, justly I believe, attached to artificial respiration, by the generality of writers, Dr. Gibson considers it improper, for the reason, if I understand him, that the effect of the process by inflation, in any manner, is to empty the heart of its blood.

In addition to the means already suggested, stimulating applications to the surface, a stimulant enema, rapid frictions to the more sensitive portions of the surface, electricity, galvanism, &c., may be resorted to. From experiments by M. Ducros, it would appear, that while the effect of positive electricity is decidedly favorable, the negative current has the effect of prolonging the anæsthetic insensibility. In extreme cases, the application of boiling water to the chest has been suggested. From the painful impression produced by the contact of cold water with the stump of an amputated leg, in one case of partial anæsthesia which fell under my observation, I would suggest its application, in cases of recent operation, to the incised surface, as a resuscitative measure, where such might be necessary. Doctor Searls, Mr. Robinson and others, consider the administration by inhalation, of oxygen gas, the most important remedial measure ; and the former thinks that an emetic might prove a useful auxiliary. But in the worst cases, of course, time is not allowed for the administration and operation of an emetic. M. Blanchet also advises the administration of oxygen, or "a mixture of gases richer

in oxygen than atmospheric air;" the recommendation being based upon the dark venous character of the blood, so often observed after death from anæsthetics. But however valuable the remedy otherwise might be, the difficulty of preparing or procuring it in proper time, would render it useless, because unavailable. The grounds too upon which the recommendation is based, would seem to be insufficient, as regards ether at least, for by experiments of Dr. Pring of Weston Super-Mere, it has been ascertained that the transmission of oxygen through the blood rendered dark by ether, does not restore its arterial color. The darkness, it would therefore seem, does not depend merely upon a deficiency of oxygen. Doctor Gall and Doctor Snow have arrived at a similar conclusion in regard to the inutility of oxygen. Unquestionably, however, it might be beneficial in mere asphyxia, such as might result from the privation of atmospheric air; whether produced by attempts at etherization with an improper apparatus, or otherwise.

As to the conditions, constitutional, or connected with organic changes, contra-indicating the use of anæsthetics.

In a highly plethoric state of the system, more especially if co-existing with fever, free sanguine depletion, would seem a proper preliminary to the administration of chloroform. To what extent should local inflammation of the various tissues and organs be regarded as a contra-indication to its use? In inflammation of the brain or membranes, although it may eventually be shown that chloroform is not injurious, in the present state of our knowledge of its action and influence, none, I presume, would be willing to hazard its use. The same may be said of acute inflammation of the bronchial mucous membrane, and of the pulmonary parenchyma, lest the state might be aggravated by its local action. I cannot understand how inflammation in any of the other organs should constitute a valid objection to its proper use. On the contrary, it would seem more probable that in many cases it might prove serviceable. Where a known tendency to apoplexy exists, it might not be deemed prudent to resort to it, though that it possesses the property of producing actual sanguine determination to the brain, has not as yet I think been satisfactorly established. With females liable or predisposed to hysterical attacks, in any community in which much prejudice exists against the use of chloroform, it would perhaps be scarcely proper to resort to it, unless under urgent circumstances; not that we need apprehend *really* dangerous effects from it in such more than in others; but should any of the protean shades of the disease be developed (and such are more likely to show themselves under an inadequate administration of the remedy for some painful operation; and more from this,

or rather from the dread of it than from the chloroform) they would unquestionably be attributed to the poisonous action of this agent, and undue importance would be attached to them, with the probable effect of deterring others from its use. Such phenomena, though not in reality, are in appearance to such as do not understand their character, sufficiently alarming.

A prevalent idea exists, that chloroform is improper with persons supposed to have "*weak lungs*," and in various pulmonary affections. Some exceptions have already been spoken of; but otherwise I scarcely think the particular circumstances referred to have been defined; nor have we any thing like a distinct comprehension of what is meant by the term "weak lungs." In the spare, thin and delicate, supposed by some to have *weak lungs*, it is every day freely used without injury. In the fleshy, plethoric and "short winded" from repletion, supposed by themselves to have *weak lungs*, we also see it daily used with the same results. If the term is used to designate a predisposition to phthisis, it has not been shown that the use of chloroform is calculated to hasten the development of the malady, nor do I understand how it would probably be injurious to such, unless we may conceive it calculated to lead to local inflammatory action, through which the tubercular deposit might be excited. If on the other hand it be intended to designate a chronic bronchitis, or the frequent recurrence of slight catarrhal affections, to which certain persons are liable, the objection is equally invalid. In chronic bronchitis especially we might expect rather a favorable than an unfavorable effect from chloroform. Doctor Protheroe Smith has used it in cases in which bronchitis was present—"and one lately in which at the time there was complete aphonia." Doctor Channing has seen the sulphuric ether used in "cases of asthma and phthisis, in which the disease had almost reached its termination; in which distress from dispnœa was extreme, and in which it seemed impossible to sustain life without almost constant etherization." In some instances nearly as much as a quart in twenty-four hours, was beneficially used. Indeed, as a palliative in asthma, the ether vapor was administered by inhalation long before the discovery of its anæsthetic operation; and by Doctor Richard Pierson of Birmingham, as early as 1794, in "phthisical cases," hooping cough, &c. In several asthmatics I have known it used with benefit for the relief of the paroxysm, and in one instance with apparent advantage, as regarded an almost habitual bronchitis, under which the individual also labored. As early as December, 1847, Mr. Greenhalgh reports in the London Lancet a case of spasmodic asthma, in which the inhalation of chloroform was attended with good effects;

and Mr. Chandler another in the Medical Gazette of the same date. Indeed under urgent indications otherwise for its use, the actual existence of considerable pulmonary disease should not constitute an insuperable objection to it. To be sure when disease, or the results of disease, (as in pleuritis with large effusion or extensive tubercular deposit) existed to such an extent as to interfere in a marked manner with the respiratory function, in consequence of physical disqualification of a considerable portion of the pulmonary structure for its use, it should, I would say, be cautiously and hesitatingly given.

It is a common impression, and it has in *general* terms been said, that the use of chloroform is inadmissible in cardiac affections. But certainly it is too much to say that it is improper in all cardiac affections, and it could only be by a proper understanding of the reasons why it might be improper in affections of the heart, that we can ever come to discriminate the cases in which it may, from those in which it may not, be safely used. The diseases of this organ, omitting the acute, and referring only to the chronic even, are numerous, and of the most opposite characters. Thus, for example, we may have hypertrophy or atrophy, dilatation of the cavities or contraction, softening of the tissue, or induration, ossific or adipose deposition, &c.; with various affections of the different valves, calculated to produce, in some instances obstruction to, in others to admit regurgitation of, the circulatory current. It would be useless to designate each, and impossible to enumerate their various possible combinations. Can we on rational principles separate those forms of disease of the heart in which chloroform would probably be dangerous, from those in which it would not. We may premise, that organic cardiac affections cannot properly be viewed as leading to an unfavorable idiosyncracy in regard to the operation of chloroform, the seat of which we must trace to the nervous system; though when such idiosyncracy exists, it may be that there are certain of them, which might render recovery from the poisonous operation of chloroform less probable. It will, I think, be found in accordance with reported facts, that the toxic operation of chloroform is productive of diminished power,—a tendency to cessation of the heart's action, prior to its actual occurrence. Now it will be evident, that any condition of this organ, by which its propulsive power and action are either directly or indirectly diminished, would render recovery from the sedation of chloroform more difficult, and constitute itself a state favorable to utter cessation of action, where otherwise perhaps mere diminution of action, not beyond the recoverable point, would have occurred. Syncope, too, is an occasional effect of chloroform; and we may readily understand

that such an accident might not be recovered from in a patient laboring under any organic disease of the heart calculated to produce habitual feebleness of action, such as dilatation with attenuation, fatty degeneration or deposition in its tissues, &c., where, in a healthy condition of the organ, it might be otherwise. By referring to the post mortem appearances recorded, it will be observed, that in a very considerable proportion of the fatal cases, evidences of previously existing disease of the heart, of the characters just mentioned, were found.

Can simple hypertrophy of the heart, not connected with diminution of any of the cavities, be regarded as peculiarly unfavorable to the action of chloroform? Scarcely, I think, unless the agent should be administered in such a manner that the stimulant operation alone would be felt. (In an asthmatic with hypertrophy of the heart I have seen it used, and with beneficial effects only.) Of hypertrophy with dilatation, the same may be said.

What can we say in regard to the various valvular affections? The effect would probably be the same in obstructive or regurgitative affections of the tricuspid valve, or the semilunar valves of the pulmonary artery. The difficulty of transmission of a sufficient quantity of blood through the pulmonary circulation in either case would be increased; not by obstruction offered in the pulmonary tissue, but for want of a proper supply sent forth from the heart. We should then by diminishing the heart's action, have still further accumulation in the right auricle and vena cava, with diminished supply to the left cavities, and as a consequence a syncopal tendency; for if the left cavities do not receive, they cannot transmit to the brain, ærated blood in sufficient quantity for the integrity of the organic functions, as dependent on innervation; and as a secondary result of this, again, we would have still further diminished action of the heart, and so on.

Certain experiments made upon frogs in a state of chloroformization, show diminished activity, and finally cessation of motion of the blood globules in the capillary circulation; which however was restored on the cessation of the action of the chloroform. Was this the result merely of diminished action of the heart, or of some change produced in the blood itself affecting its mobility?

Disease of a similar character, (such I mean as would be calculated to produce obstruction to the circulatory current) affecting the bicuspid, or the aortic semilunar valves, would in a still more evident manner operate unfavorably in case of the poisonous influence of chloroform, producing weakness or a tendency to cessation of the heart's motions. By such organic defects, the current sent forth to the different parts of

the system, reduced by the sedative influence of the chloroform, would be still further diminished; with the effect, as regards the supply to the brain in particular, and the consequences therefrom resulting, already mentioned,—while the venous accumulation occurring in the pulmonary circulation rather than the systemic, producing congestion of the pulmonary veins and capillaries, would probably render recovery more difficult. Under such circumstances the artificial respiratory movements would seem indeed highly important for the oxidation of the accumulating fluid, that on reaching the heart, a more healthful stimulus might be communicated by it, and its own further transmission favored.

The result too would be much the same in hydropericardium, existing in such a degree as to impede the diastole of the heart, and therefore prevent the ready reception in its cavities, and consequently transmission from them, of a proper supply of blood; the same of diminished capacity of the cavity of the left ventricle, whether from concentric hypertrophy or any other cause.

Notwithstanding the fact, that the belief of the impropriety of the use of chloroform, in at least some affections of the heart, is strongly sustained by post mortem appearances, we may mention, that Doctor Snow of London, who has had much experience in the use of anæsthetic agents, and who, it would seem, has the confidence of his professional brethren to such a degree that he is often called on to administer them by the most distinguished surgeons and obstetricians of that metropolis—speaking prior however to the general use of chloroform, and more especially in relation to sulphuric ether, remarks—"I am not aware that *any* state of the patient with respect to age, constitution or disease, positively contra-indicates the use of ether during surgical operations. The patients to whom I have given it have been of all ages, from early childhood to nearly eighty years; six of them being upwards of seventy. They have been in the most different states of general health. Two or three of them had tubercles in the lungs; one had extensive disease of the heart; two or three had been subject to attacks of congestion of the head; and yet there have been no ill consequences in any case."

Chloroform in Parturition.

The first and most important, if we consider its general applicability, though not as regards exceptional cases, is the relief of pain which it produces. It is for this purpose and with this view alone almost, I believe, that it has been administered in parturition. There are few cases in which its aid in this respect is not desirable, because there

are few in which the suffering experienced is not of such severity as to render its removal a desideratum. A few rare cases occur, however, in which the suffering is tolerable, and may be submitted to with but little complaint; and in a very few, the parturient throes are scarcely attended with a sensation of pain. In all such, anæsthetic agents, with a view to this particular effect, would be useless.

It would however be unnecessary to dwell on this so generally admitted and manifest effect of the operation of chloroform. But its use has other advantages, to which it may not be amiss briefly to refer, some at least of which have received but little attention, having been lost to observation in the more striking characteristic of its influence.

The first of these to which we shall refer is the absolute saving, if I may so express myself, of constitutional wear and tear. Patients when under its influence not only avoid present suffering; they pass through labor at a less expense of constitutional disturbance; suffer less during the puerperal state, and recover from the effects of parturition more readily. The nervous shock is avoided. Of this alone the effects are sometimes grave; and when these are added to other unfavorable circumstances connected with the case, death may be the result, where otherwise it would not have occurred. Indeed it would seem probable that in this way alone, I mean by the avoidance of the increased tendency to fatality, given the parturient, but more especially the puerperal state by the nervous shock, some lives are saved by chloroform; more, would it not seem probable, than would equal the reported mortality; far, far more at least than would balance its probable deleterious effects in parturition; for as yet but few cases have been reported where it has been used in this state, of an unfavorable operation, and none of death.

It is true that entire unanimity of opinion does not exist in regard to the powers of anæsthesia to prevent "shock," and depression, during operations. Professor Syme, in commenting on a case in which he had amputated the thigh of a young man, without the use of ether, while in a state of extreme depression of the system, and who certainly escaped death very narrowly, observes—"The patient seems now in a fair way of recovery, which he most certainly would not have been, if the vital powers had been in the slightest degree lowered or impeded in their operation by the use of ether." This indeed may be all very true; but instead of lowering the vital powers, the judicious use of ether would more probably have raised them; would have alleviated the already existing shock, and prevented the further shock, produced by the operation—consequent on which "relaxation of the sphincters took

place," and other indications of impending dissolution, rendering the use of artificial respiration, &c., necessary.*.

As a set-off to this case, and the early expressed opinion of Professor Syme, we may allude to a case of prostration from uterine hæmorrhage, during labor, related by Dr. Protheroe Smith; the evidence which it bears, not being merely negative, but having something of a more positive character.

"The extremities and face were damp and chilly, the breath cool; no radial pulse could be felt except at times an intermittent fluttering. ********Constant restlessness, frequent sighing, &c."**** "At this time the patient became suddenly faint, and the pulse at the wrist imperceptible. *As now the usual stimulants failed to produce any effect*, I urged the instant exhibition of ether. After a few inhalations, *some color appeared in the lips, the pulse became permanently established*, and the patient rallied in a most surprising manner." She recovered. To the well informed physician, the gravity of the case is sufficiently evident, from the symptoms mentioned.

There are some who believe, that to some extent shock is sustained, during operations performed in the anæsthetic state; but that it is only through the medium of the trisplanchnic nerve and spinal marrow, and not at all through the other parts of the nervous system.

According to statistics collected by Professor Simpson, while in the operation of amputation of the arm, leg and thigh, in certain hospitals, 29 in every hundred of the patients died who were not etherized; but 23 in 100 of those operated on in a state of anæsthesia died; the difference in the mortality being chiefly owing, no doubt, to the avoidance in the latter case of the nervous shock. At a meeting of the French Academy of Medicine, M. Roux stated that while during the two years preceding the introduction of ether into practice, the mortality of his operations had been 1.3; since the adoption of inhalation the mortality had been reduced to 1.4.

So comfortable in most cases is the condition of patients after parturition, who have used chloroform during the process—so well do they feel, comparatively, that it is with difficulty they can be restrained within the bounds of prudence, and made to pursue the course as regards position, diet, &c., which their situation demands. In several instances I have seen mischief result from this circumstance; and this is the only

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* Professor Syme, I find, subsequently renounces the opinion above given, stating, "that he believed anæsthesia not only saved patients operated on from pain, but also from shock, and all its effects."

objection, if such it can be considered, with which my reading and experience have furnished me to the general use of the "remedy of pain," in parturition.

Throwing out of the question all considerations even in reference merely to pain, it would seem probable, that the aggregate amount of benefit, more than balances the aggregate amount of mischief. It would unquestionably be but a poor consolation to the surviving friends of one who may have been destroyed by the poisonous operation of chloroform, to be told, that other persons are now living who would have died without its use, though one which the philanthropist may not despise.

A young man, about 19 years old, was much reduced by an exceedingly painful affection of the thigh, implicating the knee joint, which, as was ultimately shown, resulted from caries of the os femoris, and perforation of the popliteal artery, by a projecting point of bone. From a mere puncture of the swelling with an exploring needle, in consequence of the great debility and nervous impressibility, the nervous shock was so extreme, as evinced by tremor, wild and haggard expression of countenance, coldness of the extremities, cold perspiration, greatly increased frequency, with weakness of the pulse, &c., as to create some apprehension of a fatal termination; yet in a week after, and when still further debilitated by the progress of the disease, under the influence of chloroform, the patient bore well the amputation of his thigh near the hip joint; the depression of the system, though more protracted in consequence of the necessary loss of blood attending the operation, not being greater than from the puncture with the needle; and the subsequent nervous disturbance in reality less. It is scarcely probable—(and this was the opinion entertained by the gentlemen who assisted me, and who had witnessed the effects of the exploration, Doctors Smith and Hillhouse) that this patient could have survived the operation without the chloroform. Indeed his family was forewarned, that the result would probably be fatal, though we hoped that any depression which would otherwise result from the nervous shock would be avoided, as fortunately it was.

In the London Lancet for 1847, a case is related by Mr. J. Adams, of a young man who had both legs crushed by the passage over them of thirty railroad carriages. On admission into the hospital an hour after, he was, of course, "much depressed, pulse weak, skin cold, face pale. He was placed under the influence of ether vapor in one minute and a half, and the limbs were both amputated immediately. The influence of the ether was most marked. *His pulse rose under it*, and he appeared in a tranquil sleep." The patient recovered. It is rare

indeed that an operation of such magnitude has been successfully performed, under (omitting the use of ether) similar circumstances. So generally is the advantage of the avoidance of the nervous shock, from the influence of anæsthetics recognized and acted upon by those experienced in their use, that distinguished surgeons recommend and perform operations, which without them they would be unwilling to undertake.

An effect of chloroform in parturition is, to produce relaxation of the soft parts of the mother, and a more free secretion, where this may have been deficient, of the lubricating mucus. It is not mere muscular relaxation to which allusion is made, but that softened and yielding state of all the tissues of the soft parts offering resistance in parturition, so favorable to the easy termination of the process. Nervous irritation is no doubt a principal cause of the opposite state, rigidity; and it is through the immediate removal of this, produced by the chloroform, it is probable, that the favorable alteration is brought about. But whatever the explanation, none who has had any experience with the agent, will be disposed to question the fact. Though rigid and unyielding previously, almost invariably, as soon as the patient is brought fully under the influence of chloroform, the os uteri, the vagina and the perinæum, become well lubricated, softened and more yielding, so as to offer less resistance to the advance of the child.

One effect of this condition is, that parturition is completed with less uterine effort—that is, less exertion of force on the part of the uterus is required to propel the child through the genital passage. This of itself would render the shock less; but in the circumstance is found a very beautiful and satisfactory explanation of the fact, so generally believed by those who have had experience in the matter, that the puerperal state of the female who has been delivered under the influence of chloroform, is less liable to the usual disagreeable sequels of parturition, than of those who have not. Less uterine exertion has been required; less *pressure*, and consequently less irritation; less tendency to inflammation, gangrene, &c. The great advantage in parturition, of this diminished resistance resulting from the anæsthetic state, is not sufficiently appreciated. Long ago Doctor Burns wrote: "As the os uteri relaxes, or opens, so does the expulsive powers augment."***"Labor therefore is more certainly shortened by promoting relaxation, and diminishing resistance, than by means intended to stimulate to action."

"A fundamental principle then in midwifery is, that relaxation or diminution of resistance is essential to an easy delivery; and could we discover any agent capable of effecting this rapidly and safely, we

should have no tedious labor, except from the state of the pelvis, or position of the child." It is scarcely too much to say, that the desired agent has been discovered.

Without at all considering the question of *pain*, whatever the decision in regard to the advantages and disadvantages of chloroform in reference to *life* on the part of the mothers, it will scarcely be doubted by any, aware of the advantages as regards the child, of a relaxed state of the genital passage—that, through its operation in producing this condition, chloroform exerts a decidedly favorable effect in the saving of infant life. How frequently are children still-born, in consequence of the violent and long continued pressure exerted by the uterus upon them; rendered necessary by the resistance offered to their progress by a rigid and unyielding state of the soft parts; and which in a relaxed condition of these would be born alive. This very condition, as we have seen, the chloroform induces. Should it yet prove fatal to some mothers in parturition, it is not unreasonable to say, not only that it has preserved others, but a number of children.

As an agent for the prevention or cure of puerperal convulsions, chloroform may unquestionably exert a favorable influence as regards the fatality of the puerperal state. I have seen very severe puerperal convulsions cease almost instantaneously, on the patient's being brought moderately under the influence of chloroform. As a remedy for such affections,—not of course forgetting such other appliances as the circumstances of the case might seem to indicate,—we have few agents equal to it. Its use has the sanction, too, of high authorities, without number, though the propriety of the practice has been questioned, and we have even been told, that puerperal convulsions may be produced by it. Doctor Channing mentions 17 cases of puerperal convulsions; but observes—"Etherization has nothing to do indeed with these cases; in their production at least, since it was employed as a remedy."**** "Of the 17 cases, ten were treated with etherization, and *six recovered.* In the remaining seven, etherization was *not used* at all. *Of these six died.*"

Where a predisposition to puerperal convulsions may be supposed to exist, while not neglecting a preparatory purgation and venesection, in case of plethora, I should consider the chloroform almost imperatively demanded. The soft parts are thus relaxed, so that but little resistance is offered, and the labor progresses, while the nervous sensibility being obtunded, the reflex actions, which might otherwise result in convulsions, fail to take place. If your experience up to the present time with it is not fallacious, if but for the control alone which the remedy

gives us over this most appalling and frightful malady—in justice it could not be regarded otherwise than as an inestimable boon to the parturient female.

Another advantage. "A number of patients," remarks Professor Simpson, "have spontaneously told me, that the prospect of being enabled to pass through the ordeal of parturition, with the assistance of anæsthetic agents, and without their usual painful agonies, has destroyed in a great measure that anxiety and dread of anticipation, which in former pregnancies had for weeks and months previously, silently annoyed and haunted them. If we can thus add to the happiness of our patients, by imparting to them feelings of safety and immunity under one of the severest trials to which nature exposes them, we surely follow out in its truest sense, that which Doctor Meigs correctly describes the office of a physician to be, 'a great mission of benevolence and utility.'"

I will next speak of the effects, more particularly, of Chloroform on the uterine contractions, and other active agencies in parturition.

On the announcement of the pain destroying power of the different agents under consideration, it was a very common supposition—and one urged by some as an objection to their use in parturition—that if they annulled the pains of parturition, they must of necessity and in an equal degree, diminish the force of the uterine contractions; that as the pain was diminished, the force of the contractions must be diminished—the former being annulled, the latter must cease; as if the contractions were an effect of the pains, rather than the pains a consequence chiefly of the contractions.

This view was opposed, and correctly; but there has been, I am much inclined to think, a disposition manifested by some of the more enthusiastic advocates of anæsthetics to run into an opposite extreme; to admit to a less extent than is really the case, the tendency of these agents to diminish the force and frequency of the uterine contractions. Should such ultimately, from further observation, be ascertained to be the case, still I am inclined to believe it will not thence be determined that they are less valuable, than their most ardent supporters, believing otherwise, have supposed.

Though the general tenor of the remarks of Professor Simpson would lead to the inference that the power of the anæsthetic influence to diminish the uterine contractions is very inconsiderable indeed; yet he does admit that he had in "two or three instances seen a very deep state of etherization, modify apparently the full strength of the uterine contractions; but they returned immediately in full force, when the patient was

allowed to fall back into a state of slighter etherization." From remarks, both incidental and special of other authorities, this effect is susceptible of proof; and indeed several of the authorities quoted by Professor Simpson might be adduced in support of the affirmative.

From the actual observation of several cases in which the duration of the contractions, and of the intervals, both prior to and subsequent to the induction of anæthesia, was carefully noted by the watch, I have satisfied myself of the accuracy of the statement made by Doctor Hartman, (as quoted by Professor Simpson) after careful observation in the Westminster Hospital, "that during the *full* effect of the chloroform, the uterine contractions become less frequent and less powerful;" though I cannot confirm his statement, that, under its action in a less degree—in such a degree that the frequency of the pains was increased, their duration became diminished; for, wherever under my observation, the pains have appeared to be rendered more frequent by the operation of chloroform, it has been mainly at the expense of the intervals; that is, the intervals, and not the periods of contraction, have been abbreviated.

Judging from my own observation alone, (and the opinion is not at variance with the recorded experience of others*) I believe we are warranted in considering the effects of anæsthetics, upon the uterine contractions, as susceptible of division into three degrees or stages, according to the quantity given, and other circumstances—or rather that, according to the extent to which the system may be brought under their influence—three different and to some extent opposite effects are manifested upon the uterine contractions.

The first degree is, where the system is merely brought under their excitant action, as almost invariably happens at the commencement of their administration,—and may be protracted to any duration by administering but small quantities. This stage or degree ceases, when the agent used is carried to such an extent, as in any perceptible degree to diminish pain. It is generally marked by an increase in the force and frequency of the pulse, and diminution of such feelings of depression and apprehension, as may have been experienced.

The effect of this degree of the influence of anæsthetics is in general to increase the force and frequency of the uterine contractions. So generally has this effect been observable in my practice, that I am dis-

* Thus—to quote again from the work of Professor Simpson—"too deep a state of anæsthesia, *in general* interferes with the force and frequency of the uterine contractions, while a lesser degree of the anæsthetic state leaves the contractions unaffected; and a still smaller dose often excites and increases them."

posed to attribute the failure in the few exceptional cases, to the influence of imagination; for where the contractions have not been increased, they have mostly been at once diminished, before it was at all probable that such a result could have been produced by the anæsthetic used. Every practical obstetrician is aware how liable the uterine contractions are to suspension, at times, from causes calculated to produce any considerable impression on the mind.

In the second degree or stage of the operation of anæsthetics, as a general rule, no perceptible effect is produced upon the force and frequency of the uterine contractions, and all pain, at least invariably subsequent recollection of it, is annulled or prevented. Occasionally the uterine contractions, however, are attended with slight contractions of the features, perhaps slight moans, (indicating the continuance in a slight degree of the perception of pain.) It is true that in passing from the first to the second stage—for the lines of demarcation are altogether arbitrary—the contractions, which at the commencement had been quickened, may continue somewhat more frequent than before the administration, while under what may still be regarded as the second degree complete, or the stage of transition from the second to the third, a slight diminution of their force and frequency may occur. This stage is frequently attended with moderate stertor.

In the third degree, which is generally marked by deeply stertorous respiration, and in which there is not only an entire absence of all audible complaint, or subsequent recollection of pain, but also generally of the slightest manifestation of such feeling in the features, the force and frequency of the uterine contractions are diminished. *This I believe is invariable.* In *every case*, the anæsthetic influence may be carried to such an extent, as to diminish uterine action. It is true, that for the purpose of annulling the pains of parturition, it is seldom necessary to administer the remedy to this extent, though in some cases it may be. For instance, where the nervous sensibility is acute, the uterine contractions more energetic than usual, and the resistance to the advance of the child in consequence of rigidity, with an irritable state of the soft parts, considerable, we will seldom find all manifestations of pain to cease, till the anæsthetic is administered in such quantity as to diminish the frequency and force of the uterine contractions. Of this we judge by the changes upon the os uteri, the membranes, or the presenting part; or by feeling the changes in the condition of the uterus itself through the abdominal muscles.

At a first glance, it may appear somewhat paradoxical, that an agent which may suspend or diminish uterine contractions, should also in-

crease them; but on a moment's reflection it will seem less strange. Certain remedies produce the most opposite effects upon the system, as all are aware, according to the dose in which they are administered. Opium, according to the stage of its operation, or the dose in which it is administered, produces effects on the uterine contractions very similar to chloroform. In small doses, repeated at intervals, its general effect is to increase the force of the uterine contractions, by its excitant action. Even in a full and decided dose, a stage—but brief to be sure—frequently, almost invariably, occurs, in which the contractions are increased in frequency and power, by its excitant operation, preceding the stage in which they are diminished by its secondary sedative influence. I have repeatedly observed these two effects of opium, in cases in which it has been prescribed to arrest a progressing or threatened abortion; as also where it has been given preparatory to some obstetrical operation. In one case of shoulder presentation, in which, several years ago, I prescribed a full dose as a preparatory step to the operation of version, the pains were in a very short time greatly increased in force and frequency, and the child, though large, promptly delivered, by spontaneous expulsion.

The three degrees mentioned of the operation of anæsthetics it is evident, cannot all be made with benefit available, under the same circumstances. Where the third is indicated, the first would of course be contraindicated; where the first is desirable, the third would of necessity be detrimental; while the second, which indeed is the fact in a large majority of instances, might be beneficial—where neither the first nor the third would be of advantage, and indeed in all probability prejudicial, as regards the safe and easy progress of parturition. It is our remaining duty, briefly to indicate some of the circumstances, under which, in parturition, each separately, of the three degrees of the influence of anæsthetic agents may be desirable.

In the first degree, no *anœsthesia* is produced, consequently to this extent, merely, the influence is never desirable on account of pain. In cases, however, of tedious labor, from inefficiency of the uterine contractions—inertia—the anæsthetic agents may be used to this extent in conjunction with other remedies, if indicated, with the view of arousing the uterine energies. Of course, the circumstances of the case must determine us in the selection of adjuvants to effect the desired object. Under different conditions, however, venesection, ergot, &c. &c., will have to be used. I have had no experience whatever with ergotized anæsthetics. The uterine energies being once sufficiently aroused, the remedy may be administered to a sufficient extent to induce anæsthesia,

if this should be desirable; that is to the second degree; carefully, however, guarding against carrying it even to the incipiency of the third, lest the contractions should be diminished or suspended.

At times during the progress of labor, the patient being in the second or third degree under the anæsthetic—as in cases where anæsthetics are not used—circumstances may arise, requiring, for the safety of the mother or child, the speedy termination of labor; and by the natural powers, rather than by manual or instrumental assistance. Under such circumstances, it would be proper immediately to withdraw the remedy, till its effects are felt merely in the first degree; not only that the full effect of the involuntary parturient efforts, as increased by the stimulant action of the agent used—may be brought to bear, but also, such aid as is rendered in the process, by the voluntary efforts of the mother, and which are never available, when the patient is deeply anæsthetic. Under the anæsthetic influence, as others have observed—"the muscles of voluntary motion become powerless."

There are two generally recognized principal efficient agencies in the expulsion of the child, to-wit; first, the involuntary uterine contractions, which is the principal; and second, the voluntary efforts exerted by the mother, through the diaphragm and abdominal muscles.* These are but seldom fully exerted in the second degree, and not at all in the third; and yet circumstances occasionally arise in parturition, in which, for the safety of the mother or child, a speedy termination of the process is necessary; and for the attainment of which, all the available natural forces are imperatively required; and which may be exerted more successfully after the use of Chloroform, as already explained, from the relaxation which it produces.

The practical influences deducible from a knowledge of the two efficient agencies of parturition mentioned, have not, I am inclined to think, been sufficiently attended to, by writers on anæsthetics. As by early opponents of anæsthetics, their property, or supposed property of diminishing or suspending uterine contractions, was urged as a strong objection to their use, it has been too much an object with the partizans of anæsthesia *to make it appear*, that no such property was possessed by them—or in a degree altogether insignificant. "As yet," says Professor Simpson, "I have seen no instance in which the pains were sensibly diminished in intensity or frequency, after the Ether had fairly begun to act." It is true, that its power to produce such an effect, is elsewhere more than once casually admitted by him—and we find him on

* The action of these muscles, to be sure, toward the termination of the second stage of labor, becomes to some extent involuntary.

one occasion, placing a patient *deeply* under the anæsthetic influence, in a case requiring the operation of version, "in order, if possible, entirely to arrest the uterine contractions."

The second degree of the influence of anæsthetic agents—(the first stage however of genuine anæsthesia,) is the one applicable to the greater number of cases; but for one object mainly, the prevention of suffering. It is the more urgently required, in proportion as the suffering is severe. In few cases perhaps, is it necessary to carry it beyond this, where the presentation and position are favorable, the uterine contractions not unusually energetic, and the soft parts in a suitably relaxed condition. In a majority of cases, about half a drachm of Chloroform, though a much larger quantity of Ether, dropped on the sponge at proper intervals, will suffice to induce and maintain it.

As already observed, in what may be regarded as an advanced stage of the second degree of our arbitrary division, or the transition from this to the third, the uterine contractions may be somewhat diminished, both in force and frequency; but labor does not, on that account, as a general rule, proceed less rapidly or favorably; the diminished force being more than compensated by the diminished resistance offered to the transit of the child through the genital passage, in consequence of the relaxation of the soft parts, which, as already explained, results from the anæsthetic state.

The third stage of the operation of anæsthetic agents, which is brought about by the free and frequently repeated saturation of the sponge applied, with the particular article used; and the almost uninterrupted inhalation therefrom—though less frequently required than the second is demanded under a greater variety of circumstances.—These are, chiefly,

First.—Where the soft parts are morbidly rigid—it may be given with the view of inducing a proper state of relaxation. Though the uterine contractions will be here suspended, or for the time diminished in force; after the necessary relaxation has been induced, on the partial withdrawal of the remedy, so that its influence shall be felt in the second degree merely, they will be renewed, and the labor proceed under more favorable circumstances.

Second.—At times, in connection with more or less regidity of the soft parts; the uterine contractions, are more frequent and energetic than usual; morbidly so. Here the sufferings of the patient are not only extreme, but there is danger both of laceration of the soft parts

of the mother, from the violence with which the child is propelled against them in their unyielding state, and of the death of the child, from the forcible compression it sustains between the pelvis and unyielding perinæum on one part, and the violently contracting uterus on the other. Here, by a full anæsthetic influence, the force of the uterine contractions is for the time diminished—undue pressure upon the child, as upon the mothers soft parts ceases, relaxation immediately or ultimately takes place, and on the partial withdrawal of the anæsthetic, which may be so graduated as to insure the exertion of the desired degree of uterine force, and no more—labor will probably be completed with safety to both mother and child. A case now occurs to me, in which the two circumstances already mentioned as separately indicating the induction of the third degree of the anæsthetic influence, were united; and which strikingly exemplifies the benefits derivable from it. It was that of a negro woman—pregnant with her *first* child, and advanced in years considerably beyond the usual period of a first pregnancy—in labor. Here were two circumstances calculated to produce a painful and tedious labor. Besides, the soft parts were exceedingly rigid and unyielding; so that though the uterine contractions were unusually energetic, and followed each other in rapid succession, the labor in several hours succeeding the rupture of the membranes was not perceptibly advanced. As was afterwards ascertained, the child, (a boy with well ossified cranium) was far above the average size; weighing 14 lbs. Here then were also united several circumstances calculated to endanger the soft parts of the mother, as well as the life of the child.

The patient was placed deeply under the anæsthetic influence, as indicated by deep stertor, &c.; and kept in that condition for about three hours. During this time, the uterine contractions were diminished greatly, both in force and frequency, so that, though the soft parts gradually became relaxed, the child's head did not advance, or but slightly. Several times during the period mentioned, by way of experiment, to ascertain whether the Chloroform really did control the contractions, it was partially withdrawn, and on each occasion an immediate increase in their energy was observable. At the end of the time stated, the Chloroform was, permanently, partially withdrawn; the contractions returned with great power, and the soft parts being now in the most favorable condition, labor rapidly advanced, and was terminated favorably to both mother and child. The second degree of the anæsthetic influence was insufficient here, to produce the desired effect—more important than the mere annihilation of pain—and without the third, it is

scarcely probable, that labor would have been as speedily terminated; or with safety to both mother and child.

Third.—In certain obstretic operations (and I would particularly refer to that of version) as all are aware, wherever the uterine contractions are energetic, it is highly important, that for the time being relaxation of the organ should be induced. For this purpose, opium, bloodletting, &c.—our ordinary remedies, are inefficient, uncertain and slow in their operation; while with very great certainty, the desired condition may be at once induced by *deep* anæsthesia. Of course, deep anæsthesia would be under such circumstances highly desirable too, to prevent the pain, necessarily almost inflicted in the operation. The intended operation being completed, and relaxation of the uterus no longer necessary, the influence of the anæsthetic should be regulated to suit the altered condition of the case. Notwithstanding the force of his prepossessions against Etherization, Doctor Meigs admits, that if called upon to perform the operation of version under certain circumstances, he would probably avail himself of its assistance.

Fourth.—In retention of the placenta from hour glass contraction, or premature rigid contraction of the os uteri, though the second degree of the action of anæsthetics would probably be sufficient to prevent pain in any required operation, the third degree might be desirable for its relaxant influence. I have not, however, had occasion to use it in any such case; though to the second degree I have had it administered, in a case in which the introduction of the hand became necessary for the delivery of an adherent placenta.

Fifth.—In puerperal convulsions—with a view to its direct control, but especially where they have occurred in connection with such a rigid condition of the soft parts as would preclude immediate delivery, should this be desirable by version. The third degree of the operation of anæsthetics would be of service, by inducing speedy relaxtion, so that delivery would become possible by the operation named, or proceed more favorably through the uterine action, on the partial withdrawal subsequently of the remedy.

Sixth.—Certain accidents may possibly occur during the progress of parturition calculated to render it desirable, that the force of the uterine contractions should be diminished; under which circumstances anæsthesia, to the extent indicated, might with advantage be promptly brought to bear. I will quote in part a case in point, from the paper of Professor James Hamilton of Edinburg, on laborious labor. The case as

related by Doctor Hamilton, is intended to show the influence of fear, and other affections of the mind, in lessening or suspending uterine contractions.

* * * * "When the infant was so far advanced, as to begin to press on the perinæum, the author directed the nurse to place the patient in the proper position, as he meant after the next pain to set down to give assistance. Although he left the room for this purpose, he continued outside of the bed-room door, and on hearing a very violent bearing down pain, he ran forward to take charge. He found the external parts enormously distended on the right side, and he at once discovered that an arterial branch within the right labium had burst, and that there was a great effusion of blood. It occurred to him, that if the uterine contractions continued, the pressure of the infant upon the swollen parts must occasion a laceration, and he feared that it might be impossible to command the bleeding vessel; for he knew that, in similar cases, the hemorrhage is arrested by pressure consequent on the confinement and coagulation of the effused fluid. Thus reasoning, he told the patient that she had burst a blood-vessel, and that if she attempted to bear down, he could not answer for the consequences. The alarm thus excited had the desired effect, for the uterine contractions from that moment ceased."

Now, although the desired effect was in this instance produced by the means resorted to by Doctor Hamilton, and although we know that such an effect is not an unfrequent consequence of strong mental impressions—still we are also well assured, that it is far from being an invariable, or even a general one, and that often in relying upon such influence in the time of danger, sad disappointment might be the result.—Under such circumstances, the full anæsthetic influence of Chloroform, promptly produced, would, to the necessary extent, and with almost absolute certainty, arrest or diminish the force of the uterine contractions.

Other circumstances and conditions will no doubt suggest themselves to the obstetrician, in which the property of anæsthetics, when very freely administered to diminish or suspend the uterine contractions, may be made available in practice. Examples enough have I trust been adduced to show, that the property in question, though urged as an objection by the opponents of the practice of anæsthesia, and but partially, almost reluctantly admitted by its friends, is really more valuable in many cases, than the mere anæsthetic influence. In the one instance, it is a question of pain merely, or but little more; in the other of life or death to the child; of life or death to the mother, or the integ-

rity of her structures; of the possibility or impossibility of the performance with safety, of some urgently demanded operation. It is true, as stated, that the cases requiring the third rather than the second stage of the action of anæsthetics, are few in comparison; but then, their generally grave character, and the important aid required, and yielded, must be considered in any estimate of their comparative benefits.

In any case where hæmorrhage, or a tendency to hæmorrhage may be known to exist, the deep anæsthetic influence of the third degree would be improper; unless with the view of facilitating some operative measure for hastening delivery; and in all cases where it may have been induced, immediately on the termination of the process, for the purpose of insuring firm uterine contractions, and averting hæmorrhage, the influence should be at once allowed to subside.

A brief recapitulation. The first stage of the anæsthetics, does not diminish, but rather with the involuntary, increases the voluntary actions subservient to parturition. The second, though generally not materially affecting the involuntary, diminishes somewhat the voluntary; while the third, not only totally suspends the latter, but also very greatly diminishes the former.

Of course, *the time for commencing* the administration of Chloroform, will depend upon the character of the case, and the varying circumstances demanding its use. When resorted to, simply as an anæsthetic in ordinary cases, it is better generally to defer its administration, till the labor is pretty well advanced, the os uteri at least well dilated, and perhaps the liquor amnia discharged; though often it is required earlier.

As to the time a patient may be kept with safety under the anæsthetic influence.

It is probable that in the generality of cases, after the state of anæsthesia has been once safely induced, by judicious management, it may be kept up without danger for a very considerable period. We have no facts that I am aware of, showing that any mischief has resulted from the mere duration of the anæsthetic state. Indeed, while as a general rule, the cases have done well, where a protracted anæsthesia has been maintained; in nearly all the cases of death, or other unfavorable effects reported, as resulting from the operation of anæsthetics, such have supervened upon their use but for a brief period. In my own practice, I have not as yet found it necessary to keep any patient more than 6 or 8 hours under the influence of an anæsthetic. My friend Dr.

Baldwin lately kept a lady ten hours under the operation of Chloroform. Dr. Lansdowne, of Bristol, kept up its action sixteen hours and a half. Dr. E. H. Clarke of Boston, in a case of traumatic tetanus, 25 hours, with a favorable result; Dr. Protheroe Smith, 28½ hours; the latter being the longest period, of which I have seen any account, during which it has been uninterruptedly continued.

Generally, after the use of Chloroform in parturition, the patient awakes in from ten to thirty minutes after the removal of the sponge; or passes sometimes, as it were, from the Chloroformal into a natural sleep. I have never found it necessary to resort to any artificial means to awake a patient; but should this, from any cause be deemed proper, nothing more would be necessary, than to sponge the face with cold water.

II.—SANITARY CONDITION OF NATCHEZ, MISSISSIPPI, WITH MORTUARY STATISTICS.

BY C. S. MAGOUN, M. D.

Vital statistics, the chance of life, the continuance of health, the theory of probabilities based on figures, is constantly becoming of more importance, and new lessons of practical value are learned therefrom, which a few years since were unthought of and unknown.

The topography of this city would point it out as a place of great salubrity—elevated one hundred and fifty feet above the high water mark of the Mississippi river, on a firm, hard, dry soil, with a sub-strata of sand and gravel—free from all malarious influences, or nearly so—having no marshes or stagnant pools, and sufficiently undulating to drain to advantage; we should a priori conclude the vital statistics would sustain the position of its being a healthy locality.

In this city, as in most others, the Mortuary records are deplorably deficient. In the accompanying tables, only one item can be relied on as strictly true, and that is the amount of mortality. This embraces the deaths from all causes known and unknown, of the white population, omitting the blacks, as no sufficient data has been kept of them, till within a few years past. The law requires the attending physician to report to the Sexton, the name, age and disease of which the individual died, and the Sextons book shows some strange reports of fatal diseases—such as the "visitation of Providence, the judgment of God.

Spontaneous vomiting, paralysis of the lungs," &c. During the worst and most fatal epidemics, not more than about one half are reported by the same name. In 1837, when from 10 to 15 deaths occurred daily, some were reported "Yellow Fever, malignant fever, malignant bilious fever, and prevailing disease." All these names have been included under the head of Yellow Fever when they occurred during the prevalence of Yellow Fever epidemics. Under the other head of fevers, is included all cases where the word fever was used to designate the dis ease; such as Brain Fever, Lung Fever, &c. Thus swelling the list of fevers far above the truth, for brain fever, &c., only means frequently acute inflammation of the organ, or part designated.

We find in 28 years the greatest mortality occurring from any one disease to be Yellow Fever, and that but three fatal epidemics have occurred, viz: in 1823, 1837 and 9, the worst by far being that of 1823. I have not been able to ascertain the population at that time, but the probabilities are, that nearly one fourth of the population fell victims to that epidemic. The per cent of the other two epidemics can be ascertained from the table, and as will be seen by it, several light epidemics have prevailed. The epidemic of 1848 only numbers thirty, the *fatal* epidemic was always Yellow Fever, but the *living* epidemic was dengue. I think this fact above should convince the most skeptical, it was a mild and modified form of Yellow Fever. At any rate, they were closely related, probably had the same father and mother, with a different countenance. For a full history of this epidemic, I refer to the communication of Dr. C. H. Stone, published in the New Orleans Medical and Surgical Journal of that year.

It will be seen by reference to the table, that consumption has had a perminent part in the mortality throughout the whole period. A large majority of these cases originated elsewhere. Consumptive cases from the Northern and older States, have resorted here as a favorable resort for health, but many of the doomed victims were in a hopelessly diseased condition before their arrival; a change of locality was not made soon enough. My principal object in making out the monthly mortality of this disease was, if possible, to ascertain if the disease was on the increase, as the fevers decline. On this point I am not yet fully satisfied. We have an abundance of proof, that this locality is favorable to the convalescence of all pulmonary diseases. For a fuller exposition of my views on this subject, see Boston Medical and Surgical Journal, vol. 39, page 319.

I need hardly allude to the Cholera, at the two periods of its fearful

visitations to this continent. This city has been highly favored; as from 1832 to 35, but 80 deaths were reported; these occurred mostly under the hill, along the bank of the river—among the transient population, and those of irregular habits. The same holds good in regard to the few cases that have occurred during the past two years—amounting in all to 26. We attribute this great exemption in part to the fact, that good pure underground cistern water is almost exclusively used, except along the river landings. It is a fact worthy of note, that this disease has prevailed but, to a very limited extent, in any place, or on any plantation well supplied with good underground cistern water; and to what cause, but the quality of the water shall we attribute the great mortality of the West from this disease, as compared with the states lying East of the Alleghany side. It is a well known geological fact, that the two regions differ greatly in their formation, and supply a very different kind of water, both in quality and chemical composition. I shall not here investigate this subject—the causes of Cholera; but it opens a wide and interesting field of enquiry and observation, which I hope to see occupied by some able devotee of science.

The annual per cent. of mortality from 1830 to 1840 is based on the average increase of population during that period. From the latter date to the close of the year 1850, the population has been nearly stationary; the census of 1850 only exceeding that of 1840 by a small fraction.—This approximates near enough to the truth to answer all practical purposes. Only a small fraction over three per cent. of deaths for a succession of years is a good showing, and will compare favorably with any place in the South-west, a comparison can be made, by reference to the able Report of J. C. Simmonds, M. D., in the Southern Medical Reports for 1850, page 215. If the deaths occurring in the Hospital, which are almost exclusively non-residents, it would reduce the per cent. to at least $2\frac{1}{2}$ per cent. It is to be also noticed that chronic diseases have been for years past increasing, while those of an acute character have declined. The remittent, intermittent, bilious and congestive types of fever are less violent and frequent, and the low forms of continued typhus and typhoid are on the increase. Enteric diseases and its complications figure largely in the mortuary records, and were it not that the diseases are so imperfectly reported, notwithstanding the labor of searching the records, I would have compiled a more perfect and complete list. It has not been my object to prove Natchez healthy, or the reverse, but to let figures and facts settle the matter. Such has been the unexampled health of the children in this city. I shall quote from the Report of the Board of Visitors of the Natchez Institute, for July, 1851.

"*Health.*—Such has been the merciful care of an Overruling Providence, that but a single death, and that caused by an accident, has occurred during the year, among six hundred and twenty-one scholars! Such an instance of immunity from fatal disease and death, among an equal number of scholars taken promiscuously from the community, the ages being between six and seventeen years, cannot be produced, in all probability, elsewhere throughout our land. The single case of mortality, which was death by drowning, occurred out of school hours, when the unfortunate youth was not under the control of the instructors, nor responsible to the rules of the institution.

There have been 3,709 pupils admitted to the Institute during its existence of six years. During that period, there have been but eleven deaths by disease, which is about one-third of one per cent. Such a fact as this indicates the wisdom of the founder and benefactors of the Institute, and foreshadows the future distinction of Natchez, to be the Southern "City of Education." Here, with an atmosphere as balmy as the "eternal summer of the Isles of Greece," with a security from disease and death vouchsafed by the beneficent Creator and Preserver in a higher degree, according to population, than to any other city or town in the United States, as can be shown by the burial statistics of Natchez for the last ten years; here, with a school based on the taxable property of a generous people, devoted to letters and education, open and accessible to all who are residents, and the ages of whose children are within the prescribed limits, thousands of families, in the lapse of a few years, may be able to send their offspring into the busy world far better prepared to meet its duties and sustain its responsibilities, than either their fathers or their mothers were before them."

In addition to the six hundred and twenty-one pupils admitted to the Institute, there has been more than half that number in attendance on private schools for the same period, and enjoying the same immunity from disease and death.

We think the foregoing facts and figures point out this place, as the one, where, in coming time, will be centred flourishing institutions of learning, extensive manufacturing establishments, and the residences of the opulent to enjoy the blessings of health, the advantages of education, the luxuries of life, and a climate not excelled in any part of the world.

Natchez, October 1851.

Table showing the total mortality of the white population of the City of Natchez, Miss. for 28 years and for each month of the year. Also the monthly and yearly mortality of Consumption, Yellow Fever, other forms of Fever and Cholera for the same period.

1823.	Total Deaths.	Consumption.	Yellow Fever.	Fevers.	Cholera.
January	7			1	
February	7			3	
March	8	1		3	1
April	12	3		3	
May	10	1		3	
June	15	1		6	
July	16			11	
August	100		88	8	
September	148	1	142		
October	55		43	2	
November	13	2	5	1	
December	2	1			
	393	10	278	41	1
1824.					
January	4				
February	10			3	
March	6	1			
April	5	1		1	
May	6			3	
June	8			2	
July	20			13	
August	13			6	
September	13	1		8	
October	8		1	4	
November	4			1	
December	3	1			
	100	4	1	41	
1825.					
January	5				
February	7	1			
March	1	1			
April	3				
May	5	1			
June	6			1	
July	4	1		1	
August	17		8	3	
September	33	1	9	16	
October	48		27	14	
November	15	1	8	4	
December	4				
	148	6	52	39	

1826.	Total Deaths.	Consumption.	Yellow Fever.	Fevers.	Cholera.
January	7				
February	5				
March	4	1			
April	4				
May	8	2			
June	7	1		2	1
July	11			1	
August	9			6	
September	10	1		5	
October	5			3	
November	4			1	
December	11	2			
	85	7		18	1
1827.					
January	5	1			
February	2				
March	4	1			
April	4				
May	3				
June	3				
July	4			2	
August	5	1		1	
September	7			3	
October	26	2	8	7	
November	17	1	1	7	
December	8			3	
	88	6	9	23	
1828.					
January	4	1			
February	7	1			
March	3			2	
April	5	1		1	
May	6	1			
June	9			3	
July	5			1	
August	2			1	
September	12	1	1	1	
October	9		1	3	
November	9	1		2	
December	3			1	
	74	6	2	15	

1829.	Total Deaths.	Consumption.	Yellow Fever.	Fevers.	Cholera.
January	7	1			
February	4			1	
March	7	1			
April	7	1		1	
May	6	1			
June	5			1	
July	3			1	
August	6			1	
September	19	1	8	9	
October	21		5	12	
November	16		1	7	
December	2	1			
	103	6	14	33	

1830.	Total Deaths.	Consumption.	Yellow Fever.	Fevers.	Cholera.
January	5	1			
February	6	1			
March	6			1	
April	2				
May	3				
June	4			2	
July	7			3	
August	16			10	
September	9	1	1	6	
October	10	2	1	5	
November	7			4	
December	5				
	80	5	2	31	

1831.	Total Deaths.	Consumption.	Yellow Fever.	Fevers.	Cholera.
January	4				
February	6				
March	8	1			
April	6	2			
May	11			1	
June	6			2	
July	5			2	
August	4	1		2	
September	4				
October	5	1		2	
November	4				
December	12	1		2	
	75	6		11	

1832.	Total Deaths.	Consumption.	Yellow Fever.	Fevers.	Cholera.
January	5	1		1	
February	6				
March	3				
April	5	1		1	
May	9				
June	3			1	
July	4			1	
August	3			1	
September	9			4	
October	13				4
November	10	1		2	4
December	5			2	1
	75	3		13	9

1833.	Total Deaths.	Consumption.	Yellow Fever.	Fevers.	Cholera.
January	4	1			
February	5				
March	11	4			1
April	9	1			4
May	16				10
June	27			3	12
July	9			2	3
August	11	1		4	
September	15	1		6	1
October	30			19	2
November	10		1	3	
December	13	1		5	1
	160	9	1	42	34

1834.	Total Deaths.	Consumption.	Yellow Fever.	Fevers.	Cholera.
January	10	2			2
February	11	3		2	1
March	16	3			2
April	14	1		2	5
May	13			2	4
June	19	1		3	5
July	19	1		2	4
August	4			2	1
September	7		1	3	
October	12	2	1	3	
November	11			2	
December	11				
	147	13	2	21	24

1835.	Total Deaths.	Consumption.	Yellow Fever.	Fevers.	Cholera.
January	11	2			
February	7	4			
March	11	1		1	
April	17			1	
May	15	2		1	6
June	12	2			5
July	18			9	1
August	9			4	
September	6				
October	9	4		2	
November	6			1	
December	2	2			
	123	17		18	13
1836.					
January	10	2			
Februaray	9				
March	6				
April	7				
May	9			3	
June	8			2	
July	23	1		6	
August	25			9	
September	10			1	
October	14			1	
November	11	1		2	
December	13	2		2	
	145	6		26	
1837.					
January	16			3	
February	8			1	
March	9	1		1	
April	13	2			
May	10	2			
June	10			1	
July	18	3		2	
August	16			5	
September	70		32	10	
October	156		146		
November	37		31		
December	17		2		
	380	8	211	23	

1838.	Total Deaths.	Consumption.	Yellow Fever.	Fevers.	Cholera.
January	12				
February	10	1			
March	11				
April	3				
May	7	1	1		
June	7			2	
July	20	1		4	
August	11	1		2	
September	15			2	
October	5			2	
November	5	1			
December	6	1			
	112	6	1	12	
1839.					
January	6	2			
February	9	2			
March	5	1			
April	9	2			
May	12	1		1	
June	13	2		2	
July	13	1		1	
August	8		1	1	
September	66	4	47	6	
October	130	3	112	2	
November	30	2	13	3	
December	7				
	308	20	173	16	
1840.					
January	7			1	
February	5	1		1	
March	10	1			
April	9	2		1	
May	9	2		1	
June	8				
July	27	1		5	
August	13			5	
September	18	2		12	
October	8			1	
November	13	1			
December	7	2			
	134	12		27	

1841.	Total Deaths.	Consumption.	Yellow Fever.	Fevers.	Cholera.
January	2	2			
February	6	2		1	
March	9	1			
April	5	3			
May	9				
June	10	2		2	
July	11			2	
August	5			2	
September	9	1		1	
October	5				
November	7	2			
December	10	2			
	88	15		8	
1842.					
January	5				
February	6	2			
March	8	1			
April	7				
May	3				
June	11	1		1	
July	6			1	
August	5			5	
September	5			1	
October	4	1		2	
November	4	2			
December	2	1			
	66	8		10	
1843.					
January	4	2			
February	7	4			
March	7	2			
April	6	1			
May	6				
June	9	3			
July	8			2	
August	7			1	
September	5		1	2	
October	16	2	1	6	
November	7			1	
December	7				
	89	14	2	12	

1844.	Total Deaths.	Consumption.	Yellow Fever.	Fevers.	Cholera.
January	10				
February	8				
March	6	2			
April	6	2			
May	9	1		1	
June	9				
July	11				
August	9	1		3	
September	16	1	1	5	
October	13	2	3	1	
November	8	2	1	2	
December	8	2			
	113	13	5	12	
1845.					
January	10	1		3	
February	3	2			
March	2				
April	4				
May	5	3			
June	7			1	
July	5	1			
August	4	1		1	
September	4			1	
October	9			2	
November	7				
December	9	1		1	
	69	9		9	
1846.					
January	7				
February	8	4			
March	8	1			
April	5	1			
May	5			1	
June	11	2			
July	7				
August	4				
September	5				
October	10	1		3	
November	4				
December	5	1			
	79	10		4	

1847.	Total Deaths.	Consumption.	Yellow Fever.	Fevers.	Cholera.
January	5	1		1	
February	9	1			
March	1				
April	1				
May	12	2			
June	2				
July	10			3	
August	8	1			
September	11	1	1	3	
October	6		2		
November	5			4	
December	9			3	
	69	6	3	14	
1848.					
January	7			4	
February	5	1		1	
March	2			1	
April	4	1			
May	5				
June	6			1	
July	9	1		1	
August	3			1	
September	17		7	4	
October	25	1	15	2	
November	10	1	7		
December	12	3	1		2
	105	8	30	15	2

1849.	Total Deaths.	Consumption.	Yellow Fever.	Fevers.	Cholera.
January	18	4		2	2
February	10	1		1	2
March	11			1	1
April	5	1		1	
May	10	1			3
June	12	1		2	3
July	7	1		1	1
August	6	1		1	
September	12	1		3	
October	14	1		3	
November	12	1		1	
December	13	1			
	130	14		16	12
1850.					
January	9	1			
February	8	1		1	2
March	10				3
April	4	1			
May	2				
June	3				1
July	9	2			1
August	19	2		2	
September	9	3		1	
October	20	1	2	2	2
November	15	3			3
December	11	3			2
	119	17	2	6	14

TABLE

Showing the total Deaths in the City of Natchez, from 1823 *to* 1850, *and the the deaths from Consumption, Fevers and Cholera, with per cent. of mortality, etc.*

YEARS.	Consumption.	Yellow Fever.	Other forms of Fever.	Whole Number of Deaths.	Cholera.	1 death to the Numb. stated.	WHITE Population.
1823	10	278	41	393			
1824	4	1	41	100			
1825	6	52	39	148			
1826	7	0	18	85			
1827	6	9	23	88			
1828	6	2	15	74			
1829	6	14	33	103			
1830	5	2	31	80		16.78	1,343
1831	6	0	11	75		20.01	1,508
1832	3	0	13	75	9	23.64	1,773
1833	9	1	41	160	34	12.11	1,938
1834	13	2	21	147	24	14.03	2,103
1835	17	0	17	123	13	18.43	2,268
1836	6	0	26	145		16.78	2,433
1837	8	218	23	380		6.83	2,598
1838	6	1	12	112		24.67	2,763
1839	19	173	16	308		9.05	2,928
1840	12	0	27	134		$22\frac{13}{26}$	3,000
1841	15	0	8	88		$34\frac{1}{11}$	3,000
1842	8	0	10	66		$45\frac{15}{33}$	3,000
1843	14	2	12	79		$37\frac{77}{79}$	3,000
1844	13	5	12	113		$26\frac{62}{113}$	3,000
1845	9	0	9	69		$43\frac{11}{23}$	3,000
1846	10	0	4	79		$37\frac{77}{79}$	3,000
1847	6	3	14	69		$43\frac{11}{23}$	3,000
1848	8	30	15	105	2	$28\frac{12}{21}$	3,000
1849	14	0	16	130	12	$23\frac{1}{13}$	3,000
1850	17	2	6	119	14	$25\frac{25}{119}$	3,000
28	263	795	584	3647	108	*	

Average per cent. of the mortality for 11 years from 1840 to 1850, from Consumption 11.328.

Do. from Fevers 12.655.

N. B. Average pr. cent. of mortality for 11 years 3.174.

**Average mortality for* 11 *years, one to every* $31\frac{11}{119}$ *of the Population.*

III.—OBSERVATIONS ON THE METEOROLOGICAL AND SANITARY CONDITION OF NEW ORLEANS, FOR THE QUARTER ENDING MARCH 31st, 1851.

BY W. P. HORT, M. D., OF NEW ORLEANS.

On a former occasion I noticed in my diary, how very variable the climate of New Orleans was, but I shall at present advert more fully to the same subject.

The city of New Orleans is situated within what is called by nautical men, the variable latitudes. We are under the alternate influence of three different climates, according to the direction from which the wind blows. With the wind from the North or North West, rapid evaporation takes place from the surface of the earth, and from the surface of the body. The North East and East winds are sharp and bracing, producing a very different sensation from that occasioned by the former winds. The South East and all Southerly winds are warm, especially in winter, when the walls of the houses are streaming with water, which is also deposited on granite steps, banisters, &c. In winter, the Northerly winds cool the air, causing a fall of mercury in Fahrenheit's thermometer of 20 or even 30 degrees in twelve hours. In *summer*, they chill the surface of the body by rapid evaporation, but they never cool the air; on the contrary, the thermometer indicates a higher temperature than with any other wind. In summer, the Southerly breezes, (which in winter are so oppressive) are by far the most agreeable; and there is neither inconvenience nor danger arising from free exposure to them. Nor is there any regularity in the prevalence of these winds. They sometimes prevail for days with great steadiness, and then for weeks they blow from every point of the compass in the course of twenty-four hours. Hence the difficulty and perhaps the inability of those who are studying the science of meteorology, or of such as keep a diary of the weather, to infer from the events of one year, what will happen the next.

And for the same reason, it is almost impossible to point out with any degree of certainty, the relation of certain conditions of the weather, as indicated by thermometers, barometers, hygrometers, &c., &c., to the prevalence of disease. We have, it is true, certain diseases peculiar to certain periods of the year. This knowledge is derived from experience, and not from 'scientific researches or profound philosophical speculations.' But who can predict the advent of Cholera or Yellow Fever? How often have we been assured, by persons either born here, or who have resided here a long time, that Yellow Fever may be surely expected, when no Yellow Fever has appeared. On the other

hand, when the indications of the weather have been such as to produce a general conviction of a healthy season, the pestilence has suddenly and unexpectedly burst upon us.

There is however sometimes a combination of circumstances, from which the visitation of malignant and fatal disease may be inferred; as in 1848, when it was evident to every person of ordinary observation, that some pestilence was impending.

This difficulty arising from the peculiarity of our position, is no reason for discontinuing our researches in the science of meteorology, or our daily records of happening events; for although nothing definite may be inferred from the observation and records of a few years, yet perseverance for a century by successive generations of observers, may enable scientific men to establish some general principles. It may also enable them to notice the decline or increase of certain epidemics, or the appearance of new diseases.

I stated on a former occasion some years ago, that Yellow Fever, which in the last century prevailed frequently as far North as 40 degrees of latitude both on our Atlantic coast and in Europe, had in half a century so far receded as to make the Northern shore of the Gulf the Northern limit. Latterly it has extended itself with great severity and mortality in a Southerly direction, and particularly on the coast of Brazil, making a range of from about 30 degrees North to about 25 degrees South; which, estimating the degree at sixty miles, amounts on a line to 3300 miles. This includes too large a portion of the laboratory of nature, for meteorology to be available. It may be serviceable however in a particular locality, combined with sanitary measures and general observations. Having made these few remarks, I shall proceed with my diary for the first quarter of 1851. As was the case last year, so the diary of this year is not presented as any thing systematic, but it may serve to add to the observations of others, and supply some omissions.

January 1*st*, 1851. A cold and dismal day, with continued disagreeable chilling rain from early morning until midnight. Thermometer at daylight 40°, at mid-day 44°, at 10, P. M. 42°. Strong North wind all day.

January 2*d*. Thermometer at daylight 42°; the weather clearing up at sunrise; North wind still continuing; clear at noon, the thermometer at 46°; at 9 P. M. thermometer 42°; fine clear night.

January 3*d*. Thermometer at daylight 40°; a very heavy white frost, with considerable fog about sunrise; temperature 56° at midday, and at 10 P. M. 50°. The wind North all day.

January 4th. The same weather continuing; thermometer 46 ° at 6 A. M.; light frost with the wind South East; afterwards P. M. South West, and variable between these points; cool and dry all day; thermometer at noon 46 °; at 9 P. M. 44 °; fog towards night.

January 5th. Thermometer at 7 A. M. 46 °. Wind South, but very cool, and rain in the forenoon; temperature at mid-day 66. The weather during the afternoon gloomy, damp and very disagreeable. Thermometer at 9 P. M. 63 °.

January 6th. Thermometer at daylight 56 °. Cloudy and damp weather, with wind West Southwest; strong indications of rain; temperature at noon 70 °. Very heavy fog at night and very damp. Thermometer 60 ° at 10 P. M.

January 7th. Thermometer at daylight 56 °; very heavy fog with South wind. After sunrise the day was calm and pleasant; much less damp than yesterday. Thermometer 68 ° at noon, and 60 ° at 9 P. M.

January 8th. Thermometer at daylight 56 °. Calm in the forenoon, with occasionally light southerly puffs of wind. Temperature at noon 66 °; at 9 P. M. 64 °. Wind North all the middle of the day, but about dark shifted to the Southwest, with wind and rain nearly all night.

January 9th. It has been clearing up since an hour or two before day; still cloudy at daylight; thermometer 60 °; at mid-day 68 °; at 9 P. M. 63 °. Wind North, but the appearance of the weather very unsettled, rain about midnight.

January 10th. Thermometer 60 at daylight; the day gloomy and cloudy; wind East and very raw; a drizzling rain all day and all night. Temperature at noon 60 °; thermometer at 10 P. M. 58 °.

January 11th. Thermometer 54 ° at daylight. Wind North by East; cloudy and very raw weather; at mid-day temperature about 62 °; strong indications of rain, which came during the night. Thermometer at 10 P. M. 60 °.

January 12th. Thermometer at 6 A. M. 52 °; after 9 A. M. the weather clear and pleasant. The temperature at mid-day ranged from 64 ° to 68 °, and at 10 P. M. 60 °. Wind very variable, and all round the compass.

January 13th. Thermometer 50 ° at 7 A. M., with considerable fog from the dawn of day until 10 A. M. Wind Northeast until near noon, when it shifted to Southwest. Temperature at mid-day 66 °; at 9 P. M. 64 °. This has been on the whole a pleasant day, after the fog disappeared.

January 14*th.* Thermometer 50 ° at daylight ; the atmosphere hazy ; very calm ; at 8 A. M. very light wind from the South ; towards noon cloudy. Temperature at mid-day 68 °, and at 10 P. M. 60 °.

January 15*th.* Thermometer at 7 A. M. 58 ° ; some fog after 4 A. M. until 10 A. M. Wind Southwest ; rather cloudy occasionally ; thermometer at mid-day 64 ° ; at 10 P. M. 59 °. After the fog cleared away the weather was fine and pleasant.

January 16*th.* Thermometer at daylight 52 °, with West wind ; a pleasant bracing atmosphere ; in the afternoon cloudy and warmer. Thermometer at mid-day 65 ° ; towards evening Southerly breeze ; Thermometer at 10 P. M. 64 ° ; thick weather all day, although for the most, pleasant.

January 17*th.* Temperature at daylight 60 ° ; the weather foggy and cloudy, with North wind. The thermometer at mid-day 76 °. Wind Northeast P. M. ; drizzling rain ; at 10 P. M. thermometer at 70 °, at which time the wind shifted to the North and blew with great power all night.

January 18*th.* Thermometer 44 °. The weather very cold, and strong wind until 4 P. M. ; cloudy, indicating a snow storm at no great distance ; no variation in temperature all day, but towards night it became very damp. The St. Charles Hotel, Clapp's Church, Poydras street Church, and sundry other buildings burnt.

January 19*th.* Thermometer 44 °. Wind Northeast ; very cool and raw weather ; temperature at mid-day 46 ° ; wind Southeast, with drizzling rain towards night. At 8 P. M. thermometer 46 ; same wind and rain all night.

January 20*th.* Same weather ; wind Southwest, and drizzling rain occasionally ; very heavy fog ; thermometer at 7 A. M. 54 ° ; very cloudy after the fog, which began to clear away about 10 A. M. Thermometer at mid-day 62 °. It cleared up in the afternoon, and the weather was beautiful until midnight ; thermometer then 54 ° ; at 2 P. M. cloudy again.

January 21*st.* Much the same weather as yesterday. Thermometer at 6 A. M. 54 °. Wind East ; a very damp fog, between a drizzling rain and ordinary fog , the thermometer 60 ° at mid-day ; a decidedly raw, uncomfortable day ; a shower towards night. Thermometer at 9 P. M. 62 °. A warm night for the season.

January 22*d.* Thermometer at daylight 56 ° ; heavy fog, which did not clear away until about noon, when the thermometer was 70 °. Wind Southerly all day, and weather very damp ; drizzling rain off and on after the subsidence of the fog. Thermometer at 9 P. M. 64 °.

January 23d. At 6 A. M. the temperature 60 °. Wind East; weather cloudy and thick, with appearance of rain; drizzling occasionally. Thermometer 63 ° at noon; damp and cloudy, with strong East wind and rain for about two hours at sundown; drizzling rain all night. Thermometer at 9 P. M. 60 °.

January 24th. Same weather; thermometer at 7 A. M. 56 °; at noon 60 °, with cloudy drizzling weather; wind very variable, but generally Northeast. A very warm and disagreeable day. Thermometer at 9 P. M. 58 °.

January 25th. Thermometer at 6 A. M. 56 °; at noon 58 °; same unfavorable weather all day; foggy, cloudy damp, with constant light showers of rain; the wind all around the compass. Thermometer at 10 P. M. 58 °.

January 26th. Thermometer 58 ° at 6 A. M. The same weather continues; fog, showers, and excessively damp, with no wind; the showers came from all points of the compass. Thermometer at noon 63 °. In the afternoon the weather became more pleasant, and the sun was visible for a short time; thermometer at 10 P. M. 60 °.

January 27th. Wind North but light; stars visible before day; at 6 A. M. thermometer 58, with cloudy and foggy weather; clearing up towards noon; the atmosphere becoming drier and purer. Thermometer at mid-day 63 °. The afternoon was very bright, with cool, bracing air; wind North all day. Thermometer 60 ° at midnight.

January 28th. Thermometer 59 ° at 7 A. M., and at mid-day 73 °. The morning promised well; it was bright and clear, but in the afternoon it became cloudy, with drizzling rain. Wind West. Thermometer at 11 P. M. 70 °.

January 29th. At 3 A. M. the wind North, and clear star light; thermometer at daylight 56 °. The change has been very great since midnight. At noon the temperature was 56 °; at 11 P. M. 50 °. The wind, after sun-up, was Northwest all the rest of the day.

January 30th. Thermometer at 7 A. M. 43 °. Ice formed since the dawn of day. Wind North and moderate; the weather clear and cold. At 2 P. M. thermometer 48 ° on the North side of the street; in the shade it has been freezing all day, with Northwest wind. Thermometer at 11 P. M. 44 °.

January 31st. During the night the stars were very brilliant. The thermometer 39 at 6 A. M; still freezing; wind Northwest, moderating towards noon. Temperature at noon 50 °. Wind shifted to the East towards night. Thermometer at 10 P. M. 50 °.

The Abstract of a Meteorological Journal, for 1851, by D. T. Lillie & Co., published in the Medical and Surgical Journal, gives the average maximum of temperature for the month of January as 72 ° 8; and the average minimum as 41 ° 8; and the average range as 30 9. The average maximum as indicated by the Barometer for the same month is 30 ° 03; the minimum 29 ° 8; and the average range 0.46. The prevailing winds for the month, Northeast and Northwest; the average force of the former is 2.95, and of the latter 2.87 The number of rainy days 9. Total quantity of rain for January 8.672 inches; the most of it in the beginning of the month.

The total number of deaths in New Orleans and Lafayette, from the 28th December, 1850, to the 31st January, 1851, amounted to 539, of whom there were fifty-six cases of Cholera amongst the immigrants in the Charity Hospital. Typhus and Typhoid Fevers prevailed to some extent. The general health of the inhabitants during the month may be considered good. Pneumonia, Measles, Pleurisy, some cases of Variola, light attacks of Influenza, characterized by sore throat, with cases of Diarrhœa and Dysentery, which soon yielded to judicious treatment, are the only diseases which it is necessary to specify.

February 1*st.* Temperature at 6 A. M. 50; the wind from the Southeast, very raw and disagreeable; clouds of dust flying and strong indications of rain. Thermometer at mid-day 50 °. Drizzling rain in the afternoon, which continued until midnight, with stormy Southeast wind. Thermometer at 10 P. M. 50 °. No change of temperature or wind all day.

February 2*d.* A cloudy, dark morning; thermometer at 6 A. M. 55 °; wind still Southeast, but light; at 8 A. M. very heavy fog, and dismal weather. Thermometer at noon 56 °; drizzling rain all day and all night; thermometer at 10 P. M. 56 °.

February 3*d.* Thermometer 57 at daylight; a continuance of the same dismal weather of yesterday; wind light from the Northeast. Thermometer at mid-day 60 °; at 2 P. M. 58 °; at 10 P. M. 56 °; and still raining, with very heavy fog.

February 4*th.* Cloudy morning, and North wind. Temperature 52 ° at 7 A. M.; at mid-day 53 °; at midnight 50; cloudy all day, and gradually becoming colder. A singular glow of light was perceptible all night, extending from Southwest to Northwest, a little above the horizon, beneath the dark clouds.

February 5th. At 3 A. M. the thermometer 46 °; bright star light and very cool; thermometer at 8 A. M. 46 °; sun rose clear and red for the first time this year. Wind Northeast. Thermometer at mid-day 60 °; wind North and light; a beautiful day, although somewhat heavy soon after sunrise. Thermometer at 10 P. M. 56 °; a calm, beautiful night.

February 6th. Thermometer 50 ° at 6 A. M.; heavy fog on the river; wind North and very light. Thermometer at noon 64 °; fog dissipated about 10 A. M., after which it was a lovely spring day, refreshing and bracing. Thermometer at 8 P. M. 60 °; fine night.

February 7th. Thermometer at 8 A. M. 55 °. Wind North, and moderate; fog on the river at daylight. Soon after sunrise the wind shifted to the Southward. Very calm, temperate weather all day; wind Southeast; temperature at noon 68 °; at 10 P. M. 60 °, and wind at Southwest; clear night.

February 8th. Weather cloudy just before day, and after daylight very heavy fog. Thermometer at 4 A. M. 56 °; at 8 A. M. 58; at noon 70 °; growing warmer and threatening rain; at times veay cloudy; wind varying from Southwest to Southeast. Thermometer at 10 P. M. 66 °; warm night.

February 9th. Thermometer 67 ° at 7 A. M.; weather very cloudy and damp; strong Southwest wind, increasing almost to a gale after sunrise. Thermometer 70 ° at noon, and 66 ° at 10 P. M. Soon after mid-day it commenced drizzling rain, which changed to heavy rain at 6 P. M. During the night it cleared up, with wind at Northwest, moderate and variable.

February 10th. Thermometer at 2 P. M. 67 °; at 6 A. M. 60; wind Northwest, and clearing up, though there are many flying clouds; at 9 A. M. thermometer 56 °; at mid-day 60 °. It is now cold, and the air clear and bracing; streets drying very fast. Thermometer at 11 P. M. 50 °.

February 11th. Thermometer at 4 A. M. 48 °; clear cool morning; wind North. Thermometer at mid-day 50 °, and at 9 P. M. 48. The weather has been very fine all day, and from the great evaporation produced by the North wind, dust is already troublesome.

February 12th. Thermometer at 7 A. M. 44 °; at noon 60 °; at 10 P. M. 57 °. This was a very raw, unpleasant day. Wind Easterly, varying from Southeast to Northeast, and occasionally squally. Appearance of rain during the day, but rather clearing up about 7 P. M.

February 13*th.* Thermometer 60 ° at 6 A. M., steady rain with much lightning. Wind Southeast; very heavy fog on the river; dark, thick weather; wind East after 9 A. M.; frequent heavy showers during the day, and heavy squalls of wind. Thermometer at mid-day 63 °; and the same at 10 P. M.; rain all night.

February 14*th.* Thermometer 63 ° at 4 A. M., the temperature not having varied since noon yesterday. Wind Southeast; very heavy fog, and damp sultry weather, quite oppressive. Thermometer at mid-day 71 °, and at 10 P. M. 70 °; very warm night, with wind Southwest. It has been a dismal day.

February 15*th.* Thermometer at 4 A. M. 70 °; no fog, but very cloudy and threatening. Wind North at 8 A. M., reducing the temperature to 60 ° at mid-day; drizzling rain in the forenoon. The rain continued with North wind until midnight. Thermometer at 11 P. M. 50 °. Notwithstanding the changeable weather since the commencement of the month, the mercury in the Barometer has maintained an elevated point, and the variations have been very slight.

February 16*th.* Thermometer at 6 A. M. 44 °; at noon 56 °; and at 10 P. M. 50 °. Wind North by West; aspect of the sky cold; at times cloudy, and then very clear; in the course of the day the wind became variable from Northeast to Northwest. The night was calm and pleasant.

February 17*th.* Thermometer at 6 A. M. 40 °; at noon 56; and at 10 P. M. 54 °. Cool, raw morning, and disagreeable weather all day. The wind was all round the compass; temperature during the night rather warmer.

February 18*th.* Thermometer 56 ° at 5 A. M.; 60 ° at mid-day; 62 at 3 P. M.; and 60 at 9 P. M. A dark and cloudy day, with Southeast wind; weather quite raw and unpleasant.

February 19*th.* Thermometer 56 ° at 4 A. M.; at mid-day 70 °; and at 10 P. M. 66 °. The atmosphere dry and very clear before day, but after daylight there was damp, heavy fog, making the day gloomy. Heavy rain at night.

February 20*th.* Thermometer 64 ° at 6 A. M.; at noon 70; and at 11 P. M. 66 °. A cloudy morning, and cloudy all day, threatening rain; very variable wind, all round the compass, with the South wind predominating.

February 21*st.* There has been heavy rain since midnight. Ther.

mometer 63 ° at 6 A. M.; 64 ° at noon; and 62 ° at 10 P. M. The rain ceased at daylight; the wind from the Southwest, but variable. The weather is good; really clearing up. The night calm, but cloudy at intervals.

February 22d. Thermometer 62 ° at 4 A. M. Wind Northwest, which shifted to Southeast in the course of the day. Warm, sultry day, with occasional light showers. Thermometer at noon 70 °, and at 10 P. M. 66 °; warm night with Southerly wind.

February 23d. Thermometer 64 ° at 6 A. M.; at noon 72 °; at 10 P. M. 70. The fog dark, and very damp and heavy until 10 A. M. The weather warm and sultry; the wind South, and continued so all day. The night was clear, but warm.

February 24th. Thermometer 68 ° at 6 A. M.; at mid-day 72 °; and at 10 P. M. 66 °. The morning is sultry, with a very heavy, damp fog; at noon, after the fog had cleared away, the weather became clear and pleasant, with Northwest wind. The night calm and clear; wind South by West.

February 25. Thermometer 64 ° at 6 A. M.; at 2 P. M. 75 °; at 10 P. M. 70 °; no fog this morning; the weather is calm and clear, as it was during the night. The wind Southeast and moderate, continuing all night until near day.

February 26th. Thermometer 64 ° at 6 A. M.; at mid-day 75 °; and at 10 P. M. 70 °. Very heavy fog from 6 A. M. until 8 A. M.; wind Southeast, and very feeble. Weather close and sultry; the night warm.

February 27th. The thermometer 65 ° at 6 A. M.; at mid-day 76 °; and at 10 P. M. 70. Scarcely any change of temperature since yesterday. The wind South by West, and brisk; weather tolerably clear and pleasant; the night warm.

February 28th. The thermometer 66 ° at 6 A. M.; at mid-day 56 °; and 50 ° at 10 P. M. This sudden reduction of temperature from 66 ° to 50 °, between 6 A. M. and 10 P. M., was caused by a strong North wind. At 2 P. M. wind increased, with drizzling rain, making the weather very harsh and disagreeable. The night was quite cold.

The diseases this month varied but little from those which prevailed during the month of January. There were some deaths from Cholera; but the number was steadily on the decrease until the 25th of January, when it began to fluctuate, as the following table will show:

(From The New-Orleans Medical and Surgical Journal.)

			Total Deaths.	*Cholera.*
1850	December	28	122	25
1851	January	4	136	13
"	"	11	131	9
"	"	18	132	6
"	"	25	141	3
"	February	1	132	9
"	"	8	142	4
"	"	15	144	7
"	"	20	132*	7
"	"	27	135*	8

From Lillie's Journal, published in N. O. Med. and Surg. Jour.

WEEKLY — 1851.	THERMOMETER.			BAROMETER.			COURSE OF THE WIND.	FORCE OF THE WIND, Ratio 1 to 10.	Number of Rainy Days.	Quantity of RAIN — Inches.
	Max.	Min.	Range.	Max.	Min.	Range.				
Jan'y 30	73 .0	27 .0	36 0	30 .35	29 .94	0. 40	N.N.W.	3 .00	3	1.120
Feb'y . 6	73 .0	38 .0	35 .0	30 .58	30 .25	0. 33	N. W.	2 .75	3	1.530
" 13	81 .0	43 .0	38 .0	30 .45	29 .95	0. 50	S.	2 .75	3	3.450
" 20	75 .0	38 .0	37 .0	30 .50	30 .14	0 36	N.	2.75	4	1.375
" 27	85 .0	60 .0	25 .0	30 .28	30 .08	0. 20	S. W.	1 .75	1	0.060

The cases of fever during this month, whether fatal or not, were chiefly amongst the newly arrived immigrants. Excluding this class, the health of the city for this month, notwithstanding the sudden changes of temperature, exhibiting a great range, has, on the whole, been favorable, at least so far as *mortality* is concerned.

March 1st. The thermometer 40 ° at 5 A. M., with a Northeast wind, varying in squalls to North and Northwest, which gradually cleared away the clouds in the forenoon ; at noon, a clear, bracing atmosphere. Thermometer at 2 P. M. 51 ° ; more moderate towards night ; thermometer at 10 P. M. 54 ° .

March 2d. Thermometer 50 ° at 6 A. M. Wind North ; cloudy and dusty weather ; a cold day throughout, but more moderate towards night ; temperature at mid-day 56 ° ; at 8 P. M. 58 ° ; latter part of the night cold, with North wind all night, but rising after midnight.

March 3d. Thermometer at 7 A. M. 52 ° ; wind North, and increas-

* Under date of 22d February.

* Under date of 1st March.

ing; the day clear, bright and bracing. Thermometer at mid-day 57 °; at 8 P. M. 57 °; the wind somewhat variable during the day, but hauling to the South towards night.

March 4th. Thermometer at 6 A. M. 46 °; weather foggy and very calm; wind Southerly; a fine day after the fog was dispersed; temperature at mid-day 60 °; at 9 P. M. 58 °. A calm, pleasant night.

March 5th. Thermometer 56 ° at 6 A. M. Wind Southeast; very hazy weather, becoming close and damp. Wind very light at noon; the temperature at mid-day 70 °; at 8 P. M. 69 °; warm night, with light Southwest wind.

March 6th. Thermometer 66 ° at 6 A. M. Wind Southwest and light; very heavy and damp fog from the river; temperature at mid-day 78 °; at 4 P. M. 80 °; at 10 P. M. 78 °; a damp and sultry day. Rain at night, with change of wind to North, reducing the thermometer to 60 ° at midnight.

March 7th. Thermometer at 50 ° at 6 A. M.; wind North; weather cloudy and cold; temperature at noon 49 °; at 10 P. M. 49 °; wind Northwest all night and very cold; white frost in the morning on the outskirts of the city.

March 8th. Thermometer at 47 ° at 6 A. M. Wind Northwest, cloudy and cold weather; temperature at mid-day 52 °; at 9 P. M 50 °. Wind from the East all night; clear and bright sky some hours before day.

March 9th. Thermometer at 6 A. M. 54 °. Wind Northeast; the weather clear, cool and bracing. Temperature at mid-day 60 °; and at 9 P. M. 56 °. Wind has been variable since noon; cool and calm night.

March 10th. Thermometer at 6 A. M. 54 °; wind Northwest. The weather hazy, but the sky free from clouds. At noon thermometer 62 °, and at night, 9 P. M., 60 °. The wind has varied considerably during the day, but generally North.

March 11th. Thermometer 56 ° at 6 A. M.; wind East; very thick weather. Spring rapidly advancing, as evidenced by the progress of vegetation. Temperature at noon 70 °, and at 10 P. M. 66 °. The night calm and pleasant.

March 12th. Thermometer 54 ° at 6 A. M.; at noon 71 °, and at 9 P. M. 57 °. The wind Southerly all day, varying from Southeast to Southwest. The weather very thick; the night warm, with Southwest wind.

March 13*th.* Thermometer 60 ° at 7 A. M.; wind Southeast. The weather cloudy and thick, threatening rain. The temperature at mid-day 72 °. Rain towards evening, which ceased with the rising of the moon. Thermometer 69 ° at midnight.

March 14*th.* Thermometer 64 ° at 7 A. M.; wind Southeast. The weather cloudy, hazy and oppressive; drizzling rain at times during the day; temperature at noon 78 °, and at 9 P. M. 70 °; first part of the night cloudy; stars out before daylight.

March 15*th.* Thermometer at 6 A. M. 66 °; at mid-day 79 °, and at 10 P. M. 72 °; at midnight 69 °. The wind from the west all day, and quite lively at times. Light showers in the course of the day; warm and cloudy night.

March 16*th.* Thermometer 70 ° at 7 A. M. The wind Northwest, but the weather is still cloudy and oppressive. The temperature at mid-day 80 °, and at 9 P. M. 76 °. It has been cloudy all day, and sultry and oppressive until midnight.

March 17*th.* The thermometer 60 ° at 6 A. M. Wind Northwest; the clouds have all cleared away by sunrise, and the weather bright, clear and bracing. Thermometer at mid-day 78 °, and at midnight 74 °; clear, calm moonlight night.

March 18*th.* Thermometer at 6 A. M. 62 °; wind Northwest; fine bracing weather; very clear atmosphere. Wind at 8 A. M. Northeast; temperature at noon 74 °; at 9 P. M. 70 °. A clear night, with wind from the East.

March 19*th.* Thermometer 60 ° at 4 A. M.; at 8 A. M. 65 °; at noon 77 °; and at 9 P. M. 70 °. Wind varying between North and East. Very pleasant weather by day and by night.

March 20*th.* Thermometer 56 ° at 4 A. M.; 60 ° at 8 A. M.; 70 ° at mid-day, and 66 ° at midnight. The wind from the East all day; light and varying from Northeast to Southeast; the evening and night close weather.

March 21*st.* Thermometer 62 ° at 6 A. M. Wind South and East, and very light. The weather heavy and sultry. Temperature at mid-day 72 °; at 9 P. M. 70 °; and at midnight 67 °. The night tolerably pleasant.

March 22*d.* Thermometer 60 ° at 7 A. M.; the wind from the West; weather cloudy and hazy; temperature at noon 74 °; at 9 P. M. 70 °. A very windy day with clouds of dust. The water running over the Levee above the market.

March 23*d*. Thermometer at 7 A. M. 62°. Fair breeze from the North; the weather hazy but not cloudy. Temperature at mid-day 64°, and at 8 P. M. 60°. North wind prevailed all day, with a fine bracing atmosphere.

March 24*th*. Thermometer 56° at 6 A. M. Same weather as yesterday; wind North, cool and bracing. Thermometer at mid-day 62°. Towards night the wind subsided, and the weather became more moderate. Thermometer at 9 P. M. 62°; a clear, calm night.

March 25*th*. Thermometer 59° at 6 A. M. Wind from the East. The weather calm, hazy and moderate. Temperature at mid-day 70°. Wind still East. Thermometer at 9 P. M. 68. Wind from the West and moderate all night.

March 26*th*. Thermometer 66° at 6 A. M. Wind Southeast; the weather mild and pleasant; rather damp, and threatening rain towards noon, at which time thermometer 70°; at midnight 69. Cloudy during the night.

March 27*th*. Thermometer 66° at 6 A. M. Wind from the South all day, with light showers of rain occasionally. Thermometer at mid-day 70°. Weather very threatening; thermometer 70°; at 10 P. M. Very heavy rain betweeu midnight and day, with strong Northwest wind.

March 28*th*. Thermometer 68 at 6 A. M. Wind Southeast. Weather still cloudy and rather sultry. Temperature at noon 74°; heavy fog on the river, and very damp. Thermometer at 9 P. M. 69°; warm night.

March 29*th*. Thermometer 69° at 7 A. M.; damp fog from the river. Wind from the East. Temperature at noon 76°; at 9 P. M. 70°. The weather pleasant all day in the shade, but very warm in the sun.

March 30*th*. Thermometer 70° at 6 A. M. Wind Southeast and brisk; heavy damp fog from the river. Weather sultry when out of the breeze. Thermometer at noon 78°; and 70° at 9 P. M.; warm night.

Mrch 31*st*. Thermometer 68°. Wind Southeast. Weather calm and hazy. Temperature at mid-day 78°, and rather sultry. Thermometer 70° at 9 P. M.; rain in the night.

WEEKLY. — 1851.	THERMOMETER.			BAROMETER.			COURSE OF THE WIND.	FORCE OF THE WIND, Ratio 1 to 10.	Number of Rainy Days.	Quantity of RAIN — Inches.
	Max.	Min.	Range.	Max.	Min.	Range.				
Feb. 27 to March 6	82 .0	47 .0	35 .0	30 .47	30 .10	0. 37	N.W.	2 .25	1	0.430
" 13	81 .5	46 .0	35 .5	30 .40	30 .12	0. 28	N. by W.	2 .00	1	0.080
" 20	86 .0	57 .0	29 .0	30 .18	30 .10	0. 08	S. W.	2 .50	1	0.010
" 27	82 .5	54 .5	28 .0	30 .35	30 .08	0. 27	N. E.	2 .75	1	1.260

There is much discrepancy in the maximum temperature as indicated by the thermometer in the above Abstract from Lillie's Meteorological Journal, and the same according to my notes. Twice only—on the 6th and 16th of the month, the mercury rose to 80. I have access to seven thermometers, and feel satisfied that there must be an error in the maximum temperature, as given by Lillie, or else it must be exposed to reflected heat in the middle of the day. March was, on the whole, a decidedly cool and dry month ; the prevailing diseases were about the same as those of the last month ; if there is any change to be noted, there was a decrease in Cholera and an increase in Fevers, as we shall see by the following statement, taken from the records of the Board of Health.

	Total Deaths.	*Cholera.*	*Fevers.*
From February 22 to March 1	135	8	26
" 8	138	5	27
" 15	148	2	20
" 22	157	2	11
" 29	127	0	20

These deaths may, for the most part, be charged to the European immigrants who arrived here during the month. The proportion of deaths amongst the Creoles and the acclimated resident population, may be considered a fair average.

[*To be continued.*]

IV.—INTRODUCTORY LECTURE DELIVERED NOV. 18, 1851, BEFORE THE MEDICAL CLASS, UNIVERSITY OF LOUISIANA, NEW ORLEANS, ON OUR KNOWLEDGE OF NATURE, THE NATURAL SCIENCES, AND ON CERTAIN TRUTHS REVEALED BY THE MICROSCOPE.(*)

BY J. L. RIDDELL, M. D., PROF. CHEMISTRY.

GENTLEMEN—It is with lively feelings of pleasure that I greet you on this occasion. It will be my duty, for a few ensuing months, to assist your progress in the acquirement of a most pleasant and useful science—a science which exposes to our comprehension many of the recondite operations of nature—a science which may be said to constitute the basis of many of the arts of civilized life—a science, with which it

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(*) NOVEMBER 25th, 1851.

Dear Sir—At a meeting of the Students on yesterday evening, the undersigned were appointed to request a copy of your very able, eloquent, and appropriate Lecture, delivered before them on Tuesday morning, for publication.

Hoping, dear Sir, that it will be agreeable to you to comply with our request,

With sentiments of the highest respect,

We remain your obedient servants,

THOMAS G. FARRAR,
JOHN D. FORD,
WILLIAM P. CRADDOCK,
J. N. WILLIAMS,
L. D. HILL,
JOHN P. PETERSON,
ROBERT NEILSON,
Committee.

PROFESSOR RIDDELL.

UNIVERSITY LOUISIANA, NEW ORLEANS, Nov. 25, 1851.

To Messrs. Farrar, Ford, Craddock, Williams, Hill, Peterson, and Neilson, Committee from the Medical Class.

Gentlemen—I have the pleasure to acknowledge the receipt of your communication of this date. To say that I feel gratified, would be but saying the truth. You have honored my Introductory Lecture, perhaps, beyond what it deserves. Be that as it may, I am happy to have it in my power to comply, in effect, with your request.

Doctor Hester, Editor of the New Orleans Medical and Surgical Journal, solicited and received the manuscript, immediately after the delivery of the Lecture, for publication in his forthcoming number. It is, in fact, partly in type.

If you still desire it in pamphlet form, there will, I suppose, be no difficulty or delay in re-imposing the forms, and printing the copies required.

I have the honor to remain,

With respect,

Your obedient servant,

J. L. RIDDELL.

is absolutely indispensable that the student in Physiology, Materia Medica, and Pharmacy, should be more or less acquainted. You are aware that I refer to Chemistry; and to present you with the briefest possible good definition of it, I would say that it is the province of Chemistry to investigate molecular changes.

Availing myself of the sanction of time-honored custom, I shall, on the present occasion, lay before you, for your consideration, some subjects of a general, and perhaps rather discursive nature—subjects, some of them, at least, which have only a remote and general relation to Chemistry; namely: I propose to entertain you with a general cursory view of nature, and incidentally, of the principal sciences by means of which we study nature.

Nature comprises the sum total of all that has a real existence, passive or active, about us, whether known to, and observed by us; or existing or transpiring beyond the scope of our knowledge or observation.

Matter is the substance, and *motion* the attribute, of nature. Matter exists in space, measured by length, breadth and depth; motion exists in time, measured by recurring intervals of its own creation. All the forms which matter assumes, and all the phenomena or occurrences to which its motion gives rise, are, strictly speaking, natural; being the phenomena or occurrences of nature.

Contemplating nature as a whole, we cannot regard it as less than boundless, and truly infinite; and as to the extent of our knowledge of nature, we are compelled to the conclusion, that comparatively, it is almost as nothing, being mostly confined to the globe we inhabit; and, indeed, being almost infinitely short of perfection, even when thus limited. Yet, if we compare our knowledge of nature, derived from the prosecution of the sciences, with that possessed by the most benighted savages, we cannot but feel astonishment that such truly wonderful progress has been made.

It will be appropriate to my design to present you a summary, embracing some of the most important items constituting our knowledge of nature, which, though it should merely remind you of what you already know, I now proceed to do.

We know the earth we inhabit has a globular form, is seemingly solid, and measures in diameter what we call about eight thousand miles. We know, for the science of astronomy has so informed us, that it is a member of what we call the solar system, performing every year an orbital journey about a great mysterious central luminary, which we call the sun. By fair inference and deduction, all also know, that the

wide surrounding space abounds with other suns, and other systems, analogous to ours; that this space, though apparently vacuous, is filled with a refined medium of matter, which is the instrument of transmitting light, though too much attenuated to offer sensible resistance to planetary movements; that the heavenly bodies are obedient to certain fixed laws of motion, which can be mathematically expressed. For much of this knowledge, we are indebted to the successful cultivation of the science of optics, or light.

We know that our earth, hung as it is in all but empty space, is enveloped by an aerial mantle, the atmosphere, which we find to become less and less dense as we ascend into it; that its surface is variegated by continents and islands of land, and by oceans and lesser bodies of water.

In respect to the atmosphere, we have further determined, by means of Chemistry, that it mainly consists of two material ingredients, in the gaseous or aerial condition, namely, nitrogen, so called, an inert substance; and oxygen, a principle, or rather substance of great chemical activity, taking an essential part in most terrestrial and organic changes; that subordinately the atmosphere contains carbonic acid, a product of organic changes; and the vapor of water, a substance essential to organic life, and more or less efficiently instrumental in all the great and all the little changes which occur on the face of our globe.

In the liquid masses of water, we have this all important fluid, obedient to the laws of gravitation, presenting us extended, apparently level expanses, or seeking its proper level in rills and rivers; exercising at the same time an efficient action, in the way of dissolving from the earth, and absorbing from the air, a great variety of different substances.

The dry land, so called, distinguished by more or less solidity and fixedness, we find variously dispersed and situated. Here we have it as an extended plain, of comminuted, almost incoherent materials. Often it is seen hardened into rocks, and solidly built up into mountain ranges. The proper scientific investigation into these matters pertains to geology and physical geography.

Attentively studied, we observe the whole surface of our globe in a state of continuous change. The deep seated fires in the bowels of the earth, operating locally, and for a long series of ages, gradually heat and expand the strata superincumbent upon them, causing the land to rise higher and higher still above the ocean waters; water, gaining access to these fires, generates steam of such enormous power, as to heave up high volcanic heaps, or perhaps rend or shiver the solid rocks, with the accompanying phenomena of earthquakes. In other regions,

from slow cooling and contraction, the earth's surface is, age after age, almost imperceptibly subsiding; and it is questionable whether any portion of our dry land is absolutely stable in this respect.

Subordinate agencies are incessantly at work in modifying the surface of our globe. Even the hard rocks which crown the summits of hills and mountains, are chemically attacked by the inconspicuous lichen, and slowly crumbled into dust. The vicissitudes of moisture and frost often exercise a powerfully disintegrating agency. Loose soil, in which vegetation can be sustained, is thus formed from barren rocks. The water which falls from the clouds is constantly transporting the loose earthy materials from a higher to a lower level; tending, if time enough be allowed, to carry all below the level of the sea. The Mississippi river, for example, annually carries past New Orleans, destined to subside mostly in the Gulf of Mexico, earthy matter enough, if all deposited thereon, to elevate a tract of twenty-seven square miles of level country, or a tract of nine miles long by three miles broad, to the height of five feet.

Thus, after the lapse of many thousand ages, the sea would come to prevail over the whole earth's surface, were not the countervailing agencies, of which I have spoken, also in operation.

Among the subordinate causes, which have contributed to give some portions of our dry land its present aspect, the agency of ice islands on the ocean, and glaciers in cold and mountainous regions, may be mentioned. These islands of ice, so often met with in the colder regions of the sea, frequently transport masses of rocks, detached from the frigid shores where the ice was originally congealed. Should the island float into a warmer climate, where it would melt away, it would, of course, deposit at the bottom of the sea whatever of an earthy or rocky nature it might be burdened with. At a time remotely thereafter, when, in the course of things the bottom of such sea became dry land, these rocks, exposed to observation, would probably appear very unlike the native rocks appropriate to the locality. Erratic masses of various sorts of rocks are found strewed over an immense expanse of the Northern United States, in Europe and elsewhere; and with sufficient reason, such is inferred to have been their origin.

With glaciers, in this country, we are unacquainted. In many parts of the world, immense fields of ice, formed in alpine gorges, partially thawed in summer, push forward, almost imperceptibly, and bear with them, in their snail-like progress, masses of earth, rocks, &c., depositing in one place what originally belonged in another. Ice forms in the

cold mountain heights above, and melts in the warm valleys below. Thus a glacier may slowly slide for ages, and like a fluid river, retain much of its original conformation.

The successive heating and cooling of the earth's surface, by the alternate presence and absence of the sun's rays, gives origin to the winds of our atmosphere, and to the evaporation of water; by which means a vast amount of water, in the aerial condition, becomes mingled and diffused in the whole atmosphere. Indeed a grand process of distillation incessantly goes on, which has been, and still is, connected as a main cause, with the most considerable and most important changes, which the surface of our globe presents. Air charged with moisture, becoming cool by any means, as by coming in the vicinity of high and cold mountains, lets fall the moisture in the form of dews, rains and snows. Though comparatively pure when it falls from the clouds, or when deposited from the atmosphere, water greedily dissolves any saline matters which it afterwards meets with, transporting the same ultimately to the ocean, and which it leaves behind when again lifted into the atmosphere by evaporation. Hence the saltness of sea water. Hence the origin of springs; for the rain water which soaks into the porous soils of high lands, is prone to re-appear in the form of fountains or springs at a lower level, which may be more or less remote. Hence the origin of rivers and lakes; and hence the freshness of the water of those lakes that have an appropriate outlet into the sea.

Giving our attention to the nature of the fixed earthy materials of which continents and islands, mountains and plains, are formed, we may observe that, chemically considered, all the known elements, either commonly or occasionally, are found componently in the mineral masses of which these fixed materials consist. The elements thus occurring are seldom pure and uncombined; but rather united one to another, in various ways, forming a great variety of different bodies, denominated minerals. The classification, distinction and description of them, pertains to the science of mineralogy. It is proper to observe, that though these different minerals may be distinguished as subjects of natural history, by their forms, density, appearances and sensible qualities; yet without the aid of Chemistry, knowledge could very seldom be attained respecting their elementary composition and real nature. But availing ourselves of the chemical art, such knowledge is always at our command. If Chemistry subserved no other purpose, it would still deserve to be considered as pre-eminently the most useful and important of sciences.

The field of Chemistry, however, is greatly extended, and its usefulness enhanced, 1st, by its enabling us to produce, at pleasure, an unlimited variety of elementary combinations, new substances, which we never meet with ready formed by nature; and 2d, by its application to the subjects of the animal and vegetable kingdoms—by its elucidating the component nature, and in part the natural changes of, organized and living bodies.

Deferring, for future occasions, the consideration of that wonderful power which Chemistry enables us to exercise, the creation at pleasure of new compound bodies, let us attempt to appreciate the relation of Chemistry to organized and living bodies. I have defined Chemistry to be the science which investigates molecular changes. We propose to consider the relation of this science to life, which it is no easy matter properly to define. For our present purpose, we may regard life as a series of specific phenomena, more elaborate and exalted, and farther removed from our full comprehension, than those occurring in the merely chemical world; a series of specific, continued changes, suffered by successive portions of matter, which may be likened to the burning of a lamp; in each and every instance, seemingly due, in a measure, to material organization; which organization, from various considerations, we are forced to believe to be of a far more refined and more admirably adapted nature, than what we can clearly demonstrate by dissection, or render apparent by the aid of the microscope, or even adequately imagine. Respecting the nature of life in the higher organizations which are presented to our cognizance, such as man, we are completely at fault in all our attempts to fathom the mystery; and we are compelled to acknowledge, that it is beyond our utmost comprehension. Nevertheless, many of the vital phenomena can be more or less satisfactorily explained, by reference to physical principles; such as secretion, which seems closely akin to liquid permeation in dead, and even in unorganized matter. And many chemical changes occurring in the living body, can be elucidated and explained, and even imitated, by experiments with chemical substances, aside from the vital influence.

Man and the higher animals seem to comprise, in their organization, almost every known type of tissues and organs. In the lower, and especially in the more obscure members of organic creation, revealed by the microscope, we have apparently the most simple and elemental forms of structure. Having derived much entertainment from the microscopic examination of the clear and stagnant waters of this region, which abound in microscopic wonders, very similar to those observed in Europe, and elsewhere, I shall take the liberty of presenting you, as

in relation herewith, some brief account of those simple forms of life, ordinarily invisible, which, if they do not confirm and clear up our ideas of life, tend at least to enlarge them.

[Here the lecturer called the attention of the audience to a number of drawings, enlarged from nature, 3000 diameters, representing the structure of Torulæ, occurring in diabetic urine; Algæ of the sub class Oscillatoriæ; the Closterium Lunula; several of the sileceous coated Diatomaceæ; the Bacilla paradoxa, a species of Proteus, &c.]

Having seen, that in the microscopic world beings are often met with which seem, either or both, animals and plants, it will be proper to consider briefly the acknowledged marks of distinction, which enable us, in most known instances, to trace the boundary between the animal and the vegetable kingdoms. Nothing is usually more easy than to distinguish an animal from a plant. I shall not on the present occasion even allude to the well known distinctions usually observable. In the more obscure cases, these ordinary traits of contrast are wanting. Some have defined plants to be living organisms that secrete starch; and as this substance can be found in the Desmidiæ, most writers, notwithstanding their animal forms, and, sometimes, apparently voluntary movements, regard them as plants. Others define plants to be organized beings that can transmute dead mineral matters, water and the inorganic ingredients of the atmosphere, to their own substance; while animals are dependent for their nourishment and support, upon substances previously elaborated and organized, and are thus primarily dependent upon the vegetable kingdom.

The Chemistry of plants and animals is much the same. But the general chemical effects, exercised upon the out-door agents, air, water and earth, by the two organic kingdoms, are remarkably different. In this respect, animals and plants bear to each other an admirable relation, producing effects compensatory one to the other. Animals and plants, considered in respect to the principal material elements composing them, are mere consolidations from the thin atmosphere; for although mineral matters not occurring in the atmosphere are essentially present in them, yet the amount is usually very small, compared to the amount of material derived from the atmosphere. Such being the case, it is not to be wondered at, that a constant interchange of reactions should be kept up between the atmosphere and organic beings. Animals, for instance, are constantly undergoing a change analogous to combustion; absorbing oxygen and exhaling carbonic acid. Plants, on the other hand, are continuously keeping up an opposite change,

that of deoxidation, appropriating and assimilating to their own substance the carbon of the atmospheric carbonic acid, and setting at liberty the pure oxygen.

As to the reactions of animals and plants among each other, it can be safely said, that they prey upon each other, to the full extent of their powers respectively to do so. The general rule is, that each item of life, or organism, appropriates and assimilates to itself all it has the ability to do; and not only do animals live upon plants by destroying and consuming them, and prey upon each other, the stronger devouring the weaker; but plants, too, are often seen to worry, rob and destroy each other; witness the parasitic fungi, lichens, algæ, &c.; and in some instances we have seen animals made to suffer from the attacks of plants; witness tinea capitis in the human subject, and the fungus disease of the silkworm.

Especially if the vital principle be extinct, the organized body is rapidly possessed, and for the most part appropriated, by other forms of life; a circumstance of much moment in truly estimating the causes of the various changes that go on about us.

Having already made several allusions to the geological changes incident to the surface of our planet, I may now appropriately advert to the influence of life, in producing or modifying geological formations. Many of the organized beings that have, in the past flight of ages, dwelt upon the earth, or in the waters of the earth, have been so buried up in chemical and mechanical deposits, in the silt of ancient rivers, in the sands of primeval seas, &c., as to preserve, even to this day, such exact figures or impressions of their several shapes, as to enable us to classify them, and really to determine much about them. Vegetable matter thus entombed, has become the mineral coal beds of these times. Marine and lacustrine beds of marly earth, formed unknown ages ago, are often met with, which, under the microscope, prove to consist, sometimes, wholly of the sileceous shells of diatomaceous animalcules, frequently bearing a precise resemblance to the living forms which now abound in all our stagnant waters. But in the more conspicuous fossil remains occurring in the geological strata of different ages, important modifications of structure are apparent; certain species of animals and plants prevailing for a while, becoming extinct, and being succeeded by others of a modified type.

Without unduly dwelling upon this subject, it is worthy to be remarked, that at least one great lesson may be learned from the study of these organic remains; especially from contemplating those of the

more highly organized types, namely: That as we, in the brief day of our actual observation, have seen organic individuals begin and end their respective lives; organic varieties, as of fruit, &c., appear, flourish and decay; and even organic species to become extinct, as the Dodo and the Irish Elk; so may we infer, from the inspection of the remains of successive extinct races of beings, that all species or kinds, as such, have begun their career, will flourish for, we know not how long, and will ultimately decay and disappear; their places to be supplied by modified species and kinds.

The observed average duration of individual beings varies, from a few hours, as is exemplified in the minute world of life revealed by the microscope,—as in the Vorticella ramosa, different species of Mucor, &c.,—to a few centuries, as is inferred to be exemplified in whales, elephants and forest trees. What naturalists call varieties, possess a duration extending, more or less well marked, through, perhaps, four or five generations of individuals. Species, so called, have a much longer life. Concerning the average duration of species, nothing very reliable is known; perhaps a thousand successive individual generations might retain to the last, the essential specific characters. To pursue this subject farther, by attempting to conjecture the duration of organic races and natural orders, would be profitless, inasmuch as mere conjecture would alone supply us foundation to build upon. Nevertheless, a careful study of the organic remains which geological researches have brought to light, give strong color of truth to the general conclusion, that all organic nature is in a state of continued change; the progress of which, though often too slow for our direct appreciation, is, in the limitless flight of long successive ages, not the less certain.

Bringing to your notice another relevant topic, the relation or comparison borne by organized and living bodies to inorganic dead matter, I am desirous to impress upon you, what seems to me a clear truth of nature—that there is no gradation of one into the other; on the contrary, in no known instance do they seem in the smallest degree to approach each other in their essential characteristics. *Mineral matter* may be homogeneous, may generally be changed into the liquid or gaseous condition, without injury or destruction; may possess a crystalline form; has a definite, and more or less simple chemical composition, which can be numerically expressed in combining proportions of its component elements; and mineral bodies increase or decrease in volume indefinitely, by addition to, or abstraction from, the surface,—with no specific necessary limit to their duration in time. *Organized* and *living bodies* are never of homogeneous texture; never wholly liquid or

gaseous, but always possessing solidity, with forms more or less rounded, never crystalline ; increase in volume by an internal process of assimilation, to which their organized structure of cells, vessels and circulating fluids, is subservient ; never exceeding in size a specific limit, nor enduring in time beyond a specific limited period. Organized bodies must be regarded as indefinite in chemical composition, although the elements composing them, when detached, are truly identical with the elements of mineral matter ; and indeed, definite compounds, the proper subjects of Chemistry, exist componently in the organized structure, but so indefinitely combined with each other, as to be beyond the clear elucidating power of the Chemistry of the present day. All this is true, even of the most simple organic cell, whose existence has been revealed by the microscope. And as to simplicity of structure, any one accustomed to the use of a good microscope, can easily assure himself that the simplest structure visible, really possesses a degree of organization which far transcends the defining power of the instrument ; so that truly primitive or elementary structure has never yet, by human eyes, been seen.

Organized and living bodies can receive, absorb, elaborate and assimilate dead matter from the mineral kingdom ; but no authentic instance is yet adduced, among the myriads of scrutinizing observations made, where mineral matter by itself has elaborated and exalted itself into the organized and living condition. The experiments of Crosse and Weeks upon the production of Acari by Galvanism, deserve no weight in this question, for they were not conducted in a manner to exclude with certainty organic germs. We may, indeed, set it down as established, that organized matter has its inception with organized matter anteriorly existing ; that all living beings are descended from living beings ; just as motion is exclusively derived from pre-existing motion, and just as the present material combinations are derived from pre-existing matter.

The hypothesis of spontaneous or fortuitous generation, vaguely entertained by so many, is, therefore, an unnecessary and absurd assumption ; unsupported by a single instance, among unnumbered well ascertained contrary instances ; and not in harmony with the obvious laws of nature. This notion is apt to be entertained by superficial observers, to account for the appearance of mould, algæ, infusory animalcules, and parasitic organisms, in situations, and under circumstances, where no preceding germs are easily observed ; especially in the more obscure departments of organic nature. But closer observation reveals

the fact, that the earth, the waters and the air, swarm with exceedingly minute spores or organized particles, which are ever ready to develop themselves into visible life, where the requisite conditions obtain.

I have had the satisfaction, the past summer, of noting some interesting observations relating to these matters, of the following import, respecting the diffusion of microscopic germs in the atmosphere. Upon examination of the stagnant water from the swamp back of the city, I always found it abounding with many microscopic forms of animal and vegetable life. Allowing vessels of it to stand some days in my office, I repeatedly remarked a translucent scum gathering upon its surface. This scum, examined with the microscope, proved to consist mostly of minute, detached, rounded, cylindrical and spheroidal, germinal bodies,* that seemed inclined to separate themselves from the water, and lie dry upon its surface. Indeed these germinal bodies, mostly devoid of voluntary motion, appeared to exercise a sort of repulsion to the watery particles. In some instances observed, as the water sunk in the vessel from evaporation, these germinal bodies disappeared more or less, evidently rising into the atmosphere. Being organized particles, they could not be, in themselves, volatile, and they must have been lifted into the air by some extrinsic agency; and in my opinion, the buoyant agent is the vapor of water, which, in ascending, as the water evaporates, must have sufficient impetus to raise to a moderate height the little bodies in question, which on an average, are less than the thirty thousandth part of an inch in diameter. In further elucidation, I had no difficulty in demonstrating the abundant existence of similar minute organized germs in the air. Upon slowly passing a stream of air through pure distilled water, some few would be retained by the water, discoverable by the microscope. By first passing the air through a heated tube, so as, by partial disorganization, to overcome their repulsion for water, then sending the current through water, a much more abundant deposit of them will be apparent. Wetting the dust which subsides upon furniture, and subjecting it to microscopic examination similar organized motes are to be seen.

I will here add, that microscopic organisms abound to an incredible extent in all stagnant waters, whether fresh or salt; and, indeed, more or less in all natural waters that are moderately clear; and hence such waters are prone to undergo a putrefactive fermentation, when long kept in close vessels, as in the water tanks of a ship, in a long sea voyage.

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* A drawing was shown, representing the appearance of several varieties of these ora, magnified 3000 diameters.

Those turbid waters like the Mississippi, which transport sileceous and earthy particles, and into which light cannot penetrate, seem unfavorable to these minute organized developments. I have fully satisfied myself that the Mississippi water is remarkably pure in this respect, and among the very purest waters in the world. In water freshly taken from the river, scarcely any thing organized is perceptible, excepting a few of the minutest spores or germs; probably not one thousandth part of what exists in the waters of the Ohio, the Hudson, or the Thames. Hence the high estimation in which the water is held for its salubrity, especially by sea-faring men. Prof. Bailey, of West Point, the most eminent microscopist of America, examined, some years since, a bottle of this water, taken from the river opposite St. Louis, and found therein, some two or three weeks after its removal from the river, near twenty different species of animalcules; but from the tenor of a letter which I lately received from him, I believe he is now satisfied, they may have been developed in it, after its removal from the river, from the minute spores or germs I have spoken of.

Gentlemen, it may be said or thought by some of you, and not without reason, perhaps, that my discourse is mostly a digression from the subjects with which Chemistry is connected. It may be asked what relation has Chemistry to Astronomy, Geology, to organic species, to the contrast of animals and plants, and especially to the wonders of the microscope. Without attempting to make the special answers that might be brought forward, I must content myself by remarking, summarily, that all of nature which we can well observe, and which we flatter ourselves that we partly comprehend, consists, as a basis, of matter; and that the only intimate and useful knowledge we have of the different sorts and qualities of matter, whether engrossed by organized beings, or contained in the wide mineral world, is derived from Chemistry. Leaving out of consideration the subtile agents, light, heat, electricity, &c., Chemistry has exhibited to us some sixty-three seemingly distinct and elementary kinds of matter; all of which, in turn, by various modes and states of combination, go to make up the vast variety of sands, clays, rocks, earths and minerals, constituting land; the liquid constituting water; and the aerial mass constituting air—thus totally constituting dead or brute matter. And as to animals and plants, the living part of terrestrial creation, Chemistry has clearly shown, that they, too, are composed of some of the same elements; mostly derived, it is true, from the atmosphere, yet containing essentially more or less of the more fixed elements furnished by the mineral world; and so far as we possess any insight into the nature of the molecular changes

going on in living beings, we are entirely indebted to Chemistry for the basis of our knowledge.

Let us not deceive ourselves as to the extent of chemical pretensions; for it is proper and profitable for us to be well apprized of the practical limits of chemical investigation. No man has seen, and no man can see, an individual chemical molecule. Its minuteness is fairly inferred to transcend even the powers of the imagination to form an adequate conception of, being in this respect, perhaps, as far removed from our direct observation in the infinitessimal world, as in the universe abroad, those heavenly bodies in the wide regions of space, so remote as to transcend the utmost ken of the telescope. These molecules act and re-act upon and with each other, and produce us certain cognizable results; but we have found as yet no means of forming a satisfactory idea as to how they act, in what their action consists, nor as to what mechanism they are endued with, and enabled, without abatement, to retain the wonderful energies they manifest.

Where we can fairly and fully observe phenomena, as in ordinary dynamics, we find all in accordance with plain common sense; comprehensible; in harmony with the great principle, that cause and effect are continuous and equivalent. Things wonderful, and even seemingly miraculous, when first presented, sink, upon a closer scrutiny, to accord with the known principles of nature—so much so, as to warrant the analogical and general conclusion, that really all nature is truly *natural;* and, the mystery of its existence excepted, devoid of inherent mystery or miracle; cause and effect being always equivalent and continuous. In Chemistry, it must be acknowledged, we are, as yet, far from being able to demonstrate this continuity and equivalency. It will, perhaps, ever transcend human power to do so. Of this, however, we may be assured, that in whatever direction, and with whatever energy we may push our investigations, we shall still find ourselves in the field of reasonable nature. And if we cannot dispel all the clouds of apparent mystery that obscure the truth from our observation, we can acquire practical knowledge of useful account,—enabling us to command from passive nature the means of relieving the wants, mitigating the sufferings, and increasing the happiness of mankind.

V.—EXPERIMENTS WITH THE LIGATURE ON ANIMALS.

DOCTOR HESTER:

Dear Sir—At your request, I give you a succinct description of experiments made by me on living animals. The following is a faithful and correct account of said experiments, with their bearings on the actual state of Physiology and Pathology, etc.

Some years ago (I was then a student in the Charity Hospital of New Orleans) I noticed repeatedly, that patients dying in the very last stage of Phthisis Pulmonalis, offered at post mortem examination, strong thick cords crossing the cavernous hollows made by the progress of the disease. Upon close examination, I found that these cords were the pulmonary arteries obliterated in that part of the lungs. Such a pathological fact suggested the idea of applying this natural process of obliteration of the arteries in the cure of aneurisms. During my stay in Mexico, I have been able to make experiments on living animals, and such experiments have confirmed the views I entertained on the subject.

On three living sheep, I took up one after the other the following arteries: The two carotids, and the two femoral.

After the first week, I noticed in all three an accelerated process of cicatrization, without any apparent suppuration, although the wounds had not been united by sutures, or any other means. At that time (8th day) I dissected in one the part where the ligature had been applied. Here I must say, that instead of using the ordinary silk ligatures employed in the operation of aneurism, and instead of tying the arteries (as is usually done in the operation of aneurism) tight enough to cut their inner coats, I used the common tape, and pushed it loosely round the artery, as is done in the case of a seton.

After a minute dissection, I noticed there was no perceptible pulsation at the distal side of the artery. I withdrew the ligature quite easily, as it did not press strongly on the artery. I could not perceive as yet any circulation in the above mentioned portion of the artery. I then cut the artery across, and observed that it was completely blocked up by a thick coagulated blood (the clot observed after tying an artery in the usual way.) Withdrawing the clot, a jet of genuine arterial blood came out.

The week after, (16th day) I dissected the neck and leg of the second sheep, and found that the wound was completely cicatrized. There was, as in the first case, no perceptible circulation in the artery below

the seat of the ligature. Withdrawing the ligatures, there was no pulsation; cutting the artery, no blood came out; the clot was firmer, and adhered to the walls of the artery. I detached the clot with a little more difficulty than in the first sheep, and arterial blood came out.

In the third sheep, (on the 22d day) the clot was more strongly attached to the walls of the artery, and more firm, than in the two first instances.

In none of these three sheep could I notice any suppuration.

Thinking that some inflammation and suppuration would hasten the obliteration of the arteries, and render it more perfect, I performed successively the very same operation on two more sheep, three dogs and one calf. Instead of using simply the tape line, as I had done in the first cases, I applied to it some strong precipitate ointment, and took a great deal of care in bringing daily a fresh portion of the tape line in contact with the artery, and the parts surrounding it. It was with difficulty that I produced inflammation and a little suppuration in the sheep, but readily produced it in two dogs and in the calf.

After the 17th day, the obliteration of the arteries was perfect in all the sheep, the dogs, and in the calf.

Now, what is the bearing of these experiments in the operation for aneurism—especially in the large arteries? Evidently, if performed on the human being, as I performed it on the living animals, there is not the slightest risk of secondary hæmorrhage; which, consequently, adds considerably to the chances of success, considering that in man inflammation and suppuration is more easily produced than in animals; such inflammation would, at the same time, be propagated to the different coats of the arteries, and, consequently, promote much quicker the obliteration of the arteries.

Yours, respectfully,

J. PIERNAS, M. D.

San Luis Potosi, Mexico, 1851.

Part Second.

EXCERPTA.

I.—ON THE PREMONITORY SIGNS OF SEVERE CEREBRAL DISEASE AND THEIR IMPORTANCE.

BY DR. DEVAY, M. D.

[We have considerably curtailed this valuable essay, but have endeavored to omit nothing of real utility. The author introduces the subject by remarking on the extreme difficulty in arriving at an accurate diagnosis in cerebral affections, the symptoms being induced by lesions of various kinds—the same difficulty exists in the interpretation of the premonitory symptoms, which are nevertheless excellently demonstrated in the following observations :—]

I. *Premonitory signs, furnished by the intellectual and moral faculties.*—Almost all authors of repute have mentioned, without always attaching much importance to them, the disturbances of intellect which precede attacks of severe cerebral disease. Insanity has its period of incubation, its premonitory symptoms; and frequently it is found that the first act of insanity, which caused alarm, has been preceded by several symptoms which had escaped observation, and sometimes the first phenomenon of the disease has been taken for its cause. The insane often combat their false ideas, before the disorder of their reason, and the internal contest which precedes the explosion of their madness, are perceived. The most general precursor of every severe affection of the brain is a state of *cerebral lassitude*, presenting much analogy to that state of intellectual torpor which follows severe or pestilential fevers. There is observed in the habitual gesture of the patients, in their attitudes and movements, a total absence of what may be called the consciousness of action. The brain seems to have lost its *balancing* power over the *ensemble* of the functions of the life of relation. These patients are often in a constant state of slight habitual vertigo, which they call *weakness of the head*, and which is frequently accompanied by debility in the limbs.

The *memory* is frequently impaired in the precursory period of cerebral affections. Thus, patients have forgotten the names of their friends, or of the most common things. In conversation, they have difficulty in finding proper words to express their meaning, and are obliged to make use of circumlocutions.—More rarely, the memory becomes more powerful; it seems to take a new flight, and reproduces, to the great astonishment of the patient and his attendants, events which had seemed to be entirely forgotten. The curious and inexplicable fact of *reminiscence* corresponds to the exaltation of the special sensibility of certain senses. It is sometimes observed after a slight attack of apoplexy.

Next to the impairment of the memory, and also of the attention, which is fixed with difficulty, or not at all, on objects presented to the notice of the individual, the most striking change is in *volition*, which is diminished. The man who has hitherto been most firm, who has shown most tenacity in his views, who has pursued the plan of his life with great determination, becomes, in a measure, like the toy of a child; those who are about him, even his inferiors, can command him. Human depravity has often taken advantage of this moral decadence for culpable ends; and the man who has hitherto most rigorously and carefully managed his affairs, is all at once spoiled of his goods, either by extorted donations, or by burdensome expenses. The public see in these cases *bizarreries* of character; the physiologist and the physician see in them the first expression of a pathological condition. This weakening of the will, which, according to our observations, is chiefly connected with those cerebral lesions which lead to lunacy, or to paralysis of the insane, necessitates an alteration of the judgment. . . . . The will is the result of the other faculties; and it is not because it is wanting in the idiot, or lunatic, that they are irresponsible; but rather because they are ignorant of the rules which should direct it.

There is but a slight transition from this to *perversion of the moral faculties*—one of the most mysterious points in psychology.

The abrupt changes which may occur in a man's tastes, in his inclination, in his manner of living, in a word, in his social aspect, are worthy of attention.—Modifications of this nature, when they do appear in a slow and progressive manner, do not arise from the action of moral influences, and can only arise from a change in the nervous system. Thus it has long been remarked, that unusual gaiety in a habitually grave individual may denote the approach of an attack of apoplexy. It is the same with those who suddenly seek for noise and bustle, after having loved retirement and quietness for a great part of their life. We have known a man, aged 57, who, having up to that led a grave and even austere life, gave himself up to the pursuit of amusements unsuited to his age, and was, a few months after, seized with sudden and complete apoplexy (*apoplexie foudroyante.*) A complete change in the turn of the ideas, when it is not the result of advanced age, when it manifests itself in a short period of time, and when it cannot be traced to the action of moral influences, is very suspicious. We have known a young physician who exhibited this phenomenon in a very marked manner, and who, a short time after, was seized with paralysis of the insane. When we knew him three years before, he was very free in his assertions, and inclined to exaggerate; but he had become discreet, and wary in his speech. His former condition, and the medium in which he had lived, showed sufficiently that this change could not be the effect of *progressive amendment;* we considered that there was some disease, and our opinion was ultimately confirmed.

It is conceivable, that the same psychological perturbation which changes the moral sentiments may likewise impair the sentiment of self-preservation; and hence that *sucidal melancholy* may mark the commencement of a severe affection of the brain. The disease is, moreover, very often conjoined with a lesion of the intellectual and affective faculties.

II.—*Premonitory Signs furnished by the Sensorial Functions.*—Most of these are furnished by the sense of *vision.* We will merely mention dimness, the appearance of objects as if coloured red, photophobia, &c., which may indicate threatening meningitis, as well as cerebral hyperæmia; these symptoms bear an especial relation to acute diseases of the encephalon. These signs may exist several years before the explosion of the disease. Before attacks of apoplexy, impairment of vision sometimes exist in a high degree without being known to the patients, especially when, as is most commonly the case, it is not sufficient to prevent them from seeing those who are about them. The mis-

take is the more easy, as this symptom may be limited to one eye; the other compensating for the weakness of its fellow. Amblyopia is a frequent symptom; sometimes there is a complete blindness, as in the case of the Baron Hornestein, cited by Wepfer (*Anatomia Apoplecticorum,*) who became blind three weeks before a fatal attack of apoplexy.

A valuable sign, belonging in some degree to what may be called the expression of the eyes, consists in a want of parallelism in these organs; it is not squinting, nor is it the look of hallucination. It seems pretty well defined by the following expression: *The eyes are not in the axis of the reason.* There may be certain defects in this relation pointed out between a material object and a moral fact; but those persons who are accustomed to scrutinize the human look, and to see reflected in it the different passions will easily understand me.

The phenomenon of exaltation of special sensibility, as a precursory sign of a severe encephalic lesion, is sometimes met with. It is in this case, as in other circumstances in which it is observed, one of the most mysterious problems for the physiologist. It is well known that hearing often becomes excessively acute before attacks of apoplexy. The patients, incommoded by the least noise, become irascible; they perceive distant sounds which are unheard by those who are with them. The fineness of hearing must be distinguished from the perception of strange and imaginary sounds, which is nothing but a sensorial hallucination.

The sense of *hearing* may present the same modifications as that of vision. Some persons are tormented with drumming in the ear, with continued or intermittent tinkling. Some believe that they hear the most strange noises.—These hallucinations are by no means the constant precursors of an encephalic attack; they may be connected with simple perversions of the sensorial function.

Premonitory Signs furnished by the Organs of Motion and Sensation.—The alterations of the *muscular functions* present great variety, from the simple hesitation which we have already noticed, to paralysis which is complete, but which, on account of its nature and its seat we shall denominate *irregular paralysis.* It is not uncommon to observe a state of general languor which makes the patients seek for rest—for the *far niente.* Van Swieten has remarked, in treating of apoplexy: *Primo oritur languor et amor quietis et otii.* At other times those who are about to be attacked with cerebral disease are much agitated, and expend a great amount of activity in their movements.—Dr. Tessier has lately attended a lady, aged 60, who from the critical age, has been subject to attacks every month, at the period when she used to menstruate. She loses consciousness; and after having recovered her senses, is paralysed on one side of the body, with great embarrassment of speech. These symptoms continue some days, and gradually leave her, to return at the fixed period. But some days before the new attack, this lady, though usually quiet and peaceable, exhibits much agitation; she cannot remain in her place, and those who are about her always know what this sign means. In this case we recognize an example of *periodic nervous apoplexy.*

Impairment of muscular motion is exhibited in various degrees. It is especially remarked in the lower limbs, which seem to bend under the weight of the body, and render the gait rather unsteady. The debility is the more striking if the person be young, and has no apparent cause for it. Portal was able to prognosticate an attack of apoplexy in a gentleman apparently in perfect health, from observing a slight fixedness in the left eye, and a slight weakness in the leg of the same side. *The dignitus semi-mortuus*, noticed by Dr. Marshall Hall, is one of those instances of *irregular paralysis*, of which it is so important to determine the true signification. Some time ago, we saw the following case:—A man, aged 54, one day called on us. In conversation, he jok-

ingly noticed a sort of deadness which he felt in the little finger of the left hand, while the rest of the hand was able to perform its ordinary functions. We advised him to put himself under treatment: he neglected this advice, and some days after was seized with cerebral congestion, which left his faculties remarkably weakened. The *digitus semi-mortuus* has shortly since been noticed in a valuable communication from Dr. Gillet de Grandmont.

Irregular paralyses, which seem to arise from exhaustion of the sources of the sensitive and motive powers, may appear under circumstances in which they do not constitute a symptom of such great importance. Such are those which sometimes follow hysterical convulsions, lead-colic, venereal abuses, &c. Here, these phenomena are connected with *transient* modifications of innervation. The suddenness of the attacks, their frequent isolation from other symptomps, their seat in parts distant from each other, while those lying between preserve the integrity of their movements, constitute the exceptional characters of those palsies which are connected with a latent alteration in the nervous centres. We must not lose sight of the difficulty of deglutition which some patients experience some time before being attacked; as well as the semi-paralysis of the vocal cords and tongue, giving rise to stammering or aphonia. The paralysis of the upper eyelids, which become œdematous, is also a sign of great value.

General sensibility may be abolished, simply diminished or exaggerated. The first two forms almost always follow muscular paralysis; but they may exist alone. Sensibility may be exaggerated in two forms. The patients may present hyperæsthesia, or exquisite sensibility of the whole cutaneous surface; so that the least touch troubles them. This is an increased anormal sensibility—an exaggeration of the sense of touch, corresponding the exaltation of the sensorial faculties which we have already studied. Sensibility may also be exalted in the form of pain; and this merits our most careful attention. Violent pains, precursory of a severe cerebral lesion, have often been mistaken for neuralgia. The same is the case in treating cephalagia, supposed to be dependent on dyspepsia: and this error is more readily fallen into, as the stomach is often disordered. The diagnosis in these cases is sometimes difficult; but the duration and violence of the pain will lead to the suspicion, that there is something more than ordinary headache; and that, although the functions of the stomach are troubled at the same time, the headache is often too intense to be accounted for by the state of that organ. The patient cannot in general endure a warm room, nor the noise made by persons about him, nor even the fatigue of agreable conversation, without suffering an aggravation of his headache. The paroxysms are sometimes accompanied with vomiting, and sometimes with violent beating in the head. If with these symptoms we remark paleness of face, and weakness of pulse, and if active measures have been employed without benefit, we are led to suspect the presence of organic lesion.* Painful cramps are not unfrequent. Portal has seen patients who suffered severely from cramps in the legs before an attack of apoplexy.

Cutaneous sensibility presents other singular modes of perversion. A case is related of a man who, several months before being attacked with apoplexy, experienced from time to time an absolute loss of sensibility on five or six isolated points of the skin of the thorax, each of about the size of a five-franc piece. Here the skin might be pinched without causing any pain; beyond, the sensibility was perfect. The partial abolitions of sensation were not constant. On some days there was not the least diminution of sensibility; then suddenly, and simultaneously, it was annihilated in the isolated portions. Such unusual modifications of functions directly dependent on the brain, ought to furnish us with arguments in favor of the possibility of moral and instinctive per-

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* Abercrombie. Diseases of the Brain, p. 453.

versions, and of their dependence, not on the corruption of the moral faculty itself, but on a latent pathological condition of the organ. Hence arises the doctrine of irresponsibility.

It is in the life of relation that indicatory signs are especially to be looked for. At the initial period of severe cerebral disease, organic life reveals few or no disturbances. The symptoms which may exist under this head only acquire value in connexion with those which are derived from the life of relation. The brain must be much affected to produce changes in the nutritive function. Excepting sleep, which is one of the confines of animal and organic life, there is not in the latter any essential functional disturbance. In the initial period, most patients have lost the power of sleep; or, if this function be performed, it is rather a fatiguing drowsiness than refreshing sleep. The digestive functions present no other special disorder than obstinate constipation, which is often difficult to be overcome by drastics. The eyelids sometimes become œdematous; and, in some subjects, attacks are preceded by small effusions of blood, even in the tissue of the conjunctiva. The secretions are but little altered.—The urine is sometimes highly albuminous; but this is a subject for further researches.—*Rankins' Abstract.*

II.—CLINICAL REMARKS ON THE PRACTICE OF AUSCULTATION.

BY DR. HUGHES BENNETT.

[Although in general, we abstain from giving extracts from lectures intended for students, yet the peculiar lucidity of the present remarks, and the knowledge that auscultation is even yet not so fully practised as it should be, induces us to depart from the rule.]

Special Rules to be followed during Auscultation of the Pulmonary Organs.—1. In listening to the sounds produced by the action of the lungs, we should pay attention to three things:—1st. The natural respiration. 2d. The forced or exaggerated respiration. 3d. The vocal resonance. For this purpose, having listened to the sounds during ordinary breathing, we direct the patient to take a deep breath, and then, still listening, we ask him a question, and during his reply judge of the vocal resonance.

2. You should commence the examination immediately under the centre of one clavicle,—and having ascertained the nature of the sounds and vocal resonance there, you should immediately listen in exactly the corresponding spot on the opposite side. The examination should be continued alternately from one side to the other, in corresponding places, until the whole anterior surface of the chest is explored. The posterior surface is then to be examined in like manner.

3. When, in the course of the examination, anything different from the normal condition is discovered at a particular place, that place and the parts adjacent should be made the subject of special examination, until all the facts regarding the lesion be ascertained.

4. It is occasionally useful to tell the patient to cough, in which case we are enabled to judge:—1st, of forced inspiration, as it precedes the cough; and 2d, of the resonance which the cough itself occasions.

Of the sounds elicited by the Pulmonary Organs in health and in disease.—I am anxious to impress upon you, that the sounds which may be heard in the lungs are like nothing but themselves. Students are too apt to take up erroneous notions from reading on this subject, and, instead of listening to the sound actually produced, fatigue themselves in a vain endeavor to hear something like the crackling of salt, the rubbing of hair, foaming of beer, other noises to which these sounds have been likened. Preconceived notions frequently oppose themselves to learning the truth, and have to be got rid of be-

fore the real state of matters can be ascertained. Hence the great importance of obtaining your first impressions of the sounds to be heard by auscultation, not from books or lectures, but from the living body itself.

If you listen through your stethoscope, placed over the larynx and trachea of a healthy man, you will hear two noises,—one accompanying the act of inspiration, and the other that of expiration. These are called the *laryngeal and tracheal sounds of murmurs.* If you next place your stethoscope a little to the right or left of the manubrium of the sternum, you will hear the same sounds diminished in intensity. These are the *bronchial sounds or murmurs.* If now you listen under and outside the nipple on the right side, or posteriorly over the inferior lobe of either lung, you will hear two very fine murmurs. That accompanying the inspiration is much more distinct than that accompanying the expiration. By some, on account of its excessive fineness, it is stated that there is no expiratory murmur in health; but this is incorrect. These sounds, then, are the *vesicular respiratory murmurs.* All these sounds become exaggerated during forced respiration, but in a state of health they never lose their soft character. Again, if you listen in the same places, whilst the individual speaks, you will hear a peculiar resonance of the voice, which has been called, in the first situation, *pectoriloquy;* in the second, *bronchophony;* while in the third, it is scarcely audible. A knowledge of these circumstances, and a capability of appreciating these sounds, are necessary preliminary steps to the right comprehension and detection of the murmurs which may be heard during disease.

I have to suppose, then that you have made your ears familiar with these sounds, and that you are acquainted with the present state of theory regarding their formation. This last may be stated in a very few words to be, that the respiratory murmurs are occasioned by the vibration of the tubes through which the air rushes, according to well-known acoustic principles. Hence they are loudest in the trachea, finer in the large bronchi, and finest in their ultimate ramifications. The vocal resonance, on the other hand, originates in the larynx; and diminishes or increases:—1st, according to the distance of any point from the source of the sound; and 2d, according to the power which the textures have in propagating it.

If now you examine, in succession, any six of the cases in the wards which are laboring under well-marked pulmonary diseases, you will have no difficulty in recognizing that all the sounds you hear may be classified into two divisions:—1st, alterations of the natural sounds; 2d, new or abnormal sounds, never heard during health.

I. *Alterations of the Natural Sounds.*—All the sounds of which we have spoken, and which can be heard in the lungs during health, may, in certain diseased conditions, be increased, diminished, or absent; their character or condition may be changed; and, with regard to the respiratory murmurs, they may present alterations in rhythm, or duration with respect to each other.

Alterations in Intensity.—Some persons have naturally louder respiratory murmurs than others; if this occur uniformly on both sides, it is a healthy condition. Occasionally, however, the sounds are evidently stronger in one place, or on one side (*puerile respiration,*) generally indicating increased action of the lung, supplementary to diminished action in some other part. In the same manner, there may be feeble respiration simply from diminished action, as in feeble or old persons; but it may also be occasioned by pleurodynia, obstructions in the larynx, trachea, or bronchi,—pleurisy, or pulmonary emphysema, or exudations filling up a greater or lesser number of the air-cells and smaller tubes as in pneumonia, phthisis, &c. Complete absence of respiration occurs when there is extensive pleuritic effusion or hydrothorax.

Alterations in Character.—The various respiratory murmurs may, in certain conditions of the lung, assume a peculiar harshness, which, to the ear of the

practised auscultator, is a valuable sign, indicative of altered texture. Thus in incipient phthisis the vesicular murmur under the clavicle is often *rude* or *harsh*. In pneumonia the bronchial respiratory murmur presents a similar character. When ulceration exists, it becomes what is called *cavernous* (hoarse or blowing;) and in certain cases of pneumothorax with pulmonary fistula, it assumes an *amphoric* character.

Alterations in Position.—It frequently happens that the sounds which are natural to certain parts of the chest, are heard distinctly where in health they are never detected. Thus, in pneumonia, *bronchial* or *tabular breathing*, as it is sometimes called, may be evident, where only a vesicular murmur ought to exist. This is often well marked with regard to the vocal resonance, as certain lesions, which occasion condensation or ulceration, will enable us to hear in parts where, under ordinary circumstances, no voice can be heard, either bronchophony or pectoriloquy.

Alterations in Rhythm.—In health, the inspiration is usually three times as long as the expiration. In certain diseased conditions, this relation is altered, or even inverted. In incipient phthisis we often find the expiration unnaturally prolonged. In chronic bronchitis and emphysema it is three or four times longer than the inspiration.

II. *New or Abnormal Sounds.*—These are of three kinds; 1st, rubbing or friction noises; 2d, moist rattles; 3d, vibrating murmurs.

1. *Rubbing or Friction Noises* are caused in the pulmonary apparatus by some morbid change in the pleuræ, whereby, instead of sliding noiselessly on one another, they emit a rubbing sound. This may be so fine as to resemble the rustling of the softest silk, or so coarse as to sound like the creaking of a saddle, grating, rasping, &c.; and between these two extremes you may have every intermediate shade of friction noise. This variation in sound is dependent on the nature of the alteration which the pleuræ have undergone. If covered with a softened thin exudation, the murmur will be soft; if it be tougher and thicker, the sound will be louder; if hard, dense, and rough, it will assume a creaking, harsh, or grating character, &c., &c. These noises are heard in the various forms of pleurisy.

2. *Moist Rattles* are produced by bubbles of air traversing or breaking in a somewhat viscous fluid. This may occur in the bronchi, when they contain liquid exudation, mucus, or pus, or in ulcers of various sizes. They may be so fine as to be scarcely audible (when they have been called *crepitating*) or so coarse as to resemble gurgling, or splashing, when they have received the name of *cavernous*. Here, again, between these two extremes, we may have every kind of gradation, to which auscultators have attached names, such as *mucus*, *submucus*, *subcrepitating*, etc. With these names you need not trouble yourselves; all that it is important for you to recognise is, that the rattles are coarse or large in proportion to the size of the tubes or ulcers in which they are produced. These rattles may be heard in pneumonia, phthisis pulmonalis, bronchitis, pulmonary apoplexy, etc.

3. *Dry vibrating murmurs* arise when the air tubes are obstructed, constricted, or lose their elasticity and become enlarged, whereby the vibrations into which they are thrown by the column of air, produce sounds or tones of an abnormal character. Hence murmurs may be occasioned of a fine squeaking (*sibolous murmur*), or of a hoarse, snoring character, (*sonorous murmur*), and between the two extremes there may be all kinds of variations, to which ingenious people have applied names. These only cause confusion; all that is necessary being to ascertain that the murmur is *dry*, and you will readily understand that the fineness or coarseness of the sound will depend on the calibre of the tube or cavity thrown into vibrations. They are usually heard in cases of bronchitis and emphysema. Occasionally they present a blowing character, as when ulcers are dry, which often occurs in phthisis.

The *vocal resonance*, besides undergoing the changes already noticed, in intensity, character, and position, may give rise to abnormal sounds. Occasionally it presents a soft, reverberating, or trembling noise, like the bleating of a goat (ægophony). The value of this sign, as indicative of pleurisy, was much overrated by Laennec. At present it is little esteemed. Sometimes the resonance gives rise to a metallic noise, like dropping a shot into a large metallic basin, or the note produced by rubbing a wet finger round the edge of a tumbler, or glass vessel. This is often best heard immediately after a cough, in cases of pneumo-thorax, or large tubercular excavations of the lung. Œgophony is supposed to be produced when a thin layer of serous fluid between the pleuræ is thrown into vibrations. The cause of metallic tinkling has created great discussion; but Doctors Spittal and Skoda have shown the existence of air in a cavity, which is thrown into vibrations in the necessary condition.

Such, then, are the principal sounds which may be heard by auscultation of the pulmonary organs in health and during disease. Many writers have endeavored to point out their diagnostic importance, and drawn up rules, which have always appeared to me much too arbitrary. Indeed, in so far as the education of medical students is concerned, I have long been persuaded that the study of these rules has retarded their powers of diagnosis, and afterwards led to dangerous errors in practice. I know of no dogma, for instance, more mischievous than the one which asserts a crepitating (that is, a fine moist) rattle to be pathognomonic of pneumonia, because it is just as common in phthisis, and is frequently heard in various other lesions of the pulmonary organs. Hence, we should regard a crepitating rattle, not as indicative of this or that so-called disease, but simply of fluid in the smaller air passages; increased resonance of the voice, as indicating hollow spaces with vibrating rales, or increased induration of the pulmonary textures, and not as diagnostic of phthisis, pneumonia, etc., and so on. I wish, then, strongly to impress upon you—

1st. That the different sounds are only indicative of certain physical conditions of the lung, and in themselves bear no fixed relation to the so-called diseases of systematic writers.

2d. No single acoustic sign, or combination of signs, is invariably pathognomonic of any certain pathological state,—and conversely, there is no pathological state which is invariably accompanied by any series of physical signs.

3d. Auscultation is only *one* of the means whereby we can arrive at a just diagnosis, and should never be depended on alone.

Special Rules to be followed during Auscultation of the Circulatory Organs.—1. In listening to the sounds produced by the action of the heart and arteries, we should pay attention, 1st, to the impulse; 2d, the character and rythm of the sounds; 3d, the place where they are heard loudest, and the direction in which they are propagated.

2. You should commence the examination by feeling for the spot where the apex of the heart beats against the walls of the chest, which will enable you to judge of the impulse. This ascertained, place your stethoscope immediately over it, and listen to the sounds. Then place the instrument above, and a little to the inside of, the nipple, near the margin of the sternum, and listen to the sounds there. In the one situation you will hear the first or systolic sound, in the other the second, or diastolic sound, loudest.

3. If any thing different from the normal condition be discovered in either one or the other position, or in both, they should be again carefully examined, and by moving the stethoscope below and round the apex of the heart, or above, in the course of the aortic arch or carotids, on the right and left side. etc., etc., it should be ascertained at what point, or over what space, the abnormal sounds

are heard loudest, and whether they be or be not propagated in the course of the large vessels. Occasionally listening over the back, and in the course of the descending aorta, may be useful.

4. When, during the above examination, we discover a new source of impulse and of sound in one of the large vessels, this must be especially examined, the limits of such impulse and sound carefully ascertained,—whether they be or be not synchronous with those originating in the heart,—their direction, etc.

5. Under ordinary circumstances, the respiratory do not interfere with the detection of the cardiac sounds; but where the former are very loud, and the latter indistinct, it is useful to direct the individual to hold his breath for a few moments. Sometimes the impulse and sounds of the heart are heard better by directing the patient to lean forward; they may also, if necessary, be exaggerated, and rendered more distinct, by directing him to walk up and down quickly, or make some exertion for a short time.

Of the Sounds elicited by the Circulatory Organs in Health and Disease.—On placing your ear over the cardiac region, in a healthy person, you will feel a beating, and hear two sounds, which have been likened to the tic-tac of a watch, but to which they bear no resemblance. They may be imitated, however, very nearly, as pointed out by Dr. Williams, by pronouncing in succession the syllables *lupp*, *dupp*. The first of these sounds, which is dull, deep, and more prolonged than the second, coincides with the shock of the apex of the heart against the thorax, and immediately precedes the radial impulse; it has its maximum intensity over the apex of the heart, below and somewhat to the outside of the nipple. The second sound, which is sharper, shorter, and more superficial, has its maximum intensity nearly on a level with the third rib, and a little above and to the right of the nipple, near the left edge of the sternum. These sounds, therefore, in addition to the terms first and second, have also been called inferior and superior, long and short, dull and sharp, systolic and diastolic; all which expressions, so far as giving a name is concerned, are synonymous.

The two sounds are repeated in couples, which, if we commence with the first one, follow each other, with their intervening pauses, thus: 1st, there is the long, dull sound, coinciding with the shock of the heart; 2d, there is a short pause; 3d, the short, sharp sound; and 4th, a longer pause; all which correspond with one pulsation. In figures, the duration of these sounds and pauses, by some, have been represented thus: The first sound occupies a third, the short pause a sixth, the second sound a sixth, and the long pause a third. Others have divided the whole period into four parts; of which the first two are occupied by the first sound, the third by the second sound, and the fourth by the pause. The duration, as well as the loudness, of the sounds, however, are very variable, even in health, and are influenced by the force and rapidity of the heart's action, individual peculiarity, and form of the thorax. Their extent also differs greatly. They are generally distinctly heard at the præcordial region, and diminish in proportion as we withdraw the ear from it. They are less audible anteriorly on the right side, and still less so posteriorly on the left side. On the right side posteriorly they cannot be heard. Their tone also varies in different persons; but in health they are free from a harsh or blowing character.

Great diversity of opinion has existed regarding the cause of these sounds, all of which you will of course have heard discussed before coming here. You must never forget, however, the cardiac actions which coincide with them; for our reasoning from any changes we may detect will entirely depend upon our knowledge of these. We may consider, then, that there coincide with the first sound, 1st. The impulse, or striking of the apex against the thoraic walls.

2d. Contraction of the ventricles. 3d. Rushing of the blood through the aortic orifices. 4th. Flapping together of the auriculo-ventricular valves. There coincide with the second sound, 1st. Rushing of the blood through the auriculo-ventricular valves. 2d. Flapping together of the aortic valves. Contraction of the auricles immediately precedes that of the ventricles. The result of numerous pathological observations, and of many experiments, is, that in health the first sound is produced by the combined action of the auriculo-ventricular valves of the ventricle, and of the rushing of the blood, which sound is augmented in intensity by the impulsion of the heart's apex against the thorax; whereas, the second sound is caused only by the flapping together of the sigmoid valves.

With the cardiac, as with the respiratory sounds, the alterations which take place during the disease may be divided into, 1st. Modifications of the sounds heard in health. 2d. New or abnormal sounds.

I. *Modifications of the Healthy Sounds.*—These refer to the variations the healthy sounds present in their seat, intensity, extent, character and rhythm.

Seat.—The sounds may be heard at their maximum intensity *lower* than at the points previously indicated, as in cases of dilated hypertrophy of the left ventricle, enlargement of the auricles, or of tumors at the base depressing the organ. They may be *higher*, owing to any kind of abdominal swelling pushing up the diaphragm. They may be more on *one side* or the other, in cases where the heart is pushed laterally by effusions of air or fluid in a pleural cavity. Various other circumstances may also modify their natural position, such as tumors in the anterior or posterior mediastinum, aneurisms of the large vessels, adhesions of the pericardium, deformity in the bones of the chest, etc.

Intensity and Extent.—These are *diminished* in cases where the heart is atrophied or softened; when there is pericardial effusion, concentric hypertrophy of the left ventricle, or emphysema at the anterior border of the left lung. They are *increased* in cases of dilated hypertrophy, of nervous palpitations, and when neighboring portions of the lung are indurated, especially in certain cases of pneumonia and phthisis pulmonalis.

Character.—The sounds become *clearer* or *duller* than usual, according as the walls of the heart are thinner or thicker. Occasionally they sound muffled in cases of hypertrophy, or softening of the muscular walls. Not unfrequently there is a certain degree of *roughness*, which is difficult to determine as being healthy or morbid. Occasionally it ushers in more decided changes, at others continues for years without alteration.

Rhythm or Time.—I need not say that the frequency of the pulsations differs greatly in numerous diseases, altogether independent of any special disease in the heart. In certain cardiac affections, however, the beats are *intermittent*, in others *irregular;* that is, they succeed each other at unexpected intervals. The *number* of the sounds also varies. Sometimes only one can be distinguished, it being so prolonged as to make the other. Occasionally three, or even four sounds, may be heard, depending either on the reduplication in the action of the valves, when diseased, or on want of synchronism between the two sides of the heart. Not unfrequently the increased and irregular movements of the organ, combined with the sounds, are of such a character as to receive the name of *tumultuous.*

II. *New or Abnormal Sounds.*—These are of two kinds: 1st. Friction murmurs. 2d. Blowing or vibrating murmurs. Dr. Latham has called them *exocardial* and *endocardial.* I am in the habit of denominating them *pericardial* and *valvular.*

Pericardial or Friction Murmurs.—These murmurs are the same in character, and originate from the same causes, as the friction noises connected with the pulmonary organs. It is only necessary to observe, that occa-

sionally they are so soft, as closely to resemble blowing murmurs, from which they are only to be distinguished by their superficial character and limited extent.

Valvular or Vibrating Murmurs.—These murmurs vary greatly in character, some being so soft as to resemble the passage of the gentlest wind; others are like the blowing or puff from the nozzle of a bellows; (*bellows-murmurs*) whilst others are harsher, resembling the noise produced by *grating*, *filing*, *sawing*, etc. They are all occasioned, however, by diseases interfering with the functions of the valves. Sometimes these do not close, and the blood consequently regurgitates through them; at others, whilst this is the case, they are constricted, indurated, roughened, and even calcareous, whence the harsher sounds. They may be single or double, and have their origin either in the auriculo-ventricular or arterial valves, or in both at once, the detection of which constitutes the diagnosis of the special disease of the organ. Occasionally these sounds resemble *musical notes*, more or less resembling the cooing of a dove, singing or twittering of certain small birds, whistling, tinkling, etc. These depend either on the excessive narrowing of the orifices, or upon any causes which induce vibrations of solids in the current of blood, as when there are perforations in the valves, irregularities of their margins, string-like or other shaped exudations on their surface, etc.

Auscultation of the large Vessels.—On listening to the stethoscope placed over the arteries in the neighborhood of the heart, we hear the same sounds as are produced at the sigmoid valves, propagated along its course, but more indistinct as we remove the instrument from the base of the heart. Those which are more distinct have only one sound, which is synchronous with their impulse and their dilatation. This sound is of a full character, but in health always soft.

In the various conditions of disease, we have a single or double bellows-sound, or it may be harsh, grating, rasping, etc. In the first place, you must ascertain whether any of these sounds are propagated along the artery from the heart, which you will know by listening over its course from that organ, and observing whether they increase as you proceed towards it. If the sound have an independent origin, it may originate from disease of the internal surface of the artery, when it will be harsh in proportion to the roughness; from stricture of, pressure on, the vessel, or from its dilatation. Generally speaking, the more dilated and superficially seated the vessel is, the sharper is the sound. Sometimes there is a double murmur in the course of a vessel, having an undoubted independent origin. This is most common in cases where there is an aneurismal pouch, into which the blood passes in and out through an opening narrower than the swelling itself. Occasionally one or both such murmurs may possess somewhat of a metallic ringing, or even musical character, when the margins of the opening are probably tense and thrown into peculiar vibrations. *Ibid.*

III.—PHYSIOLOGICAL ORIGIN AND PHYSICAL PROPERTIES OF URINE.

BY GOLDING BIRD, A. M., M. D.

In the investigation of the phenomena presented by the urine in disease, it is essential that the practitioner should not fall into the error of regarding a knowledge of the morbid condition of the secretion as *alone* essential in directing his treatment; nor must he commit the equally serious mistake of regard-

ing every deviation from the natural conditions of the urine as constituting a disease *per se.* The only view that can be legitimately taken of such conditions is, to regard them, not as constituting entities of morbid action, but as part of a series of pathological changes going on in the system, and more valuable than others as an index of disease, in consequence of the facility with which they can be detected. Hence every abnormal state of the secretion in question should be regarded rather as an indication of some particular result of morbid action, than as constituting the ailment itself.

It is true that those pathological states of the urine which are accompanied by the deposition of sediments, or gravel, as they are popularly termed, may, and frequently do, go on to the formation of the much-dreaded stone, or calculus; and thus have a claim, from their importance, to be regarded as definite and independent diseases. Still, both in their pathological and therapeutical relations, although frequently called upon, from the irritation they produce, to make the deposit or calculus the primary object of attention, yet we must never lose sight of the fact, that these are but effects, not causes; the last links of a chain, of which it should be the endeavor of the physician to grasp the first.

Sources of the Urine.

In a physiological sense, the urine must be regarded as arising from three several sources, each acting alike in preserving the equilibrium of the delicately adjusted balance of the secreting functions of the body. The effect of copious aqueous potations in producing a free discharge of pale urine, at once indicates one source of the great bulk of the urinary secretion, and demonstrates one of the most important functions of the kidneys, in their pumping off any excess of fluid which may enter the circulation. A second great duty of these organs, is shown in the physical and chemical characters of their secretion after the digestion of food is completed. Here, it is no uncommon circumstance to detect the presence of some traces of the elements of an imperfectly digested previous meal; and, in unhealthy and irritable states of the chylopoietic functions, to discover some abnormal constituent in the urine, arising from the incomplete assimilation of the recently digested food. Of the former of these states, the peculiar odor and color of the urine, after the ingestion of asparagus, sea kale and rhubarb, afford an example; and a good illustration ef the latter condition is met with in the copious elimination of oxalic acid from the blood, shortly after a meal, in some cases of irritative dyspepsia. Hence the kidneys have the duty of removing from the system any imperfectly assimilated elements of the food which had been absorbed while traversing the small intestines, and entered the circulating mass, as well as excreting the often noxious results of unhealthy digestion. To effect these most important results, it is essential that the substance to be removed should be soluble, or at least capable of being readily metamorphosed into a body soluble in the water of the urine; as nothing can be excreted from the kidneys without breach of surface, unless in a state of solution. The third function performed by the kidney is, its serving as an outlet to evolve, from the animal organism, those elements of the disorganization of tissues which cannot perform any ulterior process in the economy, nor be got rid of by the lungs or skin. The disorganization of tissues here alluded to, is a necessary result of the conditions for the growth and reparation of the body.

It is generally admitted, that during each moment of our existence, every atom of the frame is undergoing some change or other; the old matter is absorbed, and thrown off at one or other of the excreting outlets of the body, and new matter is deposited from the blood to supply its place. The old and effete atoms of the animal structure are not excreted in the form of dead tissue, but, becoming liquefied, they re-enter the circulation, and their elements become rearranged; one series of combinations thus produced, rich in nitrogen, is ex-

creted by the kidneys, whilst those products which contain a preponderance of the inflammable elements, carbon, hydrogen, and, according to some late researches, sulphur, are called upon to perform, chiefly through the medium of the liver, an important office previous to their final elimination from the system. Thus the blood is not only the source of the elements which serve for the nutrition of the body, but it also serves like a sewer, to receive the matter arising from the waste of the tissues.

It is therefore necessary to recognize three distinct varieties of the urinary secretion, each characterized by certain peculiarities: First, that passed some little time after drinking freely of fluids, generally pale, and of low specific gravity (1.003--1.009), *urina potus*. Second, that secreted shortly after the digestion of a full meal, varying much in physical characters, and of considerable density (1.020—1.028, or even 1.030), *urina chyli vel cibi*. Third, that secreted from the blood, independently of the immediate stimulus of food and drink, as that passed after a night's rest, *urina sanguinis;* this is usually of average density (1.015—1.025), and presents in perfection the essential characters of urine.

As the elements of urine are thus assumed to owe their origin to a process by which the effete elements of the body are removed, it may be useful to inquire how far we are enabled to trace the exhausted tissue through its several changes, until it disappears as a fluid excretion. It is true, that, in the present state of our knowledge, it would be alike rash and presumptuous to dogmatically lay down any laws, under which the changes alluded to, occur; but it cannot be denied that we begin to see a glimmering of light, apparently in the right direction, and some few stages in these wonderful results of vital chemistry are becoming visible. At all events, enough has now been done, more especially by the illustrious head of the Giessen school, and his pupils, to enable us to draw some inductions, which, although not extensive enough to be admitted as absolutely true, are nevertheless worth attention, as suggestive of much information, which each day's labor now promises to extend.

Food is taken into the stomach, and undergoes certain changes, by which such of its constituents as are capable of forming albumen, as the protein elements of all animal and vegetable ingesta, are separated unchanged, and portions of its saccharine and amylaceous elements are converted into fatty or oily matters. This act constitutes the *first stage* of what has been aptly termed, by Dr. Prout, *primary assimilation*. The elements of food thus separated, or re-arranged by this process, being absorbed by the lacteals, reach the right side of the heart, and being exposed to the influence of the air in the lungs, become converted into blood. This act constitutes the *secondary stage* of primary assimilation. From the blood all the tissues of the body are formed, and the waste of the animal structures supplied; a process forming the *first stage of secondary assimilation*. The old and exhausted material has then to be removed, to make room for the deposition of new matter, by a process referred to the *second, or destructive stage* of the secondary assimilation of Dr. Prout, the metamorphosis of tissue of Prof. Liebig.

Dr. Prout has expressed an opinion, that the elements of the albuminous tissues of the body are, during the process of metamorphosis, so arranged as to be converted into uric acid, or urate of ammonia, and the atoms not entering into the composition of these bodies, are so combined as to form "certain ill-defined principles." The ulterior changes which the gelatinous tissues undergo in the act of destructive or metamorphic assimilation, are supposed by this distinguished physician to be intimately connected with their conversion into urea, and some saccharine principle, or its close ally, the lacteal acid. These opinions do not admit of positive proof, and hence can only be regarded as probable suggestions.

Baron Liebig has, in following the track thus first pointed out by our late illustrious countryman, with a boldness which at least excites our admiration, endeavored to express in numbers the changes occurring during the changes of destructive assimilation. He has assumed that the ultimate composition of animal flesh, as á muscle, and of blood, can be expressed by the same formula, and are, consequently, chemically identical. When, therefore, animal fibre is taken into the stomach, it undergoes a kind of imperfect solution, and reaches the circulation, possessing nearly the same chemical composition as the blood, with which it becomes mixed. It then undergoes certain changes in the lungs, assuming, probably, a more highly vitalized condition, connected, essentially, with the conversion of its albumen into self-coagulating fibrin ; bodies, however different in their physical and molecular arrangement, nearly identical in composition. Reaching, in their course, the nutrient capillaries, the elements of the food are deposited in the substance of a tissue, as a muscle, whose waste they thus supply. Ere these new molecules can be deposited, room must be made for them by the removal of old matter, and then the following beautiful results of vital chemistry are supposed to come into play. The exhausted atoms of the muscle cannot re-entre the blood as fibres, but their elements must be re-arranged, so as to form soluble compounds capable of being absorbed into the circulation, and be carried to other organs. They, therefore, undergo destructive assimilation or metamorphosis; water and oxygen are conveyed to the muscle, the former in the fluid of the blood, the latter in the red particles, and the result is the re-arrangement of the elements, which, whilst it enables the old tissues to be removed with facility, furnishes the pabulum for other and important secretions.

The researches of Professor Mulder of Utrecht, on the presumed combinations of protein with oxygen, have thrown much light on a very obscure part of the act of metamorphosis of tissues, which constituted the least tenable part of Liebig's hypothesis ; he having, as already stated, assumed, that oxygen is conveyed to the capillaries in the arterial blood-corpuscles, combined with iron, as sesquioxide—which, giving up part of its oxygen, reaches the venous blood as protoxide. This idea can be only regarded as an ingenious assumption, for which no proof is offered by its talented author. All the elements of our food capable of being organized into albuminous tissues, consist chiefly of a substance, which, from the important functions it fulfils, is called protein, a compound of carbon, nitrogen, hydrogen, and oxygen; C48. H36. N6. O14., or, C40. H30. N5 O12., according to the mode in which the formula is calculated from the per centage composition, combined with varying proportions of sulphur and phosphorus. Professor Mulder believes that he has demonstrated the existence of two oxides of protein, a binoxide and tritoxide, both of which are formed in the animal economy, and constitute, when combined with fatty matter, the buffy coat of inflamed blood. He considers that the protein of the food, reaching the right side of the heart, and then circulating through the lungs, combines with oxygen, forming oxy-protein (binoxide, tritoxide, or both). These compounds reach the nutrient capillaries, and all, or part, are decomposed ; the oxygen being employed for the disorganization of worn out tissue, the protein thus deoxidized being deposited to supply its place. If more protein is set free than is required for the growth of the tissue, it passes, unchanged, into the veins, to be again oxidized in the lungs. The tritoxide of protein, being soluble in water, is better enabled to traverse the minutest capillaries than if it existed merely diffused through the fluid containing it.

These statements, however ingenious, must be regarded as purely hypothetical, for the very existence of protein, as a distinct substance, is by no means generally admitted, in consequence of the difficulty of obtaining it from sulphur. Indeed, in consequence of this fact, Liebig has called in question the accuracy of Mulder's views, although by no one was the theory, when first announced,

more warmly espoused, than by its present great opponent. Indeed, as is well known, he rested upon it most of the theoretical deductions in the earlier editions of his well known work. Its accuracy was confirmed under his own eye, in his own laboratory, and by his own pupils, and it was certainly not generous afterwards to throw upon Mulder the whole onus of having overlooked the existence of sulphur in the so-called protein. The credit of first noticing this, indeed, belongs to my talented colleague, Dr. Alfred Taylor. Professor Mulder has, in a very late interesting brochure, entered fully into this subject, and has shown that a protein, free from sulphur, can be obtained; indeed, Laskowski, one of the many zealous pupils of Liebig, has shown, that this may be readily effected by dissolving coagulated white of egg in a solution of potass, and separating the sulphur by digesting it with hidrated trisnitrate of bismuth, before precipitating the protein by acetic acid. But even if this were not the case, if the sulphur could not be separated, the term might be most conveniently retained to express a definite quantity of carbon, hydrogen, nitrogen, and carbon. The memory is thus aided, and by no means is a greater call made upon our credulity than is effected in demanding our adhesion to the existence of the majority of the so-called compound radicals.

On Liebig's hypothesis, the elements of muscular tissue are carried into the circulation, combined with water and oxygen ; the latter, by its union with the carbon of the effete tissue, is supposed to aid the conservatian of the temperature of the body. On reaching the glandular structure of the liver, 50 atoms of carbon, 1 of nitrogen, 45 of hydrogen, and 10 of oxygen, with an unascertained but considerable proportion of sulphur, are supposed to be filtered off from the portal blood, in the form of bile, a secretion of which has to play an important part in the animal economy, prior to its final elimination. The more highly nitrogenized portions of the metamorphosed tissue are separated by the kidneys from the blood conveyed to them by the renal arteries, chiefly in the form of urea and uric acid, whilst the carbonic acid formed by the slow combustion in the capillaries of the carbon of the original atoms of muscle, is exhaled from the surface of the skin, or pulmonary membrane. In this mode, by a wonderful influence of vital chemistry, the exhausted fibre is ultimately expelled from the animal structure.

An analogous explanation to the above may be applied to the destructive assimilation of all the other animal tissues.

The following example will afford a good illustration of the results flowing from these views :

According to Becquerel's researches, the average proportion of uric acid excreted in 24 hours, by a healthy adult, amounts to 8.1 grains of the former, and 255 of the latter, being in the ratio of one atom of the acid to 82 atoms of urea. From the accurate experiments of Allen and Pepys, it appears that 18,612 grains of carbonic acid gas are exhaled by an adult man in 24 hours ; a quantity, as compared with the uric acid and urea, equivalent to about 800 atoms of carbon and 1600 of oxygen.

The average proportions of the bile cannot be determined with satisfactory accuracy, but from the lowest assumed quantity secreted by a man in 24 hours, 9,640 grains may be regarded as near the truth. As bile contains about 90 per cent of water, the amount of solids secreted in the bile during 24 hours will amount to 964 grains. Dried human bile contains about 62 per cent of carbon, and hence 964 grains may be represented by about 14 atoms of solid bile, according to the provisional formula suggested by Dr. Kemp.

For the purpose of yielding these products, about 35 atoms of muscular tissue must be acted upon by at least 1783 atoms of oxygen. The heat evolved by this slow combustion aids in keeping up the temperature of the body ; and the products of this oxidation of exhausted tissue will be—

14 atoms of solid bile, excreted by the liver.
32 ——— of urea } excreted by the kidneys.
1 ——— of uric acid }
800 ——— carbonic acid, excreted chiefly by the lungs.
403 ——— water, diffused through all the excretions.

	Carbon.	Nitrogen.	Hydrogen.	Oxygen.
35 atoms of muscular tissue - - - - -	1680	210	1365	525
1788 " " oxygen - - - - - - - -	....	....	....	1788
	1680	210	1365	2313
14 atoms of solid matter of bile - - - -	700	14	639	140
82 " " urea - - - - - - - - -	164	164	328	164
1 " " uric acid - - - - - - - -	10	4	4	6
800 " " carbonic acid - - - - -	800	....	....	1600
403 " " water - - - - - - - - -	....	....	403	403
	1674	182	1365	2313
In excess - - - -	6	28		
	1680	210	1365	2313

The 6 atoms of carbon, and 28 of nitrogen, here unaccounted for, are probably eliminated in combination with the constituents of water, forming some of the less defined elements of the excretion, as compounds of ammonia, fatty, coloring and odorous principles, etc.

The sulphur existing in the blood, and its educt, the bile, has not here been taken into consideration, as experiments are still wanting to show in what proportion it exists in the latter.

It is evident that the atoms of worn out tissues, on re-entering the blood, are ultimately evolved from the body as well recognized elements of the excretion. Recent researches have rendered it possible, that these effete matters are not at once resolved into urea, uric acid, etc., but undergo a series of transition changes, some of which have been studied with some success. Thus, in the fluids obtained by macerating the tissues of the body in water, the following bodies have already been detected: Creatine, creatinine, inosinic acid, inosite, lactic acid, hypoxanthine, besides certain ill-defined volatile acids.

All these bodies may be regarded as transition stages of the metamorphoses of worn out elements of tissues, with the constituents of the excretions. The following views of the relation borne by some of these bodies to each other, is by no means uninteresting.

Creatine is a crystalline body, first discovered in the juice of flesh by Chevreul, and lately submitted to a most masterly examination, by that illustrious chemist, to whom we owe so much, Professor Liebig. This body appears to me to be the most important product of the metamorphosis of muscular tissue under the influence of destructive assimilation. I feel little doubt of the correctness of the opinion announced by Heintz, who differs from Liebig, in regarding this body as absolutely excrementitious; indeed, the fact of the copious excretion of creatinine by the kidneys, fully bears out this view. The relations borne by creatine to several other bodies are very interesting. Thus, if the protein elements of effete muscular tissue, in a nascent state, come in

contact with water and ammonia, which is so frequent a result of decomposition of animal matter, we should have the elements of creatine, with the evolution of 23 atoms of hydrogen, which, probably, by their union with oxygen, help to keep up the temperature of the body ; for

	C	H	N	O
1 atom protein - -	40	+ 30	+ 5	+ 12
+ 18 —— water - - -		18		18
+ 10 —— ammonia - -		30	+ 10	
	40	+ 78	+ 15	+ 30
— 5 Creatine - - .	40	+ 55	+ 15	+ 30
		23		

Creatine may be traced to the decomposition of the gelatinous, as well as the albuminous tissues; for they, in the re-arrangement of their nascent atoms, are prone to form glycocoll, and this body requires but the elements of ammonia to form creatine ; for

	C	H	N	O
2 atoms of gyocoll - - -	8	+ 8	+ 2	+ 6
+ 1 ——— ammonia - -		3	+ 1	
= 1 ——— creatine - - -	8	+ 11	+ 3	+ 6

Creatine has at present been detected only in the juices of the muscular tissues, and, hence, may be regarded as the exclusive product of their decomposition, brain and nervous matter containing none.

Some of the creatine is removed by the kidneys unchanged ; some is converted into an active base, creatinine. This is made artificially by boiling creatine with hydrochloric acid, and differs only from that body in containing less water.

	C	H	N	O
1 atom creatine - - -	8	+ 11	+ 3	+ 6
—4 —— water - - -		4		4
= creatine - - - -	8	+ 7	+ 3	+ 2

Creatine, boiled with alkalies, is resolved into urea and sarcosin.

	C	H	N	O
1 atom creatine - - -	8	+ 11	+ 3	+ 6
—1 —— urea - - - -	2	+ 4	+ 2	+ 2
=1 —— sarcosin - - -	6	+ 7	+ 1	+ 4

It is hence probable that the creatine found in flesh is, after all, a sort of transition stage between the protein elements and urea ; the latter body being formed from the creatine, and not directly from the elements of the tissue. We have, however, the sarcosin to account for ; this body has not been found in the urine or other excretions, but as it differs from lactate of ammonia only in the absence of one atom of water, it is not impossible that its elements become thus arranged :

	C	H	N	O
1 atom sarcosin - - -	6	7	1	4
+1 —— water - - - -		1		1
=lactate of ammonia - - -	6	8	1	5

Lactic acid is, as has been long believed, an important constituent of the fluids of the animal economy. Professor Liebig, once the opponent of this view, is now its advocate. It is further interesting to observe, that creatine bears a simple relation to uric acid, and under the influence of oxygen, and by union with carbonic acid and ammonia, or their elements, may possibly form this acid.

	C	H	N	O
1 atom creatine - - -	8	11	3	6
2 —— carbonic acid - -	2			4
1 —— ammonia - - -		3	1	
6 —— oxygen - - -				6
	10	14	4	16
—10 atoms water - - -		10		10
= 1 ——— uric acid - - -	10	4	4	6

A peculiar acid—the inosinic—has been discovered by Liebig in the juices of flesh, and is in all probability a result of secondary changes; this has not been met with in the excretions, but its constituents are exactly equal to those of cetic acid, oxalic acid, and urea. It is, therefore, in all probability broken up into these bodies:

	C	H	N	O
Acetic acid - - -	4	3		3
Oxalic acid - - -	4			6
Urea - - - -	2	4	2	2
Inosinic acid - -	10	7	2	11

It is pretty evident that some organs of the body tend to resolve their element into transition compounds, peculiar, or nearly so, to themselves. From some late researches of Professor Scherer, it appears that the spleen presents a marked peculiarity. Thus a decoction of this organ contains a peculiar body, which evidently constitutes an early phase in the conversion of the spleen, by metamorphosis or destructive assimilation, into uric acid. This interesting body is deposited, mixed with uric acid, from the juices of the spleen, and it bears so close a resemblance to xanthine, or uric oxide, that Scherer has named it hypoxanthine.

	C	N	H	O
1 atom hypoxanthine - -	5	2	2	1
+1 —— oxygen - - - -				1
=1 —— uric oxide - - -	5	2	2	2
+1 —— oxygen - - - -				1
=½ —— uric acid - - -	5	2	2	3

Inosite is a very recent addition to our knowledge, for which we are also indebted to Scherer. It is a peculiar sugar, found in the infusion of muscular

tissue, apparently incapable of undergoing vinous fermentation, and consists of C12. H12. O12. This, in all probability, is a transition stage in the metamorphosis of fat, previous to its ultimate conversion into carbonic acid and water.

All speculations of this kind, notwithstanding the seductive interest with which they are invested, must be regarded with extreme caution, and, as in every case in which we endeavor to explain vital phenomena, by the physical or chemical laws governing dead matter, be admitted as only provisionally correct. Their minute, and even general details being liable to partial or complete alteration, on the detection of a comparatively slight error in the analysis, or even a mere difference of opinion regarding an atomic weight. But they are by no means to be idly rejected, for they enable us to group together a series of facts, which, without the hypothetical relation now assumed, would scarcely seem to bear much relation to each other. They, moreover, suggest new investigations, and induce the views thus educed to be submitted to further researches, and in thus endeavoring to determine their truth or falsehood, new facts become almost daily elicited.

IV.—A NEW MODE OF ARRESTING NOCTURNAL ERECTIONS—CONSEQUENT UPON URETHRAL IRRITATIONS.

When the usual means of arresting morbid erections of the penis fail, Dr. Sistach, of the Military Hospital of Perpignan, proposed, and has tried with perfect success, *compression of the prepuce.* What, says the Doctor, are the characteristics of this species of erection? It is a nervous influx—a sanguine congestion—an elongation of the penis: then the indications to be fulfiled are, to dissipate this nervous influx; to obviate the sanguine congestion; to interpose an obstacle to the elongation of the penis, and to fulfil all these three indications, it is *simply necessary to drag the prepuce forward of the glands, and to apply, at this point, a circular ligature;* a piece of common tape will answer all the indications. This compression of the prepuce is heroic, says Dr. Sistach, to prevent nocturnal erections. He concludes his remarks on this subject, by inviting his confrères to try this powerful means, and feels confident that they will be pleased with the result.—*Journal des Connaissances—Med. Chir., Juillet*, 1851.

V.—SYMPTOMS OF SOFTENING OF THE BRAIN—OLD SYPHILITIC AFFECTION RECOGNISED AS THE CAUSE—RAPID CURE BY A SPECIFIC MODE OF TREATMENT.

A female, aged 52 years, of medium constitution, entered on the 8th of November, complaining of intense pains in the front and back head, for about three months. The sight was feeble; the patient was no longer able to distinguish small objects; her countenance betrayed a state of mental hebetude; the superior and inferior limbs were very feeble; her step was hesitating, and prehension difficult, with general sensibility impaired. Her memory, likewise, participated in this general decadence of powers, and she could not sleep. From the foregoing symptoms, the case was diagnosed one of *cerebral softening.* A revulsive and derivative course of treatment was first tried; but from this the patient derived no benefit, and finally she became so much enfeebled, that she could not rise from bed. On the 14th, in examining her leg, a small exostosis

was discovered on one of them. It may be proper to remark, that the patient denied ever having been affected with syphilis. The exostosis shed some light on the case, and the liquor of Van Swieten was prescribed, and a *tisane* of sarsaparilla, with the iodide of potassium. On the second day of this treatment there was evident amelioration; the frontal pain had already diminished. On the 19th the patient was enabled to leave her bed; the same medicine was continued. By the 30th of November the patient was totally changed; the countenance was cheerful, and her sleep tranquil and refreshing; the limbs had recovered their strength and sensibility. The same treatment was continued up to the 12th of December, when she was discharged cured. It is certain, continue MM. Servier and Brevet, who report this case, that the subject of this observation would have perished, if accident had not revealed an exostosis on the tibea, and which fact led to the supposition of an intra-cranial exostosis, or some other analogous syphilitic lesion. But in a case even where we cannot discover any external signs of an anterior syphilitic affection, we believe it sound practice, when the usual treatment fails, to remember this axiom of Riberio—*Semper de Syphilede suspiciandum.—Ib.*

VI.—BROMOHYDRIC ETHER—A NEW ANÆSTHETIC AGENT.

Some experimeuts have been recently made with this substance on birds, etc., and M. Ed. Robin, who conducted them, is satisfied that it will prove an excellent anæsthetic agent. This preparation of ether is without taste, and possesses an agreeable aromatic odor; and, when taken by inhalation, produces rapid etherization, without any subsequent suffering or distressing symptoms.

VII.—PROF. ORFILA BEFORE THE COURT OF ASSIZES—HIS EVIDENCE IN A MEDICO-LEGAL CASE.

In a communication addressed to the Editor of the *Journal des Connaissances Medico-Chirurgical*, of a recent date, the writer says: "Prof. Orfila passed through Angers a few days since, on his way to Nantes, whither he was summoned to give an opinion in a case of poisoning by the sulphate of iron. For more than an hour this celebrated Professor spoke with that clearness and authority, which has placed him at the head of medico-legal science in Europe, and his demonstrations carried conviction to the minds of all present. The accused was condemned to hard labor for life. The impression produced by M. Orfila was so powerful, that when he left the court the entire audience arose to do honor to science and learning."

Part Third.

REVIEWS AND NOTICES OF NEW WORKS.

I.—*The Laws of Health, in relation to Mind and Body. A Series of Letters from an Old Practitioner to a Patient.* By Lionel John Beale, M. R. C. S.

With the advancement of civilization, of the arts, and of the sciences, will be that of the accretive desire to know more of the laws which regulate health, of the influence of climate, and of the seasons; for, as our author says, "that the body and the mind may be so trained as to resist disease altogether, would be too bold an assertion; but it is true of a vast number of diseases which afflict our race." It is to the observance of Hygienic laws, the management of children from the cradle to youth, from youth to manhood, and from manhood to the winter of life, with the modes of training, and many of the necessary appliances for the removal of physical and mental ailments in the various stages of existence, to which the writer of the book before us invites our attention. We proceed, briefly, to comment upon some of the Letters.

The great end and aim of medical science is, to prolong life, and "in nothing," says Cicero, "does man approach nearer to the gods, than in giving health to men;" or in removing, "*tuto, cito et jucundè*," the thousand "ills that flesh is heir to." But if, by the timely observance of the laws of nature, we avert impending danger, and ward off some threatened ill to our physical frame, we shall have proceeded a step in advance of the medical art; we shall be enabled to dispense with her arbitrary rules! If men were disposed more rigidly to observe laws, human and divine, we should find less truth in the words:

"And such is human life, so gliding on,
It glimmers like a meteor, and is gone!"

After having given us a very brief sketch of the history of medicine, from the earliest times of the Greek and Roman physicians, with some of their superstitious practices, and the mode of discovery of the therapeutic effects of some of the drugs and plants which are now introduced into our Dispensatories, our author expresses the opinion, that "it is not improbable, that in every country, the earliest Physicians were Priests. Civilization and population must have increased greatly, before it would have been possible to obtain a means of living from the practice of medicine." Of Hippocrates, our author says, "His practice was entirely empirical, derived from a close observation of nature." His sense of duty, however, is shown, by the oath which he required of a pupil, "that he would revere his master as a father; that he would exert his art only for the benefit of his patients; never to injury or death, even though required by them; that he would never divulge professional secrets."

"The first European University that acquired a reputation as a school of medicine, was that of Salernum, in Naples. The dissection of the human body was first practised at Bologna, in 1315. This and other Italian Universities, were long famous for their medical schools." Alluding to many Physicians who were conspicuous in the middle ages, the writer closes this subject by favorable mention of some Schools and Universities of the present day.

In that portion of our book which is devoted to Empiricism, we find much good sense. Many of the follies and absurdities with which medicine is surcharged, or which may be looked upon as the unsightly excrescences of a noble fabric, are touched upon with *compassionate tenderness*. Homœopathy has of late had so many *doses, not infinitesimal*, from the medical press of every country, that we might spare the reader the infliction of a single *drop* on this head, did not the views of our author claim our attention. "That the infinitesimal doses," says he, "have no influence whatever on the animal organism, either in a morbid or healthy condition, is a fact which can be readily proved by experiment—if it be considered necessary to appeal to an experimental enquiry, in order to prove that the millionth of a grain of charcoal, or the decillionth of a grain of opium, administered a certain number of times in the day, are utterly incapable of producing any marked effect on the functions of the animal body." And again, the writer remarks, "that if its professors (alluding to Homœopathists) honestly adhere to the very

minute doses of medicine which they profess to administer, they do no harm by drugs, but that the sin of their system is to look on, and allow diseases and death undisturbed possession of their patients, which must frequently occur in severe diseases." In those cases, as by mesmerism, where cures have been effected, the rationale, we are inclined to think, will rest upon the influence of the emotions, or the excitability of the imagination, it being well known that Faith and Hope are sometimes not without their effects upon disease ; in illustration of this, we find the following circumstance related :

"Sir H. Davy, in his young days, assisted Dr. Beddoes, who was trying to cure disease by the inhalation of gases. Before applying the inhaler, Davy was accustomed to ascertain the temperature by placing a thermometer under the tongue. While thus employed on a countryman, who fancied this was the wonderful process he had heard of, the man exclaimed that he already felt better. Davy took the hint, left the thermometer in its place some time, and re-applied it every morning—his patient improved in health, and ultimately got quite well, without any other treatment." Puerilities and frauds, which are not unfrequently the resorts of horse jockies and knaves, seem to have had their day with the followers of Hahneman, and whilst we may draw a veil over what we should be pleased to call their innocent delusions, we can boldly look forward to a future, which shall be brightened with a more discriminating and enlightened public sentiment ; for although, as we find in a late medical journal, "the globulists of the Continent meet in Prussia to rejoice over their gains, those of England propose to meet in London, to beseech our pity for their sorrows and their losses." In the latter country, continues the journal, "the hour of doom has already struck, and they have no other refuge, but like the associated rogues, to appeal to feelings they have never respected ;" language, we must admit, which, if it were not true, would be unkind.

In the tenth letter, which is devoted to the progress of mind in childhood, Mr. Beale, after stating the difference of opinions entertained by Philosophers upon the question of innate ideas, one class contending that the mind is at first a blank, or in the words of Dr. Good, we think, in his elaborate and learned book of "Nature," a tabula rasa,—that Genius is a mere fortuitous circumstance, and that, other things being equal, we may have a Shakspeare or a Milton, a Washington or a Napoleon, by moulding the first dawnings of intellect ; whilst another class of observers have arrived at a precisely opposite conclusion—that ideas are innate.

The true conclusion, after briefly considering each class of opinions, our author thinks, is, "that there are really no innate ideas, but only an intimate disposition to receive certain classes of ideas in preference to others." And, hence, agreeing with Pope, who says of himself—

> "And still a child, nor yet a fool to fame,
> I lisped the numbers, for the numbers came."

Some pages are devoted to the progress of mind, as developed by education, religious sentiments, and social affections; and in the sixteenth letter, "the laws of health, at various periods of life, beginning with infancy," are explained. At birth, the infant is compared to other mamalia, being guided solely by instinct in taking its food. "The first instinct common to man and animals," says our author, "is that of food, which leads the young, automatically, to apply to the mother. * * * At this early period, the foundation of health may be laid by judicious management. * * * The periods of feeding should not be more frequent than once in two hours; if possible, this rule should never be infringed; a little crying hurts no baby, and the system of immediate resort to feeding, on every such occurrence, has the effect of increasing the inconvenience it was intended to remove." Passages such as these are well worthy the careful consideration and remembrance of mothers and nurses, who too often seem to think, that the young ones under their charge live but to eat, instead of eating that they may the better live; and excess of food and nostrums are the ready appliances for a crying child. How often may we hear mothers sagely wonder, that their infants should very frequently vomit, when by ceasing to cram them with unwholesome food, or to give that which is natural—milk, in excess, so that the stomach must, necessarily, reject that which cannot be digested and converted into nutriment, would be the safest way of allaying all their fears. Said "children constitute a fourth, or more, of every existing generation," and as a large number of the diseases with which they are visited are caused by ignorance or neglect of the laws of health, a large portion of the instruction contained in the volume before us would be especially suited to lay readers, who are heads of families; and the professional reader will, we imagine, arrive at the last page of the "Laws of Health," (in noticing which, we may, perhaps, have been too prolix) without a single regret, that through the agency of Dr. Beale he may have gained a hint or an idea, which may hereafter enable him "to mend the constitution and to cure his neighbors."

G. T. B.

II.—*Urinary Deposits; their Diagnosis, Pathology, and Therapeutical Indications.* By Golding Bird, A. M., M. D., F. R. S., F. L. S., etc., etc., etc., etc. Second American, from the 3d London edition, enlarged and revised. Philadelphia: Blanchard & Lea. 1851.

The labors of Prout, so ably seconded by those of Bright, have, so to speak, created a new branch of medicine—that of Urinary Pathology. Anterior to the researches of these two writers, the profession was content to note merely the different shades of color—the abundance or scantiness, of the urinary secretion; and beyond these few physical changes, few ventured to carry their investigations in Urinology. The kidneys were regarded as necessary, but unimportant excretory organs; and hence the prevalent ignorance of the profession in this branch of Pathology. For a long time the *liver*, both from its greater size, and its intimate connections with the alimentary canal, was considered the "offending organ—the *fons et origo* of that cohort of fevers, so graphically described by Horace. Within a few years, however, a revolution has been gradually taking place in the medical mind, in relation to the lesions of both the liver and kidneys; post mortem researches having demonstrated the comparative infrequency of hepatic disease, whilst they have, on the other hand, convinced the inquiring pathologist, that the kidneys—those great depurating organs of the body, constitute, frequently, the starting point of disease—the very head and front of those departures from health, which, sooner or later, end in dissolution of the body.

The paramount influence of the renal secretion, both in health and disease, is now acknowledged by every well informed physician; and few will be considered competent to treat and overcome disease, who may not be familiar with the functions and pathology of the kidneys. To obtain this necessary information, we recommend the study of the work under notice; it has already received the patronage and approbation of the profession, and this edition, revised and corrected, is much superior to the preceding. To be had at 60 Camp street.

III.—*The Geological Observer.* By Sir Henry T. De La Beche, C. B., F. R. S., etc. Director-General of the Geological Survey of the United Kingdom. Philadelphia: Blanchard & Lea. 1851. 8vo. pp. 695.

Under the undpretending title of The Geological Observer, this able writer has given an elegant summary of geological science. The

matter, manner, typography, and numerous pictorial illustrations, combine to make this an attractive, instructive, and most useful guide for the explorer of the natural history and organization of our planet.

Palæontology, the child of Geology, occupies but little space in this work. The author appears (and very properly) to direct his and the reader's attention to what might be called dynamic geology, or the active agents which produce the changes now progressing on the earth's surface, whether igneous or aqueous. This work is highly practical, abounding in narrative, description and examples. Yet the luminous principles of generalization shed a steady light over its multitudinous details, which are never tedious. In the Preface, the author says—"The following work was undertaken in the hope that the experience of many years might assist, and, perhaps, abridge the labors of those who may be desirous of entering upon the study of Geology, and especially in the field. Its object is, to afford a general view of the chief points of that science, such as existing observations would lead us to infer were established; to show how the correctness of such observations may be tested; and to sketch the directions in which they may, apparently, be extended."

Geology is among the newest, most attractive, and sublime of the sciences. The development of our planet, from its primary crystalline, to its present stratified condition, by aqueous depositions, together with its broken and dislocated state, resulting from igneous forces, has, doubtlessly, occupied eras too vast for the science of numbers to enumerate. Who can reckon the sum of the years of aqueous domination, when the lonely waves chased each other noiselessly around the globe, unbroken by any uplifted, shelly shore? Who can count the igneous throes which upheaved plain after plain, hill after hill, with Andean, Alleghanean, Alpine, Himalayan peaks? Or the duration of detrital depositions and alluvial formations? Or the ages required for the stratification of the rocks of aqueous origin? Or the cycles occupied in printing the palæontological book of stone, the imperishable pages of which contain flora after flora, fauna after fauna—gigantic plants, and enormous fishes, reptiles, etc., many of which are now extinct, but which, in remote eras, passed from life, through the portals of death, not to putrefaction, but to petrifaction, and found a tomb, an immortal mausoleum in the fossiliferous rocks?

B. DOWLER.

IV.—*Lectures on the Science of Life Insurance, addressed to Families, Societies, &c.* By Moses Knapp, M. D.

Dr. Knapp has certainly addressed himself to the subject of Life Insurance in good earnest, and a series of Lectures pointing out the numerous advantages accruing to individuals, and to society at large, would be much more likely to redound to the benefit of numerous companies, for whose especial advantage they seem to be intended, than to the professional reputation of Dr. Knapp, than whom we know not a more through *society* going man.

The principles of Temperance Societies, Odd Fellowship and Freemasonry, are all blended in the first Lecture, upon the so-called science of Life Insurance, setting forth the veritable dogma, that as "in union there is strength," so may we infer, that the rightly directed efforts of numbers will tend to the promotion of general good. A prominent error in most, if not in all, of the voluntary associations and societies of the day is, that they profess too much—that in their excessive zeal in decrying *one* vice, they loose sight of others, of paramount importance; and in the advocacy of a special cause, they too often become *intemperate declaimers*, if not babbling hypocrites. Savings Banks and Life Insurance Companies, have, we think, been productive of much good to families, and to communities, when in the management of them, as well as in other financial operations, "honesty" has been discovered to be "the best policy;" a discovery, which, we confess, is sometimes made, when the last expediency of trickery and chicanery has been totally unmasked. Small sums, which may have been placed at interest in the former institutions, have, in the course of years, so accumulated, as to be converted to some profitable use: and the purchase of a life annuity has, undoubtedly, been the means of bringing comfort and contentment to many family circles. The views of Dr. Franklin, written many years ago, upon this subject, are not inappropriate: "Many persons (says he,) "resort to beneficial associations to make provision for their families, and there are many cases in which the funds of a beneficial society have been most useful to a portion of its members. My object is not to undervalue beneficial societies, but to call the attention of the considerate and provident to the fact, that a policy of life insurance is the *cheapest* and *safest* mode of making a certain provision for one's family."

Dr. Knapp informs us that "a Life Insurance Company is a brotherhood of provident husbands and fathers, who love their wives and chil-

dren," and on whom there will rest a moral responsibility for making future provision.

We now dismiss Dr. Knapp, hoping that his future Lectures may contain something more than *household words;* for in glancing over the first of a series of six, we have been reminded of other pamphlets addressed to families upon special subjects, which were as devoid of new ideas as "the remainder biscuit after a sea voyage." Such being the case, had they been entirely withheld, the world would have had little cause to mourn, and their authors would have been spared much tender solicitude. G. T. B.

V.—*Registration of Births, Marriages and Deaths, in Massachusetts, from May* 1, 1848, *to January* 1, 1850. By Amasa Walker, Secretary of the Commonwealth. Pp. 130. Boston: 1851.

The honorable the Secretary of State's Statistical Report, compared with the empirical possibilities of vital statistics, is but half a skeleton—compared with the actual condition of this science in the South, it is a symmetrical *subject*, not unworthy of the analyzing knife of the anatomist. To give an analysis of the Secretary's Tableaux, or even an analysis of his analysis, so as to be at all satisfactory, is a task that time, space and opportunity forbid. Well done, Massachusetts! Like her own Bunker-Hill Monument, she is the first to receive and reflect the light of the early dawn! As her great orator would say, "there she is! Look at her!" At her Eighth Report!

Numerical Tables constitute a species of literature, the least attractive, yet discovered. Whoso wisheth to do scientific penance, let him read 100 pages of the Secretary's figures. Albeit, a few random extracts from the latter part of the Report, will be given, after which some general remarks will be offered on the theory of the science.

"It is a remarkable fact, and well worthy of consideration, that within five years last past, according to the city census of 1845, and the State census of May 1, 1850, the foreign portion of the population of Boston have *increased* 70.20 per cent., while the American portion during the same period have *decreased* 2.27 per cent! It is very probable that a like change has been produced in no other place of importance in the Commonwealth.

Of the 63,466 foreigners in Boston, 52,923 are from Ireland, 2666 from Germany, and 7877 are from various other countries."

Marriages.

"There are 6936 marriages recorded as having been solemnized in the Commonwealth during the year 1849, and 4015 during the eight months of 1848, forming an aggegate of 10,951 within the period covered by this report. The marriages in 1849 were equal to 1 in every 143 inhabitants.

So far as can be illustrated by an analysis of upwards of 24,000 marriages, the ages of parties to which were stated, the probabilities of marriage under the age of 20 years are nearly fifteen times as great with females as they are with males ; and that between the ages of 20 and 25, they are much nearer equal, though still somewhat in favor of the female ; but after the age of 25, till death, the probabilities of marriage are about two to one in favor of the male.

Again, we perceive, that of all females married, the chances that this interesting event will take place prior to the age of 20, are about as *one to four* of all the probabilities that they will ever marry ; that is, when a female arrives at the age of 20 years, and is unmarried, *one quarter* of the probabilities of her ever being married are gone. If she passes to the age of 25 unmarried, nearly *three quarters* of her probabilities are lost ; and if she is unmarried at the age of 30, she has passed nearly *nine tenths* of her chances of ever becoming a wife. The case is different with males, more than one half of whose marriages occur subsequent to the age of 25. But the period of life between 20 and 25 appears the most probable of all the quinquennial periods for matrimonial alliances to both sexes.

A remarkable uniformity exists generally between the proportions which the several months furnish in the one year and the six years. The months, however, differ widely from each other. November indicates, that more than twice as many marriages have been solemnized in that month, as have taken place in either of several other months. February, March, July and August do not differ much in their proportion, and they are found to furnish less than any other months of the whole year.

Births.

Each annual return shows, that a majority of those born in the State are males, while a majority of those who die are females. In 1849, the proportion between the sexes, among the births, was 52.06 per cent. males, and 47.94 per cent. females. Of the deaths for the same year, 49.53 per cent. were males, and 50.47 per cent. females."

Deaths.

" During the twenty months of this report, there have been returned to the Secretary's office the record of 30,079 deaths, besides 516 still born. Of these, the unprecedented number of 20,423 took place within the twelve months of the year 1849. We learn by the last (seventh) report, that from January 1 to April 30, 1848, there were 3278 deaths ; and we find in the returns of the subsequent eight months of that year, that 9656 deaths occurred between May 1 and December 31 ; making 12,934 during the whole twelve months of the year 1848.

In 1849, there were eight towns, viz : Barnstable, Dennis, Cheshire, Conway, Heath, Hull, Dana and Upton, also the district of Boston Corner, which made no return of deaths according to the law. These embrace an aggregate population of 15,383. After deducting this from 994,665, the total population of the State, there remains 979,282. Now, if we make no allowance for the increase of population between 1849 and 1850, the deaths in the former year amount to one in 47.95, or 2.086 per cent. of the living.

The mortality in 1848 and 1849 was much over *two per cent.* throughout the Commonwealth.

It is not our design to descend to particulars too minute. It may not be out of place, however, to say, that Boston, in 1849, showed one death to 26.99 of the population, or 3.704 per cent. ; and in Lowell, the rate was one in 36.97, or 2.705 per cent. Some sections of these cities are from fifty to one hundred per cent more favorable than other sections.

Of the 102,596 cases of death recorded in this State (including the city of Boston, within the last nine years, and whose diseases were specified, (besides those who died by violence, 22,342 are stated to have been from consumption of the lungs ! that is, a little more than one out of every five deaths (21.78 per cent). This may be confidently stated as very near the general law, or degree of relationship, which this formidable terminator of human life bears to the aggregate of all other diseases in this Commonwealth. Besides these, from consumption, 4.88 per cent. of all deaths, of

known diseases, were from inflammation of the lungs, making 26.66 per cent., or somewhat more than one quarter of the mortality from these two common diseases of the lungs alone !"

Season.

"The summer months are by far the most fatal in either of the divisions, and in the whole State. In the latter, August and September present an aggregate of 30.70 per cent., which is more than double the amount shown by any other two contiguous months, and nearly double the amount of any two selected months. The two months above named show a difference from each other of only the half of one per cent. in the State ; but in the divisions of city and country it is much greater, and stands against August in the former, and against September in the latter. In some of these cities, isolated, it is still greater ; being in the city of Boston, for instance, 19.94 per cent. in August, and only 10.88 per cent. in September. Previous to 1840, September was the most fatal month in the mortality of Boston ; and prior to 1820, it was in October that the most deaths occurred. This change has taken place gradative, as Boston has become more densely populated, and more insalubrious to its residents, particularly the younger portion of them."

The science of population has its physics as well as the material universe. Births and Deaths, the increase and decrease of population, health and disease, the duration of life, and even morality and crime, are the legitimate effects of definite causes or antecedents, and are as completely divested of contingency, and chance, as any physical effects whatever, although the laws of casualty may be less known in the former than in the latter. If all the antecedents of a birth, death, or theft, were fully known, these events could be ascertained before hand, as readily as the eclipses, or the fall of a stone towards the earth. To suppose that a marriage, or a death, or a murder, has no cause, no antecedent, or that it has a cause which may produce any kind of effect, even a contradictory one, or several effects indifferently, is altogether absurd. Philosophical necessity does not imply fatalism, but absolute certainty in regard to life, death, and moral actions. It does not impair the force of human responsibility. It includes volition, or will, as an elementary or essential antecedent, in virtue and vice, without implying irresistibility, as in brute matter.

When all the antecedents of a natural death, or a murder, exist, the effect will take place of necessity, unless the antecedents be first changed. The murderer is not conscious that when all the antecedents or causes, including the will, exist, he can avoid the act, while the antecedents remain unaltered. This would be a plain contradiction. He may be, nay, he is, conscious, that this causation is not, in the first instance, irresistible, but voluntary. Hence his guilt. There is no chance—no contingency—nothing fortuitous—no causeless spontaniety. Could the observer appreciate all the circumstances, including, of course, the fixed purpose of the murderer, he would find that the law of

casualty was as natural and as certain in this case as in gravitation. The criminality is of no importance in philosophical necessity, (though paramount in morality) only as an antecedent, or cause, whereby a certain and definite event happens, and no other. Morality, Religion, Government, Education, Crime, and so on, so far as they are the antecedents or causes whereby definite effects take place, have all the inherent philosophical necessity, or rather certainty, in themselves, that belong to the solar system, or mechanics.

The whole theory of vital and social statistics is founded, not on the absolute certainty which exists, but on contingency, chance, and probability, which do not exist. These latter, with all our ignorance, we know must be false; yet, paradoxical as it may seem, these are sure to bring us near to the truth—truth as to masses, if not as to each individual case. In throwing a dollar into the air, (owing to our ignorance) the chance that the eagle will fall uppermost, is equal to the con trary chance that it will not. Now, here is an assumption (chance) absolutely false, yet it is the truest that human knowledge admits of. If the thrower knew all the circumstances of the case, he could foresee how the dollar would fall, conformably to the laws of gravitation, in which neither chance, contingency, nor causeless spontaniety, could possibly exist. Let the antecedents of any case deemed contingent, that is, as likely to happen one way as another, fortuitous, spontaneous —let the sum of causation be fixed and known, and then the moral political, and sanitary events of the world will appear no less certain than the physical. An event is not the less certainly produced by an essential, efficient antecedent, because the latter is partially or wholly unknown, unperceived, and unrecognized by consciousness. It is even probable, that if the Mississippi was conscious of its own motion, but, at the same time, ignorant of the law of gravity by which it falls down an inclined plane, it would suppose that it was voluntarily pursuing its own way, unconstrained by any foreign influence, or physical necessity, or antecedent external to itself.

Still, however, this false doctrine of chance, where the data are numerous, brings us, as we said already, very near the truth. We know that in throwing a dollar into the air, the eagle will not fall uppermost 1000 consecutive times, though each throw, considered in itself, gives an equal chance that this event shall happen; nay, we know more than this: for we are sure that 1000 throws will cause the eagle to fall uppermost 500 times, or very nearly so, although the first, second, or more throws, might present the reverse side of the coin in repeated succesion.

In statistical science, it is often possible to exclude supposed causes or antecedents, so as to limit the number of the chances of error. When the Mexican authorities determined to decimate the Texan prisoners, they mixed with 153 white beans, 17 black ones. Those who drew out black beans were shot. The chances of death were limited to 17. A patient having a fever, will die or recover—of these two events, one is certain. Both are not possible; but either may be equally probable to an unskilful doctor, while a skilful one may perceive a very strong degree of probability of the one event happening, and not the opposite. Among a thousand births, we are almost sure that the sex will be either male or female, and not hermaphroditic monsters, though, the antecedents peculiar to either sex are unknown. Among a thousand births, the proportions of the sexes, the duration of life, and the causes of death, will differ very little, if any, from any other thousand similarly circumstanced.

B. DOWLER.

To Dr. Edward Jarvis, of Dorchester, Mass., we are indebted for a neat copy of the foregoing Report; and we avail ourselves of this occasion to renew to him the assurances of our high regard. (*Ed.*)

VI.—*The Pocket Formulary and Synopsis of the British and Foreign Pharmacopœias, comprising the Preparations and Compounds employed in Medical Practice.* By Henry Beasley. Philadelphia: Lindsay & Blakiston. 1852.

Ingenuity has been exhausted, it would seem, to facilitate the labors of the Physician, and to lessen the toils of the dispensing Chemist; yet there are those belonging to the profession who still strive to smooth the rough road which lies before the medical man and his allies; and to this class belongs Mr. Beasley—the industrious compiler of the handsome volume before us. The book furnishes us elegant formulas of all the new remedies recently introduced into our Materia Medica, and gives, in numerous instances, concise methods of preparing many medicines entirely overlooked in larger and more extensive works on the subject. For reference, amid the haste and toil of an active practice, we would commend Mr. B.'s Formulary,—and we feel satisfied that every dispensing Pharmaceutist will keep the work on his counter, as soon as he becomes acquainted with its merits. It occupies a middle ground, between the United States Dispensatory and our works on Ma-

teria Medica, and for certain practical purposes, it will be found superior to both.

The book is finished in handsome style, and forms a volume of 443 pages—printed on good paper.

The Publishers, through J. B. Steel, 60 Camp street, New Orleans, will accept our thanks for a copy.

VII.—*An Appeal to the Legislature of Alabama, in behalf of Lunatics and Idiots.*

The Alabama State Medical Association, in session at Mobile, in December, 1850, appointed a committee, composed of Drs. A. Lopez, S. Holt, W. H. Anderson, H. V. Wooten, W. C. Baldwin, and William Boling, to draft a memorial, to be laid before the Legislature of the State, at its next regular session, setting forth the necessity and advantages which recommend the establishment of a *Lunatic Asylum* in the State. The memorial contemplated in the above resolution of the State Medical Society, is contained in a neat pamphlet of 21 pages, drawn up, as we perceive by its felicitous style, by Dr. Lopez, who has urged the subject upon the attention of the State Legisiature by an appeal at once to facts and to the sympathies common to all mankind. If this memorial—so creditable to the profession of Alabama, and to human nature everywhere—fails of its object, the law-makers of our sister State will prove deaf not only to argument and sound logic, but likewise to the appeals of suffering and afflicted humanity.

With commendable tact, the Memorialists approach the Legislature through that great channel, flattery, which never fails to gain access to the heart of both the high and the low; recounting its deeds of charity and liberality—its munificent appropriations—its more than paternal care over the interests, the welfare and the morals of the State. These are compliments to the Solons of the State no less opportune than well merited; and they come with excellent grace from the very intelligent Memorialists, by whom they are tendered.

After demonstrating that insanity is fearfully on the increase in this country—that cases of mental alienation multiply with the refinement, the luxuries, and habits of a higher civilization, and that on this account the wants of the community, and the interests of humanity, demand, at the hands of the Legislature, the establishment of a Lunatic Asylum in the State, for the reception and treatment of those bereft of reason, the Memorial proceeds to furnish some interesting statistics of the *Lunatics*

and *Idiots* found within the borders of Alabama. The whole number of both classes in *North Alabama* numbers, of all ages, sexes and colors, 255; of which 238 are white, and but 17 colored; whilst *South Alabama* reports, of all ages, colors, etc., 408 as insane and idiotic. The grand total of both classes embraced in both North and South Alabama, reaches then 663! And yet the Memorialists declare it as their honest belief, that this actually falls far short of the truth; by which we understand them to say, that the number is much greater than as set forth by the census takers in 1850 for North and South Alabama. Although the Memorialists discredit the accuracy of these statistics,—yet they deem them sufficiently near the truth to arrest the attention of the Legislature, and to obtain the co-operation of that body, in furtherance of the object prayed for by the committee.

The necessity of early and prompt treatment of Lunatics, is enforced by many cogent reasons, given by high authority—all of which tend to show, that the chances of a cure are immeasurably increased by subjecting the patients to proper treatment in the outset of the attack. The same rules hold good in regard to treatment in this affection as in other acute diseases, viz: if the acute stage is permitted to pass without proper medication, the difficulty of effecting a cure is greatly increased.

We will conclude this hurried notice of a very interesting address, by quoting the following eloquent peroration, denunciatory of the old method of treating the insane, by confinement in the "recesses of a dungeon," by chains, etc.

"How, then, can jails and dungeons be considered fit receptacles for the afflicted beings, whose cause we plead? Can isolation, thus imposed, tranquilize the morbid exaltation? Can the clank of chains supply the soothing voice of human sympathy? Can the echoes of the maniac's ravings, sent back to his distempered fancy, through the medium of mocking phantasms, tend to divert him from their unnatural tendencies? Surely not. You cannot chain or fetter thought, whether in a healthy or morbid state. If left "to grow on what it feeds," it perpetuates the condition from which it arises. If turned into other channels by the judicious training of discreet and practised guides, it yields to the stimulus of surrounding novelties, and, step by step losing its dependence upon wild and ungovernable appeals, its tones are lowered, its attention riveted, its obedience insured, and the human eye, in holy alliance with the human heart, imposes upon the turbulent, and hitherto unmanageable wanderer, a power which it finds itself unable to resist."

We feel quite confident that the above memorial, so full of sympathy for the poor Lunatics, and so ably argued in their behalf by the committee, will prevail with the enlightened and liberal Legislature of our sister State, Alabama.

We thank the committee for this mark of attention.

VIII.—*The Outlines of General Pathology.* By M. L. Linton, M. D., Professor in the Medical Department of the St. Louis University. 1851. Pp. 205.

This elegant little volume bears the impress of no ordinary mind—of no common thinker—no truckler to other men's opinions. The author has evidently made a point, and shown that *American* physicians are no longer content to follow in the wake—"unda trudit undam," of our illustrious European professional brethren. His views are at once clearly and boldly proclaimed, and bear upon their very face all the originality, freshness, and strength, of Western character. We had scarcely glanced at a few pages of the work, when the volume suddenly disappeared from our table; and we must, therefore, content ourselves with these few general remarks on the character of the book—reserving for our next number the pleasure of a full and complete analysis of Professor Linton's peculiar views.

This work effectually overthrows many of the popular theories of the day, by the severe and searching criticisms to which they are subjected.

IX.—*Operative Surgery—based on Normal and Pathological Anatomy.* By J. F. Malgaigne, Prof. Agrêgé de la Faculté de Medicine de Paris, Chirurgien de l'Hôpital de Lourcine, Chevalier de la Legion de Honneur, et du Merite Militaire de Pologne, etc., etc. Translated from the French. By F. Brittan, M. D. Blanchard & Lea. 1851.

The term "Operative Surgery" is at once comprehensive and fascinating to the student who is about to enlist his time and talents in the laborious and responsible duties of the medical profession. The apparent simplicity of the elementary principles of Surgery, and their supposed easy application, together with the brilliant results obtained, will readily explain, we think, the great readiness manifested by the generality of students of medicine for the study of this departmeut of our science. Hence the eagerness—the almost passionate love for Surgery, and surgical operations evinced by the younger members of the profession, at the beginning of their professional career. Besides, it is well known with what respect and reverence the feats of an expert operator are received by the "*profanum vulgus;*" and no effort in any other branch of medicine is so likely to fix the attention of the public, and

win its approbation and confidence. This is not a matter that should surprise us in the least, when it is remembered that many medical men, who, by some simple but timely surgical operation, have been enabled thereby to place themselves, by a single stroke of the bistoury, so to speak, at the head of their profession in the community. A knowledge of this love of surgical notoriety, has, doubtless, been a productive cause of the many works on Surgery published within the last ten years. The reputation of M. Malgaigne, as an operator, is familiar to the profession on this side the Atlantic; and the present work, the result of his own personal experience and observation, stands deservedly high in the estimation of all practical men every where. It is so concise, clear, and, at the same time, definite in its details—and, above all, so simple in its arrangement, that it commends itself both to the student and active practitioner.

Free from every thing like diffuseness, and embracing, at the same time, every practical fact deserving special notice, it must take high rank as a superior text book in our numerous medical schools, and become as popular in this country as it is in France.

In a short notice, we cannot do any thing like justice to the merits of the book; but we feel authorized to bespeak for it a candid examination, and are willing that its merits alone shall establish its claims. In bringing this "notice" to a close, we propose to extract from the work that portion of it which treats of

Non-Consolidated Fractures, or False Joints.

Anatomy.—Generally we find the fragments united by an intermediate fibrous tissue. Sometimes there exist an articular capsule, and a new synovial membrane. At others, the fragments, far apart, are separated by portions of muscles. A host of methods have been advised.

I. Friction.—Celsus would have the two ends rubbed together to irritate their surfaces, and the limb then put into an immovable apparatus.

II. Compression. *White.*—A strong envelop, forming a sheath for the limb, composed of thick leather, softened and moulded, is applied and tightly retained, by means of straps and buckles, around the limb, which the patient is made to use as much as possible.

Briot cites some successfal cases, and Amesbury several, by this means. Simple compression, by means of a common fracture apparatus, with rest in bed, succeeded once with Boyer.

III. Blisters often renewed on the spot. They have been followed, according to Wardrop, by remarkable success.

IV. Resection.—Three proceedings.

In all cases, the fracture must be laid bare, by means of a longitudinal incision, made on the side of the limb least covered by flesh, and most removed from the vessels. Thus, in the thigh and arm, on the outside; in the bones of the forearm and leg, on the side nearest the integuments. When the fracture is exposed, divide the bond of union between the fragments, and luxate them outwards; then, either you may only scrape off the cartilaginous envelop covering their ends

(the ancient method, seemingly derived from the Arabs), or cut off the osseous extremities themselves (White) or only one extremity (Dupuytren); then place the limb in a fracture box, and treat it as a compound fracture.

Very recently, after a resection of this kind, performed on the humerus, Flaubert of Rouen, not being able to maintain the ends in apposition, reunited them by an actual suture, by passing a metallic thread across the fragments themselves. This idea seems to me very ingenious, and susceptible of many other applications; moreover, the result of the operation was most satisfactory, and consolidation was duly obtained.

As for the resection alone, it has had some success, balanced by a great many failures.

V. Seton.—Invented nearly about the same time by Percy, in Europe, and Physick, in America.

Proceeding of Physick.—Extension and counter extension are made by two assistants, so as to separate the two ends from each other, and obtain a sufficient passage for the needle between them; a common, or, if necessary, a curved seton needle is threaded with a band of silk, and passed through the limb, carefully avoiding the course of the vessels, and choosing, as points of entrance and exit, for the needle, the parts least covered by flesh. It is essential that the needle pass well across the interval between the two fragments. Dress it at first as an ordinary seton; then, when suppuration is well established, place the limb in an apparatus for extension. In Physick's case (a fracture of the humerus) the consolidation did not begin until after twelve weeks. When the callus was so solid that all the motions of the arm could be executed, the seton was withdrawn, and the patient left, completely cured, after a treatment of five months and a half.

Proceeding of Wardrop.—The articulation was in the thigh, four inches below the great trochanter. The surgeon, after having recognized the end of the upper fragment, made an incision one inch and a half long, upon and along the external border of the rectus muscle, down to the bone. He passed his finger to the bottom of the wound, and on it guided a button-pointed bistoury, to cut the remaining soft parts, and expose the fibrous tissue joining the ends of the bone. Down to this he passed a sheath, containing a seton needle, which he pushed through the fibrous callus downwards and outwards, so as to bring it out at the border of the vastus externus. The seton put in; the remainder was performed as in the proceeding of Physick.

V. Caustic Potash. *Proceeding of Green.*—The articulation having been exposed by a sufficient incision, he divided the fibrous union, and rubbed each end with a bit of caustic potash, taking care that the caustic should not touch the neighboring tissues. The cauterization is deep enough when the ends of the bone become blackish.

In another case, Mr. Earle removed the fibrous tissue by scraping, so as to act on the bone itself.

Appreciation.—All these methods boast, perhaps, fewer successes than failures, which gives an indication to the surgeon, that in non-consolidation there is a primary cause that should be sought and destroyed, before we have recourse to operations, not without danger. This was perhaps an inducement, when compression failed, for seeking a new method, which, with as many chances of success as the others, incurred still less danger.

New Method. Needles.—In 1837, I tried at the "Maison Royale de Santé" to introduce acupuncture needles between the non-united ends of a fracture of the inferior fourth of the femur; but, although moveable, the fragments were so close together, that of thirty-six needles introduced, at different points, I could not make one penetrate. I since, at the hospital "des Enfans," met with a non-consolidated fracture of the condyles of the humerus, in a little girl two years old. But the fragments were so moveable, and the patient so intract-

able, that acupuncture seemed to me to have no chance. Here, then, are two special contra-indications, for which we must have recourse to other means; but I think that in more favorable cases, the needles should be tried with so much the more reason, that the operation has no inconveniences.

Vicious or Deformed Callus.

Anatomy.—It too often happens, after bad treatment, that the bones become consolidated, with different displacements, or inequalities; that the bones of the forearm become consolidated together; and that the callus is of extraordinary size, or unshapely. It should be remembered that the callus has several stages; that it is successively fibro-cartilaginous, and osseous; and that, even arrived at this last state, it again passes from the state of provisionary to that of definite callus.

The duration of these stages is not the same in all the bones; but it is important to know, that after sixty or ninety days, according to the bone fractured, and the nature of the fracture, the definite callus commences; and, lastly, the farther we get from the time of fracture, the more difficult it is to reform the callus.

Five principal methods have been proposed.

I. Permanent Extension.—Made with common apparatus; or, better, with graduated orthopedic machines; when the fragments ride, and the callus is still provisionary, this is undoubtedly the best plan.

II. Compression. Principally employed for angular displacements. It is made with ordinary splints, or with the hyponarthécic splint and bands of Mayor; or by different mechanical compresses, which it is not our object to describe. Its utility is also limited to the first stages of the callus.

III. Rupture of the Callus.—It has been proposed to rectify the angular callus, or deformity, by breaking it on the knee, as a stick; or striking sharply, with sufficient force, the place of consolidation. These violent measures are generally reprobated, and it would be better to use a chisel and leaden mallet, as I have advised in cases of anchylosis.

IV. Section of the Callus, consists in laying bare the callus, and dividing it either with the common or chain saw, or chisel and mallet; this is the only way of remedying consolidation of the bones of the forearm.

Proceeding of Wasserfuhr. The case was a fracture of the femur, at four fingers' breadth from the great trochanter, in a child five years old, consolidated, so that the two ends of the bone bearing upwards and outwards, formed a right angle, and that the limb was shortened *twelve fingers' breadths.* The callus was large and solid, and three weeks had passed since the accident. The operator having strongly extended the skin below, with his left hand, to make the angle still more prominent, made on the projection a transverse incision, comprising a quarter of the circumference of the thigh; in a second cut, the muscles were divided down to the bone. The retraction that followed laid bare the angle of the callus; with a fine saw, he commenced dividing it to one-third of its thickness. The soft parts did not permit going any farther. As the operator contemplated finishing the division of the bone by fracture—considering that the fragments thus broken would assist the work of consolidation—he tried to break the bone, placing under the angle, in the thigh, a wooden pyramid, with a rounded top covered with chamois leather, the base of which was fastened to the table; but, notwithstanding a pretty violent effort on the two ends, the callus resisted. He was obliged to cut the soft parts more freely, and again saw the bone more forwards. Then a second attempt at fracture succeeded. In the operation thus easily performed, in a few minutes, not more than 3 x of blood were lost. Permanent extension was put in practice with complete success.

V. The Seton. *Method of Weinhold.* In a case of fracture of the femur, three months consolidated, with two and a half inches shortening, and an enormous callus, Weinhold mounted on a drilling-handle a needle, which he called "aiguille-trepan." He pierced the soft parts about one inch outside the femoral artery; arrived on the callus, he caused the needle to penetrate it, by a careful rotary movement. When the callus was pierced, he pushed the needle through the flesh, and transfixed the limb. He then passed the seton. Very little more than one ounce of blood was lost. About the seventh week the callus began to yield, an extending apparatus was put on, and the limb was soon so elongated, that it was not more than one-tenth of an inch shorter than the other.

The work contains some badly executed wood-cuts—quite unworthy the reputation of him who designed them, and the publishing house from which the book emanated. The paper is rather inferior; but the next edition, which we feel quite certain will soon be called for, will make some improvement in these respects. But let not these trifling objections militate against the circulation of so valuable a work.

T. L. White, 53 Canal street, has the book for sale.

X.—*A Practical Treatise on the Diseases of the Lungs and Heart, including the principles of Physical Diagnosis.* By Prof. W. H. Walshe, of London.

CRITICALLY REVIEWED BY J. ROUANET, D. M. P., OF NEW ORLEANS.

The name of Professor Walshe is well known in the medical profession. What student or practitioner has not in his hands *The Physical Diagnosis of the Diseases of the Lungs*, printed eight years ago? A great many of them, I am sure, have often regretted their inability to find, in the same volume, the *Physical Diagnosis of the Diseases of the Heart.* This longed for information is offered us in the present treatise. On this account, then, we have no more to desire. Have we any thing in other respects? This I intend to make the object of my examinations; which, I hope, will be found quite plain and downright. What I think of the extent of the work, of the disposal and development of its materials, I will expose candidly. But I will do it after performing my chief duty as a critic, in pointing out those sentences that I can not help thinking erroneous. Such as the following—(page 38.)

1. *Respiratory Motions and Murmurs.*

"Inspiratory movement is, in the majority of people, slightly more active at the middle than the commencement or close of inspiration; and, likewise, the expiratory motion is effectuated with greatest rapidity at the middle part of the act."

My trials on the subject have shown me the inspiratory motion to be rather uniform from its beginning to its close. The concomitant murmur possessing the same character, is heard in the same limits, without any appreciable change in its intensity.

The expiratory movement is quite different ; it is uniformly retarding, and its murmur uniformly decreasing, so that we perceive only the first part of it, in healthy breathing; the last part being too feeble to be seized by the ear. Hence its comparative shortness ; hence, too, the possibility, for the prolonged expiration in phthisis, of taking rise with unchanged expiratory motion. It is, indeed, of great moment, not to confound the motions with the murmurs of respiration ; a general error, of which the author partakes, when he writes, (page 39)—

" If the entire time occupied by the respiratory act be represented by ten, the value of the duration of the inspiratory movement may be estimated, approximately, at five, of the expiratory at four, and of the pause at one."

This proposition would be true, if so reversed as to represent the entire time by five, the inspiratory movement by two, the expiratory by three, and to suppress the pause, which is only apparent. This may be easily ascertained by comparative consideration of both circulation and respiration. If you take the pulse, and look at once at respiration, you will find that the inspiratory motion coincides almost closely with two, and the expiratory with three, pulsations of the artery. Seventy pulsations for fourteen respiratory acts, (viz : five for one) in a minute ; this is, I think, the general rule. When two or three pulsations are in excess, they are rather ascribable to the expiratory movement.

2. *Resonance of Bone and Cartilage.* (P. 58.)

Bone and Cartilage possess a special, clear resonance.

Yes, some hard, long bones, like the femur and humerus, possess some resonance when naked and almost suspended in the air; they enjoy none when buried into flesh hindering their vibrations. So are the ribs, and all bones in their natural place. As for the cartilage, it is completely deprived of resonance, whatever be its situation, in or out of the body. When stricken in the open air, its vibrations can never reach, in a second of time, the number thirty-two, under which there is no sound appreciable by the ear. Every body knows that ; but very few are aware that the resonance of the percussed thorax proceeds from echoing, and not from any sonorous vibration of its parts. The sound once formed by striking, is reflected by the innumerable surfaces of the bron-

chi, goes out successively, and reaches through the walls of the chest, and through the air, our auditory organ. No, there are no parts of the human body capable, in their natural situations, of producing sounds by their proper vibrations. But some are apt to reflect the sounds, to produce echoing; and some other to favor the vibrations of air, or liquids running into them, as will be seen hereafter.

3. *Cause of the Respiratory Murmur.* (P. 90.)

"Laennec believed that the (pulmonary) sounds were caused by the entrance of the air into, and its expulsion from, the air cells of the lungs, and this appears to be their essential cause. The vibrations of moving air and moving parenchyma, and the distension of the air cells, all, doubtless, contribute to the general result."

Please to compare the smallness of the air cells with the pitch of the sounds produced; perhaps you will be convinced by this simple comparison, that the former have nothing to do with the latter. If your mind wants a more conclusive demonstration, attempt to reproduce the respiratory sounds by certain disposition of your mouth, or by some hollow globes of India Rubber, pressed and relaxed alternately near the ear, so that the air can run through the hole. These easy experiments will lead you to this unexpected conclusion: that the air cells, to generate such murmurs, ought to be no less than hen's eggs, if not small oranges. The vibrations of the moving parenchyma are quite soundless; more so, if possible, than of cartilage. I say nothing of the fanciful sounds proceeding, says the author, from the distension of the air cells. Then, of four alleged causes, one only remains; but this is very genuine and true. I mean the vibrations of moving air. Both respiratory murmurs proceed from these vibrations arising, not in the air cells, surely, but in the whole extent of the bronchial apparatus, in which the length compensates for the widening of the globular cavities, as to the proper character of the sounds.

This is, if I mistake not, the essential mechanism of sonorous vibrations of the air, as well as of fluids, moving in tubal cavities. Wherever the conduit enlarges, whirling takes place, and vibrations of running gas or liquid. When the current reaches a certain degree of rapidity, the vibrations become sonorous. Here is all the mystery. One obstacle opposed to the current acts like an enlargement. Whirling is engendered behind it, for this spot is enlarged, comparatively, to the spot occupied by the obstacle—stricture, wart-like productions, and so forth. So long as the pipe possesses the same width, there is no noise in the stream, because no whirling, no vibrations are produced. Where the tube becomes narrower, no vibration, no murmur exists, provided no widening after straitening.

If you look at the respiratory tubes, you will find many narrowing, comparatively, to the subsequent part—entrance of the mouth, nostrils, velum pendulum palati, entrance of the glottis, cordæ vocales, and lastly, every bronchus, which widens notably at its end, in the point of its division in two or more bronchi. During the inspiration, the whirling, vibrations and murmur arise behind every obstacle; that is to say, in every enlargement; at the mouth, the nasal fossæ, the pharynx, the glottis, the trachea, and the final extension of the bronchi; whilst during the expirations the same are formed in the glottis, in the pharynx, in the mouth, and nasal fossæ; always in the widening subsequent to the obstacle.

I dwell much on this subject, because I do not know one of greater consequence in auscultation.

The preceding statements can be experimentally demonstrated. But we have, of their accuracy, a striking example, as well as a powerful argument in their favor, in some abnormal sounds of the heart. When, for instance, the aortic valves are thickened, ossified, and immovable, two sounds always take place in the præcordial region: one during the systole of the heart, the other during the diastole; the systolic is much more intense above the aortic valves, the diastolic, under them. Why is it so? On the supposition of the friction being their moving cause, both must be equally intense in the aorta, and in the middle of the sternum; for, their seat would be precisely the same, viz: the hole left free by the altered valves, which I have supposed deprived of movement, as it often happens. The direction of the current cannot account for that difference; then, the systolic murmur is stronger in the aorta, because it arises therein behind the obstacle opposed to the stream, behind the thickened valves. The diastolic murmur is generated according to the same law; it rises, too, behind the obstacle opposed to the stream directed now downward, below the same altered valves; that is, in the left ventricle, or, if you prefer, in that part of the aorta which precedes the valves; and it is heard there, exclusively, in most cases. I would be very glad to see, on this point, the explanations of the supporters of friction sounds.

4. *Cause of the excess of the Inspiratory Murmur over the Expiratory.*

"The excess of inspiratory over the expiratory sound, seems explicable by the greater resistance of the textures during the inspiratory, and by the current being, in the former instance, directed towards the ear."

The said greater resistance is fantastical, since the air penetrates the lungs according to their expansion, in proportion to the action of the

inspiratory powers. As to the direction of the current, the transmission of the sound through the air, though not so rapid as in liquids or solids, is yet exceedingly swift, compared to the current, which must be considered as indifferent in the question.

The true cause of the excess of the inspiratory sound over the exspiratory, is revealed by the exposed mechanism of their production; the former, generated under every comparative stricture, is directed principally downward. The latter, formed above the obstacles, comes, for the most part, to the external opening.

5. *Causes of Exaggerated Respiration.* (P. 96.)

"The causes of exaggerated respiration are, unnaturally rapid circulation of air through the lungs, together with an increase of its quantity, and the force of its impulse against the walls of the vesicles, and, probably, in the number of these expanded by each inspiration in the spot."

The increased quantity follows, as a necessary consequence, the increased rapidity of the air, an unquestionable cause of exaggerated respiration.

But, the noise of the air cells receiving some impulse from the air, or expanded in a greater number, is an imaginary one, and will never be experimentally proved.

6. *Cause of the Diffused Blowing and Tubular Respiration.* (P. 103.)

"It is probable that the diffuse blowing respiration is transmitted from a number of small bronchi, the tubular from a few large ones."

This opinion of Professor Walshe is a plain and groundless supposition. The difference between blowing and tubular sound may be accounted for by the degree of alteration of the substance of the lungs, affording imperfect or perfect transmission,—imperfect in the blowing, perfect in the tubular sound. But the author does not admit the theory of bronchial respiration being transmitted through the hepatized lungs, for he says, (page 104)—

"Three objections occur to me as negativing this explanation: Pneumonic murmurs materially differ in quality and pitch from those of the trachea and larynx; they are habitually much stronger than the latter; while in some cases of perfect consolidations there is dead silence over the hepatized structure."

The different states of the transmitting tissue afford always modifications to the quality of the sound. Is it, then, so wonderful, if the pneumonic murmurs undergo some change in their traject through the lungs? Yet, I do not grant that they are habitually much more stronger over the thorax than over the trachea and larynx. I think it contrary to

general observation, and the result of some delusion. But yet, admitting it true, the increase may be imputed to the bronchial part of the sound enforcing that of the larynx and trachea.

The dead silence over the hepatized structure depends, likely, on some quantity of liquid or foam hindering the transmission. Is this the true cause of the phenomenon? I cannot warrant. I testify only, that there is nothing preferable in the author's system. Judge yourself.

"The intensification of the respiration seems to me, in the mean, a phenomenon of bronchial echo, and its variability to depend on the state of the lining mucous membrane (tense and firm, or loose and flabby) being favorable or not to reflexions of sound. On the same principle, elevation or depression of pitch becomes intelligible."

I do not believe that the blowing and tubular sound can be called a mere intensification of the respiratory murmur. They will be surely never obtained whilst the hepatization be absent, whatever be the intensification.

Writers on auscultation have accustomed us to the strangest assertions; however, I cannot help wondering when I see Professor Walshe considering the tubular sound as an effect of bronchial echo. Is it so glorious to follow the steps of Prof. Skoda, who has explained the normal sounds of the heart by the amazing supposition of some quantity of air in the organ? I know not a more direct way to Babel than that intemperance—I would say that debauchery, of explaining every thing at random. No, certainly no; the blowing and tubular murmurs are not phenomena of bronchial echo. You ascribe to the mucous membrane a chimerical tension, and to this tension a chimerical power, inconsistent with reason and physical laws.

The last proposition of the foregoing quotation is no more true than the rest. Echo repeats the sound, without elevating or depressing it. Then, the elevation or depression of its pitch, according to the principle of echoing, is unintelligible and spurious.

7. *Cause of Cavernous Respiration.*

"Cavernous respiration seems to be the neighboring bronchial breathing modified by echo."

Cavernous sound proceeds from the vibrations of air penetrating into a cavity, or from neighboring bronchial murmurs reaching the same cavity, modified by it, and prolonged by echo. The quality of the sound depends on the cavity.

8. *Cause of Amphoric Respiration.*

"The special character of this variety is derived from the sensation which attends it, of air passing into a large empty cavity, having dense walls."

The density of the walls is indifferent to the character of amphoric or

cavernous respiration. The transmission alone is more perfect with dense walls.

9. *Cause of the Crepitant Rhonchus.* (P. 113.)

"It seems most probable that the phenomenon occurs in the parenchyma of the lung itself, especially in those portions of it immediately contiguous to, and actually forming the walls of, the ultimate terminations of the bronchi; and that its physical cause is the sudden and forcible expansion of that parenchyma, glued together, as it were, by the viscid exudation with which it is infilterated. Each single crepitus or click would thus signify the expansion of a cell, and be produced by the unfolding of surrounding glutinous tissue necessary for that expansion."

What first appears to me, in this long exposition, is some want of light. And then I see an old theory a little darkened by the author: the theory of crepitant rhonchus being engendered in the air cells. Instead of refelling it, I esteem it more serviceable to indicate the way leading to the truth.

I have been made confident, very recently, that the crepitation of pneumonia is a normal murmur, just as the bronchial sound. Both inaudible in state of health, become audible over the chest when the consolidation permit them to go through the lungs. Every body can ascertain the normal existence of crepitation, by ausculting, as it were, his own respiration.

If, in the silence of the night, you put your hands, half hollowed, one over the ear of the same side, the other over the mouth, so as to direct the respiratory sounds from the mouth to the ear, you will perceive distinctly numerous minute crepitations, appearing only in the inspiration, and being quite representative of the crepitating pneumonic sound.

In some persons the healthy lungs, by their natural contraction in repose, and, perhaps, together with some slight degree of infilteration, become apt to transmit the crepitant murmur from the bronchi to the ear of the auscultator, in the first deeper inspirations. This has been noticed by many authors,and by Prof. Walshe himself at page 120, where he treats of the *adventitious sounds originating in the substance of the lungs.* No one, to my knowledge, has deemed these sounds to be natural. What is the mechanism of their production? I cannot tell now. I see two possible explanations, but I do not know exactly which is the right. Perhaps neither. I will seek.

10. *Cause of Dry and Humid Crackling Rhonchi.* (P. 116.

"This rhonchus, though its mechanism be unexplained, is of considerable diagnotic importance. Humid crackling. Its mechanism is almost as obscure as that of the dry crackling."

It would be, perhaps, convenient to reserve the term *rhonchus* to the bronchial sounds. Such are neither dry nor humid crackling. Their seat is in the proper texture of the lungs, as every body knows. When

the tuberculous matter, till then adherent on every side to the surrounding parts, begins to be moveable in its hollow place, as to yield to the impulse of the air, it is laid during expiration to the mouth of the small bronchus, or bronchi, reaching the cavity in which it moves; whilst the inspiratory column thrusts it back towards the extremities of the air pipes. The small piece being humid, as well as the mouth of the bronchus, their sudden separation cannot take place without noise. The clicking is the expression of that separation. It appears dry, because there is no bursting bubble in this disjunction. A little later the increase of liquid gives rise to the bubbles, and to the humid crackling sound. The first step of the tubercular softening is really marked by the dry crackling.

11. *Cause of Friction Sounds.* (P. 121)

"This noiselessness of movement of the pleural surfaces upon each other, depends upon their perfect smoothness and slight humidity; when these conditions become changed by disease, this gliding motion is attended by different modifications of sound, varying with the nature and amount of the existing anatomical change."

The author describes separately many varieties of friction sound, with their corresponding alteration in the pleura. He forgets that the sound here represents two things. It represents the changes supervened in the state of the pleura; and, further, the energy of the friction. It is well established now, that there is no constant relation between the sounds and the alterations of the pleura. Furthermore, the friction sound may appear without any distinguishable change in the gliding membranes, and by the only effect of their serosity losing its natural glutinous character. The contrary opinion is so deep-rooted in the minds, as to lead Mr. Fournet, a very skilful and accurate observer, to profess, that the friction sound may propagate itself to a great distance. He says, (page 208 of his work) that he has seen one case presenting friction sound in two inferior thirds of one side of the thorax; yet, the post mortem examination proved that the sound might have taken place only in two square inches. In this instance the clinical fact, well observed, has been accommodated to the preconceptions of the author, or rather to the general preconceptions of which he has partaken. In reality, the friction sound is heard where it is produced; not an inch out of this spot—an important character in some difficult cases.

12. *Pleural Pseudo-Ronchi.* (P. 126.)

The sounds described on this head by the author, were a quantity of minute friction noises; no other rational interpretation can be given of them.

13. *Causes of Ægophony.* (P. 141.)

"Laennec thought it probable that the fluttering that the bronchi undergo from pressure of the pleural fluid, had a good deal of influence in its production; the

quality of resonance being such as might be anticipated from the shape of the vibrating tubes, resembling the mouth-piece of the bassoon and hautbois."

Here is another example of the noxious intemperance of explaining, from which Laennec himself has not enjoyed freedom. I will ask, what kind of likening may be settled between two things so dissimilar? On one side a bronchus, whose structure is perfectly known; on the other, a thin, hard, elastic piece of reed, having one of its ends fastened to the instrument, the other free, and vibrating in the current of the air proceeding from the mouth. Vibrating, because free, and hard, and elastic, and thin; closing and opening alternately the hole of the instrument, creating, by its play, the vibrations of the air and the musical sound.

According to Prof. Walshe, *it is not sufficient, by itself, for the production of the phenomenon.* On this point I agree completely with him, declaring, besides, that the foregoing comparison has always struck me as exceedingly absurd.

(*To be continued.*)

XI.—*Part V. and Last, Surgical Anatomy.* By Joseph Maclise, Fellow of the Royal College of Surgeons. With 68 Colored Plates. Philadelphia: Blanchard & Lea. 1851.

We are extremely gratified to announce to the profession the completion of this truly magnificent work on Surgical Anatomy. The concluding part is equal, if not superior, to the first; and the work, as a whole, certainly stands unrivalled, both for accuracy of drawing, beauty of coloring, and all the requisite explanations of the subject in hand. To Messrs. Blanchard & Lea, the truly liberal publishers of this work, the profession in America is deeply indebted for placing such a valuable—such a useful work, at its disposal, and at such a moderate price. The entire Five Parts may be purchased for $9; thus making one of the most finished and complete pictures of Surgical Anatomy ever offered to the profession of America. With these plates before them, the student and practitioner can never be at a loss, under the most desperate circumstances.

We do not intend this for commonplace compliments. We are sincere, because we know the work will be found invaluable to the young, no less than the old, Surgeon. We have not space to point out its beauties, and its merits; but we speak of it *en masse*—as a whole, and strongly urge—especially those, who, from their position, may be debarred the privilege and opportunity of inspecting the fresh subject, to furnish themselves with the entire work.

T. L. White, 53 Canal street, has several copies for sale.

Part Fourth.

MISCELLANEOUS MEDICAL INTELLIGENCE.

(ORIGINAL.)

SELECTED ITEMS OF OBSERVATION,

Referring, chiefly, to the living microscopic organisms that abound in the waters of New Orleans and its vicinity. Embracing also some matters pertaining to microscopic anatomy.

BEING IN EXPLANATION OF EIGHTY LITHOGRAPHIC FIGURES.

BY J. L. RIDDELL, M. D., PROF. CHEM. MED. DEP. UNIV. LA.

Published by the Medical Class of 1851–2, as an Appendix to the author's Introductory Lecture.

TAB. I.

[*Magnified* 1000 *Diameters.*]

MICROSCOPIC ANATOMY.

The objects here represented, are drawn as magnified 1000 diameters. That is, the lineal extension is 1000 fold, the apparent area is magnified one million times, and the objects themselves, if enlarged to this extent, would measure, in cubic contents, or would weigh, one thousand millions of times as much as their real volume or weight.

Fig. 1. The most minute visible spherules seen in the fluids of animals and vegetables, and in most natural waters, usually manifesting, when beheld, various irregular movements, which by some are considered as indicating vitality. They abound in the air, and, indeed, occur in almost every situation. A gum resin, as gamboge, mixed with water, exhibits myriads of them in active motion; and this motion will continue unabated for many days, at least, perhaps, until the water is permitted to dry. A heat of near 400 °. Fahr. will permanently deprive them of the power to assume these molecular movements. Some are proportionably more minute than represented. They are usually denominated *monads*. Considerable obscurity hangs about them.

2. 3. Active animalcules, constituting, perhaps, one-fifth part, by weight, of healthy human fæces. Similar beings, or at least animalcules of similar size and shape, abound in putrid sores, fetid pus; and they are often seen in stagnant, and also occasionally in fresh running water. In the Mississippi water, they may be now and then discovered, and it is very rare to find therein, minute as they are, any microscopic living thing, exceeding them in size.

4. A slow moving worm, occurring in human fæces, mostly observed by me, in cholera discharges.

5. The most usual appearance, of a freshly drawn human blood corpuscle.

6. Human blood corpuscle, in which the contained nucleoli are slightly visible.

7. Human blood corpuscle, in which, by the shrinking of the envelop, from partial desiccation, or from the exosmotic influence of a chemical agent, the nucleoli are prominent, and distinctly visible.

8. Side view of a blood corpuscle, when in the same condition as No. 7.

9. Blood monads, or individual nucleoli liberated from the corpuscles; sometimes observed in the blood, and easily effected by grinding a little blood between two plates of glass. These, when free, manifest molecular movements,as do the blood corpuscles themselves,when drawn from a human system laboring under any kind of excitement, or upon the application, out of the system, of a great number of different agents.

10. The disintegrated appearance of blood corpuscles, produced at pleasure, by mixing a little blood with strong brandy.

11. One of the spermatozoa, abounding in human male semen; moves by oscillating the head, the tail remaining nearly straight. Lives for several hours out of the human body.

12. The same as No. 11. Drawn from a preparation mounted by C. M. Topping, London.

13. 14. 15. Spermatozoid (?) bodies, seen in the fluid contents of an unimpregnated ovum, from the ovary of a human female. No. 15 has some resemblance to spermatozoa. These bodies were not observed to move.

16. 17. Balloon cells, observed to abound in the same fluid with 13, 14 and 15. The subject from which, 28th May, 1851, three hours after death, Dr. Hunt dissected the ova examined, died suddenly of dysentery in the Charity Hospital. She was aged near 22 years. These curious cells consisted of a hyaline membrane, tense and spherical, filled mostly with transparent fluid. To one side internally, (or externally, in fact, in some instances) was attached a reddish granular mass.

18. 19. 20. Pus corpuscles; appearing like dropsical, diseased and deformed blood corpuscles. Often seen in exposed sores, &c., with a part of the outline sloughed away, as in No. 20. The nucleoli very seldom manifest the molecular movements, which characterize those of blood; much more seldom than those of mucus corpuscles, which otherwise closely resemble them.

21. A cancer corpuscle, being a decompound cell.

22. *Vibrones.* Algæ (?) possessing the power of spontaneous motion. Seen in human urine in certain depraved conditions of the system.

TAB. II.

[500 *diameters.*]

DESMIDIÆ.

This, and the following plate (Tab. III.) represent a number of the curious forms of the *Desmidiæ*, which occur in the waters of this region. These little bodies are generally regarded as microscopic plants. In their simplest varieties, they consist each of a single cell, which is hyaline and not sileceous, and which is more or less filled with a green granular substance, containing, when mature, minute granules of starch (as is evinced by the action of iodine). Some of them, as Nos. 25, 29, occasionally exhibit active movements, suddenly changing their position—but most of them seem passive, floating freely in their native element.

23. Cosmarium granatum, Bréb. Locality, mouth of the Bayou St. John, La. Each lobe containing a green core, and many moving monads of a green color.

24. Euastrum? ——— ? From the Tchefuncte river. 24th June, 1851. Endochrome green. Occasionally manifesting, apparently, voluntary movements.

25. Scenedesmus quadricauda, Turpin. Common in stagnant waters. Moves voluntarily.

26. Micrasterias oscitans, Ralfs. Tchefuncte river. July, 1851.

27. Ankistrodemus falcatus, Corda. Tchefuncta river, La.

28. Scenedesmus obliquus, Turpin. Bayou St. John. May.

29. Scenedesmus quadricauda, Turpin. Very common in all our waters. Varies much. From two to eight or more corpuscles. (Fig. 25.) Moves by fits and starts.

30. ——— ? ——— ? Tchefuncte river, near Madisonville. Probably a species of Scenedesmus.

31. 32. Scenedesmus? ——— ? Tchefuncte river. June.

33. 34. Staurastrum Arachne, Ralf. 33 front view. 34 side view.

TAB. III.

[500 *diameters.*]

DESMEDIÆ.

35. Closterium Leibleinii, Kützing. Tchefuncte river. June. A free corpuscle, containing 10 or 12 moving monads ; and, also, a separate small bubble of air was observed near each extremity. The corpuscles are shown in the figure.

36. Closterium setaceum, Ehrenberg. Bayou St. John. July.

37. ——— ? ——— ? Tchefuncte river. July.

38. Pediastrum pertusum, Kützing. Lake Pontchartrain, near Lewisburg. July.

39. Staurastrum ———? Possibly this is Desmidium tridens, Ehr. Tchefuncte river. June.

40. Pediastrum biradiatum, Meyen. Tchefuncte river. June.

TAB. IV.

[650 *diameters.*]

DIATOMACEÆ.

The minute beings revealed to us by the microscope, constituting the class Diatomaceæ, are conceded to hold a rather doubtful position in respect to animals and plants. They exist in nearly all natural waters upon the earth's surface, whether salt or fresh, wherever light can gain access. They are mostly encased in a sort of basket work of silex; hence, viewed with a good microscope, they exhibit on the surface a great diversity of lines, protuberances and depressions, symmetrically and beautifully arranged. The indestructible *carapaces* or cases of the Diatomaceæ, are often met with in a fossil state, as in tripoli, polishing slate, marls, and guano. In the living condition, they exhibit, interiorly, masses of soft granular substance, which, from their varying position, seem to be almost fortuitously disposed. The color of this interior substance is mostly a dark reddish brown, or rust color—rarely green. Without visible external organs, they move indifferently either end foremost (if free), with a slow, equable progress.* The majority of naturalists are inclined to regard them as more closely allied to animals than to vegetables.

41. Navicula Hippocampus, Ehrenberg. Tchefuncte river, near Madisonville. The longitudinal and cross lines discoverable with a good ordinary microscope, are here sketched. The former are 40,000 to the inch; the latter 32,000 to the inch. This shell has had considerable reputation as a microscopic test object. It occurs in Europe and various parts of America.

42. Navicula ———? Professor Bailey thinks this may possibly be the Navicula acuminata, Kützing. Stagnant waters of the swamp back of New Orleans. The markings are much like fig. 41. but considerably more difficult to resolve. Cross lines 60,000 to the inch; longitudinal lines 45,000 to the inch. (Not represented in the figure.

43. 44. Navicula ———? Stagnant water, swamps back of New Orleans. This is one of the most difficult test objects with which I am acquainted. The cross lines are 80,000 to the inch. Fig. 43, front view of outline; fig. 44, side view.

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* By closely observing the movements of the larger Diatomaceæ, as Pinularia viridis, and Synedra scalaris; and especially by noting the impetus given to a free ring of mucous matter, now and then accidentally encircling them, it appears to me very probable, that they propel themselves along by means of very minute, invisible ciliæ. A filament much less than one hundred thousandth of an inch in thickness, could not be made visible with our best defining microscopes; hence, we should not be surprised that such ciliæ, as yet, remain unseen.

45. Navicula ———? Lake Borgne.
46. Eunotia tetraodon, Ehrenberg. Tchefuncte river.
47. Stauroneis Baileyi, Ehr.? Tchefuncte river. Cross lines 32,000 to the inch.
48. ———? ———? Tchefuncte river.
49. Gomphonema acuminatum, Ehr. Tchefuncte river.

TAB. V.

[650 *diameters.*]

DIATOMACEÆ.

50. 51. Himantidium arcus, Ehr. Fig. 51 represents a single frustule, emptied of its contents, showing the characteristic markings. Fig. 50 shows a number of frustules, attached side by side, so as to constitute a long, flat, tape-like filament, containing usually a quantity of granular and cellular matter in each joint. This species varies very much in size. On aquatic plants. Common in the Tchefunte river and elsewhere.

52. Bacillaria paradoxa, Ehr. Lake Pontchartrain. This curious bag of bones has excited the wonder of all who have beheld it. The single frustule at the bottom of the page, exhibits its markings when viewed with a powerful microscope. The Bacillaria paradoxa consists of a greater or less number, usually a dozen or more, of beings with separate vitality, and power to move, all enclosed in a pretty close fitting bag, which, likewise, seems endued with vitality and contractility. The whole structure manifests a power of locomotion much greater than most of its congeners. You may, perhaps, first discover the object, with the frustules all side by side, like a layer of segars in a box. An outside frustule may then push forward, followed in succession by the adjacent ones; until, perhaps, you have them all in a long string. Several varieties of figures, as of the letters V, M, N, L, Z, are presented in rapid succession.

53. Gomphonema dichotomum, Kützing. Tchefuncte river. June. Occurring upon Utricularia vulgaris. Many of the Diatomacæ are borne upon little stems, sometimes branched, precisely, after the manner of vegetable flowers and fruit. These stems are usually attached to aquatic plants. When the frustules thus borne are detached from their parent receptacle, they commonly manifest the power of locomotion.

TAB. VI.

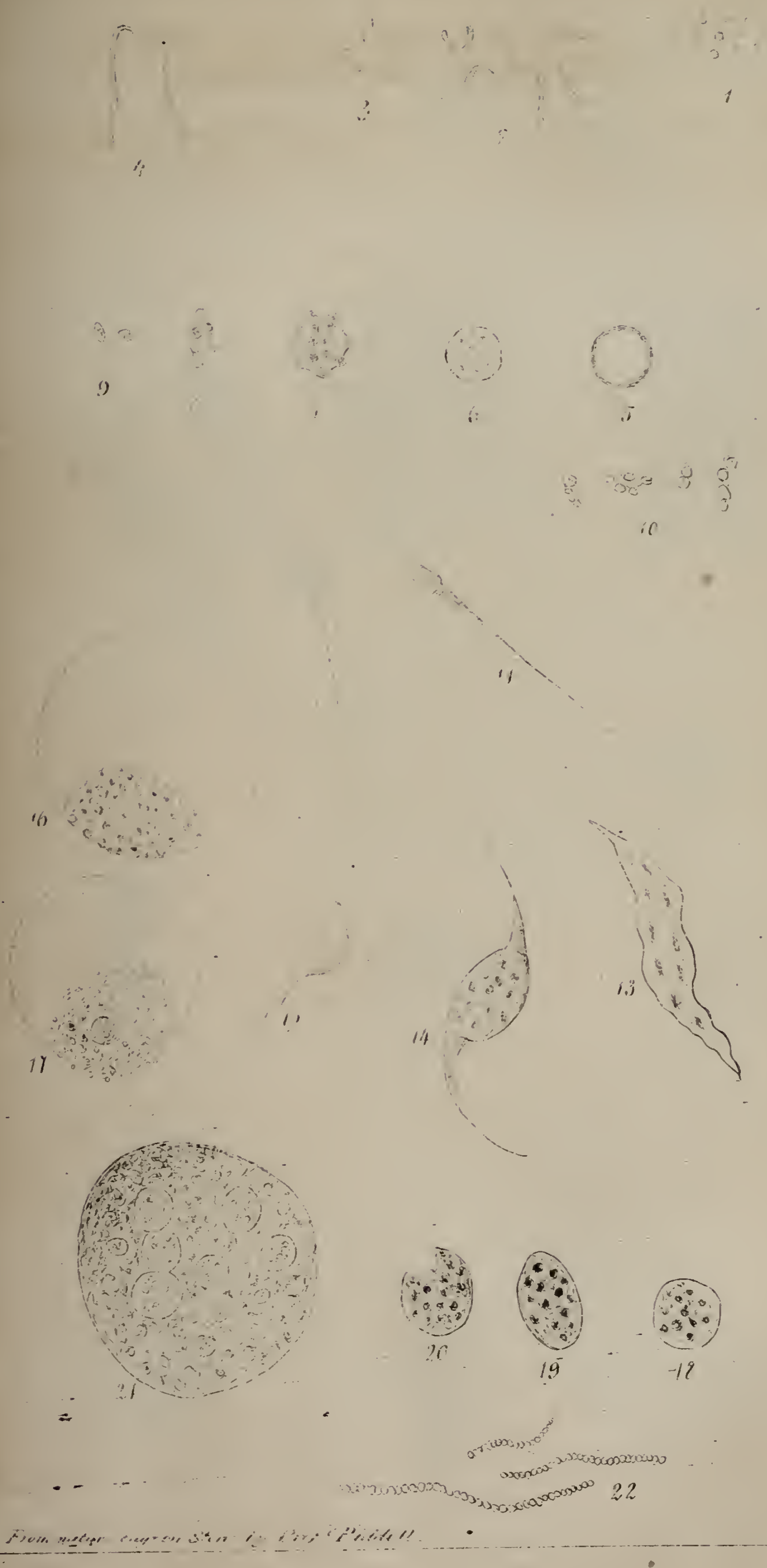
[650 *diameters.*]

MICROSCOPIC OVA. INFUSORIA.

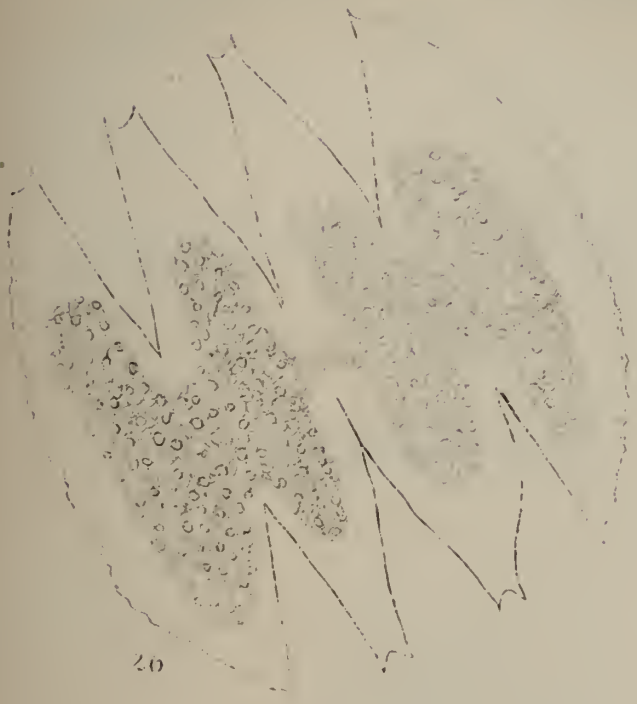
54. 55. Two of the numerous varieties of microscopic ova, observed to rise to the surface of stagnant swamp and lake water, and to lie thereon apparently dry, ready to be lifted into the atmosphere by the upward impetus of evaporating water.

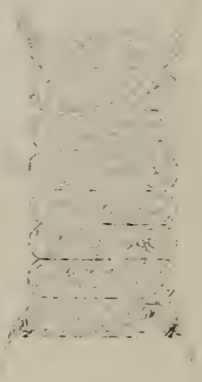
56 to 62. This strange infusory animalcule, found in the waters of the Bayou St. John, in Lake Pontchartrain and Lake Borgne, among aquatic vegetation near the shores, I take to be closely related to what

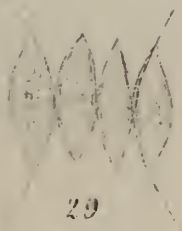
TAB. I.

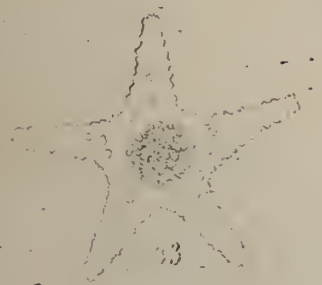


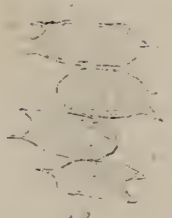
From nature engraved on Stone by Prof. Riddell.

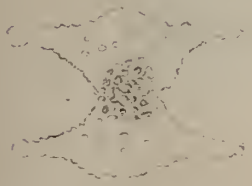












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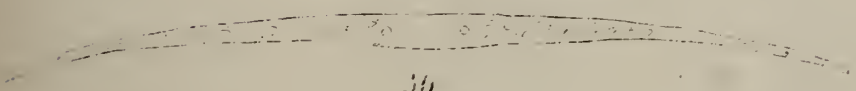

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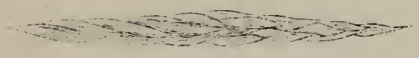

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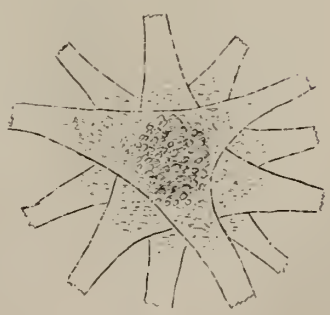

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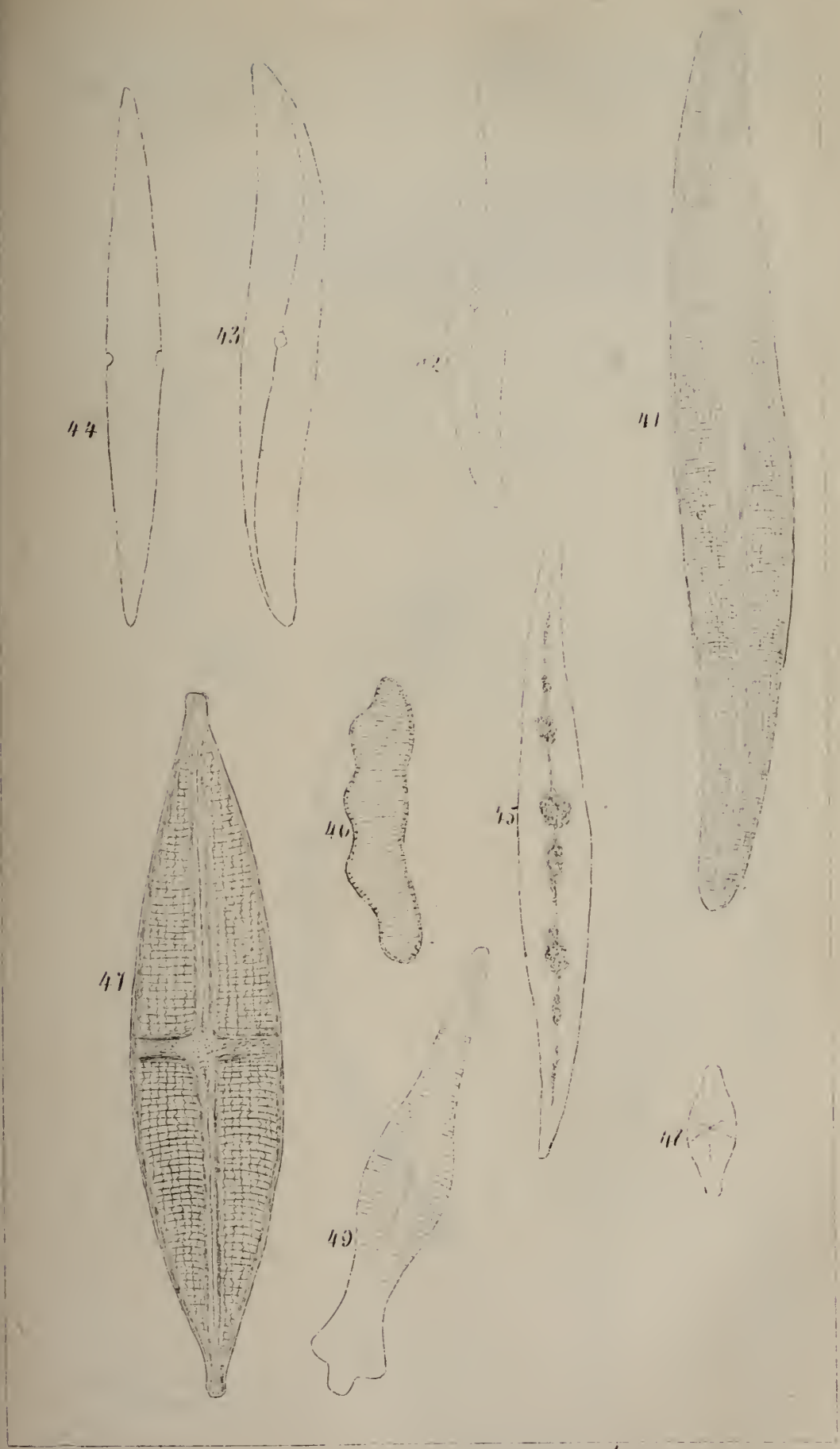
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TAB. V

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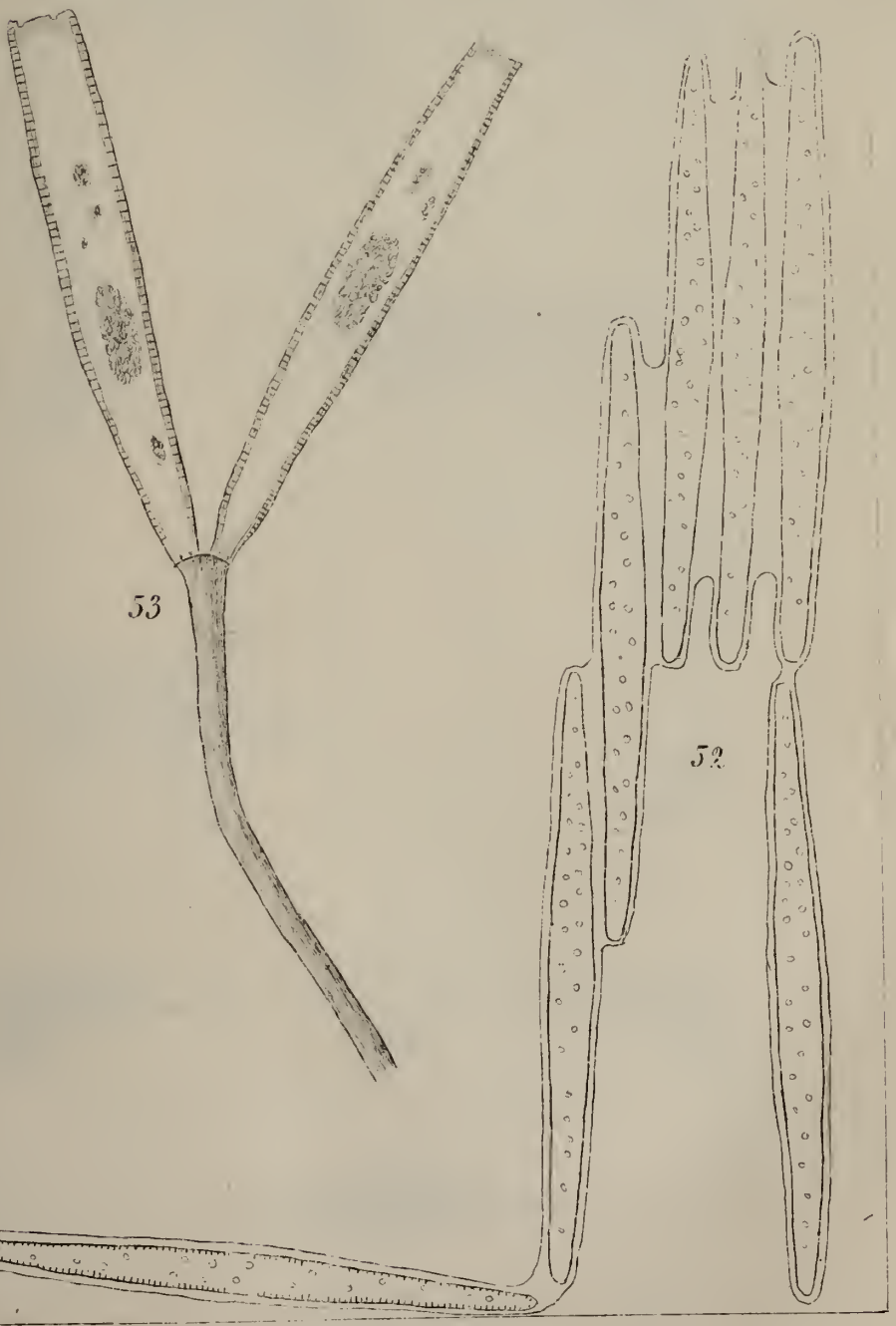

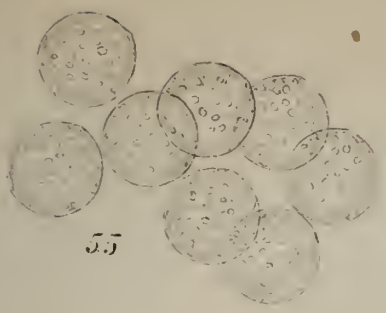

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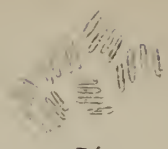

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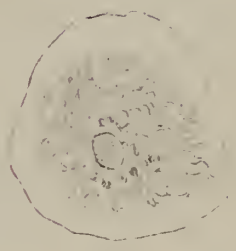

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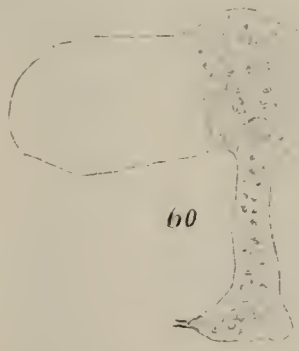

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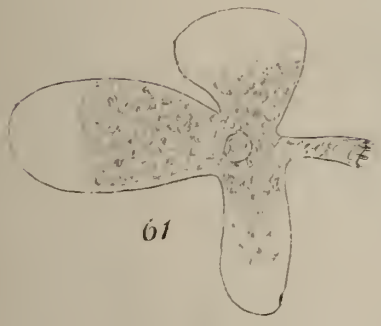

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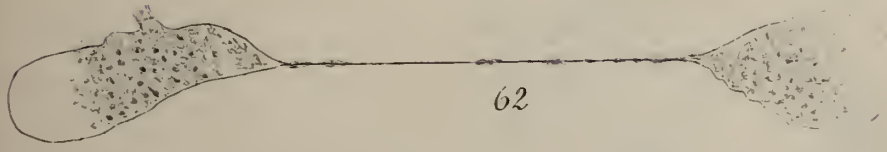

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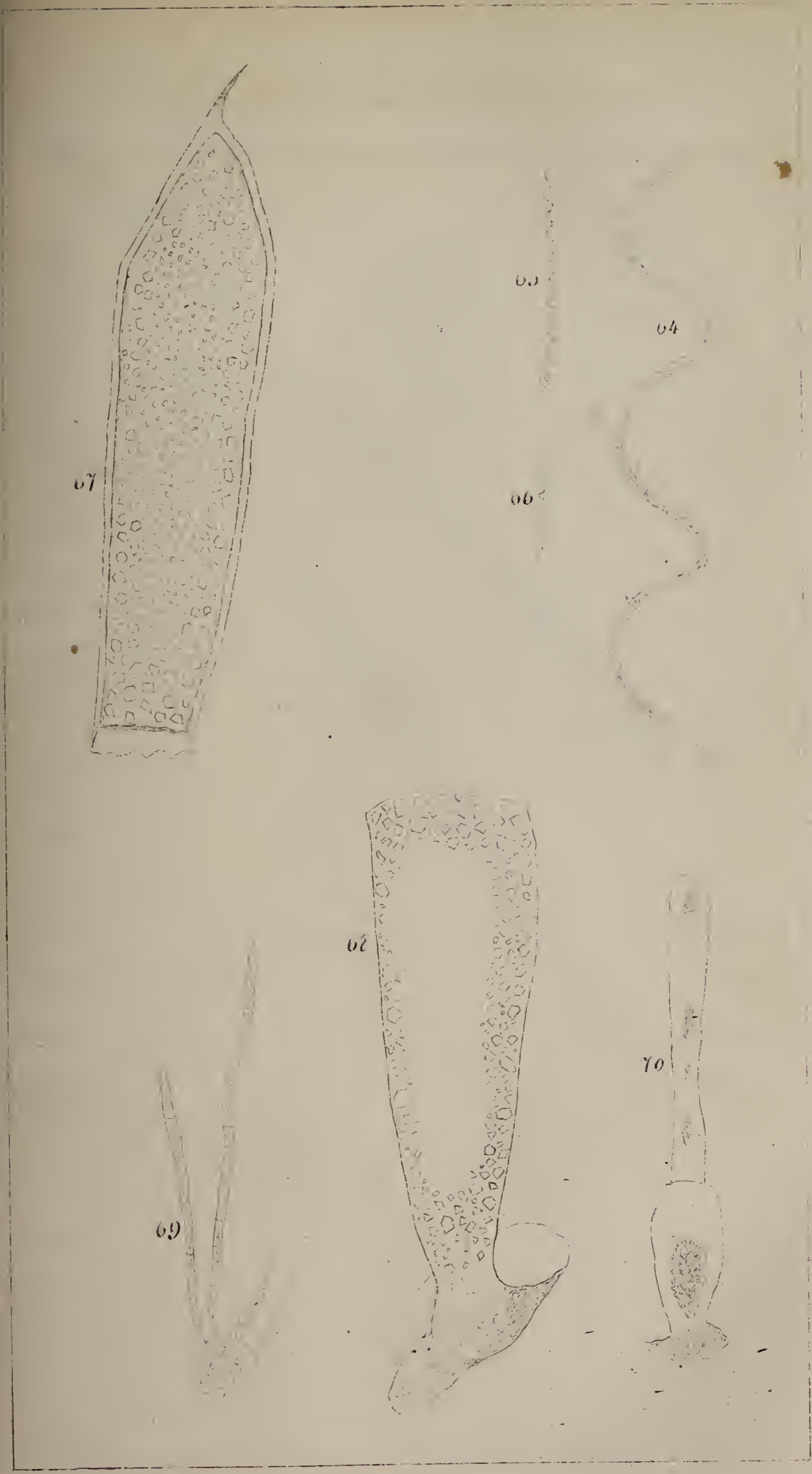
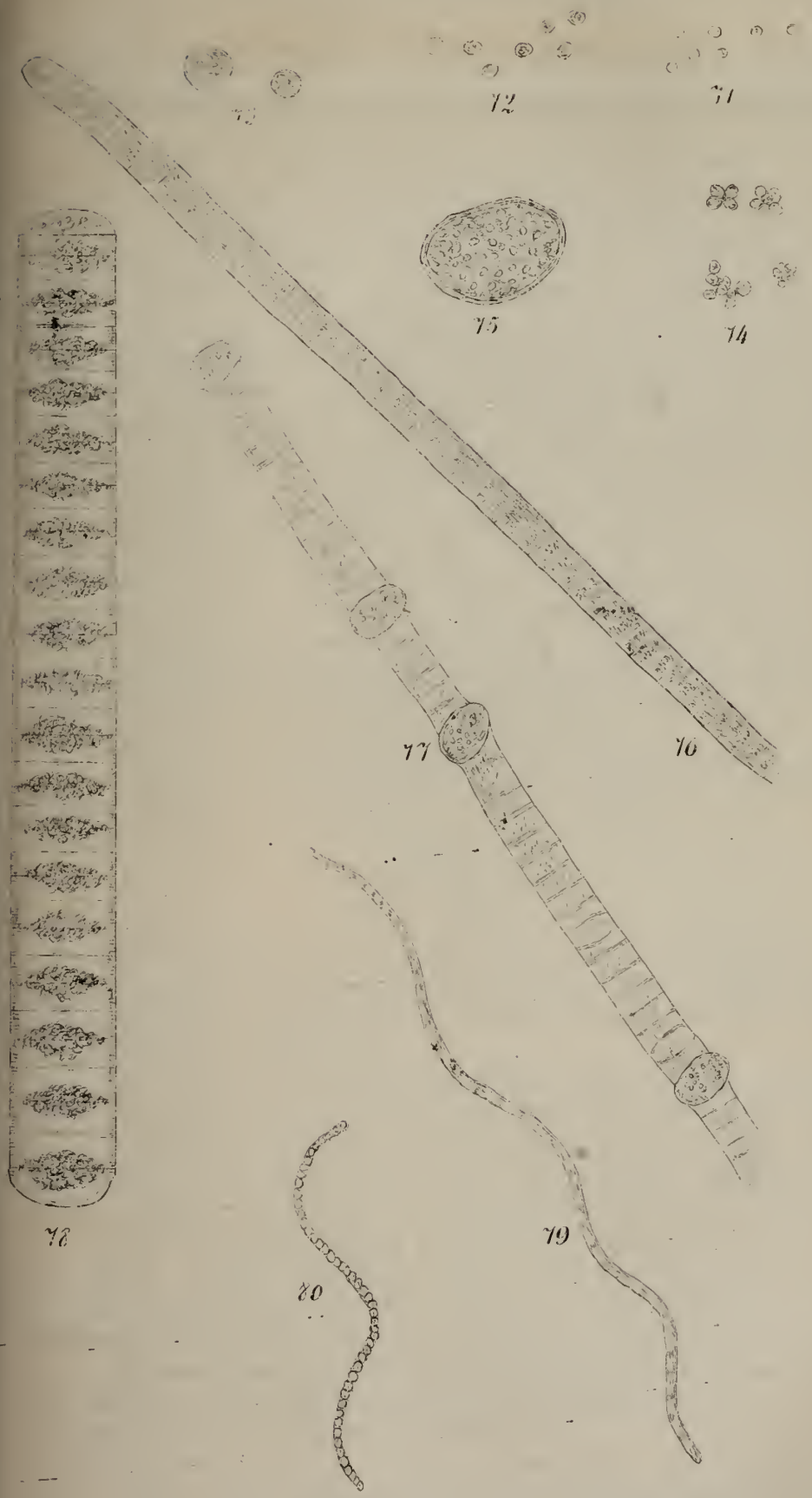
TAB.VII



TAB. VIII.



the Danish naturalist, Müller, described under the name *Proteus diffluens*. It consists, apparently, of a distensible, elastic, transparent bag, containing one or more comparatively large cells, and a great number of smaller cells and granules, which move over each other freely, and do not appear to have to each other any organic attachment. Its movements are very sluggish, and it assumes, at pleasure, a great and surprising diversity of shapes, as shown in the figures, which were sketched faithfully from a single individual. It would seem that the direction of movement is determined by the popular voice and combined efforts of the numerous granules making up the little commonwealth. And, as in the affairs of men, different factions or parties are evidently apt to co-exist, it necessarily results, that different regions of the bag seem to be striving, at the same time, to move in different directions. Hence the strange conformations assumed by the Proteus. In fig. 62, there are two parties, pulling in opposite directions, and while observing them, I expected nothing but a dissolution of the union. I was mistaken, however, and the Protean constitution proved more strong and elastic than the party efforts; for in a minute afterwards the two contending factions compromised the matter, and quietly coalesced, presenting, in fact, much the appearance of fig. 56. One part of the bag is characterized by three or four minute protuberances, with which it occasionally fixes itself to adjacent objects.

63. ———? ———? Lake Borgne. A soft, flexible, active animalcule, using its attenuated extremities as feelers.

TAB. VII.

[650 *diameters.*]

ALGÆ.

Plants of the natural class Algæ, grow almost exclusively in water, being, in a few obscure species, rarely met with in damp, shady situations upon land. Many of the microscopic species assume some of the characteristics of animal life.

64. 65. 66. In all the clear and quiet, and in all the stagnant waters of this region, long spiral filaments may be observed, as represented by the figures, which seem to be of the nature of Algæ. They are usually of a faint greenish hue, and move slowly through the water, by revolving upon themselves, at the rate of near twice per second, so as to screw themselves along, precisely as a corkscrew is made to enter a cork. In May and June, 1851, Lake Pontchartrain was turbid, from the great abundance of a spiral worm, similar to, but rather smaller than, the one represented by fig. 64. I have noted several species. Some of them (fig. 66) are so very thin, delicate and minute, as with difficulty to be discerned with the best microscope. They all appear referable to the genus Spirillum, Ehr.

67. 68. 69. ———? ———? Near the mouth of the Bayou St. John. June. Prof. Bailey, from a drawing sent him, is inclined to refer this to the genus Vesiculifera. Fig. 67 and fig. 68, represent the first and last joints of one of the filaments, magnified 650 diameters. Fig. 69 represents the outline of a whole plant, much less magnified. The joints are usually more or less filled with angular cells, of a green

color; among and beyond which, multitudes of minute, truncated, greenish granules, are often seen in active motion.

70. ——— ? ——— ? Tchefuncte river. Seedling of some one of the fresh water Algæ; the cells or joints containing masses of green endochrome.

TAB. VIII.

[650 *diameters.*]

ALGÆ.

71 to 75. Green particles observed in the water of Lake Pontchartrain, manifesting motion. Probably the spores [seeds] and sporangia [seed cases] of Algæ.

76 to 80. Filaments of green fresh water Algæ, constituting the green slime in the street gutters of New Orleans; occurring also in the swamps back, and in the waters of the Bayou St. John. These filaments are often of great relative length. They are entangled with one another, but seem destitute of a common mucous matrix, and have no attachments or branchings, either lateral or terminal. While young and growing, they have not been observed to manifest any disposition to move. But when mature, they seem like so many worms, endued with animal life, moving at a slow and steady rate, indifferently either end foremost, without any necessary bending of the body. If they meet an obstruction, they at once, after a few trials, reverse the direction of movement. From the effect their efforts to move have on minute adjacent particles, it is to be inferred that invisible external ciliæ, distributed over nearly the whole surface, constitute their means of locomotion.

76. The species of crawling Algæ, most abundant in the green slime of street gutters of New Orleans.

77. Same as fig. 76, only in a more advanced stage of development; several of the joints having become enlarged and transformed into sporangia, nearly ready to be detached; after which, still possessing the power to move, they resemble figs. 73 and 75.

78. The largest observed species of crawling Algæ, more abundant back in the swamps than in the city.

79. 80. Smaller species of crawling Algæ, occurring with Nos. 76 and 78; and likewise found among the leaves of Ceratophyllum demersum, Linn., growing in Lake Borgne.

I have been unable to refer satisfactorily, the objects represented in this plate, (Tab. VIII.) to any of the established genera of Algæ. They seem to hold, in some respects, an intermediate position between the tribes Oscillarineæ and Nostochineæ; possessing, in a greater degree, the characteristics of the former.

I.—SANITARY CONDITION OF THE COUNTRY.

From all we can learn, typhoid fever is gradually, yet steadily, extending itself over the Southern country. In many parts of Georgia, Alabama, Mississippi and Louisiana, it has made its appearance, and seems destined to supplant many of our acute diseases. What connection exists, if any, between the propagation of this fever, over the South, and *European immigration*, we are not prepared to state; certain we are, that the disease is gradually migrating towards a Southern latitude, as many of our correspondents from the different parts of the surrounding country, assure us, in letters addressed to us. The so-called bilious remittent, and continued fevers, have put on the livery of typhoid fevers, and demand a corresponding modification of treatment. Whether the treatment usually adopted plays any part in converting these diseases into typhoid fever, we are not prepared to state. We give the following extract from a letter addressed to us:

SELMA, (Ala.) Nov. 12, 1851.

Doctor A. Hester:

DEAR SIR—We have had, as you are aware, but little rain since the 1st of May last, and an unprecedented hot summer. Epidemic dysentery has prevailed to a considerable extent, and in some localities has been very fatal; about the same time and since it subsided, Typhoid Fever has been rife; and from present indications, I think it probable that the latter is to be the disease of the winter here. It has not as yet assumed a very malignant form. It attacks all classes of the community. Those in the prime of life are particularly obnoxious to it. Where intestinal diseases have prevailed, I have noticed many non-contagious eruptive diseases; some cases of very distressing character, closely resembling what the British journals have described as "furunculoid." Were you to ask me, "what is the health of your place?" I should answer, very healthy.

Very respectfully,

W. P. REESE.

II.—LAWS GOVERNING THE PRACTICE OP MEDICINE IN THE STATE OF ALABAMA.

We are authorized by Dr. Hort to publish the following letter, in order to correct an unintentional error, which appeared in his article on "Medical Education," in our November Number. *Ed.*

MOBILE, Nov. 28, 1851.

W. P. Hort, M. D.

DEAR SIR—In the November No. (1851) of the New Orleans Medical and Surgical Journal, at page 322, last paragraph, you include *Alabama* among those States wherein "salutary laws that were once enacted and enforced, *have been repealed.*" This declaration you base upon a Report, published *during last spring*, in the Boston Medical and Surgical Journal." I hope you will pardon the liberty I take, in calling your attention to the 3d vol. of Transactions of the American Medical Association, page 409, where you will find a protest from the Alabama delegation, on this subject. The error originated

through the ignorance of a person, who communicated such a statement to the Monroe Medical Society, New York, somewhere about 1845; thence it was assumed as a *fact*, by Dr. Campbell F. Stewart, of New York, as Chairman on Medical Education, reported to the American Medical Association, at its meeting held at Boston in 1849. To say nothing of such a report being put forth, without reference to the only reliable authority, viz: the published laws of the State, always obtainable, it is still more singular, that as late as *last spring*, any one at Boston should have repeated the assertion, when our protest was read to the Convention in 1850. The perpetuation of this error is made still an apparent fact, through the following remark in your essay. You say: "We take for granted the statement respecting these facts."

Having directed your attention to this matter, it only remains for me to assure you of my thorough concurrence with the remarks embraced in your able and well digested article—(with the single exception of that paragraph at page 362, where you allow such latitude to qualified graduates, in the adoption of the "pathies.") The Medical Faculty of our State is also sensibly alive to their truths. They are daily striving to eradicate the evils which exist, and establish within our own borders a more healthy state of things.

The supineness which has for some time past allowed the *enacted* laws to remain inoperative in many cases, has, doubtless, been productive of much harm; but the spirit now awakened, will, I hope, result in all that can be desired.

I am, sir, very respectfully,

Your obedient servant,

A. LOPEZ.

III.—MISSISSIPPI STATE HOSPITAL AT NATCHEZ.

We are gratified to learn, that at a recent meeting of the Trustees of the Mississippi State Hospital, Dr. C. S. Magoun was elected Physician, Surgeon, and Superintendent of that useful and excellent Institution, to take charge on the 1st of January, 1852. A better selection could not have been made; and we congratulate the Doctor on this additional evidence of public appreciation; feeling assured, at the same time, that he will discharge his responsible duties with credit to himself and advantage to the State. As proof of the Doctor's talents and indefatigable industry, we may refer to the Original Department of this No. of the Journal, for a very full and satisfactory paper, prepared by him on the "*Vital Statistics of Natchez.*" Dr. Magoun's position will enable him to continue his practical contributions to our pages; and we hope he will avail himself of his official station to give to the profession the results of his experience.

MOBILE, (Alabama) Nov. 1st, 1851.

DEAR SIR—At the last annual meeting of the "American Medical Association," I was appointed Chairman of a Committee, to report at its next session, on the "*Endemic Prevalence of Tetanus.*" The subject is a novel one, its solution difficult of attainment, and not easily controlled by any individual effort.

Permit me, therefore, to solicit your assistance, to the extent of your information, either from personal experience or inquiry, embracing the immediate circuit under your professional supervision. My object is, not to tax you with long and elaborate replies, but simply, where admissible, to furnish affirmative or negative answers.

Your attention to the following queries and answers, seriatim, forwarded by mail to my address, on or before the 15th day of January, 1852, will not only serve the special object of the Association, but particularly oblige,

Very respectfully,

Your ob't serv't,

A. LOPEZ.

1st. Are there any physical causes, in or about your locality, productive of Endemic Disease, and if so, what form does such disease assume?

2d. Have changes by clearing of lands, change of culture, or any other circumstances, been the cause of such Endemic?

3d. Has Tetanus been of frequent occurrence, and if so, does it hold an analogous or independent origin?

4th. Does it follow the laws which govern other climatic Endemics, in sufficient number, and simultaneous prevalence, to warrant the belief of its identical origin?

5th. What form of Tetanus have you most commonly met with?

6th. The proportion of Traumatic to Idiopathic?

7th. Have meteorological variations governed the production and character of the disease?

8th. The average number of deaths from Tetanus?

9th. Have adults or children been most liable to its attack?

10th. What sex?

11th. Proportion of whites to negroes?

12th. Duration of disease previous to fatality?

13th. Intervals between cause and developments?

14th. Does *Trismus Nascentium* ever observe an Epidemic or Endemic character?

15th. Do you consider it Traumatic or Idiopathic?

16th. Are negro or white children most liable to it?

17th. Your belief as to its origin?

18th. Proportion of deaths to cures?

19th. Have you found any form of treatment more successful than another, in either Tetanus or Trismus Nascentium?

From the Charleston Med. Jour. & Review, No. 6, for Nov. 1851.

[The subjoined "Card" being considered by Dr. F. M. Robertson as a final settlement of the difficulty between Dr. H. A. Ramsay and himself, we insert it, together with his letter to Dr. De Saussure, at his request.—*Eds. Charleston Med. Review.*]

A CARD.

Since the publication of my reply to the pamphlet recently issued by Dr. F. M. Robertson, of Charleston, S. C., I have been in correspondence with Dr. J. J. Robertson, of Washington, Ga., through a friend, and having received from him the grounds upon which the opinion of himself and Dr. D. M. Andrews, in regard to my professional statistics, was based—which opinion, led them, when called on by members of the American Medical Association, at their late Convention in Charleston, to express a want of confidence in the reliability of my obstetrical statistics, and induced Dr. F. M. Robertson, a member of that Association, to move to strike out the notice of said statistics from the Report of Dr. Storer, of Boston—and having received from Doctors Andrews and Robertson the assurance that those opinions were neither formed or expressed through personal ill-will towards myself, but were honestly entertained, and given in pursuance of what they regarded their duty to the profession; and feeling convinced, from the representations of those gentlemen, that they were influenced by circumstances, which, unexplained, were calculated to impair their confidence in me as a reporter, I feel bound in justice to them to state, that, with such impressions on their minds, they could not, when called on, have given other than an unfavorable opinion, and that Dr. F. M. Robertson, in making the motion he did, under the circumstances, was actuated by no unworthy or improper motive.

The grounds on which Doctors Andrews and J. J. Robertson were led to the statement that I had not, during my practice of physic, been continuous in one place, were, my removal from Bookerville to Mrs. Wellborn's, a distance of six miles, and subsequently to this place, a distance of one and a half miles, while I regarded myself as never having left the *neighborhood* in which I originally settled. I have also been satisfied, from the statements and evidence furnished me by Dr. J. J. Robertson, that although he has not had a general practice in my neighborhood, he has made over twenty professional visits in the vicinity of my location within the past six years, a fact of which I had not been apprised at the time my late pamphlet was published.

In issuing this card to the profession and the public, I am impelled by no other than a desire to render strict justice to all the parties concerned, and therefore I feel bound, under the circumstances, as an honorable man, to withdraw all offensive language I may have used in my pamphlet, or elsewhere, touching this controversy, either towards Drs. Robertson and Andrews, or towards Dr. F. M. Robertson, of Charleston.

I respectfully submit this statement to the profession and the public, with the single additional remark, that it is regarded by all the parties as an amicable and honorable termination of this entire controversy.

H. A. Ramsay.

Raysville, Geo., Oct. 14, 1851.

Charleston, S. C., Oct. 31, 1851.

Dear Doctor—Since you handed me the two letters of Dr. H. A. Ramsay to yourself—one dated September 1st, the other October 1st—I have received "a card"—issued by the same gentleman—dated Raysville, Ga., Oct. 14th, 1851, one of which, I presume, has been sent to you also.

As circumstances growing out of Dr. Ramsay's published defence of August last, and his private correspondence with numerous persons, have drawn me into personal issues with certain parties, which are yet unadjusted, I deem it but justice to Dr. Ramsey, as well as due to my own position, to make the following remarks, which will prevent misunderstanding in future.

1st. The card alluded to, was unsolicited by me, but voluntarily tendered by Dr. Ramsay. Nor was the disclaimer of its author, of imputing "*unworthy*

or improper motives" to me, for the course which I thought it my duty to pursue, in relation to his obstetrical statistics, or the withdrawal of "*all offensive language in his pamphlet or elsewhere*," in relation to myself, the result of any correspondence or explanation on my part, either *directly* or *indirectly*.

2d. Desiring still, as stated in my note to you, of the 28th June, published in my circular of July last, to "throw no impediment in the way of his doing himself ample justice in the matter complained of," I now accept the card as an honorable amend for the imputations against my motives, and his personal abuse, and consider it, so far as I am concerned, a final termination of the personal difficulty between Dr. Ramsay and myself.

3d. Inasmuch as the collateral issues in which I have been involved (by no act of my own, however) with the editors of certain medical periodicals, in relation to the merits of the "Obstetrical Statistics," are yet unsettled, I hold myself perfectly free, until they are satisfactorily arranged—in case it becomes necessary to my defence—to discuss the professional merits of the points of difference, without its being considered a violation of my acceptance of Dr. Ramsey's card.

th. If the question should be introduced into the American Medical Association, at its next meeting, which has been intimated from certain quarters, I reserve to myself the same privileges claimed in the preceding paragraph.

Having thus set forth my position, that it may be clearly understood by all parties,

I remain, very truly and sincerely,
Your obedient servant,

F. M. Robertson.

Dr. H. W. De Saussure, Sec'y A. M. A., Charleston, S. C.

[Since the above was in type, we have received the following from one of the parties:]

Dear Doctor—I see a *Card* in the Charleston and other journals, over my name. I never published it, or ordered Robertson to do it, and shall not be responsible for it, unless it be *fairly, honorably and satisfactorily explained and recognized* by the American Medical Association. Permit me, in *justice*, to say this in your columns.

H. A. RAMSAY.

Dr. A. Hester, New Orleans. Dec. 10, 1851.

The New-Orleans Medical and Surgical Journal.

Vol. VIII.] NEW-ORLEANS, JANUARY 1, 1852. [No. 4.

In making up the bi-monthly statement of our sanitary condition, we shall have to repeat, in a great measure, what we advanced under the same head in our November Number.

Since that time, no essential change has been manifested in regard to public health; although we have experienced some severe weather—abrupt changes of temperature—at one moment freezing, the next quite oppressive—during one week almost constant rain,—the following one, clear, dry and delightful; yet amidst all these vicissitudes, so common in this latitude, public health has

continued excellent; and with the exception of an occasional death from cholera, as will appear in our statement below, no dangerous or fatal disease has prevailed. In fact, with the exception of some pulmonary complaints, mostly of a chronic character, we have not heard of many of our usual winter diseases. Of the exanthemata—such as variola, scarlatina, rubeola, &c., we believe very few cases have been reported.

At this period, vessels are daily arriving, crowded with poor, destitute, and in some instances, sick immigrants from Enrope; many of these gain admittance into our hospitals; some are taken to the homes of their relatives and friends; but notwithstanding this close proximity of the sick with the healthy, we have not learned that any infection has been propagated from the former to the latter. All this tends to prove the salubrity—the purity of our atmosphere, and the total absence of that condition of the air favorable to the transmission of the infectious principle from one subject to another.

We continue our weekly statement, as heretofore, as follows:

Deaths in New Orleans and Lafayette for the week ending—

1851	*Total.*	*Fevers.*	*Cholera.*
October 25th,	104	14	2
November 1st,	127	14	5
" 8th,	131	18	11
" 15th,	142	18	20
" 22d,	158	20 (one yellow f.)	27
" 29th,	149	14	24
December 6th,	120	13	11
" 13th,	115	14	8
" 20th,	110	10	4
Totals,	1156	135	112

From the above it appears that the total of deaths from all diseases, casualties, &c., numbers, for the *nine* weeks ending December 20th, eleven hundred and fifty-six, of which one hundred and twelve were from *Cholera*, and one hundred and thirty-five from various types of *Fevers*. In estimating the mortality of this city (as caused by disease) we are necessarily compelled to include a large number in the list, who are either killed, drowned, or destroyed by accidents: such as by explosions of steamboats, &c. If an explosion takes place on the Mississippi, on the Lakes, or in any of the streams communicating with the Mississippi river, within three or four hundred miles of the city, the wounded and dead are generally brought to the city; the former to be treated in our hospitals, and the latter to be interred in our cemeteries. This is a notorious fact, and yet the deaths caused by these and many other accidents, even beyond the parish of Orleans, are included in our mortuary statistics, and go to swell the grand total of our deaths.

By reference to the preceding weekly tables, the reader will perceive, that the deaths from that inscrutable disease, the Cholera, began insensibly to increase about the middle of November; and that, too, without any appreciable or obvious cause. The disease remained stationary, as the deaths would indicate, for about three weeks, when it began to decline, without any known cause; and for the week ending the 20th December, the deaths in New Orleans were

only *three;* and for the same time, *one* in Lafayette. We have noted, more than once, this singular feature in the history of this disease since its first irruption in this city, in December, 1848. No meteorological condition seems either to favor or retard its progress. It comes, and again disappears for a season, with equal mysteriousness, baffling the investigations of the scientific world.

Bowel affections—including dysentery and diarrhœa, chiefly the former—have been rather prevalent, and sometimes obstinate, since the commencement of winter. The deaths from typhus and typhoid fevers, begin to increase perceptibly, as the winter season advances,—but these fevers are confined chiefly to our public hospitals; we rarely hear of any cases in private practice, except as supervening upon some other form of disease. We observe, also, a perceptible increase in the number of deaths from consumption—usual at this season of the year.

The city is exempt from all contagious or infectious diseases, and may, therefore, be proclaimed perfectly healthy.

MEDICAL ATTENDANCE ON FAMILIES BY THE YEAR.

Although condemned in strong and unequivocal language by the National Medical Association, yet we regret to state, that the practice of attending families and individuals by the year, has become a crying—a great evil, in many of our cities, if we are correctly informed. It is unjust in itself, and cannot result in any thing but mischief to the profession and to the parties contracting. The physician should receive a fair—a just remuneration for his services; and his clients should be compelled to pay only for such professional attention as they may receive; but "yearly practice" aims at a species of miserable, petty monopoly, which is at war with the objects—the noble purposes of a liberal and enlightened profession. You may bargain with your grocer, your butcher, your laundress, and no harm comes of or by it; but for an honorable, an educated physician, to hire himself by the year, like a slave; to pledge his talents and his services, for a stipulated sum, is in direct violation of the ethics of the profession, and indicates at once an unwillingness to enter the field of fair and honorable competition with our brethren.

LIGATURE OF THE EXTERNAL ILIAC ARTERY.

On Saturday, December 20th, Prof. Stone applied a ligature to the external iliac artery, for a large aneurism of the femoral, near Poupart's ligament.

The operation was performed before the medical class and a number of medical gentlemen, in the operating amphitheatre attached to the Charity Hospital. The patient declined the benefits of chloroform, and bore the operation quite well.

Prof. Stone operated with his usual dexterity and skill. Four days after the application of the ligature, the patient seemed progressing favorably. The issue will be reported in our March Number.

SPIRIT OF THE AMERICAN MEDICAL PRESS—OR GLEANINGS FROM AMERICAN MEDICAL JOURNALS.

Under this head, we propose, hereafter, with no little labor to ourselves, and, we hope, with corresponding advantage to our readers, to notice the most interesting matter contained chiefly in the *original* department of our exchange list of *American Medical Journals.* We shall endeavor to present many of the most valuable facts and observations contained in these articles, omitting all matter foreign to, or not directly connected with, the practical part of the profession. Many of the papers we shall pass briefly in review, may be deserving a more extensive analysis than we shall be able to present; but the reader must remember, that variety of matter, no less than practical information, should be the great end and aim of an editor's labors. Besides, we are expected to cater for the wants and tastes of hundreds of the profession scattered over a great variety of climate; and, of course, having to deal with as many different diseases. We shall not pretend to notice all the articles contained in any of the journals to which we have alluded, but only such as may seem to reward us for our labors.

We copy from the British and Foreign Medico-Chirurgical Review for October, 1851, the following critical notice of the Experimental Researches of Dr. Bennet Dowler on the Nervous System, published in the July No. of the New Orleans Medical and Surgical Journal of the present year:

"Dr. Dowler has made himself conspicuous among his brethren, by his refusal to receive certain of those *Neurological* doctrines, which, under one form or another, are now generally admitted among well informed physiologists.* We do not quarrel with him 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; and we have a strong sympathy with his objection to the new terms—diastaltic, esodic, exodic, anodic, cathodic, paltodic, panthodic, anastaltic, catastaltic, peristaltic, &c., by the adoption of which, we venture to think, a comparatively easy subject would be rendered obscure. * * * * Dr. Dowler has a fine field for experiment, being able to procure alligators for purposes, for which European physiologists must content themselves with frogs; and the former animals not only exhibiting the phenomena of reflex action upon a much larger scale, but also possessing a most extraordinary tenacity of life. His accounts of his experiments are very graphically drawn," &c.

We have not space to copy the entire Review, nor to notice certain details, in which the Reviewer dissents from Dr. Dowler, particularly in the concluding query, from which it appears that the Reviewer mistakingly supposes that Dr. Dowler wishes to establish an independent *Me, Ego,* or conscious mind, in the centre of each division of a vivisected or divided animal. Dr. D.'s argument is in favor of a diffused, and not in favor of a central sensorium, in the entire, much less in the divided animal. The Reviewer, probably, has not seen the

*The italics and caps are ours.

whole series of Dr. D.'s papers on this subject, or he would not have attributed so much to *automatic action* in the phenomena detailed by Dr. D., who has thoroughly examined and fully refuted this mechanical idea, as applied to explain the varied intelligential actions of decapitated and divided animals, as related in his numerous papers.

The readers of this Journal will probably be not less surprised than ourself, at the moral courage manifested by the most eminent Medical Review extant, in abjuring all faith in the Four-fold Nervous System, "*now generally admitted*," (to use its own words) "*amongst well informed physiologists, such having, as we now believe*, NO REAL EXISTENCE IN NATURE."

Such an admission forms an epoch in the mighty stream of knowledge, that has so long flowed in the Medico-Chirurgical Review, and is a luminous exemplification of an editorial principle announced in the June (1820) Number of that Journal, more than thirty-one years ago, namely, "This journal is free and independent as the air we breathe; we trust that it will never be *deterred* from doing that which is right, or *seduced* to do that which is wrong.

"The double system of sensori-volitional nerves," which the illustrious Bell was supposed to have discovered, found in this Review its mightiest and earliest advocate. In a Review of Mr. Bell's experiments on the Nerves, in March, 1822, the Reviewer says:

"No man in this country works harder, in unravelling those mysteries of the nervous system which puzzle our senses, than the present distinguished teacher in the venerable school of the Hunters.

Some people may ask, to what does this discussion lead, after all? It may be answered, that both the surgeon and physician are interested in knowing, that *two sets of nerves* are distributed to the face, having *distinct functions*.

When the air-balloon was first discovered, some one flippantly asked Doctor Franklin, what was the use of it? The Doctor answered, in the Socratic manner, by asking another question—'*what is the use of a new-born infant?—it may become a man.*'"

We repeat, that this admission forms an epoch in scientific progress, because with certain individuals it will weigh more than any amount of *demonstration*, *intuition*, or possibly *revelation itself*.

ANNIVERSARY OF THE PHYSICO-MEDICAL SOCIETY OF NEW ORLEANS.

The anniversary of this Society took place on Saturday, December 6th, in the Hall of the Medical Department of the University of Louisiana. An oration was delivered by Dr. E. D. Fenner, before the Fellows of the Society, and other professional gentlemen, all of whom seemed highly delighted with the effort of the speaker. The oration was pertinent to the occasion, and abounded in eloquent passages, elevated sentiments, and just and enlightened views of the dignity and usefulness of our profession. If space would justify, we should

be pleased to recapitulate portions of Dr. Fenner's address; but as this is impracticable, we must content ourselves with the expression of our full and entire approbation of the sentiments and views which be advanced in his oration.

At the close of the address, the Society proceeded to the election of officers for the ensuing year, with the following result, viz:

President—Dr. James Jones.
Vice Presidents—Drs. Farrell and Bein.
Recording Secretary—Dr. Macgibbon.
Corresponding Secretary—Dr. J. C. Simonds.
Treasurer—Dr. McKelvy.
Curator—Dr. Nott.

The election over, the Society, with a number of invited guests, repaired to the "Casino," where a sumptuous repast was prepared, over which the members discussed, until a late hour, the merits of the several dishes spread before them.

During the evening, the Hon. Randal Hunt made a most eloquent and effective speech, in the course of which he passed a beautiful eulogium upon the medical profession.

THE SYDENHAM SOCIETY OF LONDON.

We are pleased to learn that Dr. E. D. Fenner has been appointed Local Secretary to this great and useful Association, whose objects and operation thus far have received the unqualified approbation of the Medical Profession in Europe and America. An opportunity is here presented of getting the *best standard works*, both ancient and modern, at an extremely low price; and we trust that many of our Southern Physicians and Colleges will avail themselves of the facilities afforded by having a Local Secretary and Agent at hand to receive their orders. The Society republishes *three standard works* each year, which will be delivered to subscribers, in *New Orleans*, for *five dollars per annum*. These works are selected from the great mass of medical literature, by a council of the most reputable Physicians of London, and may be presumed to be of the highest value.

The Sydenham Society could not have made a better selection of a Local Secretary for this region, than Dr. Fenner, whose extensive acquaintance with the members of the profession will enable him to extend its objects as far as practicable. We earnestly recommend all who desire to procure *first rate medical works, at little cost*, to forward their names to Dr. F. without delay. For further particulars, see his Advertisement.

ABSTRACT OF A METEOROLOGICAL JOURNAL FOR 1851.

BY D. T. LILLIE & Co., at the City of New Orleans.

Latitude, 29 deg. 57.; Longitude, 90 deg. 07 min. West of Greenwich.

WEEKLY. — 1851.	THERMOMETER.			BAROMETER.			COURSE OF THE WIND.	FORCE OF THE WIND, Ratio 1 to 10.	Number of Rainy Days.	Quantity of RAIN — Inches.
	Max.	Min.	Range.	Max.	Min.	Range.				
Oct. 23	82.5	52.0	30 5	30.27	29.95	0.32	N.	3.00	0	0.000
" 30	80.0	52.0	28.0	30.15	29.94	0.21	N.W.	2.85	2	0.622
Nov. 6	83.0	54.0	29.0	30.20	29.93	0.27	S.	2.80	0	0.000
" 13	77.0	47.0	30.0	30.32	29.90	0.42	N.E.	3.00	3	9.245
" 20	71.5	42.0	29.5	30.25	29.85	0.40	N.E.	2.60	2	0.325
" 27	66.0	44.0	22.0	30.15	29.95	0.20	N. W.	3.10	5	3.324
Dec. 4	62.0	45.0	17.0	30.40	29.95	0.45	N.	2.90	2	0.845
" 11	72.0	47.0	25.0	30.45	30.15	0.30	S.W.	2.43	1	0.010
" 18	68.0	26.0	42.0	30.50	30.10	0.40	N.	3.00	2	0.735

The Thermometer used for these observations is a self-registering one, and is placed in a fair exposure. Regular hours of observation: 8 A. M., 2 P. M., and 8 P.M

CHARITY HOSPITAL REPORT,

FROM THE 1ST OF JANUARY TO THE 20TH OF DECEMBER, 1851.

By J. V. LOUBERE, Asst. Clerk.

MONTHS.	ADMISSIONS.			DISCHARGES.			DEATHS.		
	Males.	*Females.*	*Total.*	*Males.*	*Females.*	*Total.*	*Males.*	*Females.*	*Total.*
January	1207	441	1648	1000	304	1304	153	57	210
February	1115	401	1516	923	324	1247	163	43	206
March	1004	370	1374	1311	463	1774	112	43	155
April	890	414	1304	811	403	1214	155	61	216
May	648	287	935	613	267	880	126	31	157
June	733	280	1013	612	278	890	86	28	114
July	1126	249	1375	789	291	1080	88	40	128
August	1541	571	2112	1287	521	1808	74	24	98
September	1701	616	2317	1652	576	2228	109	29	138
October	1505	470	1975	1359	438	1797	118	25	143
November	1092	290	1382	1006	322	1328	139	32	171
December	691	195	886	590	170	760	81	7	88
TOTAL.	13253	4584	17837	11953	4317	16270	1404	420	1824

TABLE OF DEATHS

DURING THE SAME PERIOD.

DISEASES.	January,	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.
Cholera Asiatic - - -	38	27	8	51	48	26	33	1	0	2	42	14	290
Diarrhœa - - - -	21	30	10	9	8	9	6	9	3	10	13	7	135
Dysentery - - - -	21	25	19	12	8	14	13	10	23	33	21	9	208
Fever, Yellow - - -	0	0	0	0	0	0	0	0	2	0	0	0	2
Do. Typhus - - -	42	42	43	61	25	9	11	9	22	23	19	16	322
Do. Pernicious Intermittent	1	0	0	0	0	8	8	2	4	2	2	0	27
Do. Congestive - -	0	1	1	1	1	6	2	10	10	6	4	1	43
Phthisis Pulmonalis - -	30	27	20	18	19	6	10	12	18	19	29	12	220
Other Diseases - - -	57	54	54	64	48	36	45	45	56	48	41	29	577
TOTAL.	210	206	155	216	157	114	128	98	138	143	171	88	1824

THE NEW-ORLEANS

MEDICAL AND SURGICAL JOURNAL.

MARCH, 1852.

Part First.

ORIGINAL COMMUNICATIONS.

I.--OPERATION OF LITHOTOMY—A MODIFICATICN OF GORGET PROPOSED.

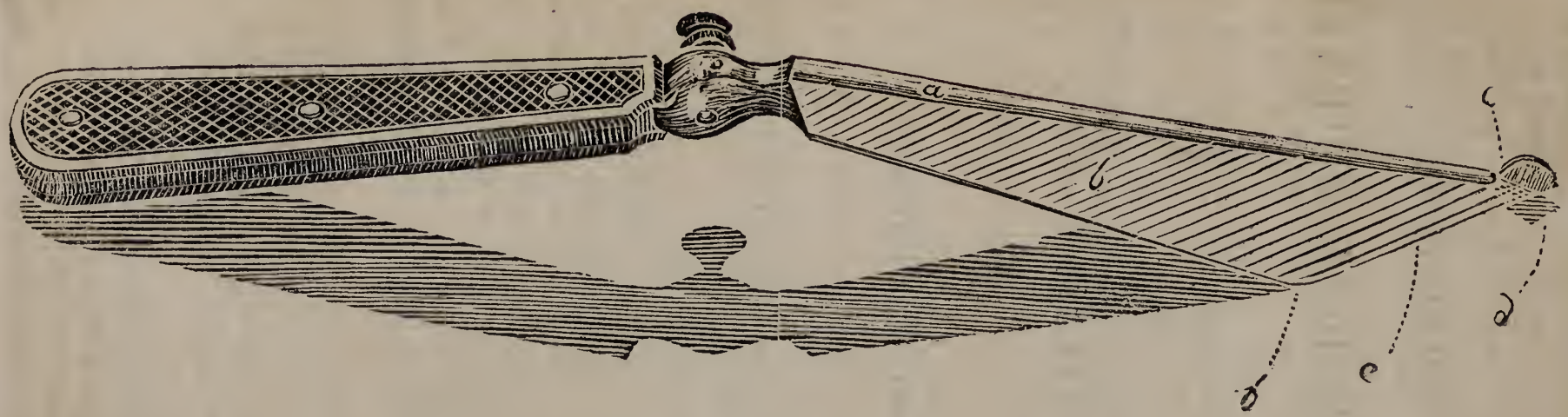
BY J. C. NOTT, M. D., MOBILE, ALA.

Surgeons have proposed a great variety of cutting instruments, as Gorgets, Lithotomes, Bistouries, &c., for opening the bladder in the lateral operation, and there can be no question that any one of these instruments, or even a common scalpel, in the hands of a thorough anatomist, may be made to fulfil the indications reasonably well.

After the most impartial investigation I can give the subject, I must express my decided preference for the Gorget, for the following reasons:

1st. From its construction, if properly used, it makes the exact cut into the bladder designed, with more certainty, and less risk, than any other instrument. The operator can select what breadth of blade he pleases, and by giving it the proper direction, it will cut neither more nor less.

2d. Discarding all theory on the subject, the Gorget has, from positive statistics, attained higher success than any other instrument. Prof. Dudley, of Kentucky, who has operated more frequently, and with more success, than any operator known in the records of Surgery, has always used this instrument.



EXPLANATION.—*Fig.* 1.

a—Stem or back, in which blade *b* is fixed.
b—Blade.
c—Blunt back of beak, which stands up at right angles with blade, and is intended to run in the groov ed staff, as the common Gorget.
d—Anterior *cutting edge* of beak, which opens its way through the urethra into groove of staff.
e—Cutting edge of blade, like common Gorget.
f—Angle of blade.

In the common Gorget, the beak is formed by the termination of the stem—here the cutting beak is a part of the blade, and standing up at a right angle with it.

I have before me a pamphlet of Dr. Dudley, entitled, "Observations on the nature and treatment of Calculus Diseases," published in 1836,—in which he states, that out of 135 operations, but 4 "failed to enjoy its benefits." The history of these four, too, shows, conclusively, that death in every instance was attributable to chronic diseases of Kidneys, Liver, &c., and not to the operation. The Professor states, that "No one has ever died in my charge before the bladder had closed, or within the ordinary period required for the healing of that organ."

I am sorry that I have not at hand the result of this distinguished operator's experience since the date of this pamphlet. The last statement I saw was some two or three years ago, when his operations had reached 185, and with continued success. I know that Prof. Dudley's success has been discredited in Europe; and while in Paris, some years ago, I heard his veracity broadly impugned by distinguished teachers, who lost about one in four of their Lithotomy cases; but of the correctness of his statements there can be no question. His operations have all been performed in the presence of respectable medical gentlemen and students, and no one where he lives has ever called the facts in question. If, then, the facts of Dr. Dudley, and those friends who have witnessed his operations, be true, the Gorget has not only been more successful than any other instrument, but has effected all which any cutting instrument *can* effect. While I pass this merited encomium on Prof. Dudley and the Gorget, I must, on the other hand, remark, that I have no belief that he could have attained the same extraordinary success in the foul atmosphere of London, Paris, or other large cities. His operations have been performed in the beautiful little town of Lexington, Kentucky, where the climate is salubrious, provisions of the best quality, and the subjects, probably, of better constitutions, than are usually met with by other experienced Surgeons.

While it is admitted that an expert operator may do *all* the cutting part of this operation with a simple scalpel, it should not be forgotten, that it is our duty to throw all the guards we can around the young, and the country Surgeons, whose operations are few and far between. I have no hesitation in asserting, that in the hands of a Surgeon of average skill, (if not in all cases) the Gorget is the safest instrument.

As the operation of Lithotomy is usually performed in this country, three cutting instruments are required, viz: a Scalpel, a sharp pointed Bistoury, and a Gorget or probe-pointed Bistoury; and I now propose, by a certain modification of the common Gorget, to make it answer the purpose of both Gorget and Bistoury. This new instrument saves time, is simple, and quite as safe as the common Gorget.

The modification of the Gorget I propose is confined to the beak. Instead of having this part *blunt*, as is usual, I have had an instrument constructed with a beak somewhat in the shape of a quadrant, standing up at a right angle from the blade, with a straight, pointed, cutting edge in front, and a blunt, curved back above, made so as to fit and run in the groove of the ordinary staff, in the same way as other Gorgets. After an opening is made in the usual way, through the perineum down to the urethra, instead of opening a way into the urethra for the Gorget with a Bistoury, the cutting beak of my Gorget is thrust immediately through the urethra into the gutter of the staff and pushed steadily on through the prostate into the bladder, and the operation completed at once.

I am opposed to all unnecessary innovations, and should never have thought of changing the form of the Gorget, had I not experienced inconvenience in its use. Not only in my early operations, but to this day, the most embarrassing part of this operation to me is the opening of the urethra with a Bistoury, and then adjusting the blunt beak of the old Gorget in the groove of the staff through this opening. I might be more disposed to blame my own awkwardness, had I not often seen the same embarrassment and delay occur to distinguished teachers in this country and Europe. The operation of Lithotomy is one requiring much skill, and is a rare operation in most parts of the world; and few Surgeons really perform it with great facility. I have performed the operation ten times, and there are very few Surgeons south of the Potomac who have performed it so often.

I can imagine no good reason why we should cut first through the perineum with a Scalpel, and then lay this down and take up a Bistoury to open the urethra, preparatory to the Gorget, when, by simply putting a cutting beak to the latter instrument, it can be made to follow the Scalpel at once. Any Surgeon accustomed to the use of the Gorget, and knowing how to cut with it, would hardly say there was any danger from a sharp beak; and still less would such an objection be made by those who open the bladder with sharp pointed Lithotomes, Bistouries, Scalpels, &c.

I have never lost but one patient after this operation, and this one from pleurisy consequent to exposure three weeks after the operation. I have never had occasion to tie an artery, or seen a hæmorrhage of any consequence. The artery most in danger is the pudic, and I always use a Gorget with the sharp angle *ground* off, which precaution affords almost certain protection against injury to this artery.

I am perfectly aware, that the great majority of the Surgeons through-

out the world are opposed to the use of the Gorget; but until I can see some satisfactory reason assigned for this abandonment, or a table of operations with some other instrument *approaching in success* that of Professor Dudley, I must hold to the opinion that the world is wrong and Professor Dudley right. I must believe that this opposition is based on a want of experience, or an improper mode of performing the operation. Where the Gorget is unsuccessful, the mischief is not done by the Gorget, but by *enlarging the wound after it with Bistouries.*

Mr. Ferguson, a practical writer of great merit, expresses himself thus: "Of the method with the cutting Gorget, I have had little experience. * * * I cannot but express my concurrence with the prevailing feeling of the present day, that the Scalpel or Bistoury is the safest instrument for making the wound in the neck of the bladder. There is no modern author, with whose works I am acquainted, who has so clearly pointed out the deplorable effects of the Gorget, as Mr. Crosse, and in so far as I myself am able to form an opinion, the instrument might be altogether dispensed with among modern Surgeons." Now, I have never seen what Mr. Crosse says about the matter, and am greatly at a loss to know what these *deplorable effects* are.

Mr. Ferguson performs the whole operation with the Scalpel alone. After opening the perineum with this instrument, he goes on to describe his method of operation as follows: "Now with a little force the finger can be placed upon the membranous portion of the urethra, and the groove in the staff, and the blade, with the surfaces nearly horizontal, should be carried along above the finger, made to perforate the urethra about three lines in front of the prostate, and then be slid along the groove, until it has entered the bladder, having slit open the side of the urethra, and notched the margin of the prostate in its course. In withdrawing the knife, if the stone is supposed to be of considerable size, the blade should be kept a little out of the groove, so as to increase the incision of the prostate." If the stone cannot now be extracted with facility, he again enlarges the wound with a Bistoury.

Now, I must confess that I have not skill enough to know, in a deep bleeding wound of this kind, whether I am "three lines" or six from the prostate, and must believe that cutting latterally with a Scalpel having no guage to limit the cut, is far more dangerous than the wound made with the Gorget, *which cannot exceed the width of the blade used.*

I am induced to make the following pertinent extract from the pamphlet of Professor Dudley, which I think will not be unacceptable to the reader:

"After all the observations I have been able to make upon the different modes of performing the lateral operation, together with the various instruments that have had each a preference amongst the Surgeons of most distinction, I cannot withold my approbation of the Gorgets of Mr. Cline. These are received as superior to all other instruments bearing the name, from their greater simplicity in construction, and because they are conceived to answer most perfectly the intent of the operator. The Gorget is a knife which makes the incision as it enters the bladder; nor does it make one of less or greater dimensions than is designed by the operator, but precisely of the extent proposed."

"In using the Scalpels of different Surgeons, the incision is made after entering the bladder by means of a lateral movement of the hand, and consequently more to the hazard of the patient, inasmuch as it is subject to all the casualties from different degrees of resistance in the parts to be divided, from their remoteness from the surface, from their size, from the length and breadth of the blade of the Scalpel, and from the manner of holding it. Who could pretend to accuracy in a piece of dissection carried on upon parts, to reach which, the instruments are passed through an obscure medium? And yet the operation for calculus with the Scalpel is commended to public approbation, notwithstanding the remoteness of the parts to be operated upon deprives the Surgeon of all the advantages of sight and touch, the two senses by which he is governed in all operations."

"There is no correspondence between the opening made by the Gorget in the bladder, and the calculi to be extracted, as these vary, from the size of a kidney bean to that of an ordinary orange, in magnitude. But the advantage insisted on in the use of the Gorget, consists in the *relative safety of the patient against hæmorrhage, or infiltration*, with consequent inflammation and sloughing. Let the prostate gland be enlarged or of its natural size, indurated or broken down, inflamed or healthy, the incision made by the Gorget *cannot vary in extent or position.* The staff being firmly held in one hand, while the other directs the Gorget into the bladder, no varying condition in the anatomy of the parts can in any respect affect the extent of the incision. It may, and is often found to be, too small for the passage of large calculi, and an important principle is there involved," &c.

The Professor here goes on to show, that there is much less danger from *dilatation* of a small wound in the neck of the bladder during the extraction of a Calculus, or even its laceration, than from enlarging it by a cutting instrument; he not only establishes his point by ingenious reasoning, but by the result of his ample experience.

Professor Dudley, speaking of his own cases, says:

"In not less than sixty out of the whole number of those who have submitted to the operation of Lithotomy, calculi were extracted, the dimensions of which would require, but for the yielding of the parts, an incision which would have

endangered, in every instance, the plexus of blood vessels on the lateral portion of the bladder; and yet the opening in the bladder, in these cases, was made by the Gorget of Mr. Cline, of medium size; an instrument not large enough to excel the lateral limits of the prostate in the full grown subject, and in the use of which the blood vessels on the side of the bladder were not exposed to danger. An incision in the neck of the bladder, from one half to three fourths of an inch in length, the precise extent being somewhat regulated by the nature of the urethra and prostate gland, answered for the extraction of calculi varying from four to nine, and in one instance, eleven inches in circumference. Notwithstanding the necessary laceration of parts, in the passage of the calculus through the wound, yet every one recovered; while there was no difficulty from infiltration and inflammation, except in four cases."

II.—OBSERVATIONS ON THE METEOROLOGICAL AND SANITARY CONDITION OF NEW ORLEANS, FOR THE FIVE MONTHS ENDING AUGUST 31st, 1851.

[*Continued.*]

BY W. P. HORT, M. D., OF NEW ORLEANS.

April 1*st.* Thermometer at 6 A. M., 68°.; still raining, and the weather very dark and gloomy. Wind North and very light. Thermometer at mid-day 74°., and at 10 P. M. 69°. It has been drizzling all day, and the weather has been thick and sultry.

April 2*d.* Stars shone brightly from 4 to 5 A. M., after which the weather became cloudy, thick, damp and disagreeable. Thermometer 68°. at 6 A. M.; at 2 P. M. 78°. Wind from the North and very feeble; the weather cleared away about noon; the sun warm and every appearance more cheering. Wind East in the afternoon. Temperature at 9 P. M., 70°. There is much complaint of influenza and sore throat.

April 3*d.* Thermometer 66°. at 5 A. M.; wind brisk from the East; the weather clear and pleasant. Temperature at midday 78°. and at 11 P. M. 72°.

April 4*th.* Thermometer 70°. at 6 A. M.; a calm and cloudy morning; heavy fog from the river after daylight; very light airs from the Northwest. At 9 A. M. wind East, and appearance of rain. Wind very variable all the forenoon, from East to Northeast, at 2 P. M. Temperature 79°., and pleasant breeze from Southwest. Cloudy all day. Thermometer at 8 P. M. 74°.

April 5th. Thermometer 70 °. at 5 A. M.; a dark, gloomy, sultry morning; currents of air from all parts of the compass. After sunrise, a drizzling rain, followed by a heavy shower; after which the weather cleared, with wind Southwest. Thermometer at noon 70 °., and at 10 P. M. 70 °.

April 6th. Thermometer 66 °. at 5 A. M.. Wind Southerly, and squally, cloudy weather. Thermometer at midday 68 °., and at 9 P. M. 66 °. It has threatened rain all day. Dysentery is now prevailing; also, intermittent fever.

April 7th. It has rained during the night. Thermometer 72 °. at 6 A. M. The weather cloudy, with a fresh breeze from the Southwest. Thermometer at noon 70 °. Showery towards evening. Thermometer at 9 P. M. 72 °. A very severe storm of thunder, lightning, rain and wind from the Southeast.

April 8th. Thermometer 65 °. at 5 A. M., with a cool, refreshing North wind. Temperature at midday 68 °. Wind North, and very cool weather all day. Thermometer 62 °. at 9 P. M.; calm night, and stars very bright.

April 9th. Thermometer at 6 A. M. 58 °. Wind has been very strong from the North since midnight; it moderated at daylight; weather clear and cool. Temperature at noon 66 °., and at 9 P. M. 64 °. Wind from the East since 8 A. M. A clear, pleasant night.

April 10th. Thermometer 60 °. at 5 A. M. Wind Southeast and light. The weather is hazy; wind increased considerably during the day, always from the East. Temperature at noon 72 °.; at 9 P. M. the thermometer at 68 °. Dysentery, Diarrhœa and Influenza abundant.

April 11th. The night has been clear, and the weather moderate. Thermometer at 4 A. M. 60 °. Wind East, and increasing with the sun; thermometer at noon, until 3 P. M. 76 °.; at 8 P. M. 70 °; a quiet, clear night.

April 12th. Thermometer 58 °. at 5 A. M.; at noon 68; at 9 P. M. 64. Cloudy weather, threatening rain all day. Wind in the forenoon Southeast; in the afternoon South by East; there was much lightning in the South after dark. A fine shower at half past eleven, P. M.

April 13th. Thermometer 60 °. at 5 A. M. Weather cloudy; wind Northwest and light; at 8 A. M. clearing up rapidly, and wind increasing. Temperature at midday 70 °., and 60 °. at 9 P. M. After a threatening morning, it turned out to be a very pleasant, bracing day.

April 14*th.* Thermometer at 5 A. M. 69 °. Light breeze from the Northwest. Hazy weather. Before noon the wind increased, clearing the atmosphere. Temperature at midday 72 °.; at 11 P. M. 60 °. A clear, beautiful night. The wind Northwest, and still increasing.

April 15*th.* Thermometer at 4 A. M. 57 °., at 6 A. M. 58 °. Wind Northwest and brisk; sky clear, and very pure atmosphere. Temperature at midday 64 °; at 9 P. M. 60 °. Sore throat, catarrh and disturbances of the bowels abundant.

April 16*th.* Thermometer at 4 A. M. 59 °. Wind North in the forenoon and brisk. Thermometer at midday 70 °. The wind variable in the afternoon. Weather clear and bracing; thermometer at 10 P. M. 68 °.; at midnight 67 °.

April 17*th.* Thermometer 60 °. at 5 A. M. Wind from the East in the forenoon; subsequently all round the compass. Thermometer at midday 76 °., at midnight 72 °. The weather calm and serene all day.

April 18*th.* Thermometer at 4 A. M. 63 °. Wind South by East, and very light; gradually changing to Northwest by noon; thermometer at that time 78 °., and at 10 P. M. 69 °. In the afternoon the weather was very unsettled, and the wind all round the compass. Influenza very prevalent.

April 19*th.* The night has been warm. Thermometer 70 °. at daylight. Wind Northwest. Rapid development of vegetation. Thermometer 77 °. at midday, and wind all round the compass, settling at North at 3 P. M. Weather becoming cloudy; the atmosphere oppressive and deficient in electrical impulses. Thermometer at 9 P. M. 74 °.

April 20*th.* Thermometer 76 °. at daylight; weather very cloudy, with currents of air from all directions. Fog on the river. At 9 A. M. brisk East wind, with drizzling rain. Thermometer at noon 78 °., and at 9 P. M. 76. Heavy and continued rain during the night, with thunder and lightning, bringing the wind round to North before day.

April 21*st.* Thermometer at 6 A. M. 63 °. There has been very rapid evaporation since 2 A. M., with Northwest wind. After sunrise the weather became cloudy and threatening, with Easterly wind, ranging from Northeast to East by South. Thermometer 69 °. at noon; cool and cloudy all day. Thermometer at midnight 62 °. Drizzling rain occasionally during the night.

April 22d. Weather very cloudy, harsh and threatening. Wind Northeast. Thermometer 60 °. at 5 A. M. Severe lightning and lumbering thunder in the Southwest. Moderate rain all the forenoon, with East wind. Thermometer at noon 64 °., and rain increasing; no change of temperature during the afternoon and night; rain continuing and wind shifting to the South.

April 23d. Thermometer 64 °. at daylight. The weather dark and gloomy, with drizzling rain. Wind Southeast. Weather becoming warmer. Thermometer at 11 A. M. 64 °. Raining all day and all night, with occasional intervals. The thermometer 64 °. at 10 P. M.

April 24th. Thermometer at 5 A. M. 62 °. Wind Northeast; weather cool and cloudy. Light rain occasionally during the day. Thermometer at noon 69 °.; at 2 P. M. 70 °. Sharp rain at 6 P. M.; thunder and showers in the Southwest. Thermometer 70 °. at 9 A. M. Heavy rain at midnight, with thunder and lightning.

April 25th. Thermometer at 5 A. M. 62 °. Wind Northeast; weather very damp and raw; clearing up towards noon, with Northwest wind. Thermometer at noon 70 °.; fine weather during the remainder of the day. Thermometer at 10 P. M. 65 °. Calm night.

April 26th. Thermometer at daylight 61 °. Wind North and very light. The weather hazy from the rapid evaporation, but not cloudy. Every appearance of fine weather. Thermometer at noon 76 °., and at 9 P. M. 76 °. Wind North.

April 27th. Thermometer at 5 A. M. 63 °. Wind South by West. Weather clear over head, but hazy round the horizon. Thermometer at noon 80 °. Wind all round the compass. Thermometer at 10 P.M. 72 °; calm night.

April 28th. Thermometer 68 °. at daylight. Wind Northwest. The weather is clear and beautiful. Temperature at noon 80 °. A warm afternoon, with a pleasant westerly breeze. Thermometer at 9 P. M, 75 °. Rumors of Cholera in the Hospital and in the city, and on the Bayou Lafourche.

April 29th. Thermometer 71 °. at 5 A. M. Weather calm and cloudy; light puffs of air from all quarters. Thermometer at midday 80 °., and at 9 P. M. 74 °. Rumors of cholera continuing on the Bayou Lafourche. Fifteen negroes died on one plantation in a few days.

April 30th. Thermometer 70 °. at 4 A. M. The weather mild with

flying clouds. Wind light and variable, changing from Southeast to South, and then to Southwest, and back again. Thermometer at noon 80 °. Drizzling rain from noon until midnight; the temperature at that time 77 °. Many persons still complaining of sore throat and influenza.

May 1*st.* Thermometer 64 °. at 5 A. M. The wind changed to the North at 1 A. M., and blew with great force for some hours. The clouds very heavy in the morning, but the weather became clear about 10 A. M. Thermometer at midday 72 °., and at 9 P. M. 68 °. Wind North all day.

May 2*d.* Thermometer at daylight 64 °. Wind Northeast. The weather clear and cool. Temperature, from 11 A. M. to 4 P. M., 73 °. Wind Southeast in the afternoon; weather moderating. Thermometer at 10 P. M. 70 °.; calm night.

May 3*d*; Thermometer 68 °. at 5 A. M. The weather calm, sultry and cloudy, threatening rain. Wind Southerly, but scarcely perceptible; drizzling rain about 10 A. M. Thermometer at noon 76 °. Heavy shower of rain at 2 P. M., which continued all the afternoon and all night. Thermometer at 10 P. M. 70 °. Weather close and sultry; wind Southwest.

May 4*th.* Thermometer at 4 A. M. 68 °. Wind West Southwest. At 1 A. M. a heavy squall, with severe thunder and lightning until 3 A. M.; the lightning, however, was very vivid and incessant all round the horizon until daylight. At 7 A. M. rain again, with thunder and lightning. Weather very stormy until 1 P. M., when it cleared away; thermometer at noon 72 °., and at 10 P. M. 66 °.

May 5*th.* Thermometer 64 °.; clear, cool morning. Wind North, but at noon shifted to Northeast. Thermometer at that time 72 °., and at midnight 66 °. 31 deaths of Cholera last week in New Orleans and Lafayette.

May 6*th.* Thermometer 64 °. at 6 A. M. Wind East and Southeast alternately all day, but quite moderate. Weather hazy and apparently unsettled. Thermometer at noon 72 °., and at 9 P. M. 69 °.; moderate Southeast wind all night.

May 7*th.* Thermometer at daylight 65 °. Cloudy at that time, but the weather became clear soon after sunrise. Wind Southeast, and a pleasant, refreshing breeze. Cloudy again about noon, and thermometer 78 °.; light, drizzling rain for a short time, about 6 P. M. Thermometer at 9 P. M. 70 °.

May 8th. Thermometer 70 °. at daylight. Wind Southeast. Weather same as yesterday, occasionally cloudy, with alternate sunshine. Thermometer at noon 79 °., and at 9 P. M. 70 °. Cholera on the increase in Lafourche and in Ascension; deaths said to be very sudden.

May 9th. Thermometer 74 °. at 5 A. M. Heavy fog at 2 A. M. Very cloudy at daylight. Wind Southeast all day. Temperature at noon 80 °., and at 9 P. M. 73 °. The mortality on Lafourche has been chiefly confined to negroes. We are informed that but few whites have died of Cholera.

May 10th. Thermometer 74 °. at 5 A. M. Wind South by East, and a few flying clouds. The atmosphere appears to be much warmer. Thermometer at noon 80 °. During the day there was a strong Southerly breeze, ranging from Southeast to Southwest. Thermometer at 10 P. M. 70 °.

May 11th. Thermometer at daylight 74 °. Southerly wind continuing. Weather same as yesterday. Thermometer at midday 82 °. Pleasant breeze throughout the day. Thermometer at 10 P. M. 79 °. With the exception of some few severe cases of Dysentery and Cholera, the health of the city has improved within the last ten or twelve days.

May 12th. Thermometer 75 °. at 5 A. M. Calm weather; what little wind there is, from the South. At 11 A. M. a brisk easterly breeze sprang up, which was very refreshing, and continued all day. The thermometer at midday 80 °., and at 10 P. M. 76 °. The night calm.

May 13th. Temperature at daylight 75 °. Wind Southerly, with summer clouds. Weather is soft and agreeable. Thermometer at noon 82 °. Heavy rain at 2 P. M.; of great service in washing the dirty streets, as there was no Board of Health in existence at the time; thermometer at 10 P. M. 76 °.

May 14th. Thermometer 74 °. at 4 A. M. Wind Northwest and light. Weather very hazy, but cleared up about noon; thermometer at midday 84 °., and at 11 P. M. 78 °. No change in the force or direction of the wind all day.

May 15th. Thermometer 78 °. at 5 A. M. Wind Southeast, and flying clouds; thermometer at midday 85 °. Warm weather in the afternoon, with very light, variable, Northerly wind; thermometer at 11 P. M. 79 °.

May 16*th.* Thermometer 76 °. at 4 A. M.; very calm morning. Very light, northerly wind, and hazy weather. Wind East at 8 A. M., and gradually increasing; thermometer at midday 85 °.; at midnight, 79 °. Wind hauled to the Southward towards dark. A calm and pleasant night.

May 17*th.* Thermometer 76 °. at 4 A. M. Southerly weather, and moderate breeze. Wind variable, from Southeast to Southwest; thermometer at midday 85 °. Heavy rain in the afternoon, cooling the air and washing well the streets and gutters; thermometer at 10 P. M. 78 °. Wind West Southwest.

May 18*th.* Thermometer 75 °. at 4 A. M. Showery weather in the forenoon; thermometer at meridian 83 °. At 1 P. M. a heavy shower, after which the afternoon was very pleasant, with a fine Southerly breeze; thermometer at 10 P. M. 77 °.

May 19*th.* Thermometer 75 °. at 5 A. M. The Southerly breeze has continued all night, and is still blowing; summer clouds in the East; thermometer at noon 82 °. Cloudy weather all the afternoon, with Southeast wind; thermometer at 10 P. M. 79 °.

May 20*th.* Thermometer 74 °. at 5 A. M. Weather cloudy and threatening rain, with Southerly wind; thermometer at noon 82 °. At 1 P. M. a fine rain, reducing the thermometer to 74 °., and at 9 P. M. 78 °. The cases of Cholera that occasionally occur, are almost entirely confined to strangers, who have recently arrived in the city. Similar facts, since 1848, would tend to confirm the opinion of Prof. Stone, that there is an acclimation for Cholera as well as for Yellow Fever, unless forfeited by excessive imprudence.

May 21*st.* Thermometer 74 °. at 5 A. M. Wind Southerly; weather hazy and sultry; thermometer at noon 82 °:, and at 9 P. M. 78 °. Very calm in the forenoon; in the afternoon a fine sea breeze, varying from Southeast to Southwest.

May 22*d.* Thermometer 76 °. at 5 A. M. Nearly the same weather as yesterday; wind West, and increasing with the sun; a few light summer clouds to be seen; thermometer at midday 82 °., and at 10 P. M. 77 °. Since the 18th, many persons have experienced light bilious attacks, with either continuous or intermittent fever, which, however, yielded promptly to judicious treatment. Disturbances of the digestive and assimilative organs, also, occasionally complained of.

May 23*d.* Thermometer at 4 A. M. 75 °. The weather is thick and heavy, and almost calm, only a mere puff of wind perceptible at

times; thermometer at midday 84 °., and at midnight 77 °. The wind very variable all day; all round the compass.

May 24th. Thermometer 76 °. at 4 A. M. Weather calm and hazy; wind Southerly; somewhat cloudy; heat of the sun very intense; thermometer at noon 84 °.; at 10 P. M. 76 °. The night calm and pleasant, with puffs of wind occasionally from the North and Northwest.

May 25th. Thermometer 72 °. at 5 A. M. Wind North and very light; the weather is very hazy; thermometer at noon 85 °. Wind Easterly in the afternoon; temperature at 10 P. M. 80 °. A very warm night, and no breeze.

May 26th. Thermometer 78 °. at 5 A. M. Wind East and very light; weather still hazy, with scattering clouds; fine Southerly breeze in the course of the morning; thermometer at midday 86 °. Wind to the Southward towards night; thermometer at 10 P. M. 80 °. The Yellow Fever is raging on the coast of Brazil.

May 27th. Same weather and temperature as yesterday; in the forenoon, a light rain, about 10 A. M. Thermometer at noon 84 °. Heavy shower of rain at 1 P. M., with a squall of wind from Southeast. Thermometer at 10 P. M. 78 °.

May 28th. Thermomoter 78 °. at 6 A. M. The weather calm, sultry and hazy; wind Southerly; a fine shower in the forenoon, followed by a brisk Southwest wind; thermometer at noon 82 °., and at 10 P. M. 80 °. The Cholera is reported in various parts of Lower Louisiana.

May 29th. Thermometer 74 °. at 5 A. M. Weather clear and calm; wind from the East; thermometer at midday 85 °., and at 10 P. M. 80; a fine easterly breeze all the afternoon. Intestinal affections are abundant at this time.

May 30th. Thermometer 76 °. at 5 A. M. Wind North; the weather is pleasant; thermometer at noon 84 °. The sun is very intense; at 2 P. M. the wind changed to the Southward; thermometer at midnight 78 °.

May 31st. Thermometer 76 °. at 5 A. M. Wind North and very light; thermometer at noon 85 °. We may now notice the alternating breezes, so regular in Florida, and comparatively of rare occurrence in New Orleans. The Northerly wind is the North breeze, and the Southerly, the sea breeze. Thermometer at 9 P. M. 80 °.

June 1*st.* Thermometer at 5 A. M. 76°. Wind North, and very light; atmosphere hazy; the weather very close and oppressive until midday; temperature at that time 86°. In the afternoon a refreshing breeze from the Southwest; thermometer 81°. at 9 P. M.

June 2*d.* Thermometer 77°. at 5 A. M. Much the same weather as yesterday; thermometer at meridian 84°. Wind Southwest, and very light; sometimes quite calm and sultry. Thermometer in the afternoon 80°.

June 3*d.* Thermometer at 6 A. M. 80°. Wind Northwest and light; the atmosphere very hazy near the surface; temperature at noon 86°. Wind Southerly in the afternoon; thermometer at 10 P. M. 80°. The Cholera is reported at Memphis, Cairo, St. Louis, and as being prevalent on several of the Mississippi steamers ascending the river.

June 4*th.* Thermometer 79°. at 5 A. M. Wind Southerly and very light; at midday thermometer 86°. Wind still Southerly; thermometer at 9 P. M. 80°. Many persons complaining of severe attacks of Influenza, its chief characteristic being sore throat, tormenting cough, from irritation in the pharynx, and often terminating in Rheumatic pains and Dysenteric affections; all, however, yielding to moderate and judicious treatment.

June 5*th.* Thermometer 76° at daylight; wind Southwest; the weather is very warm and dry; thermometer at midday 88°., and 80°. at 9 P. M. Wind Southerly all day, and very light. The night quite sultry.

June 6*th.* Thermometer 80°. at 5 A. M. The weather is cloudy, thick and sultry; wind from the Southwest; brisk for some few hours, and then variable and light; thermometer 88°. at noon, and 81°. at 10 P. M. Influenza still much complained of, attacking the head, throat and lungs in different cases. Dysenteric affections and Diarrhœas also abundant.

June 7*th.* Thermometer at 6 A. M. 80°. Wind light from the North; the weather is dark, cloudy and sultry; heavy clouds at the North; two heavy showers at midday, with strong Northwest wind. Thermometer before the rain, 88°.; after the rain 83°., and at 9, P. M. 80°.

June 8*th.* Thermometer 76°. at 6 A. M. The weather calm and sultry; wind from the North and very light; at midday very warm; thermometer 90°. A thunder shower cooled the air towards night, reducing the thermometer to 78°. at 9 P. M.

June 9th. Thermometer 74 at 5 A. M. Weather cloudy and sultry; light currents of air from the North; wind rising with the sun; temperature at midday 88 °. A shower of rain at 6 P. M., which reduced the thermometer to 78 °. at 10 P. M.

June 10th. Thermometer 75 °. at 5 A. M. Wind East by North; the air is elastic and pleasant, although the weather is somewhat hazy; thermometer at midday 88 °. The afternoon calm and sultry, and the thermometer at 10 P. M. 80 °. The Louisville and St. Louis papers notice many cases of death from Cholera on the steamers ascending the river.

June 11th. Thermometer 75 °. at 5 A. M. Wind Southerly, and the weather thick and hazy; a very warm day, but relieved occasionally by a pleasant breeze from the Southwest; thermometer at midday 90 °. and at 10 P. M. 81 °.

June 12th. Thermometer 80 °. at 5 A. M. Wind North, but scarcely perceptible; weather still hazy; temperature at midday 90 °. and at 9 P. M. 81 °. After meridian the wind was from the East and very refreshing; the night very warm and oppressive.

June 13th. Thermometer 80 °. at daylight; wind very light from the North; weather hazy; thermometer at midday 90 °. Wind Southerly in the afternoon, and the weather more pleasant; thermometer at 9 P. M. 82 °. Health of the city very good.

June 14th. Thermometer 80 °. at daylight; wind Southerly and light; weather hazy and sultry; wind all round the compass during the forenoon; thermometer at noon 88 °.; at 1 P. M. a light and refreshing shower of rain; thermometer at 10 P. M. 80 °.

June 15th. Thermometer 80 °. at daylight; weather very sultry and calm; after sunrise, a brisk North wind; thermometer at midday 90 °. At 4 P. M. an abundant shower, with a heavy squall from Southwest, with lightning and thunder; thermometer at 10 P. M. 76 °, Cholera is making progress in Texas.

June 16th. Thermometer 78 °. at 5 A. M. Wind North and very light; weather hazy, cloudy and sultry; thermometer at midday 90 °. After 2 P. M. the wind freshened and cooled the air; thermometer 80 °. all night. Fifteen deaths from Cholera have occurred amongst the troops at Fort Smith, and amongst the soldiers moving by sea from Corpus Christi.

June 17th. Thermometer at 5 A. M. 80 °. At 1 an incessant lightning, followed by steady rain and strong North wind, which died away

before day; thermometer 88°. at midday; very sultry weather in the afternoon; the wind North and very light; thermometer at 9 P. M. 80°.

June 18*th.* Thermometer at daylight 76°. Soon after midnight much lightning in the Southeast; a pleasant shower a short time before day; wind East and brisk; thermometer at midday 82°. A cool East wind continued all day and all night. Thermometer at 9 P. M. 75°.

June 19*th.* Thermometer 70°. at 5 A. M. East wind still; weather clear, with some flying clouds, and much cooler; thermometer at midday 80°. Towards night the refreshing East wind subsided; thermometer at 9 P. M. 80°.

June 20*th.* Thermometer 76°. at 5 A. M. Wind East and increasing in force until midday; thermometer at noon 82°., and at 9 P. M. 78°. The Cholera is travelling about as it did last year. It attacks the United States troops when removing from one place to another, and the steamboats that carry immigrants up the river.

June 21*st.* Thermometer 76°. at 5 A. M. Wind East, light at daylight, but increased with the sun; thermometer at noon 81°; a fine shower at 2 P. M. Thermometer at 10 P. M. 77°.

June 22*d.* Thermometer 76°. at 5 A. M. The weather calm, with Southerly wind, and becoming warmer; scarcely any wind all day; thermometer at noon 88°. Towards night, heavy rain in the Southeast, not far off; cooled the air, and produced a pleasant night; thermometer at 10 P. M. 78°. A case of Yellow Fever (with black vomit) reported amongst the interments at Potter's Field.

June 23*d.* Thermometer 76°. at 5 A. M. The weather cloudy, calm and sultry; wind Southerly; thermometer at midday 88°; very calm all day, and heat oppressive; thermometer at 10 P. M. 80°. It is reported by Indian Agents that *four thousand* Sioux Indians have recently died of Cholera.

June 24*th.* Thermometer 78°. at 5 A. M. Wind Southerly, and the weather calm, hazy and sultry; thermometer 88°. at noon, and at 10 P. M. 78°. Heavy clouds and rain not far off in the Southwest; Col. Sumner on his way to New Mexico by the Arkansas route has lost 30 of his men by Cholera.

June 25*th.* Thermometer 80°. at 5 A. M. Wind Southerly; weather close and sultry, and nearly calm the whole day; thermometer at noon 88°. Cloudy all day; heavy rain again in the Southwest; thermometer at 10 P. M. 80°.

June 26th. Thermometer 80 °. at 5 A. M. The weather very sultry; not a breath of air stirring; at meridian a West wind from a heavy cloud cooled the air; thermometer 86 °. Rain all round the city, and cloudy all day; wind South at night, and the thermometer at 9 P. M. 78 °.

June 27th. Thermometer 77 °. at daylight; the weather still cloudy and sultry; wind Southerly; a fine rain at half past 11 A. M., continuing for two or three hours, cooling the air considerably; thermometer at noon 85 °., and at 9 P. M. 79 °.

June 28th. Thermometer 77 °. at 5 A. M. Wind Southerly, and very light; more rain threatened; thermometer at midday 86 °. The weather is very warm, but the heat is tempered by a fine Southwest wind; thermometer at 10 P. M. 80 °.

June 29th. Thermometer 76 °. at 5 A. M. The weather very calm, with light, Southeast wind; thermometer 86 °. at noon; wind Southwest in the afternoon, with indications of rain; thermometer 78 °. at 10 P. M. Influenza becoming very prevalent again, characterized by sore throat, violent headache, chills and high fever.

June 30th. Thermometer 77 °. at 5 A. M. A very calm morning, with light Southeast wind; thermometer at noon 88 °. Wind very variable, from Southeast to Southwest; thermometer 78 °. at 10 P. M. First part of the night calm; just before midnight a very heavy rain, with lightning and thunder, and strong Southeast wind.

ABSTRACT OF A METEOROLOGICAL JOURNAL FOR 1851.

BY D. T. LILLIE & Co., at the City of New Orleans.

WEEKLY. — 1851.	THERMOMETER.			BAROMETER.			COURSE OF THE WIND.	FORCE OF THE WIND, Ratio 1 to 10.	Number of Rainy Days.	Quantity of RAIN — Inches.
	Max.	Min.	Range.	Max.	Min.	Range.				
April 3	88.0	64.0	24 0	30.27	30.08	0.19	S.W.	2.00	3	1.405
" 10	81.0	56.0	25.0	30.36	29.29	0.46	N.E.	3.25	2	3.730
" 17	82.5	57.0	25.5	30.30	29.94	0.36	N.E.	3.25	1	0.209
" 24	85.0	55.5	29.5	30.16	29.96	0.26	S.E.	2.90	5	1.639
May 1	86.0	63.0	23.0	30.24	29.96	0.28	S.	2.25	1	0.530
" 8	82.5	54.0	28.5	30.22	29.90	0.32	N.E.	3.00	2	1.950
" 15	88.0	72.0	16.0	30.18	30.10	0.08	S.byE.	2.30	2	0.075
" 22	90.5	76.0	14.5	30.18	30.10	0.08	S.	2.35	2	0.655
" 29	89.5	76.0	13.5	30.26	30.18	0.08	S.byE.	2.50	2	2.245
June 5	93.0	77.0	16.0	30.20	30.05	0.15	S.	1.70	1	0.020
" 12	93.0	76.0	17.0	30.15	30.05	0.10	S.byW.	2.15	4	0.570
" 19	94.0	77.0	17.0	30.17	30.00	0.17	N.E.	2.60	3	0.600
" 26	91.0	77.0	14.0	30.15	29.94	0.21	E.	2.30	1	0.110

The mortality from Cholera has been steadily on the increase since January to the end of June, with the exception of a slight diminution in February, and particularly in March. Of this disease there died in New Orleans and Lafayette, in January, 30; in February, 29; in March, 11; in April 108; in May, 121; and in June, 131.

There occurred, during the same time, 391 deaths from Diarrhœa and Dysentery; 331 from Typhoid and Typhus Fevers; 141 from all other fevers; and 407 deaths from Consumption.

A complete and detailed statement of other diseases may be found in the September number of the Medical Journal, 1851, page 267, where they are classified by the Editor, according to the plan suggested by the National Medical Convention.

The total number of deaths, as recorded, for the first six months of 1851, was 3892.

July 1st. Thermometer 79°. at 5 A. M, Wind North; before day the weather was clear, but after daylight cloudy, and indicative of more rain; wind North, varying to the Eastward; thermometer at noon 85°., and at 9 P. M. 80°. Cholera spreading in the valley of the Mississippi, and on the increase in towns and cities. Princeton, Kentucky, almost depopulated; 130 deaths a week in St. Louis, and the disease appearing at various points throughout the State.

July 2*d.* Thermometer 77°. at 5 A. M., at midday 86°.; at 9 P. M. 80°. Wind Southerly and very light; forty deaths a day from Cholera in St. Louis, and the disease extending to the immigrants on the prairies.

July 3*d.* Thermometer at 5 A. M. 79°. Weather calm and sultry; wind Southerly and light, but increasing with the sun; thermometer at midday 88°., and the atmosphere close and oppressive; thermometer at 9 P. M. 80°. Warm night and very calm.

July 4*th.* Thermometer 79°. at 5 A. M. Weather still calm and sultry; wind North early in the morning, and Southwest after 8 A. M., and very light; thermometer at midday 90°. The heat very oppressive; the wind all round the compass in the course of the day; thermometer 83°. at 10 P. M. This has been the hottest day of the summer.

July 5*th.* Thermometer at 5 A. M. 80°. Very calm weather; slight currents of air from the North; during the night very vivid lightning in the East; thermometer at noon 90°., and at 10 P. M. 82°., with Southerly wind.

July 6th. Thermometer 80 ° - at 6 A. M. Calm weather, with very light Southerly wind ; thermometer at midday 88 ° . In the afternoon, a fine Southwest breeze ; partial showers in parts of the city, and heavy squalls of rain, lightning and thunder in the neighborhood ; thermometer at 10 P. M. 80 ° .

July 7th. Thermometer 78 ° . at daylight ; weather very calm and sultry ; no wind ; thermometer at midday 85 ° . Very heavy rain soon after midday, with a strong Southerly breeze ; wind subsequently North, and clearing up ; thermometer 78 ° . at 10 P. M.

July 8th. Thermometer 76 at 5 A. M. Very heavy showers of rain during the forenoon ; thermometer at midday 84 ° . Evening cool and pleasant after the rain ; thermometer 76 ° . at 10 P. M. Wind varying all day, and dying away after the showers.

July 9th. Thermometer 79 ° . at 5 A. M. Light wind from West Northwest ; weather very warm and sultry ; thermometer at midday 90 ° . A light shower in the afternoon ; thermometer 80 ° . at 10 P. M., and the night close and damp.

July 10th. Thermometer 80 ° . at daylight ; at noon 88 ° ., and at 10 P. M. 78 ° . At 4 P. M. a very heavy rain, with lightning and thunder for two hours. The night cool and pleasant, and the wind from the West.

July 11th. Thermometer 76 ° . at daylight ; wind Northeast and light ; heavy rain in the forenoon, but very sultry afterwards ; thermometer at midday 88 ° , and at 9 P. M. 82 ° . The night warm.

July 12th. Thermometer at 5 A. M. 79 ° . Same kind of weather as yesterday ; wind variable all day, with frequent showers ; squally when raining, but dying away after the showers ; thermometer at noon 86 ° ., and at 9 P. M. 80 ° .

July 13th. Thermometer 80 ° . at 5 A. M. ; and soon after heavy rain, reducing the heat ; thermometer at noon 84 ° . The afternoon very sultry and oppressive ; wind all round the compass ; thermometer at 10 P. M. 80 ° .

July 14th. Thermometer 80 ° . at 5 A. M. Weather very sultry and calm, not wind enough to move a leaf ; about midday heavy rain, with lightning and thunder ; thermometer at noon 84 ° . Wind all round the compass ; weather extremely damp and oppressive ; thermometer 82 ° . at 10 P. M.

July 15th. Thermometer 80 ° . at daylight ; the weather calm, sultry, oppressive and damp; not a breath of air; heavy threatening clouds

without apparent motion all round the horizon; thermometer 88 °. at midday, and at 10 P. M. 80 °,

July 16*th*, 17*th* and 18*th*. The same calm, sultry, oppressive weather; the thermometer 80 °. at 5 A. M.; 88 °. to 90 °. at midday; and 80 °. at 10 P. M. Wind generally from the North, but it was very variable; calm for an hour or two, and then squally; the nights very warm and disagreeable. *Yellow Fever predicted by persons of great judgment and experience.* "*L'homme propose, mais Dieu dispose.*"

July 19*th*. Thermometer at daylight 72 °. Wind very variable, but generally from the South; the weather clear and bright, with great elasticity of the atmosphere; thermometer at midday 82 °., and at 10 P. M. 76. Pleasant night.

July 20*th*. Thermometer 70 °. at 4 A. M.; at noon 80 °., and at 10 P. M. 76 °. The same weather as yesterday; wind very variable, but on the whole Southerly.

July 21*st*. Thermometer 70 °. at 5 A. M. Same weather as the two preceding days; light Northeast wind; hazy on the river; wind from the South after 10 A. M. Thermometer at noon 80 °., and at 10 P. M. 76 °. A beautiful clear moonlight night.

July 22*d*. Thermometer at daylight 80 °. Wind North and very light, varying from Northeast to Northwest. Thermometer at noon 90 °.; at 10 P. M. 84 °., and at midnight 80 °. The night was warm.

July 23*d*, 24*th*. The same temperature, weather and wind; nights very warm and oppressive.

July 25*th*. Thermometer 80 °. at 6 A. M. Wind Westerly; weather cloudy and damp; much rain all round the city, cooling the air; thermometer at noon 87 °., at 10 P. M. 80 °. Wind variable during the day; the night cool and pleasant.

July 26*th*. Thermometer 80 °. at 5 A. M. Light showers in the forenoon, but heavy rain in the country all round the city. Weather cloudy and threatening; wind very variable and influenced by the direction of the rain, dying away afterwards; thermometer at noon 85 °. and at 11 P. M. 81 °.

July 27*th*. Thermometer 80 °. at daylight; weather very cloudy and threatening; a fine shower of rain between seven and eight P. M. Wind all round the compass; thermometer 88 °. at noon, and 80 °., at midnight.

July 28*th.* Thermometer 78 °. at 6 A. M. Weather clear and pleasant, the clouds having entirely disappeared; wind very light, in puffs from every part of the horizon; thermometer at noon 94 °. The hottest day of the season; at 4 P. M. a pleasant breeze from the West, cooling the air considerably; thermometer at 11 P. M. 80 °.

July 29*th.* Thermometer 80 °. at daylight; light wind from the Northwest; thermometer at midday 90 °.; at 10 P. M. 82 °. Warm night; very little fever in the city; light bilious attacks, yielding promptly to simple remedies, and intermittents as easily controlled.

July 30*th.* Thermometer 80 °. at daylight; weather rather pleasant, with a refreshing Southerly breeze; thermometer at noon 90 °., and at 10 P. M. 81 °.

July 31*st.* Thermometer 82 °. at 6 A. M.; at midday 90 °., and at 10 P. M. 82 °. Wind very light and variable; weather very warm and dry; city quite healthy, *for a reputed graveyard.*

August 1*st.* Thermometer 82 °. at 6 A. M. Weather sultry and oppressive all the forenoon; wind very light, and equally variable; thermometer at noon 90 °. A fine shower in the afternoon, and wind Northwest, cooling the air most agreeably. Temperature at midnight 78 °.

August 2*d.* Thermometer 82 °. at daylight; weather very warm, with light and variable winds; thermometer at meridian 90 °., and at 10 P. M. 82 °. The night close and oppressive.

August 3*d.* Thermometer at 6 A. M. 83 °. Wind North; weather very oppressive; thermometer at midday 95 °. This is the hottest day of the season; thermometer at 10 P. M. 88 °. The night oppressively warm.

August 4*th.* Thermometer 85 °, at daylight; wind North, but very light, and the weather sultry; thermometer 95 °. at midday, and 90 °. at 10 P. M. In the course of the night a brisk westerly breeze afforded much relief, reducing the temperature.

August 5*th.* Thermometer at sunrise 86 °. Weather sultry and oppressive; very light currents of air from the North; temperature at midday 94 °. At 4 P. M. a heavy squall from the South, reducing the thermometer to 86 °: in 20 minutes; thermometer at 10 P. M. 82 °. Very cloudy towards night; after midnight cooler, with pleasant West wind.

August 6*th.* Thermometer 76 °. at daylight, and the weather very calm; in the forenoon, after eight, wind brisk, and varying from West

to North; thermometer at midday 91 °.; at 10 P. M. 83 °.; heavy thunder and lightning during the night in the neighborhood; fine westerly breeze all night.

August 7th. Thermometer at 6 A. M. 76 °. Weather cloudy, with very light North wind; thermometer at midday 92 °. Fine weather in the afternoon, with a stiff Northerly breeze; thermometer at 10 P. M. 78 °. and a cool pleasant night.

August 8th. Thermometer 78 °. at 6 A. M. Wind North, and the weather pleasant; thermometer at midday 92 °. At 2 P. M. heavy squall of wind, veering to the Southward; thermometer at 10 P. M. 86 °. The first part of the night was oppressive, but agreeable after midnight, with a fine Westerly breeze.

August 9th. Thermometer 74 °. at daylight; Wind West by North; weather, as usnal, sultry in the forenoon; thermometer at midday 92 °., and at 10 P. M. 80 °. Pleasant night, with a lively West wind.

August 10th. Thermometer 76 °. at 5 A. M. Wind West Northwest, and very variable as to force; thermometer 90 °. at midday, and weather oppressive; thermometer 80 °. at 11 P. M., and night warm and sultry.

August 11th. Thermometer 80 °. at 6 A. M. Wind West Southwest; at 10 in the forenoon, a violent storm of wind, which continued two hours, cooling the air, and reducing the temperature from 86 °. to 80 °. at noon; at 3 P. M. rain, which laid the dust, and cleansed the streets; thermometer 78 °. at 10 P. M. The night was cool and pleasant.

August 12th. Thermometer 74 °. at 6 A. M. Wind has died away; forenoon on the whole pleasant; North wind in puffs, and varying to Northeast and to Northwest; heavy clouds in the vicinity of the city; thermometer at noon 85 °.; at 10 P. M. 80 °. Twelve deaths reported in private practice from Yellow Fever last week. When certificates for the burial of the dead are signed by Commissaries, and other persons not of the Medical Faculty, there is reason to doubt the accuracy of their decisions.

August 13th. Thermometer at 6 A. M. 80 °. Weather close, sultry and very warm; thermometer at 10 A. M. 88 °. Pleasant showers at noon, reducing the temperature to 84 °. Light Northeast wind in the afternoon. Thermometer 88 °. at 3 P. M., and 82 °. at 10 P. M.

August 14th. Thermometer 75 °. at 5 A. M. Light airs from the

Southward ; pleasant showers during the day, reducing the thermometer from 88 to 80 °. The night cool and pleasant; temperature at midnight 77 °.

August 15*th.* Thermometer 76 °. at 5 A. M. Wind North and very light; thermometer 86 °. at midday, and 82 °. at 10 P. M. A fine shower of rain, followed by a West wind, cooled the air and rendered the night pleasant.

August 16*th.* Thermometer 80 at 6 A. M. Weather close and sultry; the change is great since midnight; very light North wind, and quite calm at intervals; thermometer at midday 90 °. The afternoon and evening very sultry; after dark, North wind until midnight, followed by a fresh breeze from the Westward, which made the balance of the night cool and agreeable.

August 17*th.* Thermometer at daylight 80 °. The same temperature since 10 P. M. of the 16th ; vivid lightning before day, and very heavy clouds on the horizon ; weather calm and sultry, and thermometer 88 °., at noon. Soon after, the greatest fall of rain that has occurred during the summer, washed the streets, cooled the air, and produced a cool night ; thermometer at eight, A. M. 76 °.

August 18*th.* Thermometer at 6 A. M. 76 °. ; at midday 88 °. The weather in the forenoon very sultry, with light Southerly breeze; a brisk Southwest wind in the afternoon, which died away about sundown ; the night very warm, and thermometer 80 °. until midnight.

August 19*th.* Thermometer at daylight 79 °. ; at midday 90 °. A pleasant Westerly breeze all day, which after sundown cooled the air, and caused a very pleasant night. The thermometer at 10 P. M. eighty-one degrees.

August 20*th.* Thermometer 80 °. at 6 A. M. Light North wind ; temperature at midday 90 °. Fourteen deaths from Yellow Fever are reported for last week, all occurring in private practice, and none in the Hospitals—a very singular fact, as it is generally, and I may say almost universally the case, that this disease makes its first appearance in the Charity Hospital. Intermittents very abundant, but easily subdued ; thermometer 80 °. at midnight.

August 21*st.* Thermometer 80 °. at daylight; wind from the North, and very light, increasing towards noon ; thermometer at midday 90 °. The afternoon and night very warm. The thermometer all night at eighty-four degrees.

August 22*d.* Thermometer at daylight 84°. A light Northerly breeze rising with the sun; thermometer at midday 92°. Wind from the Southward in the afternoon, which died away towards night, leaving the weather very sultry and oppressive; thermometer eighty-six degrees all night.

August 23*d.* At 3 A. M. a fine thunder shower, which reduced the temperature by daylight to 80°., with Northeast wind; at eight A. M. thermometer 83°., with a fine Easterly breeze; at meridian the wind shifted to the North, and became very light; thermometer at midday 90°. Weather very sultry. The thermometer at 10 P. M. eighty degrees.

August 24*th.* Thermometer 80°. at 5 A. M. Light North breeze; weather clearer than yesterday; the wind shifted to Southeast about noon, at which time the thermometer was 92°., and at eight P. M. 88°. Towards midnight the weather was cooler, with a fine Westerly breeze.

August 25*th.* Thermometer 80°. at daylight; at midday 95°.; the wind North in the forenoon, and Southerly in the afternoon; the weather very warm; thermometer at 10 P. M. 88°. At half past ten a thunder shower, with a heavy gust of wind, and but little rain.

August 26*th.* Thermometer 82°. at 5 A. M. The weather sultry and oppressive; no breeze, except a puff now and then from the North; thermometer at 10 A. M. 90°., but the temperature was reduced at noon to 84°., in consequence of a fine shower of rain; wind North early in the morning, but all round the compass in the course of the day; thermometer at bedtime 85°., with a Southwest wind all night.

August 27*th.* Thermometer 80°. at daylight; the weather very calm and sultry all the forenoon; thermometer 90°. at noon; at 2 P. M. a thunder shower, reducing the temperature to 79°., which subsequently rose before night to 82°. The night was cool and pleasant.

August 28*th.* Thermometer 76°. at daylight; wind at first North, and light, but after 9 P. M. Southwest, but very variable; thermometer at noon 88°. In the afternoon, gentle showers for two or three hours; thermometer 76°. at 10 P. M.; and the night cool and agreeable.

August 29*th.* Thermometer 78°. at 6 A. M. Wind Southwest and very light; the weather cloudy; two heavy showers with lightning and thunder, and squalls of wind between 11 A. M. and 3 P. M., reducing

the thermometer from 88 °. to 78 °. Wind westerly all day, and the night cool and pleasant.

August 30*th.* Thermometer 76 °. at 5 A. M. Wind Southwest, but quite light; heavy rain at noon, which continued till 4 P. M. Thermometer before the rain 86 °., subsequently 78 °. The night cool and pleasant; temperature 78 °.

August 31*st.* Thermometer 78 °. at daylight, Wind West by North; weather cool and hazy, in consequence of great evaporation going on; soon after sunrise the wind shifted to Northwest, increasing during the day, and reducing the midday temperature to 82 °. Thermometer 76 °. at midnight.

Intelligent and observant watchmen inform me of all that passes during the night, and thus many interesting statistical facts may be rescued from oblivion, and make the records of our city, as regards climate, more complete.

The main meteorological records are due to the patient and persevering observation of my respected friend, Dr. E. H. Barton—and also to D. T. Lillie & Co., in Customhouse street.

Having spoken of our peculiar position in regard to latitude, which accounts, in a great degree, for the sudden changes of temperature and vicissitudes of weather that we experience, I would further remark, that the topography of the land on which the city is built, must not be overlooked. In hilly countries, the rain disappears almost as fast as it falls, and there is comparatively but little evaporation. But an alluvian plain absorbs a vast deal of water, always, more or less, according to the prevalence of drouth, or of rainy weather.

When we have been for some time without rain, and the soil is dry, a vast absorption takes place, to be followed by rapid evaporation, under the influence of Northerly winds, chiefly in winter, and of the sun in summer. The evaporating power of the wind, however, exceeds that of the sun, if we judge of it from the rapidity with which it dries the surface of the earth, and reduces the temperature. This fact will, perhaps, account for the frequent occurrence, and general prevalence, of Influenza in this city. The North wind, when strong, carries far away the watery vapor, and hence the cooling process of evaporation is uninterruptedly carried on. But in summer, after a fall of rain, the breeze generally dies away, and the atmosphere, instead of being cooled by evaporation, is heated and vitiated by an excess of watery

vapor. This consideration may serve to explain, in part, why the temperature is comparatively so regular in summer, and so irregular at other seasons of the year.

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WEEKLY — 1851.	THERMOMETER.			BAROMETER.			COURSE OF THE WIND.	FORCE OF THE WIND, Ratio 1 to 10.	Number of Rainy Days.	Quantity of RAIN — Inches.
	Max.	Min.	Range.	Max.	Min.	Range.				
June 26	91.0	77.0	14 0	30.15	29.94	0.21	E.	2.30	1	0.110
July 3	91.0	77.0	14.0	30.15	30.04	0.11	S.E.	2.00	4	0.065
" 10	93.0	79.0	14.0	30.20	30.05	0.15	S.W.	1.86	1	0.640
" 17	94.0	79.0	15.0	30.20	30.05	0.15	S.	2.00	1	0.005
" 24	92.5	76.0	16.5	30.19	30.08	0.11	S.byE.	2.25	3	0.830
" 31	93.0	78.0	15.0	30.20	30.10	0.10	E.	2.14	4	1.240
Aug 7	91.0	77.0	14.0	30.25	30.10	0.15	S.E.	2.30	6	0.970
" 14	94.5	79.0	15.5	30.20	30.10	0.10	S.	1.57	4	1.205
" 21	95.0	78.0	17.0	30.17	30.05	0.12	S.E.	2.60	5	5.735
" 28	92.5	76.0	16.5	30.13	29.78	0.35	S.E.	2.00	5	1.800

III—HISTORY OF AN INTERESTING CASE OF FIBROUS TUMOUR IN THE ANTRUM—EXCISION OF THE SUPERIOR MAXILLARY BONE—ERYSIPELAS AND DEATH.

John E. H., ætat 25, came to this city from Florida, in the month of May, 1851, to consult some of the Surgeons of New Orleans, in relation to a tumour on his cheek, which not only gave him great uneasiness, but likewise caused much deformity and inconvenience. It first made its appearance in January, 1849, since which time it grew rapidly, until about the commencement of the present year, when its growth seemed less rapid. A physician extracted several teeth from the upper jaw of the affected side, which was followed by considerable inflammation, pain, and ultimately an abscess formed about the gums, which was punctured, and then, in a measure, disappeared. The tumour now began to encroach upon the nasal passages, interfering with the respiration at times, and obstructing and modifying his voice. Now he experien-

ced much pain and uneasiness in his head and face, extending down the cervical vertebræ. All this time his appetite and general health were good, and so remained up to the hour of the operation.

For some time he took blue pill, iodide of potash, &c., but none of these remedies gave relief, or checked the extension of the tumour. On the contrary, the salivation produced by the mercury, rather impaired his general health. To Mr. Coorpender,* one of the very intelligent *Internes* of the Charity Hospital, and an *Eléve* of Medicine, we are indebted for the preceding facts in relation to this case. At the time of the operation, which will be described hereafter, Mr. H. seemed to be in pretty good health ; his complexion clear; his pulse regular, and all the secretions natural. On Saturday, May 26th, 1851, Dr. Warren Stone, Professor of Surgery, etc., proceeded to excise the Superior Maxillary bone, in the presence of a number of Physicians, medical students, etc. The subjoined graphic description of the steps of the operation was furnished by Dr. T. W. Compton, now Resident Surgeon of the Hospital, who aided in the operation, and thus describes what came under his observation.

" OPERATION.

"The patient being placed upon the table in the horizontal position, Chloroform was administered, until its anæsthetic influence was fully produced. The first incision was then carried from the angle of the mouth to the external angular process of the frontal bone, dividing all the soft parts to the bone. Profuse hæmorrhage from the facial and labial arteries followed this incision ; these being secured by an assistant, a second incision was commenced from the nasal spine of the maxillary bone, and carried vertically down, dividing the upper lip. The flap was then raised, and dissected from below upwards, separating the nasal cartilage and soft parts from the maxillary bone as high up as the lower edge of the orbit, dividing the infra-orbital artery and nerve. The soft parts were then separated from the floor of the orbit with the handle of the knife, and a small curved bistoury saw was used to divide the malar bone, commencing upon its external surface, midway between the maxillary and zygomatic attachments, and carried inwards as far as the orbital plate of the maxillary. The nasal process, near the attachment to the frontal bone, was next divided by a pair of small Liston forceps. The detachment of the maxillary bone was then completed, after first extracting the front tooth by the separation from its fellow of the opposite side, with Liston's large bone forceps ; the upper blade of the forceps being introduced into the nostril. The bone was now removed

* Since the above was written, this gentleman has received the degree of M. D.

from its site, and a large Polypus, fibrous in texture, was discovered, filling up compactly all the cavity of the antrum and nostril, extending backwards into the posterior fauces, and attached to the Pharynx and soft Palate. At this stage of the operation the patient became sick; but after discharging the contents of the stomach, and brandy and water being administered, he rallied, and the operation was completed by the separation of the tumour from the soft parts by the curved scissors.

Upon examination of the parts removed, it was found that the Polypus was lobulated, each lobule being attached to the lining membrane of the antrum and nostril, by a long membranous root. It filled up compactly the concave surface of the maxillary bone, having caused, by pressure, the absorption of the septum between the antrum and nostril,—all of the spongy or turbinated bones,—the hard Palate, and the spongy portion of the alveolar process upon the side—leaving only the outer lamina of bone. The fissure caused by this absorption was filled up with a fungus growth, differing in texture somewhat from the Polypus."

After the operation was completed, the patient was pulseless, and seemed on the point of expiring from loss of blood, pain and fatigue; but Dr. Stone ordered a drachm of carbonate of ammonia and a little brandy, to be given by injection, before the patient was removed from the operating table, and before the wound was dressed. This judicious step served to revive the patient, somewhat, when the wound was brought together by the interrupted suture and a few adhesive plasters. He reacted quite slowly during Saturday, the day of the operation, and at night his pulse was yet feeble; skin cool and pale; and his mind seemed to wander. Some morphine was ordered, and he slept some during Saturday night. On Sunday morning, the 25th, he had rallied considerably, but during the day he was attacked with diarrhœa, which was speedily checked by an enema, composed of 10 grains of quinine and 40 drops of laudanum.

We saw him about half past 5 P. M., on the 25th. His pulse was soft, and between 95 and 100; skin warm, but moist; intellect clear. The wound, especially that portion of it near the zygomatic process, was swollen, red, and seemed to be of an erysipelatous character; besides, it was rather hot to the touch. The eye, also, of the affected side, seemed swollen, watery and injected. He slept at short intervals during Sunday night.

On Monday morning, the 26th, we again examined the patient with Dr. Stone, when he ordered lint, charged with cold water, to be constantly applied to the wound, eye, etc. The patient said he felt badly—yet he seemed doing well in other respects; his pulse was about 100,

soft and regular ; skin moist and warm. On the evening of the 26th—same day—saw him again ; pulse over 120, occasionally intermittent ; no positive delirium ; skin soft ; cold lotion being constantly applied to the wound ; had reduced the erysipelatous redness and heat about the wound.

Tuesday, 27th. Slept at short intervals during the night,—says he has "no sense,"—meaning his mind wanders ; carotids throb violently; skin rather hot, yet moist ; the erysipelatous blush has extended over the centre of both cheeks, eyes, and forehead, up to the scalp—painful to the touch ; slightly œdematous ; the skin is of a dusky, pale red color. Has thirst, and complains that he connot rest in one position ; pulse over 120, but soft and easily compressed under the finger. The wound, notwithstanding the intervention of the erysipelas, looks quite healthy, and the edges not much swollen. The pins and thread remain as yet undisturbed. Ordered a laxative enema, and continue the pledgets of lint, saturated with cold water, to the wound, face and forehead.

Tuesday evening, 6 o'clock. But little change since this morning ; intellect less confused ; pulse has more volume, and indicates less perturbation of the vascular system ; skin a little hot, but perspirable ; the œdema of the face slightly reduced, and the erysipelatous blush a little paler ; had two or three dark, fluid evacuations during the day ; regard his condition as better than this morning. Ordered syrup morphia to-night ; continue cold lotions, and the following enema :

℞	Quinia Sulphates	Gr. xv.
	Tinct. Opii	ʒ ss
	Muc. Gum Arab.	℥ iij

Warm anodyne poultice. M.

He rested well until after 12 M. at night, when he became restless, and moaned at times. He retained the enema.

Wednesday morning, 28th. The wound looks healthy, and will heal chiefly by the first intention, except at the points penetrated by the needles. The intellect is clear ; the head and face less flushed ; the eyes and face are less œdematous ; the countenance more cheerful, and the patient more hopeful and composed. Pulse about 125, soft, and regular ; but little heat of surface.

Ordered by Dr. Stone, the following, per anum :

℞	Quinine Sulphatis	Gr. xv.
	Camph Pulv.	Gr. x.
	Muc. G. Arabic	ʒ iij. M.

If not retained, to be repeated. Chicken broth as diet, either per anum vel per orem.

Dr. Stone ordered the above enema to be repeated at noon, and the lint which had been thrust into the wound to be removed. The surface from which the tumour had been removed, presented a healthy suppurating and granulating appearance.

About half after three o'clock, on the 28th, the patient became cold, says Mr. Semple, a highly intelligent resident student of the Hospital, and delirious, with profuse perspiration, which was checked by friction and warm alcohol, applied externally. Was ordered—

℞	Carb. Ammonia	ʒ ss.	
	Aqua	℥ iv.	M.

Take a table spoonful every hour.

Wine whey was given freely at the same time. At half after seven o'clock, P. M., an enema, composed of Tinct. Opii ʒ ss. Bicarb. Ammon. ℈ i. and Sulph. Quin. Gr. x., was administered by injection. He appeared to sink rapidly, and at half past nine gave him:—Syrup Morphia ʒ ii. Liquor Morphia Acetat ʒ ij. Spirits Nit. Dulcis ʒ i. He continued to sink, became quite delirious and almost unmanageable, until a short time before death, when he seemed to become partially rational, and seemingly aware of his critical situation. At 4 o'clock, on the morning of the 29th, he expired.

Remarks—It is worthy of observation, that about the time he complained of a sense of chilliness, all the œdema and erysipelatous blush about the face began to disappear; and it was doubtless at this moment the erysipelas left the surface, and attacked the brain and its coverings—hence the rigors, the paleness of the face and the delirium. It is a law, we believe, in pathology, that when disease—inflammation or irritation—especially of a violent and specific character, is about to be transferred from one organ or tissue to another, by what is called metastasis, the general system receives a sort of shock—experiences a chill, out of which it soon rallies, under favorable circumstances—but in the present case, the condition of the patient was adverse to favorable reaction,—his nervous system was too much depressed by the severe ordeal of a terrible surgical operation, through which it had but just passed. May we not infer from the foregoing speculations, that death, in this instance, was produced or hastened by a metastasis of the erysipelas to the brain and its membranes?

In conclusion, we may state, that nearly half an hour elapsed before the operation was completed ; and although death, in this case was caused, beyond a doubt, by the supervention of erysipelas—so fatal in all large hospitals, after surgical operations—yet the operation proved to be practicable, and quite successful, as far as relates to the ablation of the diseased structures.

The morbid growth, as soon as removed, was subjected to the microscope by Dr. James Jones, but no cells, or other traces of a cancerous or other malignant growth, could be detected.

Although no post mortem examination could be made in this case, yet the parts from which the tumour was removed was inspected, and presented nothing remarkable or unhealthy.

IV.—OBSERVATIONS ON TYPHOID FEVER.

BY H. G. DAVENPORT, M. D., OF WARSAW, GEO.

Without entering into a critical examination of all the speculations heretofore published on the nature of Typhoid Fever, I shall, nevertheless, attempt to point out some of its peculiar features, as manifested in this section of the country. I have been engaged for the last seven years in the practice of medicine in Forsyth County, Georgia —known as the Cherokee or Northern portion of the State. The country is broken ; the lands bordering the rivers and creeks are rich and productive ; and the streams which traverse these broken lands, frequently overflow. In this region, mining was carried on quite extensively, up to 1846 and '47 ; and in the mining process, large excavations were necessarily created, and when rain fell, these pits became large pools of standing, stagnant water. This dead water, we have reason to believe, caused much sickness—particularly periodical fevers —sometimes of a malignant type. This fever, however, yielded, in the majority of cases, to judicious treatment. In 1844, Intermittent Fever prevailed to an extraordinary extent, especially in the mining region, and along the banks of large streams and pools of water. With few exceptions, the attacks were mild, and readily cured, by the usual remedies, in from seven to fifteen days (!). (Here we cure Intermittent Fever with *one* dose of Quinine.—*Ed.*) I treated eighty-two cases this season, of Intermittent and Remittent Fevers—of which number one only died—(an aged black man). The following was my plan of treatment :

In the beginning, I administered an emetic ; but if contra-indicated (by gastric irritation) I substituted a mercurial purge, to be followed by quinine, barks, etc. In the remittent form, I occasionally resorted to bloodletting, epispastics, blue mass, and *heroic doses* of quinine. The winter of '44 was extremely healthy ; we had only a few cases of pleurisy, acute rheumatism and angina ; these attacks were witnessed, chiefly, among those laboring in the mines. The spring of '45 opened extremely warm and dry, when the same fevers began to prevail ; but at the commencement of September and October, the cases were few and easily cured.

During November, Bilious Remittent disease prevailed—assuming, in not a few cases, a pernicious type, and often terminating in death in from seven to eleven days. The winter and spring of '46 were healthy, up to July, when the Fever again made its appearance among the laboring classes ; the intermittents assumed a congestive type, and terminated fatally, in many instances—indeed the disease proved almost unmanageable in a great many instances. Not unfrequently, the fevers assumed a continued form—persisting from 22 to 30 days, and requiring bold, but judicious treatment.

It was during the fall of '46 that I heard Physicians speak of cases of Typhus (Typhoid—*Ed.*) Fever. Yet I saw none myself that fully answered the description given of that disease by our standard authors. We had some cases of Bilious Fever that were very obstinate—reducing the patient, in spite of treatment, to the verge of the grave. About the 20th of October, '46, I saw the first case of Typhoid Fever, in a lady who had labored under the disease for 22 days, before I saw her. Dr. B., who had been in attendance, informed me, that her fever had persisted, without any appreciable remission, for 22 days.

The lady patient presented the following symptoms : Pulse 122 beats the minute—of small volume, and offering slight resistance to pressure—skin dry, and warm about the body, but cool over the inferior extremities—tongue loaded with a white fur, but moist—eyes dull and injected—abdomen tympanitic and tender—urine high colored and scant—thirst not troublesome—partial deafness—spine tender over the dorsal and lumbar regions—slight diarrhœa—hacking cough, but no expectoration—miliary eruption over the chest and neck—desires to eat.

She had been treated as a severe case of Remittent Fever—taking, frequently, large doses of quinine. On the 31st day from the attack, the patient died, from extreme exhaustion, being worn down with diarrhœa.

Eight other cases, similar to the preceding, occurred in the neighborhood, of which I treated seven—one died—the recoveries took place on the 20th and 30th day of the disease. In January, the disease gradually disappeared from my section, and showed itself about eight miles up the river.

In February, '47, I treated a child with the disease—on the 17th day he convalesced and recovered. The negroes who waited on this child, and nursed it, soon began to complain, and many of them (14 out of a family of 16) were attacked with Typhoid Fever, during the months of March, April and May. Two proved fatal. The disease spread to several families in the vicinity, who had visited the sick.

In from 17 to 30 days, the disease usually ran its course, either with or without active treatment. The fevers of the fall of '47 were generally hard to manage—being protracted, tedious, and often fatal. They were of a mixed character—some Pernicious, Remittent, Typhoid, Intermittent, and pure Typhoid. During winter, Pneumonia, Measles, Mumps, Typhoid Fever, and Scarlatina, prevailed. The fevers lasted from 20 to 50 days, and were characterized by one peculiarity, viz :— Throughout the whole course of the fever, the skin was moist with perspiration. From this circumstance it took the name of "sweating fever." It prevailed through the months of January, February and March, and disappeared in April, '48.

The spring and summer of '48 was mild and pleasant—more so, indeed, than for several years previous. At this period less disease prevailed than usual, and I only saw an occasional case of puerperal fever. This year we had more than our usual number of accouchments—many of them complicated, and consequently, followed by more accidents than customary. Several women had twins; and in a few, triplets; we heard of one female who was delivered of four at an accouchment. The diseases of the succeeding winter were limited, and not all malignant in their type. I saw a few cases of Pleuritis, Pneumonia, and one case of Typhoid Fever.

The spring of '49, and a part of the summer, remained quite healthy; but towards fall, we had a few cases of mild Typhoid and Bilious Remittent Fevers. The year '50, which succeeded, will long be remembered as the "dry year;" causing almost a complete failure of all the crops throughout the country. During the spring of '50, the general health was quite good; but in July, Bilious Fever, and one case of a Typhoid type, appeared. Cases of Typhoid Fever began to multiply as fall approached, and during the following winter it extended its ravages through several families, which were in the daily habit of visiting

each other, especially during times of sickness and distress. The attacks, in many cases, lasted from 30 to 50 days, and only a few proved fatal.

I have thus, in a very desultory manner, given the history of Typhoid Fever, as it has, from time to time, occurred, and come under my observation, in this section, since the year 1844; without, however, detailing many of the symptoms or treatment. I shall now proceed to give the symptoms and treatment, which was not precise in every case, but with very little variation; and all the symptoms were not present in all the cases; yet a majority of the most striking symptoms were present.

In the foregoing part of this communication, I mentioned the first true case of Typhoid Fever, which was seen by me in October, '46. I was called to see one on the 26th October, '46, two days after the first case. This was a young man 20 years of age, full habit, strong and robust, and never had been sick a day in his life. Upon my first visit he gave me the following information: He said, for the last five or six days previously, he had felt languid; had great aversion to exercise,—pain in the back of his head and neck,—aching in his joints,—pain in the small of his back,—some giddiness, but thought he could not be dangerously sick, as his appetite remained good up to the previous night, when his stomach became nauseated, and he vomited two or three times during the night. To his case I append the following notes:

On first visit, October 22, pulse 109 and thready; eyes dull, and slightly injected,—slight pain in back of head and neck,—tongue furred white, tip red,—spine tender over the lumbar vertebræ,—urine high colored, strong scented and scanty,—bowels constipated, and tender over the right iliac region. Says he feels extremely weak.

Prescription—Venesection to ℥ 12, which made him very sick, and nearly extinguished the pulse at the radius, but in 30 minutes reaction had taken place; pulse fuller, and beating only 90, and softer; small blister over three of the lumbar vertebræ, and one to nape of neck; sinapism over the bowels, to remain 40 minutes. Gave full dose of Comp. Cath. pills, U. S. Dis., with Dover powder at eight o'clock at night, and pediluvia as high up as the knees.

October 23d, 9 o'clock, A. M. Patient says he is better, he thinks. Pills produced four copious discharges of hard matter, offensive and dark colored. Blisters drew well—dressed with cornmeal poultice. Pulse 100—water high colored, burns in passing—bowels quite tender—skin dry and husky—seems restless. Says he could eat, if allowed. Drank soup.

Prescription :	Quin.	6 grs	
	Ipecac	3	
	Camphor	12	
	Blue Mass	12	M.

Make 12 pills. One to be given every two hours, with 25 drops Spirits Nitre in cold water, and $\frac{1}{4}$ gr. Morphine, to be given as circumstances required, with sinapism to bowels, to remain 20 minutes,—to take, occasionally, a wine glass of a weak decoction of Virginia Snake-root. Diet, chicken water. Pediluvia.

24th, 9 o'clock. Pulse 94 ; eyes very much injected,—tongue loaded, tips red,—bowels very tender,—urine high colored, strong scented,—skin dry; open bowels with cath. pills. Prescription continued.

25th. No change. Prescription continued.

26th. No change. Prescription continued.

28th. Seems more quiet.

29th. No change perceivable.

30th. Is more quiet, pulse 102, rose colored spots on the cheeks, bowels tympanitic, stools watery and frequent ; ordered a little White-oak Bark tea, cold, with an injection every four hours of cold water, to which was added a little Tr. Assafœtida.

31st. Very restless, talks confusedly at times; wants to eat. Prescription continued; sinapism to remain twenty minutes—poultice at night.

November 1st. Pulse 96, volume larger ; bowels tender ; stools not so frequent, but watery ; eyes appear better ; urine scanty and high colored. Prescription continued.

2d, 10 o'clock. No change.

3d. No change. 4th. No change.

5th. Talks and mutters at times, while dozing ; was very wakeful in the first part of last night; bowels less tympanitic ; stools better ; pulse 93 ; millet eruption over the breast and back.

6th. Pulse 90 ; complains of the blisters being sore ; bowels tender; tongue furred, dark ; eyes very red; craves something sour ; gave him cold lemonade; says it is grateful and very pleasant to the taste. In this way the case progressed, when, finally, he was salivated, and from that time rapidly recovered.

Treatment —A cathartic, in the outset of these cases, and a brisk one, too, I consider indispensable—(as in most of the cases, in

the beginning, the bowels have been, to some extent constipated). Several good and substantial reasons might be given, but the following will suffice : A large quantity of hardened fæces and morbid matter, pent up in the alimentary canal, will irritate and produce mischief, and the diarrhœa which follows, will be of a more dangerous and fatal nature. No cathartic answers, in my hands, as well as the Comp. Cath. Pills of the U. S. Dis. After the first, Cathartics are extremely hurtful, producing, in many cases, fatal collapse. During the progress of the disease, it becomes necessary to move the bowels gently, and to accomplish this, I use the Soap and Rhubarb pill. I object to oil, because it nauseates, gripes, and produces restlessness, and disposes to diarrhœa, which should always be avoided in these cases.

Opium, in some form, is very necessary, having a very happy effect in quieting the nerves, and bringing rest to the wakeful patient. The pills of Quin. Ip. Camph. and Blue Mass, is alterative, slightly stimulant, anodyne, and determines to the surface. The compound tends greatly to prevent tympanitis and diarrhœa, and emulges the liver. In long protracted cases, blisters to the spine are always beneficial ; first, by determining the blood from the brain ; and secondly, by acting upon the nervous centres, and relieving spinal irritation. But blisters over the abdomen I have found, from experience, do more harm than good, in a majority of cases ; they are useful as counter-irritants, but I have usually found them to cause the diarrhœa to be more obstinate, and to bring on stranguary, which harrasses the prostrate patient not a little. I would, therefere, caution the young physician, especially, to be cautious in the use of blisters over the abdomen.

Sinapisms applied every twenty-four hours for several days, during the progress of the disease, followed by poultices, have a good effect, and I think accomplish all that could be expected from a blister, in the way of counter irritation, without running any risk of increasing the irritation. This poultice is antiseptic and tonic, and acts finely on the nerves distributed over the bowels.

The Oak Bark tea is astringent, and in connection with the preparation of opium necessary to quiet the patient and produce rest, controls the bowels very happily. The Virginia Snake Root is a diaphoretic tonic, and with the Nitre added, becomes diuretic. The injection of the Tr. Asafœtida, as an anti-spasmodic, relieves the tight feeling of the bowels, by giving ease, at least, for the time being.

I now come to the first Therapeutic agent used in nearly all my cases—and that is venesection. In every case which has come under

my charge for the last five years, where I have been called to them at the beginning, I have always bled—having an eye to the age, constitution, etc., of the patient. I have never seen any fatal consequences follow its use; it lessens the frequency of the pulse; it becomes softer and slower, and remains so during the whole course of the disease. I have never had any cause to regret bloodletting in the first case. Even down to the present cases now under my charge, daily experience proves that this agent, in a majority of the cases, in the outset, is a material agent, and instead of lessening, actually increases the patient's chances for recovery.

Many cases of Typhoid Fever terminate fatally, no doubt, from the following causes: These cases are usually very slow; hence, the patient loses confidence; despairs of recovery; the friends become anxious; the physician also becomes deeply concerned for the safety of his patient, and his own character; becomes panic-stricken, flies from remedy to remedy, and does too much, and fatal consequences follow. Nurse your patient well; keep him cleanly; the room well ventilated, and of equable temperature; wear a cheerful countenance; inspire him with hope; keep his confidence, and success will, in a large majority of cases, follow.

Of the causes producing this disease, I will make a few suggestions, by way of relating my experience.

This disease has not confined itself, in this County, to the water courses; but a majority of the cases has occurred out among the hills, far removed from any water course, or stagnant ponds, and has been confined principally to locations which have been long settled. Many of the houses now standing in the County, were built in the first settling of the country,—are small log houses, flat on the ground; hence they are now, many of them, fast decaying. Many of the negro cabins in this country are in the same condition, and the disease, with a few exceptions, has been confined entirely to the blacks and large families huddled in these log cabins of long standing. Under these houses may be found any thing we might mention, but such things as would be calculated to promote health. This large amount of litter and filth is kept damp, in many cases, by the negligent, lazy, and filthy habits of the families, in pouring every species of water under the house. Many of them sleep, cook, eat, and keep their provisions in the same house; and not one current of fresh air can pass under them, for they are built immediately on the ground, and every inch of space left open under them has become entirely closed, and the houses have never been cleaned beneath since their erection. The blacks are in the

same condition, not cleanly in their persons, lying down and sleeping immediately on the floor, without cover; often with damp and very dirty clothes on. There may be a peculiar state of the atmosphere, I have no doubt; but it is, I think, brought forth under these houses. Neglect to keep the person clean, poor diet badly prepared, sometimes half raw, and oftentimes scanty in quantity; their persons, in many instances, badly protected from the inclement weather.

The whites in this county who are cleanly in their persons, who live in good houses, have good sleeping apartments, live plentifully, go well protected from the weather, have suffered but little from the ravages of this fever. Neither have I ever seen the first case occurring in the neighborhood of one of these families; but, on the contrary, always developed among the first described class.

Again, some farmers here take special care of their slaves, furnishing them good, high houses, good clothes, plenty of provisions, good bedding, etc., and in no one instance has this disease first made its appearance among that class of slaves; but on the contrary, always among the first described class. I could recite many instances in proof of the above, but deem it unnecessary.

The next question is, whether it is contagious or not. I hold that it is highly contagious, and upon this principle I account for its spreading throughout whole neighborhoods. The sick cannot nurse the sick; it requires the well, and sometimes several nurses, for the disease usually progresses so slow, that it requires a long continued nursing—much more than any one nurse could perform; hence, from visiting, sitting up, and waiting on the sick, some systems (being very impressable) become affected immediately; while others, having the power of resistance, keep the disease at bay. From the fact that it commenced at Mr. A.'s, and every single family that visited his house during their affliction, contracted the same fever, and so it is still marching, turning right and left to those families who have visited those first fallen sick with it. Does this fever bear any resemblance, as its name imports, to jail, ship and hospital fevers, produced from bad air, damp rooms, poor living, filth, and too many individuals crowded together? If so, we have the causes calculated to produce it in this country; and among them may be enumerated large families crowed in a very small, low cabin, filled beneath with a bed of filth, decaying matter, confined air, poor living, feeble constitutions, &c. Hence, Typhoid Fever does, beyond contradiction, prevail in this country; and that it is contagious, with the present lights before me, I must admit.

I made but one post mortem examination during my attendance on

this form of fever. In this case, (a negro woman) the brain was not examined; the liver was found slightly enlarged; the lungs were healthy; the stomach presented reddish patches here and there; the spleen was engorged, and even firmer than in a normal condition; the plaques of Peyer and Brunner presented a dark reddish hue. The peritoneum appeared healthy; the mesentery was studded over with dark spots; no other lesion could be detected.

Remarks.—We publish the foregoing communication, because it confirms our declaration, contained in our January No., that a form of fever, characterized by typhoid symptoms, is gradually spreading over the Southwestern portion of the United States. That it differs, in many of its essential features, from our usual autumnal bilious remittent and congestive fevers, clearly appears from the history of its symptoms—its aptitude to spread from person to person, and from family to family—and above all, its decided preference for those who are crowded together, in small, filthy, and illy ventilated cabins—surrounded by both animal and vegetable matter in a stage of transition—and breathing an atmosphere which imparts but little pure oxygen to the blood. Typhoid Fever is essentially and primarily a disease of the fluids of the body—of the blood; and any lesions found after death—after a protracted and wasting attack of the disease, must be the effect of such hæmatological lesion. The inflammation and subsequent softening, in the course of the disease, of the glands of Peyer and Brunner, must be attributed to imperfect nutrition, giving rise to morbid and irritating secretions, which, in their course over the alimentary tract, provoke diseased action in these glands. Hence the lesions, found at post mortem examinations, in the small intestines. Imperfect nutrition, or mal-assimilation, gives rise, as we conceive, in the progress of the disease, to delirium, subsaltus, and the various distressing nervous symptoms which usually characterize the latter stages of Typhus and Typhoid Fevers. It has been long known, that persons dying of starvation, fall into delirium a short time prior to dissolution, resembling, in many of its features, the delirium of Typhoid Fever.

The eruption which is usually developed in the course of this disease, evidently points to an ill condition of the blood, as its cause and origin. To indicate the modification which the blood experiences in Typhoid Fever, we avail ourselves of the labors of Becquerel and Rodier, who analyzed the blood of eleven men affected with this fever, and obtained the following results, viz:

Water - - - -	797
Fibrin - - - -	2.8
Albumen - - - -	64.8
Fat - - - -	1.7
Corpuscles - - - -	127.4
Extractives and salts - -	6.3
	1000.0

Andral and Gavarret have demonstrated, by their labors, that the proportion of fibrin in the blood in this fever, decreases, while that of the corpuscles increases. We have thus said enough to show the importance of attending to the condition of the blood in the treatment of this disease; at all events we are satisfied, that any other than a course of treatment based upon a better knowledge of the actual condition of the blood, in the disease, is purely empyrical, and must, therefore, in the majority of cases, terminate unsatisfactorily. The chemical change which the blood experiences in Typhoid Fever, must vary with the stage of the disease, the treatment that has been instituted, and the complications that have been developed in the progress of the disease. For more specific details on the chemical character of the blood in Typhoid Fever, we refer the reader to Simon's "Chemistry of Man," edition of 1845.

In the forming or initiatory stage of the fever, the abortive treatment with large doses of quinine, has been well spoken of by some Southern physicians; others, again, declare, that it has failed in every instance in their hands. We, for our part, repose much confidence in the quinine treatment—having succeeded, as we honestly believe, in arresting the development of the fever, in more than one case, in the last few years. If the treatment fails, under proper restrictions, the patient's chance of recovery is scarcely diminished; and we enjoy the pleasing satisfaction of having given a fair trial to the most powerful febrifuge known to modern medicine.

It is not our purpose to write a paper on the treatment of Typhoid Fever; but our main object is to direct attention to the absolute necessity of resorting to a mild, bland, digestible and nutritive diet, as early in the disease as the nature of the case will justify. A dry and red tongue, although associated with nocturnal delirium, should not deter us from administering suitable nourishment in this form of fever; since, if we wait until these unfavorable symptoms subside, the vital forces may become so much impaired and enfeebled, that stimulants the most powerful, and revulsives the most active, may fail to prolong life. Then, feed your patient, if you wish him or her to survive the attack;

be not deterred by preconceived partialities for gum water and leeches, from doing your duty both to yourself and your patient. The tongue will assume a healthy and natural appearance—the raving delirium will abate, and the secretions will improve, under a well-selected and well-timed system of diet. If you starve your patient, he will surely die—but not of the fever. (*Ed.*)

V.—CASE OF ABSCESS IN THE RIGHT VENTRICLE OF THE HEART.

UNDER THE CARE OF DR. M'CORMICK.

James Murrish, a sailor, æt. 65, a native of England, was admitted into the Charity Hospital November 12th, 1851. The patient complained of a very severe cough and profuse expectoration, and on examination, he was found to have all the physical and auscultatory signs of Bronchitis. He said that he had been sick for three weeks. He was put upon the usual treatment on the 13th, but owing to his age, and the advanced stage of his complaint, very little could be effected towards a cure. He died on the 4th of January, 1852.

Post Mortem Examination.—Some of the larger bronchial tubes were found ossified, and a portion of the lining membrane of the smaller tubes appeared to be inflamed, thickened and softened. Nothing else of importance was observed in the lungs.

On examination of the heart, it proved to be a little hypertrophied. The aorta was very much dilated. All the valves of the heart were sound. Upon examination of the right ventricle, an abscess was discovered at its apex. It was equal in size to a hickory nut, and contained about a fluid drachm of pus. It was perfectly defined by lymph, with the exception of a small opening into it, about the size of a crow's quill, immediately behind one of the columnæ carnæ. The external part of the sac presented an appearance very much resembling the lobulated exterior of the Parotid gland.

Nothing else of importance was observed.

VI.—CASE OF GASTRO DYNIA, IN WHICH 22 GRAINS OF OPIUM WERE GIVEN IN 35 HOURS.

BY DR. G. T. BROWNING.

About 3 o'clock, P. M., Sept. 13th, I was called to see Mr. M., proprietor of a sailor's boarding house, aged about 30 years, of plethoric habit and bilious temperament, who, a few weeks previously, had returned from Chagres, and

who, that morning, had arrived in New Orleans from Pass Christian, having been obliged by sickness to abandon a fishing excursion, for which purpose, a few days before, he had left the city.

Mr. M. was suffering with very severe paroxysms of pain in the stomach, at intervals; slight tenderness over the epigastrium; considerable fever, great thirst, and occasional vomiting; the bowels had been acted on that day. The following was ordered:

℞ Quinia Sulph. ℈ ij.
Pulv. opii. gr. iv.
Muc. acaciæ ʒiij.
Fit. mist.

One half directly, and the remainder in two hours, if not relieved; also, a full warm bath with mustard, and a cataplasm of the same to the epigastrium.

8, P. M. All the medicine had been taken,—had dosed a little, skin moist, no fever, pain not much abated.

℞ Pulv. opii gr. vi.
" camph. gr. viij.
Syr. Aurant.
Aqua menth. pip. aa. } ʒ iss.
Fit. mist.

One third part every two hours.

14th, 7 A. M. Patient said he felt a little better, although still very restless, and tossing about in bed; had slept little during the night, the paroxysms of pain somewhat mitigated, countenance still anxious; medicine had all been taken as directed; repeat the mixture, and take as before. Anodyne poultice to epigastrium.

2, P. M. All the symptoms relieved, except the feeling of distension of the stomach and bowels; all the mixture had been taken; patient drowsy.

℞ Mag. Sulph. ʒ i
" Carbonat. 3 iij.
Fit. pulv.

Half to be taken directly, and repeated in two hours, if the bowels were not opened.

7, P. M. The powders had operated slightly, with the assistance of an enema, previously ordered. The pain, although gradually diminishing, was not entirely removed; thirst not so urgent. Continue small quantity of rice water and lumps of ice. Ordered the mixture, as above, to be repeated, and taken as before, or so often during the night as occasion required.

15th, 6, A. M. Patient sleeping soundly; not to be disturbed; the medicine had been finished about 3, A. M.

12, M. Had slept well; no pain, and still inclined to sleep; no medicine. 8, P. M., improved.

16th. 8, A. M. Patient felt well; had dressed himself, and was walking about the house. In the after part of the following day, a messenger came in great haste to say, that Mr. M. had had a "fit, and was dying." On going to the house, I found him bathed in a cold, clammy perspiration, and almost pulseless. Ammon. Sesquicarb. was freely used, which, with external heat, soon caused the patient to rally. This state was soon followed by some return of the former symptoms, with greatly increased tenderness over the epigastrium. Six ounces of blood were ordered to be taken by cups, to be followed by a large blister. After this, recovery soon took place, with an occasional anodyne, and abstinence from food, to the too free indulgence in which, with, perhaps, some stimulating drinks, may have been attributed the relapse.

The chief point of interest in the above case is, the very unusually large quantity of opium which was given in a short time, it being *twenty-two grains within thirty-six hours*, with no other effect than that of gradually fulfilling the indications for which it was employed, and hence the persistence in its use. But it may be asked, was the opium good? In reply to which I have to say, that it was some of Haskill & Merrick's "*extra powders*," and was obtained from a very reputable apothecary, the quality of whose articles is reliable.

New Orleans, Dec. 10, 1851.

VII.—REMARKS ON EPIDEMIC DYSENTERY, AS IT APPEARED AT TALLADEGA, (ALA.) IN THE AUTUMN OF 1851.

BY WM. TAYLOR, M. D.

The town of Talladega is situated in a beautiful, well watered and fertile valley, in latitude 33 ° 25 N., and long. 86 ° 15 W., with a population of about 1600 inhabitants.

The topography of the town would indicate it as a place of great salubrity; and until the visitation of the epidemic, last autumn, it has generally proved to be quite healthy. Being elevated about seven hundred feet above the level of the sea, on a firm, dry soil, resting on a substrata of clay and limestone; almost wholly free from malarious influences; having no river, marshes, or stagnant water in its vicinity, and sufficiently rolling or undulating to drain, advantageously; we should not hesitate to conclude it, even in the absence of a knowledge of its history, a most healthful locality. And then, as if to add still more to its sanitary appearance, a fine, large spring of limpid limestone water, bursts its way from a ledge of rock within a stone's throw of the public square. The stream then makes its way out of town, running briskly in a Southwesterly direction.

Seasons.—The spring was uncommonly cold and backward, followed by a remarkably hot and dry sun. Much dust and impurity in the atmosphere, during summer, in consequence of the long continued drought. The early part of the autumn was very cold and damp; subsequently it became dry and dusty, with very warm days and cool nights. Winds variable.

Epidemic.—Although several cases of sporadic Dysentery occurred in town during the spring and summer months, yet it did not become epidemic until about the middle of September, when it assumed that form, and remained with us until about the 10th of November.

Symptoms.—In some of the severe cases, the disease came on suddenly, with chill, griping, mucous and bloody stools, and tenesmus, without any previous symptoms, as if it had been produced by causes acting immediately on the mucous intestinal surface,—and in some instances *muco-purulent* discharges, while the disease was yet in its acute stage. In other cases, the disease was ushered in by lassitude, loss of appetite, nausea, and sometimes retching; depressed pulse, chilly sensations, alternating with flushes of heat, thirst, dry, harsh skin, momentary pains in the bowels, and occasional stools, streaked with blood. Occasionally, fever manifested itself, before the proper dysenteric symptoms were fully developed; but more frequently, more or less mucous and bloody stools, with severe tormina and tenesmus, preceded the occurrence of febrile irritation. From the commencement of the disease, throughout its whole course, in many of the cases that I visited, the patient would discharge, occasionally, quantities of dark, vitiated bile; while in some few of the cases, there seemed to be an entire absence of that secretion in the stools, until towards the termination of the disease. Nor was the recovery of those that discharged *bile*, in the early stage of the disease, more rapid or certain, than in those in whom it was absent, until towards its close. In some instances, the patients would have bloody mucous stools almost every half hour; and at the end of every six or eight hours, would have one or two bilious operations; although they had taken no medicine to increase the hepatic function, for some days previous. Marked exacerbation, in the evening, of all the symptoms, seemed to be a characteristic of the epidemic; in the morning, the patients would almost universally express themselves better; but as the day advanced, there would be a regular increase of fever, and an exasperation of nearly all the symptoms. The discharges in the beginning of the disease had a peculiar, fleshy, disagreeable smell; but in the latter stage, in many instances, it was exchanged for an intolerable fetor. The tormina was extremely vio-

lent and distressing; and constant pain and soreness felt in the abdomen. In the early stage of the malady, the stools were very bloody, containing flesh-like shreds, resembling the washings of meat; but as it advanced, the blood diminished in quantity, and the mucous gradually assumed a straw-like hue, which was always hailed as evidence of a speedy recovery. Few cases passed into a chronic state, and when they did, they became diarrhœal in their nature, and streaked with blood. At the outset, the tongue was covered with a white or yellowish fur, becoming brown, rough and dry, along the middle, in the progress of the disease, with the edges and tip red and moist. In the more protracted cases, the edges and tip became clean, smooth, shining and florid; and in some few instances, the entire surface of the organ was raw. The pulse, in the severer cases, frequently ranged from 120 to 140 beats per minute; in ordinary cases, from 100 to 120; and in the milder cases, from 80 to 100 pulsations per minute. The urine was universally scanty and high colored, and sometimes possessing a strong ammoniacal and pungent odor; and the patients, sometimes, experienced difficulty in voiding it. The liver, as I have before intimated, was not always inactive; for in many cases large quantities of dark, vitiated bile was poured out, throughout the whole progress of the disease. The *cutaneous* function was universally inactive, the skin, being obstinately dry and harsh, during the active period of the malady; but not so hot to the touch as might be supposed to attend such high vascular excitement. There was a marked tendency, throughout the entire course of the epidemic, to assume a typhoid character.

Causes.—Apart from the deleterious influence of a cold, moist and variable autumn, succeeding a hot and dry summer, I know of no primary cause, that was calculated to engender the disease. It is evident, however, and I believe it is the opinion of all my medical brethren, of Talladega, that the disease was modified, to a considerable extent, by miasmatic influences; and although I cannot believe that malarial exhalations, alone, are capable, of themselves, of producing the affection, but am satisfied, that they have the property of materially modifying it. We arrive at this conclusion the more readily, since the epidemic was the more violent in the lower part of town, where it was thought there was more cause for the existence of miasm—that part of town being lower, and traversed by two spring branches. But I am convinced that atmospheric vicissitude is always the chief agent in producing epidemic dysentery. Follow the march of armies, and you will find, ordinarily, that ten men fall from this scourge, to one from the

arms of the enemy. And if the disease is not brought into the camp by this cause, what agent produces it in localities and seasons, where it is impossible for malaria to exist? Evidently, Dysentery must be produced, under such circumstances, by atmospheric vicissitudes. It has, with some propriety, been called the " scourge of armies," and the reason why they are so peculiarly subject to its attacks is almost self-evident. The men are either taken from comfortable barracks, or the comforts and luxuries of a home, and subjected to the hardships and exposure of the march ; during the day, from fatigue, and perhaps exposure to the rays of a scorching sun, the perihperal circulation is raised to an inordinate height—perspiration streams from every pore, and the skin becomes soft and open ; and at evening, instead of retiring to a comfortable bunk, or a luxurious bed, he lies down, with nothing intervening between himself and the earth, but a single blanket ; and is exposed to the cool, humid air, and vapors of the night. The consequence is, that he becomes chilled ; the exhalents of the surface are rendered torpid, the blood retreats from the external to the internal vessels ; and the liver, in common with the other internal organs, becomes engorged with blood ; its function is deranged; which contributes directly to congestion of the portal vessels, and consequently, to the rise of inflammation of the intestines.

The climate of California, that *hotbed of Dysentery and Diarrhœa*, is eminently calculated for the production of this disease. While in that country, I not unfrequently saw the thermometer stand, during a part of the day, as high as 109 ° Fahr. ; and on one occasion, as high as 113 ° 58, and then, before the following morning, drop down below 60 °. Hence, I must regard the prevalence of the disease there, with the unacclimated, as the relation of cause and effect. In fact, so common was Diarrhœa and Dysentery in that country, that a natural stool was rarely seen. With these facts presenting themselves, and in the absence of a better cause, we must regard the cool and variable autumn, succeeding a hot, dry summer, as the chief cause of the epidemic. Having digressed thus far from the true tenor of my discourse, I will dismiss the ætiology, and speak something of the

Prognosis.—The mortality attending the epidemic, when we consider the violence of its attack, its obstinate character, and the marked disposition which it manifested, to run into typhoid, was very small. From the middle of September to the 10th of November, about one hundred and fifty cases occurred in the town and vicinity, which were treated by Doctors Knox, McKenzie, Moore, Chilton and Tay-

lor; and yet the entire fatality did not exceed five per cent. A large majority of the fatal cases were females; and although the negroes seemed equally susceptible to the disease as the whites, there was but a single instance with them, in which it proved mortal. The duration of the disorder was variable. In the severe cases, the patient was seldom fairly convalescent under twenty or thirty days; common cases, ten to fifteen; while the milder form of the epidemic lasted from five to eight days. The disease seemed, in many instances, to run a stated course, in despite of any treatment that could be adopted. It is to be regretted that no *post mortem* examinations were made; consequently, I cannot speak specially of the lesions.

Treatment.—Bloodletting, from the marked tendency which the disease had, to assume typhoid action, was deemed inadmissible. *Calomel*, in small and repeated doses, combined with Opium and Ipecac, or Dover's Powders, in some instances, had a most happy effect, in correcting the vitiated state of bile, when present; and of inviting that secretion, in others, when absent; while in some cases, it seemed only to augment the pyrexia, and increase the dysenteric symptoms. In cases where mercury failed to alleviate the symptoms, the *Nitrate of Silver* was given in quarter grain doses, repeated every three or four hours, with the most flattering results. And in no instance where I administered this medicine, and continued it for any length of time, did it fail to be followed by a healthy bilious secretion, a reduction of febrile irritation, and a marked mitigation of all the dysenteric symptoms. Whether this amendment resulted from the *Nitrate*, or whether it was equivalent to doing nothing, and the result of *time*, and the *vis Medicatrix Naturæ*, future experience must decide. At all events, I am well pleased with it, as a remedy in this malady, and believe that it is well worthy of a further trial. *Anodynes* were freely used, and were highly useful, in allaying the distressing tormina, and disposition to stool; but were not supposed to hold any permanent influence over the disease. Tinct. Camph. and Laudanum, or Tinct. Camph. and Tinct. Opii Acetas, given in emulsion, and repeated at intervals of three or four hours, I found to possess a decided influence, in quieting the bowels, and was admissible in a greater number of cases than any other anodyne that I tried. Injections of laudanum and starch, or laudanum and acetate of lead, were useful in allaying tenesmus, and quieting the system. *Astringents*, both the mineral and vegetable, in the more aggravated form of the disease, were found to be inefficient, and productive of no good; but were used advantageously in the very mild cases. Some of the astringent teas

were used in some of the severe cases, with apparent efficacy, but their beneficial effects, doubtless, were due more to their diaphoretic than astringent properties. *Emetics* were not found productive of much good, as there was already a morbid irritability of the stomach existing; this class of medicines served usually to aggravate that symptom, and hence was little prescribed. Impressed with the belief that the malady was modified by miasmatic influence, I was induced to try the effect of the *Sulph. of Quinine*, but did not find that it made any permanent impression, at any period of the disease. *Local applications*, as poultices, or cloths dipped in warm or cold water, as the feelings of the patient might dictate, and placed over the bowels, were found to possess a marked and salutary influence—lowering febrile action, alleviating the pain and soreness of the bowels, and ensuring rest to the patient. *Cupping and counter-irritants* were seldom productive of much permanent relief. *Blisters* were sometimes serviceable, in the latter stage. *Gum water* and *Mucilages* were prescribed throughout all stages of the malady, with benefit. *Diuretics* were also prescribed to much advantage. *Diaphoretics*, however, were more uniformly beneficial in their effects, than any other class of medicines; and whenever they were pushed to the extent of free diaphoresis, there was always a marked and decided amelioration of all the symptoms; and if this condition was maintained for any considerable length of time, the patient never failed to have a rapid convalescence, and perfect recovery. Although I am no advocate for the doctrine of *specifics*, yet I believe that Sudorifics, in Dysentery, approximate that character, as closely as it is possible for any medicine, to approach it, in any other disease; as much so, even, as sulphur in itch; or quinine in intermittents. The *modus operandi* is obvious. Such is the intimate relation which subsists between the skin and bowels, that high action in one is attended by diminished action in the other. Consequently, when free diaphoresis is established, and the cutaneous function, thoroughly reinstated, the primary cause of the disorder ceases to exist; the blood is thrown out to the surface; the engorged organs and congested vessels of the interior are freed from embarrassment; the liver and kidneys resume their natural functions, and the bowels necessarily relieved—a little time then makes the recovery complete. The prompt reinstatement of the cutaneous function, in this malady, is the first great indication to be fulfilled; as we regard the disturbance of the hepatic and renal functions secondary to this. But the great obstacle, in fulfilling this indication, is, the difficulty, in getting the patient to drink sufficiently, of warm teas, to produce sweating; for diaphoretics, without diluents, are of little service in this disease. But if this

difficulty can be overcome, and the patient be got to sweating, the disease will be easily managed. Sage tea and Spts. Nit. Dul. will be found a good sudorific ; or if the stomach is not too irritable, small and repeated doses of ipecac, every three hours, with as much sage tea as the stomach will bear, will seldom fail to sweat the patient freely. Buttermilk, slightly soured, proved to be an admirable diet, in all stages of the disease. Animal broths, and light farinaceous gruels, was the diet ordinarily prescribed.

Talladega, Ala., January 21, 1852.

VIII.—CAPITAL SURGICAL OPERATION—LIGATURE OF THE ILIAC ARTERY—DEATH ON THE TWENTY-SEVENTH DAY AFTER THE OPERATION

Shreveport, La., January 16, 1852.

A. Hester, M. D.

Dear Sir—Having seen in the last number of the New Orleans Medical and Surgical Journal, a case of Ligature of the External Iliac Artery, applied by Dr. Stone, on the 20th December, 1851, for a large aneurism of the femoral Artery, I am induced to report a similar case, which occurred in my practice, on the 4th February, 1850, on the person of Mr. Henry Hogan, residing in Washington Parish, in this State.

I was at that time residing in Covington, St. Tammany Parish, and was sent for on the 28th January, to see Mr. Hogan, who had accidentally received a gun-shot wound. I was absent from home in New Orleans at the time. On my return, on the 3d February, I was requested by a second messenger to go to see Mr. H., who resided 35 miles distant. The messenger stated, that he had, on the previous evening, lost a large quantity of blood from a tumour on the upper and fore part of the thigh, and the medical gentleman in attendance was at a loss what to do.

I went to the residence of Mr. H. on the 4th, accompanied by W. S. Edwards, Esq., a neighbor, who took great interest in his recovery. On my arrival I learned that Mr. H. had been hunting about three weeks previously, with a younger brother, who, on crossing a log, had fallen, his rifle had gone off, and the ball had passed through the thigh of Mr. H. They were then some distance from home, and the physician did not see Mr. H. until the following morning.

There was no hæmorrhage of any consequence at the time, but after ten days a tumour was perceived on the upper,inner and fore part of the thigh, which gradually increased, and induced Mr. H.'s friends to send for me, for the purpose of opening the tumour, or of amputating the limb. The subsequent hæmorrhage induced them to send a second time for me.

I could learn nothing from the physician in attendance, who did not claim to be a Surgeon.

On seeing Mr. H., I found him much reduced, his skin pallid, pulse about 110 in the minute, and small. I examined the tumour, and found a strong pulsation, and immediately concluded it was Aneurism of the Femoral Artery. The tumour extended about two-thirds down the thigh, and about an inch above Poupart's Ligament.* I then stated to the friends of Mr. H., there was only one chance of saving his life, and that was a very slight one—for hæmorrhage would again take place, and as certainly prove fatal; on the other hand,the reduced state he was in, and the nature of the operation, was such as to render the chance very much against his recovery. They stated my opinion to Mr. H., who, for the sake of his family, immediately consented to the operation of tying the artery.

I commenced it by making an incision a little below the umbilicus, and extending it, in a crescent form, almost to Poupart's Ligament. After dividing the tendon of the external oblique, and carefully the fibres of the internal oblique and transversalis muscle and peritoneum, I passed my finger into the cavity of the abdomen, where I found the pulsation of the artery without any difficulty. I carefully separated it from the vein and nerve, and passed my ligature around it, which, being secured, I brought the edges of the wound together with sutures, and applied a bandage.

Mr. H. bore the operation well, and lost but a small quantity of blood. I left him that evening very comfortable. My residence was so distant, I did not see him after the operation, but left him to the care of the attending physician, from whom I learned that he was doing well for a few days, and the limb retained some heat, which gradually lessened, and he died on the 27th day after the operation.

Yours, respectfully,

JAMES GILPIN.

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* Near the centre of the tumour was a small orifice, about the size of a crow quill, through which the blood had escaped.

Death following the Ligature of the Iliac Artery.—Autopsy.

To the foregoing, we add the particulars of the post mortem examination, made on the patient, whoseexternal iliac was tied by Prof. Stone,and the fact reported in our January number. We promised at the time to report the result; and for the following interesting facts, observed at the autopsy, we are indebted to Messrs. Semple and Nye, Resident Students at the Charity Hospital.

The patient was aged 38 years—operated on December 20th, 1851—ligature was removed on the 13th day after its application. No secondary hæmorrhage followed. The case progressed favorably up to within a few days of death. (*Ed.*)

Autopsy.—The external wound had nearly healed—there having been but a slight discharge of pus for several days. At the seat of the ligature the artery was entirely closed by adhesions, and the tissues in the immediate neighborhood were much thickened and changed by the deposition of lymph. The peritoneum was thickened, but bore no appearance of recent inflammation. Below the original aneurismal sac, the artery had collapsed, and assumed the appearance of a fibrous cord. The Femoral vein was pervious as far as the crest of the Pelvis, but was obliterated below, as far as it was examined, to the opening in the Adductor Magnus—which accounted for the turgidity of the veins of the leg. The Anterior Crural Nerve appeared much diminished, and its fibrillæ could not be traced. The aneurismal sac was much reduced from its original size. In it was found the remains of the clot, and a considerable amount of fœtid pus. The pus seemed to have been derived from an opening in the posterior part of the sac, communicating with an abscess, situated on its posterior and outer side. This abscess was imbedded beneath the Iliac Fascia, within the Iliacus Internus Muscle. In fact, the whole substance of the muscle was completely softened. The abscess extended down the thigh beneath the Fascia Lata, as far as the upper border of the insertion of the Adductor Longus. It was not a well-defined abscess, but a general breaking down of the tissues. All the arteries examined were diseased—being readily torn by traction. The Arteria Innominata was very much dilated, and contained a small clot. This dilatation was noticed only two or three days before his death, and was supposed to be another aneurism. An extensive examination was not made, as the permission of his friends could not be obtained.

He commenced vomiting and purging four or five days before his death—by which he was finally exhausted.

IX—CASE OF SEROUS APOPLEXY CAUSED BY DISEASE OF THE HEART, THE RESULT OF STRUCTURAL LESION OF THE AORTIC VALVES.

REPORTED BY ——— ———.

On the 20th January there was admitted into ward 20 of the Charity Hospital, a man, apparently about 45 years of age. He was, at the time of his admission, laboring under coma, with loud stertorous breathing, inability to swallow, and he breathed with his cheeks like one smoking a pipe; he was totally insensible, and could not be roused; his urine and fæces were passed involuntarily; the pupils of his eyes were fixed, neither dilating nor contracting; and on close examination, he was found to have hemiplegia of the right side. In consequence of the loudness of his breathing, it was difficult to obtain any precise information by auscultation of the heart or lungs; but the impulse of the heart was strong, and extended over a wider space than usual; but any abnormal sound which might exist, was drowned by the greater loudness of the stertorous breathing. The pulse presented that jerking, impelled character, and in the neck, the arteries that locomotive appearance, peculiar to regurgitation through the aortic valves. In the lungs, the physical signs were,—coarse crepitation, widely diffused, together with rhonchus and sibilus, indicative, as was supposed, of œdema of those organs, the result of arrest of function of the brain. Inasmach as his exhausted condition forbade depletory measures, external stimulants were resorted to, and such like remedies as his condition suggested, but in vain; he expired 48 hours after his admission.

The diagnosis was apoplexy of the brain; the hemiplegia being on the right side, it was inferred that the left side was the seat of lesion. But whether this consisted in a rupture of a branch of one of the cerebral arteries, or in effusion of serum into the left ventricle, or on the corresponding side, it was admitted could not be decided. Considering the relation existing between heart disease and Apoplexy, and the great number of instances in which they are connected, it was remarked that it would not be surprising if disease of the heart formed a complication in the present case.

The body did not present the appearance said to be characteristic of persons predisposed to Apoplexy. On examination of the brain, a great quantity,—fully half a pint,—of serum, was found effused between the membranes and the brain, on the left side; the left lateral ventricle was full, to distension, with the same fluid; and a smaller quantity was also found in the right ventricle. The lungs were in a state of sanguine congestion, and the upper lobe of the right lung presented

that appearance termed apoplexy of the lungs,clots,—of blood apparently occupying the air cells and smaller tubes, as well as the areolac tissue of the lung on that side.

The heart was greatly hypertrophied, being at least one third larger than usual ; its right auricle and ventricle were distended with blood ; the left auricle was considerably dilated ; and so was the left ventricle, its cavity being twice the usual size, and its walls twice as thick as usual. The mitral valve and orifice presented no appearance worthy of remark ; but the aortic orifice was dilated, and its valves were deformed, contorted, and twisted, and loaded with bony incrustations, whereby they must have been wholly unfitted for the performance of their function—the closure of the aortic flood-gate. The ascending aorta was considerably dilated, and the coronary arteries were in a semi-cartilaginous condition.

The liver was congested with blood, and enlarged one third beyond its usual size, and was of a dark slate color ; the gall bladder was full of bile. The urinary bladder was greatly distended with urine, and filled the entire hypogastric region—showing, plainly, by reason of the reflexion of the peritoneum over the upper part of the bladder, how the puncture of that organ above the pubis, may be safely performed, when it is full of urine, without wounding the peritoneum.

The inference to be drawn from the post mortem examination is, that the Apoplexy was a consequence of the disease of the heart. The obstruction in the circulation on the left side of the heart, by reason of the regurgitation of the blood through the aortic valves, caused the blood to be detained, first in the left auricle, next in the lungs, giving rise to sanguine congestion and apoplexy of those organs—then to distention of the right ventricle and auricle,then to detention blood in the jugular veins; and finally, to over-fulness of the sinuses and veins of the brain, which resulted in effusion of serum beneath the membranes, and into the ventricles, whereby pressure, coma and hemiplegia were induced.

It is an interesting fact, that the greatest amount of effused serum existed on the left side, and that the hemiplegia existed on the right, which confirms the common observation, that the palsy is generally found on the side opposite the lesion. It is worthy of note, also, that the cause of the hemiplegia was effusion of serum, and not extravasation of blood. This observation also proves the correctness of Watson's explanation of the relation between heart disease and apoplexy, viz : how the apoplexy is caused evidently by the detention of blood in the brain, by reason of the obstruction to the circulation in the left side of the heart, and not by reason of the greater violence with which the

blood is thrown into the brain by the left ventricle ; the hypertrophy of the heart being a mere measure of the difficulty at the aortic outlet, and not of the force with which the blood is propelled through the arteries.* The heart acts morbidly on the brain through the veins, and not through the arteries.

In the present case, the blood having been thrown by the left ventricle into the aorta, the resiliency of that vessel, together with the weight of the blood, should have thrown down the aortic valves, and given the left ventricle time to fill from the auricles ; but such was not the case, the aortic valves being unfitted for closing perfectly a large quantity of blood regurgitated into the ventricle at the time of the second sound, (which is made by the closure of the sigmoid valves on both sides) the left ventricle was consequently stimulated into increased action, which occasioned the thickened state of its walls, together with the enlargement of its cavity, which was the inevitable result of over-distension by the blood, which constantly regurgitated and filled it. The excentric hypertrophy of the heart then, in this case, was simply a conservative effort of nature, to carry on the circulation, and prolong life. Had the man not been in the agony of death, or had he been examined by auscultation before the attack of apoplexy, the disease of the heart would, in all probability, have been easily diagnosed by a double bellows murmur on the aortic orifice, heard above the base of the heart, and transmitted along the arteries.

New Orleans, January 24, 1852.

X.—SOME REMARKS UPON THE FUNCTIONS OF THE NERVOUS SYSTEM, IN CONNECTION WITH THE VIEWS OF SIR CHAS. BELL, DR. MARSHALL HALL, AND DR. BENNETT DOWLER.

BY B. F. TAYLOR, M. D., LA.

It is known to the student of Physiology, that Sir Charles Bell, long ago, announced his views in reference to the functions of the Spinal Cord, and endeavored to prove that it consisted of *four sets of fibres*—each of which was made to perform a separate function, though intimately associated with each other.

1st. A *sensory* bundle.

2d. A *motor set.*

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* See Watson on the effect of heart disease of left side in causing Apoplexy of the brain and lungs.

3d. A set of *excitor* or centripetal fibres.

4th. A *motor* or centrifugal set.

The first and third are united in the posterior, the second and fourth in the anterior, column of the Spinal Marrow, In other words, the *anterior for motion*, the *posterior for sensation*, and the *middle column for respiration.*

After the inception of this new theory, Physiologists found it exceedingly difficult to trace the course of the fibres within the Spinal Cord; in consequence of which, Sir Charles Bell's views began to be distrusted. In the meantime, cases were constantly occurring, when a portion of one of the columns were found almost entirely destroyed by disease, with a corresponding loss of function.

Whilst the merits and demerits of this new discovery were being warmly discussed, by British and Continental Physiologists, a new star arises, in the person of Dr. Marshall Hall, who was destined to shed a brilliant, but an ephemeral light, upon the profession—but to give place to one far greater in magnitude and brilliancy, in the person of an eminent *savan*, whose genius and discoveries are destined to reflect additional lustre upon the American name, and physical science, wherever it is cultivated.

Dr. Marshall Hall contends, that the nerves of the Spinal column have a *fourfold set of functions—a double set of excito-motor, and of sensori-volitional nerves*—and explains every phenomenon connected therewith, as purely reflex in its character. It cannot be denied but that this theory is surrounded with a great deal of mystery, since the Editor of the London Lancet, in his rapturous support of the doctrine, was compelled to announce his conviction, that " not half a dozen of the members of the Royal College of Physicians could comprehend his peculiar views ; and that he was an hundred years beyond his contemporaries, &c. Looking through a *Hall medium*, it is not to be marvelled that Mr. Wakly should still continue to support those views, since it is shrewdly suspected that Marshall Hall himself controls that able and influential Journal.

Dr. Bennett Dowler, with a view of testing the truth of Sir Charles Bell's and Marshall Hall's views, has made a series of experiments upon the great Saurian, whose tenacity of life is greater than that of any known animal, and who exhibits the phenomena of reflex action upon a much greater scale than frogs—which demonstrate the fallacy of a "fourfold set of functions," in opposition to which, the following satisfactory and nicely conducted experiments are adduced :

(We omit here the experiments quoted by our correspondent, and refer the reader to page 40 et seq. of the July No. for 1851, of this Journal.—*Ed.*)

In reviewing Dr. Dowler's paper, the Editor of the British and Foreign Medico-Chirurgical Review, the most able reviewer in Europe, had the manliness and moral courage to come out boldly and renounce his adhesion to the "four-fold system of nerves," "now generally admitted," says he, "amongst well informed Physiologists, such having, *as we now believe, no real existence in nature.*" An admission, Dr. Hester judiciously remarks, which "forms an epoch in scientific progress, because with certain individuals it will weigh more than any amount of *demonstration, intuition,* or possibly *revelation* itself."

Dr. Dowler's discovery of a *diffused sensorium*, has furnished a key to the hidden recesses of the nervous system. The adaptation of those views to therapeutic medicine, is most strikingly and beautifully illustrated, in man's first ingress into this breathing world. The first respiratory effort of the new born infant, is most vigorously performed when the cool air comes in contact with its general surface. Accoucheurs avail themselves of this important fact; hence the utility of slapping, frictions, and the application of cold water, in more effectually exciting the respiratory movements. In the treatment of Asphyxia by pouring, Hysteria, &c., the alternate application of heat and cold, is most powerfully manifest in restoring these movements. All of these phenomena are in harmony with nature's laws,—written upon the nervous system,—and the application of the doctrine of a *diffused sensorium.*

January, 1852.

XI.—A MEMORIAL TO THE LEGISLATURE OF THE STATE OF LOUISIANA, FROM THE LOUISIANA STATE MEDICAL SOCIETY, AND THE PHYSICO-MEDICAL SOCIETY OF NEW ORLEANS—WITH REFERENCE TO THE REGISTRATION OF BIRTHS, MARRIAGES AND DEATHS.

To the Hon. the Senate and House of Representatives of the Legislature of Louisiana.

In presenting to your honorable body the following memorial, it is proper first to indicate the authority under which we act.

The licensed Physicians of this State having been invited by the Attakapas Medical Society, and the Physico-Medical Society of New Orleans, to meet in convention, the result was the formation of a State Medical Society, to which all Physicians and Apothecaries, duly licensed according to the laws, are eligible as members, and he objects of which are declared in its Constitution to be, " The advancement of the usefulness, and the elevation of the character, of the medical profession, and the protection of the interests of its members; the *promotion of medical science*, and the *diffusion of information upon collateral subjects.*"

At the first meeting of the Society, in December, 1849, it was made the duty of the Board of Administrators to petition the Legislature, as the sense of this Society, that it should pass the necessary law, to authorize to be taken throughout the State, annually, an accurate record of Births, Deaths and Marriages. [A complete, and as far as practicable, a correct record is kept by the Board of Health, of the names, ages, sexes, color, disease, place of birth, &c., of all those who die and are buried in New Orleans and Lafayette. All these particulars are recorded in the "*Dead Book*" and are open to public examination and inspection.—*Ed. Med. and Surg. Jour.*] At the second meeting, in March, 1851, this duty was enjoined upon the present Board, and in accordance therewith, this memorial has been prepared.

Having also been submitted to the Physico-Medical Society of New Orleans, and having received their sanction, it is presented in behalf of these two public organizations by the memorialist.

It may not be improper to add, in justification of the presentation of this memorial, that the National Medical Convention, assembled in Philadelphia in May, 1847, and which was organized into the " American Medical Association," adopted a memorial and resolutions, recommending " to the various State Governments, the adoption of measures for procuring a Registration of Births, Marriages and Deaths, occurring in their several populations," and requesting the co-operation

of the State Medical Societies therein ; and that the memorials of the Massachusetts Medical Society, and of the American Statistical Association to the Legislature of Massachusetts, were not only favorably received, but doubtless contributed essentially to the establishment of a most excellent system of Registration, and to the recent valuable Sanitary Survey of that State.

A sketch of the systems adopted in various civilized countries, for the Registration of Births, Marriages and Deaths, will properly introduce this subject to your notice.

Registers of Deaths kept in Breslau, Silesia, one hundred and sixty years ago, enabled Dr. Halley to prepare the first table of mortality ever computed.

The registration of Births, Marriages and Deaths in Geneva, was commenced in 1549, and while the system has undoubtedly contributed largely to secure the rights of individuals, it has also served to demonstrate the progressive improvement in the duration of human life—the increase of which amounts to the enormous proportion of 521 per cent.

At the present time the Prussian system is very complete, and has furnished materials for very able and valuable contributions to vital statistics. "Every fact there is gathered with great care, under the direction of a central officer at Berlin, and arranged and published for the benefit of the people."—*Shattuck.*

More than one hundred years ago, complete returns of all the births, marriages and deaths in Sweden were collected by the Government, and published by M. Wargentine.

The codes of Austria and Prussia were established prior to the Code Napoleon ; but there and in Bavaria, legal provision is made for establishing the civil *status*, but the records are kept by ecclesiastics. The codes of Sardinia, Baden, and the Cantons of Friburg, Argovia and Vaud, have adopted this portion of the Napoleon Code, with, however, considerable alterations. In Holland, the two Sicilies, and even in Hayti, the provisions of the French Code are almost literally adopted.

In France, the system of registration is very perfect, and is embodied in its Code, which, under Title ii., of Book 1, gives, with the utmost precision, the details requisite to establish the civil *status* of individuals. The adoption of this entire Title, with the exception of Chapter 5, and with the few modifications requisite to make it conform to our present laws—together with the appointment of proper officers to perform the duties required, would leave nothing wanting but tabular reports to a

central officer. Registration in France, though previously in existence, was systematized, and consequently simplified and rendered precise, by the Code Napoleon, which has not been altered in this respect. A brief statement of the system, as defined in the Code, will be given here.

The object of the law is, to obtain and securely preserve, all the facts necessary for enabling every individual to prove his civil position, *i. e.* his age, his rights of citizenship, and his relationship to other persons. This is accomplished by an official registration of the three important epochs of birth, marriage and death, with a sufficiency of the details of the event, the persons interested therein, and the witnesses thereto, as will at any time thereafter furnish proofs of these events, and consequently, of every thing dependent on, and connected with, them. The registers, themselves, constitute the proof, to a great extent, and the details preserved are sufficient to complete it, or, at least, lead direct to its completion. Some points are common to all the acts. The year, the day, and the hour, at which the declarations are received by the registrars, the Christian and family names, age, occupation and domicil, of all who join in the act, as principals or witnesses, must be given in full (Art. 34), without any abbreviation or figures (Art. 42) and inscribed in duplicate registers (Art. 40), *seriatim*, without any blank (Art. 42). The registers are paged and paraphed (Art. 41), and closed each year, when one copy is deposited in the archives of the commune, and the other in the office of the clerk of the court of first instance (Art. 43). The record of birth must be made within three days (Art. 55) by the father, the accoucheur, or some other person who was present. It requires two witnesses to the act (Art. 56); and the child must be shown to the registrar (Art. 55). The inscription must contain the day, the hour, and the place of birth, the sex and name of the child, the names, occupation and domicil of the parents, and of the witnesses (Art. 57).—The marriage ceremony must be celebrated by a civil officer (though it is generally also repeated by a priest or minister) and generally in the town hall (Art. 75). A copy of the act of birth is a necessary preliminary, if it can possibly be obtained (Art. 70), or its want must be supplied by the homologation of the judge of an act of notoriety (Arts. 71, 72). The marriage record contains the names, occupations, ages, places of birth and of residence of the parties—states if they are of, or under age—the names, occupations and residences of the parents and of the witnesses, and their relationships to the parties—the declaration of the parties that they take each other as a consort, and the pronouncement of their union by the civil officer, together with a record of the

compliance with all the necessary preliminaries and formalities prescribed by law (Art. 76).—No interment can be made without the authorization of the civil officer, who must see the body to assure himself that life has been extinct for twenty-four hours (Art. 77); if he observe signs of violence, or other suspicious circumstances, he calls upon the coroner and a physician for a professional examination, &c. (Art 81.) The record of deaths contains the names, age, occupation and residence of the deceased, of the consort, (if there be or has been one) and of the declarants and their relationship, and so far as known, the same details of the parents, and the place of birth of the deceased (Art. 79). The highest price chargeable for the completion of these acts is, for that of marriage in Paris, two and one third francs—that for an inscription of birth is less; and it is expressly provided that there can be no charge made for an act of death (Art. 77).

In 1837 a very perfect system of registration was commenced in England, of which a full description may be found in McCullock's British Empire, i. 410. It provides fully for the registration of every fact of importance and interest relating to every birth, marriage and death that takes place. These facts are all reported to a central office in London, where, by means of *alphabetical indexes*, on the mere mention of the name, any entry can generally be found in a few minutes. The Registrar General publishes weekly a statement of the births and deaths in the metropolis, quarterly statements of those in the whole of England and Wales, and lays before Parliament annually a general abstract account, embracing full statistical details of the births, marriages and deaths in every part of the kingdom. The reports of the Registrar General fill a large volume, and have generally been accompanied by valuable papers on various topics of great importance connected with vital statistics.

The State of New York had a system of registration about seven years ago, but no details of the system, or of its results, can be given here.

The State of Massachusetts has now in full and successful operation a system, commenced in 1842, of which it is only necessary at present to state, that based as it is upon a thorough study of the English and French systems,—modified, as it has been, by their own experience, and developed by the very able men of that State, it would constitute, perhaps, the most eligible model for the establishment of a similar system in the other States of the Union.

It appears, then, that in Norway, Sweden and Finland, Prussia, France, Belgium, England and Wales, Massachusetts and New York,

very good systems of registration exist, and probably in other countries similar systems, more or less perfect, may be found. These countries constitute a large proportion of the civilized world, and if their inhabitants do not find it onerous, but believe themselves benefitted thereby, it would be reasonable to presume that a similar result would follow its introduction here.

As other reasons than that of the experience of civilized states may be desired, a few of the most important will be given, as briefly as possible.

The objects to be accomplished by a complete system of civil or official registration of Births, Marriages and Deaths, presents itself in two distinct points of view. First, as tending to secure to every citizen however obscure, any rights that may be dependent on the proof of these important epochs (Births, Marriages and Deaths) in his own life, or in the lives of those with whom he may be connected.—Second, as serving to elucidate many of the most important problems of political economy and of social dynamics. Where the common law prevails, as in England, New York and Massachusetts, the second object seems to have been the leading idea in the establishment of such a system; while in other countries, and especially in France, (the laws of which are before us) the principal aim appears to have been the first of these objects, viz: the possession of authentic records to establish the civil *status* or position of each citizen, and his connections with other individuals.

With reference to the individual, it is evident that numerous cases must constantly arise, in which it is highly important to establish, by public records, the authenticity and authority of which would be unquestionable, the facts pertaining to the Birth, the Marriage or the Death, of some connection, and that after the lapse of many years these facts can scarcely be established, even though great pecuniary interests may be dependent thereon. The celebrated Gaines case is one of this kind, and this bare reference is sufficient, as it is so well known. Great difficulty has been encountered by many widows and orphan children, in obtaining, and in many cases it has been impossible to procure sufficient evidence to establish the relationship which would entitle them to the bounty land and pensions awarded by the United States, for services in the war of 1812, and even in the late war with Mexico. On the other hand, dependent, as the evidence must be, on personal testimony, it is to be feared that fictitious claims have in some, if not in many cases, been successfully made. Both of these difficulties would have been avoided by a good system of registration. A case may even

now be in its inception, by which future citizens of this State may be deprived of their rights, or that will involve as much litigation as the great Gaines case. Fifty, or even twenty years hence, a child born of a marriage solemnized recently, with all the formalities and requirements of the law, and of custom, will be dependent upon the parol testimony of strangers to establish his legitimacy. The licenses granted, the bonds given, the certificates of the person celebrating the rites, are so carelessly kept, and so widely diffused, that it will be impossible to discover their existence. The old registers of the Parish Judge (required by law) cannot be found, and it is probable that some of the licenses granted by Justices of the Peace, within the last five years, are already lost.

The great pecuniary or other interests at times dependent on the establishment of such facts,—the very necessity of the case, has, therefore, given rise to family records, church registers, and to a system of public registration more or less perfect in most countries. In England and the United States these important rights have been left to depend upon such evidence, together with parol testimony. In France, prior to the Revolution, the registers were confided to the Curates, who were required to deposit the duplicate in the office of the clerk of the court. When freedom of religious worship was established, when it became necessary "to mark distinctly that the civil *status* and religious belief have nothing in common—that religion can neither take away nor bestow the civil *status*"—(*Simeon*) it was wisely determined to establish public records which would preserve these important facts independent of ecclesiastical control or neglect. The great Code Napoleon—that noble result of the energy and wisdom of a great mind—that magnificent monument of the industry, learning and intelligence of the ablest jurists and legislators of France, though it served as the foundation of our law, unfortunately in this respect never became the law of this State, or there would be nothing for us to do on this subject, but to profit by the recorded results of its wisdom. The Code Napoleon, considering these three great epochs in man's life, (birth, marriage and death) as the landmarks of his civil *status* and personal rights—seeing that one of these events is beyond personal control—that the uninformed husband, or the careless father, may neglect the means necessary to secure the rights of future citizens of the state, takes entire charge of the whole matter, and prescribes such forms that it would be almost impossible to question the legitimacy, or deprive of his birthright any citizen of the state.

In other States, where the ecclesiastical relation enters into the con-

sideration of the state of matrimony, and where the pecuniary interests of the parties are identified, it is not so indispensable; but in this State, where "the law considers marriage in no other view than as a civil contract," (Art. 87) the preservation of official public records of so important a contract, is peculiarly obligatory.

It is the duty of the State to protect every one in his rights of person and property. Personal rights not only involve protection of life, limb and liberty, but the right, at prescribed ages, to possess and administer property, to marry, &c.; to exercise the rights of citizenship, by voting, and to be considered eligible to certain offices, as to become a legislator, &c., &c. These rights are dependent upon the date of one's birth, which the individual cannot himself take any steps to secure a knowledge of, and which must, therefore, be dependent on the voluntary acts of others, or regulated by the laws of the State. To illustrate: A child becomes an orphan at a very early age, the law appoints administrators and tutors, these possess themselves of the family Bible and studiously concealing from himself his age, may retain possession of his property for some time after the law would allow him to control it, as with Tony Lumpkin, in Goldsmith's beautiful play.—A man presents himself to vote, many may honestly believe him still a minor, and some might even swear that he is not of age, and thus deprive him of his rights; the law, most unjustly, throwing upon him the *onus probandi* of an event, of which he was not cognizant. So with respect to marriage, and every other privilege dependent on his age.

The rights of property not only involve its possession and administration, but the right to acquire it by succession in certain cases; and while the law prescribes the rights of succession, &c., it leaves to chance the proof of paternity, or other relationship, which might be shown by proper registers.

In connection with a general system of registration, registers of qualified voters might easily be kept, and while the two would assist to sustain each other, they would contribute essentially to the purity of the ballot box, and protect legal voters from the risk of having their wishes annulled by fraudulent votes and dishonest voters.

We must next endeavor to show, that a general system of registration will be conducive to public interests.

Many important questions in political economy remain yet unsolved, and the data heretofore collected, have been in countries so dissimilar to our State, as to be utterly inapplicable, even though they may approximate to the truth for their respective localities. The rate at which population increases, and its ratio to the increase of the means of sub-

sistence—the fruitfulness of marriages, the proportional fruitfulness of early and late marriages, and consequently the policy of encouraging early marriages, or the propriety of deferring them to a later period of life—(*i.e.* their respective advantages)—the proportion of births to deaths; the dependence of the increase of population upon immigration, and natural increase by procreation,—are questions not only as yet unsettled, but must be determined for different countries presenting diversities in climate, density of population, races of men, avocations of the inhabitants, &c., &c. A thorough system of registration, and *it alone*, can furnish the data for the solution of such questions.

Within the last thirty years the subject of sanitary reform has become one of the prominent questions of the day, especially in England and some of the Northern States. The attempt to improve the health of any locality, or of any particular class of persons, must be preceded by investigations more or less accurate, into the prevalent kinds of disease and causes of death; for thus only can proper direction be given to efforts for the removal of those causes. Sanitary reform, based, as it must be, upon vital statistics, has therefore attracted to the latter a degree of attention not previously bestowed upon it. The vital statistics of a country cannot be developed by private records or investigations; nor by investigations instituted at long intervals, as at the periodical taking of a census. The only means by which the facts can be rendered available is, by their record at the date of the occurrence of the events; for thus only can accurate and reliable data be obtained. A system of registration by collecting the necessary facts, becomes available for the determination of the true sanitary condition of different localities, and may be used to direct efforts for its improvement in the most effectual manner.

No region of country has a worse reputation abroad for salubrity than the Delta of the Mississippi, and no city in the civilized world is elsewhere considered more insalubrious than the city of New Orleans. The want of information—the failure to furnish accurate statistics of our actual mortality, and the injudicious efforts to palliate the apparent mortality by deducting a portion of the deaths, or adding to the census population—by leaving a degree of uncertainty upon the subject, has served to exaggerate the idea of its insalubrity. The vague, undefined, and misty idea presented by a large number of deaths, (which cannot be denied), with insufficient precision as to their causes and place of origin, has presented itself to the minds of those who have never visited our region, as a phantom of death; and it has been, and is even yet, considered almost an act of self-immolation to venture here. It is gener-

ally thought that one might as well be bitten by a venomous reptile, or attempt to repose under the shade of the Upas tree, as to venture here, where may, nevertheless, be found a large, flourishing and healthy population. This is due to the fact, that for years the health of the city and country has been estimated by the statistics of the Charity Hospital, the only figures ever published to the world—which *judges by figures and not by assertions.* For the last five years only, have sufficiently authentic, accurate, and continuous records been preserved in New Orleans, to make reliable calculations as to its sanitary condition. These data show, that including the great epidemic yellow fever of 1847—the ravages of cholera, and in fact every death that has been recorded—those dying immediately on their arrival here from foreign ports, and from the upper country, the mortality is (without attempting to make any abatement) only 6.728 per cent.* Will this prevent any person from coming to New Orleans? On the contrary, will it not dispel that shadowy mistiness which exaggerates into a giant, proportions not far exceeding the natural? Will it not reduce greatly the ideas entertained of the pestiferous character of New Orleans? Will it not, therefore encourage immigration? There is no doubt that it will, and that a proper system of registration would prove, that many of these deaths are not attributable to endemic influences, but to a variety of causes, which, though existing elsewhere, to some extent, are here manifested with a greater degree of intensity.

Whatever may be the degree of mortality here, whether it be great or small, the important question that must present itself to every mind is, can this mortality be reduced, can the number of deaths be diminished? That they may be, scarcely admits of doubt; but how can proper measures for this reduction be proposed, until its causes are known? and how can these be discovered but by an accurate registration and a thorough analysis of the data furnished thereby? If a system of registration contributes to this end, it is a public benefit; for population is the wealth of a state; without population, the richest mines, the most fertile soil, the most unbounded manufacturing and commercial capacities must remain barren and unprofitable.

That the vital statistics of each different locality must be examined for itself, may be shown by the results of some of the most celebrated Tables of Mortality.

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* This calculation includes deaths in 1851, viz: five and one third years from September 1st, 1846, to December 31st, 1851.

Of 100.000 aged	25 and	65
there survives at age of	65 and	80
according to—		
Dr. Price, Northampton,	34.286	28.738
" Sweden,	43.137	23.704
De Parcieux, Tontines,	51.053	29.873
Milne, Carlisle,	51.335	31.577
G. Davies, Equitable,	49.330	37.267
Finlayson, 1825, Govt. Ann.	53.470	38.655
" 1827, "	53.950	37.355

If such discrepancies exist in the same region of the globe, with the same general character of populations, similarly circumstanced, we surely cannot, from all the facts heretofore collected elsewhere, predicate any thing concerning the vital force in a State situated as is this, differing in all the elements of vital statistics.

Hitherto so little attention has here been paid to the collection and preservation of data pertaining to vital statistics, that it is almost impossible to present any facts from our own history to show their importance and value. The following—the best that can be obtained—are only intended to show that important truths might be deduced from such materials, if they possessed sufficiency of accuracy and minuteness of detail.

In 1818, the number of deaths in New Orleans was 1185; in 1851, the number had increased sixfold, being 7,275, while the population had only increased threefold.

In 1830, the population of New Orleans was 49,826; in 1850, it amounted (with Lafayette) to 129,757: the mean number of annual admissions to the Charity Hospital for the years 1828—'9—'30—'1—'2, was 2,736; while for the years 1849—'50—'1, it was 17,451. In 1830, the admissions amounted to near five and a half per cent of the population; and in 1850, it had increased to nearly thirteen and a half per cent.

Of the total admissions, females constituted 6.17 per cent from 1832 to '38—12.95 per centfrom 1839 to '45; and 21.81 per cent from 1846 to '51.

These facts are sufficiently remarkable, to at least suggest an inquiry into their causes.

According to the late United States census of 1850, the Eastern District of Louisiana, with a population of 304,096, experienced in the

year ending in July, 7,499 deaths* (2.466 per cent), while in the Western District 9,883 deaths occurred among 211,470 inhabitants—(4.674 per cent). In Sabine Parish, 538 deaths are reported in a population of 4,514; while La Fourche Interior shows but 9 deaths in a population of 9,534. These results show upon their very face errors of great magnitude; for they cannot be attributed to any local epidemic. In fact, during this period Cholera, if it did not prevail more extensively in the Eastern District, at least caused a greater proportion of the deaths reported. Four fifteenths of the deaths in this District are attributed to Cholera, while but one fifteenth are attributed to it in the Western District; and in Sabine, but six deaths are referred to Cholera. These results, surprising, if true, (which they cannot be) show clearly, that indispensable as the census returns are, and valuable as they may be in some respects, they do not furnish materials sufficiently reliable to supersede an accurate registration of the population, and of the births, marriages and deaths occurring therein.

We shall now proceed to refute the objections that might be made to the adoption of the system in this State. We shall suppose that we are contending for a good system—the objections that might be adduced against a defective one cannot enter into the argument; for with the information derivable from the experience of France, England, etc., and of New York and Massachusetts, it is not to be supposed that your body would unadvisedly adopt an imperfect system.

It might be supposed that the unwillingness of the people to submit to the annoyance of frequently going to public offices to register the desired facts, would create such an indisposition on their part to support the system, that it must fail. It may freely be conceded, that no law of this kind can be enforced by penalties, in opposition to the wishes of the people, and therefore, that it must be rendered as little annoying as possible. But it has been found that wherever adopted, the people have speedily become so well acquainted with its advantages, as to readily give it their hearty support. The following extract from a report by Lemuel Shattuck, Esq., (whose writings on this subject have been of signal use to the memorialist) will show the opinions entertained of the system where it has been adopted.

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* Of this number 4,031 were furnished by New Orleans and Lafayette alone, and 2,191 by the third representative district. In fact the records of the Charity Hospital contributed largely to these numbers. It must be remarked, moreover, that the New Orleans Board of Health report for the year embraced in the census returns, 7,251, being not much less than the total number reported in the whole district.

"These registers [in France] are compulsory and universal. They are kept by a civil officer in every commune, of which there are 40.000 in France. Their accuracy and regularity are most carefully assured and vigilantly preserved. Duplicates are kept and closed every year, with formalities that preclude interpolation. Tabular alphabetical indexes are formed annually. One copy of the duplicate and index remain in the records of the parish or commune, and the other is transmitted to the tribunal of the district, where it is examined and placed under the superintendence of the local officer of the government. From all these local documents another complete alphabetical index, or quinquennial or decennial analysis, are made; and these statistical documents furnish the useful information, as to the movement of the population, which almost supersedes the necessity of a census, and which philanthropists, and wise men, and good governments desire.

"As it might be apprehended that these regulations, though of public utility, might be productive of individual and social vexation, and considerable expense, it is important to know, that the system is deemed, throughout France, an individual and social benefit, and is neither evaded or disliked. And it is also important to know, that in Geneva, in the Rhenish provinces of Prussia, and in Belgium, where the regulations were introduced when these countries were subjugated to France, they are still tenaciously adhered to, though these countries have long since become independent, and might have returned to the forms they previously observed; and that in Belgium, after the last revolution in 1830, an attempt was made to restore the clerical registrars, by the parochial Catholic clergy, but that it was frustrated by the decided exertions of the nation, who would not consent to the change. There the registrations are gratuitous; and since that revolution, these registrations are rendered additionally independent of religious opinions; and though the clergy are allowed to record births, marriages and deaths, when they are called in to perform religious ceremonies, yet these inscriptions are purely ecclesiastical memoranda, and have no official character in civil affairs. There, too, the humblest individual may trace his parentage, and the origin of his family, as well as the most illustrtous personages, who possess geneologies, the result of laborious research."

To this must be added the following observations. The number of facts, the registration of which is desired, is so few, that it cannot conflict essentially with the business of the mass of the people. The head of a family will be required to register his marriage, and the birth and death of each member of his family, and perhaps of a few friends. At most, in the course of a long life, he might have to visit the register's office ten or twenty times; even if each adult male averaged one registration every year, it would be but a mite contributed to the general good, and to the special benefit and protection of those near and dear to him. Moreover, existing laws already impose the obligations herein proposed, and all that is suggested is such modifications as shall render them useful to the private citizen, and available for a knowledge of social statistics, by collecting in one general office the facts and records at present so scattered as to be useless, and in great danger of being lost.

The only other objection to a system of registration is its cost. From the only data available for this purpose, we may estimate that there are each year among the free inhabitants of the State, about fifteen thousand

thousand births and deaths; if thirty cents be allowed for registering them, the expense would be four thousand ffve hundred dollars. There are probably fifteen hundred marriages annually, which at ten cents, would be one hundred and fifty dollars. The sum of three hundred and fifty dollars would probably be required for books—for registers and for blanks. These sums, with a salary of one thousand dollars to a State Registrar, would amount to six thousand dollars, which would probably be for some years the entire expense to the State, if it assumed the whole charge of the system; but one half of this expense of registration should be paid by the parish or town. It is indispensable to the success of a system of registration, that it be free of direct expense to the individual. That the system is worth the expenditure of six thousand dollars, your memorialists feel well assured, and they hope that the reasons therefor previously set forth, will lead your honorable body to the same conclusion.

The next consideration is, the present state of the laws pertaining to this subject, and as they are scattered through the legislative acts of the past forty years, and have never been digested into one consistent scheme, it is necessary to go back and trace downwards successive alterations, to know what the law now is. It is further necessary to treat separately of marriages, as past legislation has done so.

The acts approved April 10th, 1811, March 6th, 1819, and February 10th, 1821, ordained the registry of births and deaths, with the following provisions digested from these three acts. Special Recorders were appointed by the Governor for New Orleans, and for a portion of Lafourche, and Parish Judges were declared Recorders for the rest of the State. The births and deaths of whites and free colored were to to be recorded in four separate books. The fee for recording 50 cents, for copy 50 cents. The person required to make the record was designated, and a penalty of five dollars imposed for failing so to do within a designated time.

These laws never have been formally repealed. The new Constitution virtually abolished the office of Parish Judge, but the duties performed by them have been assigned to other officers. The Act of June 1st, 1846, (No. 104) appointed Parish Recorders, (except for Orleans) who were declared to be Recorders of Births and Deaths, with the proviso, "that no person shall be under any legal obligation to have a birth or death recorded." Whether three formal Acts were repealed by an incidental proviso—and if so, whether it applies to the Parish of Orleans, and to that portion of La Fourche having a special Recorder —whether the introduction of matter so extraneous to the general

object of the Act, dees not violate Articles 118 and 119 of the Constitution, are questions for the decision of the Judiciary. Until they have been decided, it may be presumed that the old registry laws are still in force, at least in New Orleans and a part of La Fourche. If these laws be still in force, no other legislation is necessary than to require the proper officers to make periodical returns to a central office, and to prescribe the duties of that officer, except that it would be better to re-enact the law, with such modifications as may be desired, in order to place its obligations beyond the contingency of doubt.

The forms of celebrating marriages has engaged a great deal of legislation in this State. Without entering fully into the history of this legislation, it is proper to state briefly what appears to be the present state of the law on this subject.

By the Act approved April 6th, 1807, and re-enacted in Articles 102 to 105 of the Civil Code of 1825, a license, prior to the issuance of which the intended husband must give a bond, must be obtained from the Parish Judge of the Parish where either party lives, before the rites could be performed by those whom the law allows to celebrate the same. The Act of March 10th, 1845, (No. 104) requires every Minister and Magistrate celebrating a marriage, to make in duplicate the marriage act, and to return one copy within thirty days to the Parish Judge, to be filed and recorded in his office. The office of Parish Judge having been discontinued, the Act of June 1st, 1846, (No. 106, §5) required Justices of the Peace in New Orleans to grant licenses and celebrate rites, and to keep records thereof. By another Act of same date, (No. 108, §7) Justices of ihe Peace in Jefferson were authorized to grant licenses in *their respective districts*, and to charge therefor a fee of three dollars. The Act of May 29th, 1846, (No. 96, §1) empowers Clerks of the District Courts to grant marriage licenses.

This brief synopsis indicates the necessity of a revision of the laws pertaining to this subject, and of their re-enactment in one systematic scheme. The transition from the old to the new Constitution, appears to have involved the subject in almost inextricable confusion. To determine who are authorized to grant marriage licenses, and the fees chargeable therefor, to celebrate the rites of matrimony, and the fees when performed by a civil officer, to ascertain whose duty it is to keep records of these matters, and to preserve the marriage bonds, to know if records of births and deaths is obligatory, who shall keep these records, and the fees chargeable for making the record and attested copies thereof—subjects that might and should be embraced in one or two well defined laws—requires an examination of the whole legislation

of the State. At present, we would merely recommend the establishment of an office or bureau, where these important facts should be collected together, with such modifications of the law as will conduce to a more general adoption of the practice of recording these events. The reports from such an office would hereafter indicate such additional provisions of law as might be found necessary.

Respectfully submitted,

J. C. SIMONDS, M. D.,

On behalf of the Louisiana State Medical Society and the Physico Medical Society of New Orleans.

New Orleans, 31st January, 1852.

At a meeting of the Board of Administrators of the Louisiana State Medical Society, held this day, the following resolutions, in accordance with a resolution adopted on the 27th of December last, to memorialize the Legislature for the passage of a suitable law for the faithful recording of the Births, Marriages and Deaths in the State, were adopted:

Resolved, That the Report of Dr. Simonds be received and adopted by the Board of Administrators of the Louisiana State Medical Society.

Resolved, That the Physico Medical Society and Board of Health of New Orleans, be requested to co-operate with this Society, in furthering the passage of the object of this memorial by the Legislature.

(Signed P. B. McKELVEY, M. D.
Recording Secretary.

At a meeting of the Physico Medical Sodiety, held on the 31st January, 1852, the following resolutions were adopted:

Resolved, That the Physico Medical Society highly approve of the memorial of the State Medical Society to the Legislature, on the subject of the Registration of Births, Deaths and Marriages, and highly recommend the adoption of its suggestions.

Resolved, That a copy of this resolution be appended to said memorial.

D. McGIBBON, M. D.,
Recording Secretary.

Part Second.

EXCERPTA.

I.—PROF. FORGET ON THE DISEASES OF THE HEART.

We translate and transcribe from the *Gazette Med. de Paris*, the following very interesting observations on the causes of Heart Diseases, by M. Forget as copied from the Medical Gazette of Strasbourg.

The learned and skilful *clinicien* of Strasbourg has established the following laws, which govern in the causation of certain cardiac diseases:

1st. That the dilatation of a cardiac cavity is always effected *behind* the obstacle.

2d. That the (*rétrecissement*) contraction, on the contrary, always takes place *in front* of the obstacle.

Thus isolated, contraction of the aortic orifice determines aneurism of the left ventricle; isolated contraction of the mitral orifice produces concentric hypertrophy of the same ventricle. From simultaneous contraction of both orifices results, sometimes dilatation, and sometimes coarctation of the ventricles, according as the aortic orifice may be more contracted than the mitral, or the latter orifice more contracted than the aortic orifice.

Professor Forget calls the dilatation thus produced *retro-dilatation*, or *opistectasia;* and coarctation, *anté-coarctation*, or *prostenosia*. M. Forget furnishes some anatomical proofs of valvular affections. When, says he, a single orifice is contracted, we have there the anormal sounds to indicate, by their seat—by their relations with the systole and diastole, the precise point of the lesions; but in the instance of simultaneous contraction of both orifices—the mitral and aortic—the difficulty is complicated, and the valvular sounds become insufficient. But if it be true that a cavity situated between two contracted orifices becomes dilated, when the *predominant* contraction is seated at the orifice of the *dégagement*, and returns upon itself when the contraction is located at the orifice of the canal, it is manifest that from the anatomical condition of the cavity itself, we may deduce the respective degrees of contraction of the two orifices. A contraction, says the author, existing at either of the orifices of the left side, the *predominant* constriction will be seated at the aortic, or at the mitral orifice, according as the left ventricle may or may not be dilated with hypertrophy.

The determination of the precise seat of valvular lesions is not a matter of mere curiosity; these lesions, whatever may be their seat, will influence us very materially in the treatment which we are to adopt. If it be a mitral lesion or disease, we should take care not to enfeeble the left ventricle, especially if exempt from hypertrophy; in which case we must husband all its strength, to enable it to send the blood to the extremities; but if, on the other hand, it be ascertained to be an aortic lesion, we need not fear to reduce the force of the heart's action, since this excess of vigor can but aggravate the difficulty.

The editor of the Gazette Medicale de Paris comments as follows on M. Forget's views, as above presented:

"It is with pleasure that we are enabled to state, that this general theory of organic affections of the heart, seems to me to represent the reality; it is conformable to the laws of physics; it is rational; it elevates the mind above the consideration of material facts, and replies to the objections which have been so often predicated upon the existence of several contractions, without taking fully into account their mode of distribution, and their respective degrees. We have but one objection to M. Forget's views. He admits that the obstacle to the circulation, capable of varying the cardiac cavities, may be found elsewhere than at the orifices—in the aorta, for example, or even still further; that this obstacle cannot always be called, in the strict sense of the word, a contraction, but may be regarded as a condition susceptible of impeding—of diverting the course of the blood.* * * Certain it is, that softening of the walls of the aorta—partial destruction of the coats—numerous atheromatous deposits, may induce dilatation of its vessel, by the effect alone of the shock caused by the column of blood impinging upon it, with its ordinary force, even in the absence of all obstacles to the circulation beyond the dilated portion. What is true of the aorta, is equally true of the heart. We believe, that in the course of fevers of a certain type—of certain rheumatisms—the walls of the heart may become altered in their elasticity—even in their texture—become softened—and react imperfectly against the column of blood, and thus, at length, become dilated, without the previous existence of an obstacle in front of the dilated cavity. It is quite true, that the muscular lesion of the heart constitutes here an obstacle to the circulation.

II.—EXTRACTS FROM A CLINICAL LECTURE ON DISEASES OF THE NERVOUS SYSTEM.

BY DR. HUGHES BENNET.

Monthly Journal of Medical Science, March, 1851.

I. *Functions of the Nervous System.*—The great difference in structure existing between the gray and white matter of the nervous system, would, *a priori*, lead to the supposition, that they performed separate functions. The theory at present entertained on this point is, that, while the gray matter eliminates or evolves nervous power, the white matter simply conducts to and from this ganglionic structure, the influences which are sent to originate there.

The brain proper furnishes the condition necessary for the manifestation of the intellectual faculties, properly so called, of the motions and passions, of volition, and is essential to sensation. That the evolution of power especially connected with mind, is dependent on the hemispherical ganglion, is rendered probable by the following facts:

1. In the animal kingdom, generally, a correspondence is observed between the quantity of gray matter, depth of convolutions, and the sagacity of the animal.

2. At birth, the gray matter of the cerebrum is very defective; so much so, indeed, that the convolutions are, as it were, in the first stage of their formation, being only marked out by superficial fissures, almost confined to the surface of the brain. As the cineritious substance increases, the intelligence becomes developed.

3. The results of experiments by Flourens, Rolando, Hertwig, and others, have shown, that, on slicing away the brain, the animal becomes dull and stupid in proportion to the quantity of cortical substance removed.

4. Clinical observation points out, that in those cases in which the disease has been afterwards found to commence at the circumference of the brain, and proceed towards the centre, that the mental faculties are affected *first;* whereas, in those diseases which commence at the central parts of the organ, and proceed towards the circumference, they are affected *last.*

The white tubular matter of the brain proper serves, by means of the diverging fibres, to conduct the influences originating in the hemispherical ganglion, to the nerves of the head and trunk, whilst they also conduct the influence of impressions made on the trunk, in an inverse manner, up to the cerebral convolutions. The other transverse and longitudinal fibres which connect together the two hemispheres, and various parts of the hemispherical ganglion, are probably subservient to that combination of the mental faculties which characterizes thought.

The spinal cord, both in its cranial and vertebral portions, furnishes the conditions necessary for combined movements; and that the nervous power necessary for this purpose depends upon the gray matter, is rendered probable by the following facts:

1st. Its universal connection with all motor nerves.

2d Its increased quantity in those portions of the spinal cord from whence issue large nervous trunks.

3d. Its collection, in masses at the origin of such nerves in the lower animals as furnish peculiar organs requiring a large quantity of nervous power, as in the triglia volitans, raia torpedo, silurus, &c.

4th. Clinical observations point out that, in cases where the central portion of the cord is affected previous to the external portion, an individual retains the sensibility of, and power of moving the limbs, but wants the power to stand, walk, or keep himself erect, when the eyes are shut; whereas, when diseases commence in the meninges of the cord, or externally, pain, twitchings, spasms, numbness, or paralysis, are the symptoms present, dependent on lesion of the white conducting matter.

The white matter of the cord acts as a conductor, in the same manner that it does in the brain proper, and there can be no doubt that the influence arising from impressions is carried along the tracts, formerly noticed, which connect the brain and two portions of the spinal cord together. It is now also determined, that many of the fibres in the nerves may be traced directly into the gray substance of the cord, a fact originally stated by Grainger, but confirmed by Budge and Kolliker.

The various nerves of the body consist, for the most part, of nerve tubes, running in parallel lines. Yet some contain ganglionic corpuscles, as the olfactory, and the expansion of the optic nerve constituting the retina, whilst the sympathetic nerve contains, in various places, not only ganglia, but gelatinous, flat fibres. The posterior roots of the spinal nerves possess a ganglion, the function of which is quite unknown. These roots are connected with the posterior horn of gray matter in the cord, while the anterior roots are connected with the anterior horns. As regards function, the nerves may be considered as—

1st. Nerves of special sensation, such as the olfactory, optic, auditory, part of the glosso-pharyngeal and lingual branch of the fifth.

2d. Nerves of common sensation, such as the greater portion of the fifth, and part of the glosso-pharyngeal.

3d. Nerves of motion, such as the third, fourth, lesser division of the fifth, sixth, facial, or portio dura of the seventh, and the hypo-glossal.

4th. Senso-motory or mixed nerves, such as the pneumo-gastric, the accessory, and the spinal nerves of the head, thorax and abdomen,—the exact function of which has not been determined.

All nerves are endowed with a peculiar vital property called sensibility, inherent in their structure, by virtue of which they may be excited, on the application of appropriate stimuli, so as to transmit the influence of the impressions they receive to or from the brain, spinal cord, or certain ganglia, which may be considered as nervous centres. The nerves of special sensation, convey *to* their nervous centres the influence of impressions caused by odoriferous bodies, by light, sound, and by sapid substances. The nerves of motion carry *from* the nervous centres the influence of impressions, whether psychical or physical. (Todd.) The mixed nerves carry the influence of stimuli both to and from, combining in themselves the functions of common sensation and of motion. Although the sympathetic nerves also undoubtedly carry the influences of impressions, the direction of these cannot be ascertained, from their numerous anastomoses, as well as from the ganglia scattered over them, all of which act as minute nervous centres. But there *are* cases, where certain psychical stimuli (as the emotions) act on organs through these nerves, and where certain diseases (as colic, gallstones, &c.,) excite, through them, sensations of pain.

Sensation may be defined to be *the consciousness of an impression*, and that it may take place, it is necessary—

1st. That a stimulus should be applied to a sensitive nerve, which produces an impression.

2d. That, as the result of this impression, a something should be generated, which we call an influence, which, arriving there, it calls into action that faculty of the mind called consciousness, or perception, and sensation is the result. It follows that sensation may be lost by any circumstance which destroys the sensibility of the nerve to impressions, which impedes the process of conducting the influence generated by these impressions; or, lastly, which renders the mind unconscious of them. Illustrations of how sensations may be affected in all these ways, must be familiar to you, from circumstances influencing the ultimate extremity of a nerve, as on exposing the foot to cold; from injury to the spinal cord, by which the communication with the brain is cut off, or from the mind being inattentive, excited, or suspended.

The independent endowment of nerves is remarkably well illustrated by the fact, that whatever be the stimulus which calls their sensibility into action, the same result is occasioned. Mechanical, chemical, galvanic, or other *physical* stimuli, when applied to the course or the extremities of a nerve, cause the very same results as may originate from suggestive ideas, perverted imagination, or *psychical* stimuli. Thus a chemical irritant, galvanism, or pricking and pinching a nerve of motion, will cause convulsion and spasms of the muscles to which it is distributed. The same stimuli applied to a nerve of common sensation will cause pain, to the optic nerve flashes of light, to the auditory nerve ringing sounds, and to the tip of the tongue peculiar tastes. Again, we have lately had abundant opportunities of seeing, that suggestive ideas, or stimuli arising in the mind, may induce peculiar effects on the muscles, give rise to pain, or insensibility, and cause perversion of all the special senses.

Motion is accomplished through the agency of muscles, which are endowed with a peculiar vital property called contractility, in the same way that nerve

is endowed with the property of sensibility. Contractility may be called into action altogether independent of the nerves (Haller), as by stimulating an isolated muscular fasciculus directly. (Weber.) It may also be excited by physical or psychical stimuli, operating through the nerves. Physical stimuli applied to the extremities or course of a nerve, may cause convulsions of the parts to which the motor filaments are distributed directly, or they may induce combined movements in other parts of the body *diastaltically* (Marshall Hall)—that is, through the spinal cord. In this latter case, the following series of actions take place:

1st. The influence of the impression is conducted to the spinal cord by the afferent or *esodic* filaments which enter the gray matter.

2d. A motor influence is transmitted outwards by one or more efferent or *exodic* nerves.

3d. This stimulates the contractility of the muscles to which the latter are distributed, and motion is the result.

Lastly, contractility may be called into action by psychical stimuli, or mental acts, such as by the will, and by certain emotions. Integrity of the muscular structure is necessary for contractile movements; of the spinal cord, for diastaltic or reflex movements; and of the brain proper, for voluntary or emotional movements.

Thus, then, we may consider that the brain, acting alone, furnishes the conditions necessary for intelligence; the spinal cord, acting alone, furnishes the conditions essential for the co-ordinate movements necessary to the vital functions; and the brain and spinal cord, acting together, furnish the conditions necessary for voluntary motion and sensation.

II. *The Pathological laws which regulate diseased functions of the Nervous System.*—For the purposes of diagnosis and treatment, it is a matter of great importance to attend to the following generalizations:

1. The amount of fluids within the cranium must always be the same, so long as its osseous walls are capable of resisting the pressure of the atmosphere. There are few principles in medicine of greater practical importance than the one we are about to consider; the more so, as many able practitioners have lately abandoned their former opinions on this head, and on what I consider to be very insufficient grounds. On this point, therefore, I cannot do better than condense and endeavor to put clearly before you, the forcible arguments of the late Dr. John Reid, together with such other considerations as have occurred to myself.

That the circulation within the cranium is different from that in other parts of the body, was first pointed out by the second Monroe. It was tested experimentally by Dr. Kellie of Leith, ably illustrated by Dr. Abercrombie, and successfully defended by Dr. John Reid. The views adopted by these distinguished men were, that the cranium forms a spherical bony case, capable of resisting the atmospheric pressure, the only openings into it being the different foramina by which the vessels, nerves, and spinal cord, pass. The encephalon, its membranes and blood vessels, with, perhaps, a small portion of the cerebro-spinal fluid, completely fill up the interior of the cranium, so that no substance can be dislodged from it without some equivalent in bulk taking its place. Dr. Monroe used to point out, that a jar or any other vessel similar to the cranium, with unyielding walls, if filled with any substance, cannot be emptied without air, or some other substance taking its place. To use the illustration of Dr. Watson, the contents of the cranium are like beer in a barrel, which will not flow out of one opening, unless provision be made at the same time that air rushes in. The same kind of reasoning applies to the spinal canal, which, with the interior of the cranium, may be said to constitute one large cavity, incompressible by the atmospheric air.

Before proceeding further, we must draw a distinction between pressure on, and compression of, an organ. Many bodies are capable of undergoing a great

amount of pressure, without undergoing any sensible decrease in bulk. By compression must be understood, that a substance occupies less space from the application of external force, as when we squeeze a sponge, or compress a bladder filled with air. Fluids, generally, are not absolutely incompressible, yet it requires the weight of one atmosphere, or fifteen pounds in the square inch, to produce a diminution equal to one twenty thousandth part of the whole. Now, this is so exceedingly small a charge upon a mass equal in bulk to the brain, as not to be appreciable to our senses. Besides, the pressure on the internal surface of the blood vessels never exceeds ten or twelve pounds on the square inch, during the most violent exertion, so that under no possible circumstances can the contents of the cranium be diminished even the one twenty thousandth part. When the brain is taken out of the cranium, it may, like a sponge, be compressed, by squeezing fluid out of the blood vessels; but during life, surrounded, as it is, by unyielding walls, this is impossible. For let us, with Abercrombie, say, that the whole quantity of blood circulating within the cranium is equal to 10—5 in the veins and 5 in the arteries; if one of these be increased to 6, the other must be diminished to four, so that the same amount, 10, is always preserved. It follows, that when fluids are effused, blood extravasated, or tumours grow, a corresponding amount of fluid must be pressed out, or of brain absorbed, from the physical impossibility of the cranium holding more matter. At the same time it must be evident, that an increased or diminished amount of pressure may be exerted *on* the brain, proportioned to the power of the heart's contraction, the effect of which will be, not to alter the amount of fluids within the cranium, but to cause, using the words of Abercrombie, "a change of circulation" there.

Dr. Kellie performed numerous experiments on cats and dogs, in order to elucidate this subject. Some of these animals were bled to death, by opening the carotid or femoral arteries, others by opening the jugular veins. In some, the carotids were first tied, to diminish the quantity of blood sent to the brain, and the jugulars were then opened, with the view of emptying the vessels of the brain to the greatest possible extent; while in others, the jugulars were first secured, to prevent, as much as possible, the return of the blood from the brain, and one of the carotids was then opened. He inferred, from the whole inquiry, which was conducted with extreme care, "That we cannot, in fact, lessen, to any considerable extent, the quantity of blood within the cranium, by arteriotomy or venesection; and that when, by profuse hæmorrhages destructive of life, we do succeed in draining the vessels within the cranium, of any sensible portion of red blood, there is commonly found an equivalent to this spoliation in the increased circulation or effusion of serum, serving to maintain the plenitude of the cranium."

Dr. Kellie made other experiments upon the effects of position immediately after death from strangulation or hanging. He also removed a portion of the unyielding walls of the cranium in some animals by means of a trephine, and then bled them to death; and the differences between the appearances of the brain in these cases, and those where the cranium was entire, were very great. One of the most remarkable of these differences was its shrunk appearance, in those animals in which a portion of the skull was removed, and the air allowed to gravitate upon its inner surface. He says: "The brain was sensibly depressed below the cranium, and a space left, which was found capable of containing a teaspoonful of water."

It results from these inquiries, that there must always be the same amount of fluids within the cranium, so long as it is uninjured. In morbid conditions, these fluids may be blood, serum, or pus; but in health, as blood is almost the only fluid present, (the cerebro-spinal fluid being very trifling) its quantity can undergo only very slight alterations. There are many circumstances, however, which occasion local congestions in the brain, and, consequently, unequal pressure on its structure, in which case another portion of its substance must

contain less blood, so that the amount of the whole, as to quantity, is always preserved. These circumstances are mental emotions, hæmorrhages, effusions of serum, and morbid growths. Such congestions, or local hyperæmias, in themselves, constitute morbid conditions; and nature has, to a great extent, provided against their occurrence, under ordinary circumstances, by the tortuosity of the arteries, and the cerebro-spinal fluid, described by Magendie.

The views now detailed had been very extensively admitted into pathology, when Dr. Burrows, of St. Bartholomew's Hospital, endeavored to controvert them, first in the Lumleian lectures of 1843, entitled, "On Disorders of the Cerebral Circulation, and on the connection between Affections of the Brain and Diseases of the Heart." Dr. Burrows, however, evidently formed the most confused notions of the doctrine we are advocating; for, instead of stating it, as propounded by its authors, he actually *misrepresented it*, as Dr. Reid pointed out. Thus, he is always combatting the idea that bloodletting, position, strangulation, &c., cannot affect the *blood in the brain*; whereas the real proposition is, that they cannot alter the fluids *within the cranium*. By thus confounding blood with fluid, and brain with cranium, he has only contrived to overthrow a theory of his own creation.

Dr. Burrows has brought forward several observations and experiments, which he considers opposed to the theory now advocated. His facts are perfectly correct. I myself have repeated his experiments on rabbits, and can confirm his descriptions. It is the inferences he draws from them that are erroneous. For the paleness which results from hæmorrhage, and the difference observable in the color of the brain, when animals, immediately after death, are suspended by their ears, or by their heels, is explicable by the diminished number of colored blood particles in the one case, and by their gravitation downwards in the other. That the amount of fluid within the cranium was in no way affected, is proved by the plump appearance of the brains figured by Dr. Burrows, and the total absence of that shrunken appearance so well described by Dr. Kellie.

Neither does our observation of what occurs in asphyxia or apnœa, oppose the doctrine in question, as Dr. Burrows imagines, but rather confirms it. On this point the following observations by Dr. John Reid, are valuable. He says: "If any circumstance could produce congestion of the vessels within the cranium, it would be that of death by hanging; for then the vessels going to and coming from the brain are, with the exception of the vertebral arteries, compressed, and then obstructed. These two arteries, which are protected by the peculiarity of their course through the foramina of the transverse processes of the cervical vertebræ, must continue for a while to force their blood upon the brain, while a comparatively small quantity only can escape by the veins. Indeed, the greater quantity of blood carried to the encephalon by the vertebrals, returns by the internal jugulars, and not by the vertebral veins, which are supplied from the occipital veins of the spinal cord; and the anastomoses, between the cranial and vertebral sinuses, could carry off a small quantity of the blood only, transmitted along such large arteries as the vertebrals. And yet it is well known, that there is no congestion of the vessels within the cranium after death by hanging, however gorged the external parts of the head may be by blood and serum." This is admitted by Dr. Burrows, although he endeavors to get rid of so troublesome a fact by a gratuitous hypothesis, which will not bear a moment's examination, but for the refutation of which I must refer to the works of Dr. Reid.

On the whole, whether we adopt the expressions of local congestion, of change of circulation within the cranium, (Abercrombie) or of unequal pressure, (Burrows) our explanation of the *pathological* phenomena may be made equally correct, because each term implies pretty much the same thing. But if we imagine that venesection will enable us to diminish the amount of blood

in the cerebral vessels, the theory points out that this is impossible, and that the effects of bleeding are explained by the influence produced on the heart, the altered pressure on the brain, exercised by its diminished contractions, and the change of circulation within the cranium thereby occasioned.

I have entered somewhat fully into this theory, because, independent of its vast importance in a practical point of view, it is one which originated in, and has always been maintained by, the Edinburgh School of Medicine. Singular to say, notwithstanding the obvious errors and fallacies in Dr. Burrows' work, no sooner did it appear than the whole medical press of England and Ireland adopted its conclusions, and even Dr. Watson, in the last edition of his excellent work, also abandoned the theory of Monroe, Kellie and Abercrombie. But so far is this theory, concerning the circulation within the cranium, from being shaken by the attack of Dr. Burrows, that it may be said now to stand on a firmer basis than ever, owing to that attack having drawn forth the convincing reasoning and unanswerable arguments of so sound an anatomist, physiologist and pathologist, as the late Dr. John Reid.

2. *All the functions of the nervous system may be increased, perverted, or destroyed, according to the degree of stimulus or disease operating on its various parts.*—Thus, as a general rule, it may be said, that a slight stimulus produces increased or perverted action; whilst the same stimulus, long continued or much augmented, causes loss of function. All the various stimuli, whether mechanical, chemical, electrical or physical, produce the same effects, and in different degrees. Circumstances influencing the heart's action, stimulating drinks or food, act in a like manner. Thus, if we take the effects of alcoholic drink, for the purpose of illustration, we observe that, as regards combined movements, a slight amount causes increased vigor and activity in the muscular system. As the stimulus augments in intensity, we see irregular movements occasioned, staggering, and inability of directing the limbs. Lastly, when the stimulus is excessive, there is complete inability to move, and the power of doing so is temporarily annihilated. With regard to sensibility and sensation, we observe cephalalgia, tingling, and heat of the skin, tinnitus aurium, confusion of vision, muscæ volitantes, double sight, and lastly, complete insensibility, and coma. As regards intelligence, we observe at first rapid flow of ideas, then confusion of mind, delirium, and lastly, sopor and perfect unconsciousness. In the same manner, pressure, mechanical irritation, and the various organic diseases, produce augmented, perverted, or diminished function, according to the intensity of the stimulus applied, or amount of structure destroyed.

Thus it has been shown, that excess or diminution of stimulus, too much, or rather too little blood, very violent or very weak cardiac contractions, and inflammation or extreme exhaustion, will, so far as the nervous functions are concerned, produce similar alterations of motions, sensation, and intelligence. Excessive hæmorrhage causes muscular weakness, convulsions, and loss of motor power, perversions of all the sensations, and lastly, unconsciousness from syncope. Hence the general strength of the frame cannot be judged of by the nervous symptoms, although the treatment of these will be altogether different, according as the individual is robust or weak, has a full or small pulse, &c. These similar effects on the nervous centres, from apparently such opposite exciting causes, can, it seems to me, only be explained by the peculiarity of the circulation, previously noticed. A change of circulation within the cranium takes place, and whether arterial or venous congestion occurs, pressure on the organ is equally the result. The importance of paying attention to this point, in the treatment, must be obvious.

3. *The seat of the disease in the nervous system influences the nature of the phenomena or symptoms produced.*—It is a matter of very great importance to ascertain how far certitude in diagnosis may be arrived at, and the seat of the disease ascertained. On this subject it may be affirmed, that, although clinical

observation, combined with pathology, have done much, more requires to be accomplished. As a general rule it may be stated, that disease or injury of one side of the encephalon, above the decussation in the medulla oblongata, especially influences the opposite side of the body; whilst, if the spinal cord be affected below the decussation, the influence produced is not crossed,but direct. It is said that some very striking exceptions have occurred to this rule, but these, at any rate, are remarkably rare. Besides, it has always appeared to me probable, that, inasmuch as extensive organic disease, if occurring slowly, may exist without producing symptoms, whilst it is certain most important symptoms may be occasioned without organic disease; even these few exceptional cases are really not opposed to the general law. Then, as a general rule it may be said, that diseases of the brain proper are more especially connected with perversion and alteration of the intelligence; whilst disease of the cranial portion of the spinal cord and base of the cranium, are more particularly evinced by alterations of sensation and motion. In the vertebral portion of the cord, the intensity of pain and of spasm, or want of conducting power, necessary to sensation and voluntary motion, indicates the amount to which the motor and sensitive columns are affected. Further than this, we can scarcely generalize with prudence, although there are some cases, as will be particularly shown subsequently, where careful observation has enabled us to arrive at more positive results.

The fatality of lesions affecting various parts of the nervous centres, varies greatly. Thus, the hemispheres may be extensively diseased, often without any injury to life, or even a permanent alteration of function. Convulsions and paralysis are the common results of the disease of the ganglia, in the cranial portion of the cord. The same results follow from lesion of the pons varolii. But this, if it affects the medulla oblongata, where the eighth pair originates, or injury to the centre itself, is almost always immediately fatal.

4. *The rapidity or slowness with which the lesion occurs, influences the phenomena or symptoms produced.*—It may be said, as a general rule, that a small lesion, for instance, a small hæmorrhagic extravasation, occurring suddenly, and with force, produces, even in the same situation, more violent effects than a very extensive organic disease, which comes on slowly. Here, however, much will depend upon the seat of the lesion. Very extraordinary cases are on record, where large portions of the nervous centres have been much disorganized, without producing any thing like such violent symptoms as have been occasioned at other times, by a small extravasation in the same place. Here, again, the nature of the circulation within the cranium offers the only explanation, for the encephalon must undergo a certain amount of pressure, if no time be allowed for it to adapt itself to a foreign body—whereas, any lesion coming on slowly, enables the amount of blood in the vessels to be diminished, according to circumstances, whereby pressure is avoided.

5. *The various lesions and injuries of the nervous system produce phenomena similar in kind.*—The injuries which may be inflicted on the nervous system, as well as the morbid appearance discovered after death, are various. For instance, there may be an extravasation of blood, exudation of lymph,a softening, a cancerous tumor, or tubercular deposit, and yet they give rise to the same phenomena, and are modified only by the circumstances formerly mentioned, of degree, seat, suddenness, etc. Certain nervous phenomena are also of a paroxysmal character, whilst the lesions supposed to occasion them are stationary or slowly increasing. It follows, that the effects cannot be explained by the nature of the lesions, but to something which they all have in common; and this, it appears to me, may consist of, 1st, pressure, with or without organic change; 2d, more or less destruction or disorganization of nervous texture

Further, when we consider that the same nervous symptoms arise from irregularities in the circulation, from increased as well as diminished action, sometimes when no appreciable change is found, as well as when disorganization has occurred, the theory of local congestions in the nervous centres seems to me the most consistent with known facts. That such local congestions do frequently occur during life, without leaving traces detectable after death, is certain; whilst the occurrence of molecular changes, or other hypothetical conditions which have been supposed to exist, have never yet been shown to take place under any circumstances.

(*Rankin's Half Yearly Abstract.*)

III.—CHEMICAL RESEARCHES UPON THE FATTY MATTER IN VENOUS BLOOD.

In a memoir read before the Academy of Medicine, and published in the *Gazette Medicale de Paris*, M. Gobley, the author of the report, arrives at the following conclusions, on the subject of the fatty matters found in venous blood :

1st. That neither free nor combined acid fats exist in the blood.

2d. That serotine is a complex body, the existence of which, as an immediate principle, cannot be admitted.

3d. That the composition of the fatty matter of the blood is much more simple than might be supposed ; that it is composed of oleine, of margarine, of cholesterine, of lecitrine, and of cerebrine.

4th. That cholesterine is the only crystallisable substance found in the fatty matter of the blood; that it possesses the properties and the composition of the cholesterine contained in the yolk of an egg, and in biliary calculi.

5th. That the phosphorized matter, or lecitrine, is not susceptible of crystalization; that it gives, as the products of decomposition, oleic acid, margaric acid, and phosphoglyceaic acid.

6th. That cerebrine possesses the same property as that which is found in the yolk of a hen's egg, and in the roe of the carp ; that it contains azote at a high temperature, and swells in water like starch.

7th. That the fatty matter of the blood, under the influence of putrefaction, furnishes, with the greatest facility, oleic and margaric acids.

8th. That the blood of the ox contains the same fatty principles as that of man.

IV.—EXTIRPATION OF THE UTERUS WITH THE OVARIA.

BY DR. MARTIN.

Dr. Martin reports, in a Bavarian journal, which has been copied in the Gazette Medicale de Paris, the following extraordinary case :

Surgeon Z. was summoned to attend a female, who had just been delivered of a child; and after some time he attempted to extract the placenta, and in about a quarter of an hour, he succeeded in abstracting the *entire* uterus with

the ovaria! He was carried before the tribunal of Wasserbourg for trial. The woman, in the mean time, pending the trial, *perfectly recovered*, and assisted and gave her evidence at the trial. She preserved her uterus with the ovaria in a jar of alcohol, and produced them in court!

In conclusion, Dr. Martin adds: "Quelque incroyable que paraisse ce cas je pus répondre de sa véracité."

Si Jupiter mittat sua fulmina quoties homines mentiuntur,exiguo tempore,erit *inermis*." (*Ed.*)

V.—TREATMENT OF ASTHENIC DROPSY BY THE PREPARATIONS OF NUX VOMICA.

BY TESSIER.

Serous infiltration of paralyzed limbs is dissipated with the paralysis; and paralysis is sometimes cured by nux vomica. This medicine does not act alone on the nerves of the life of relation, but also on those of organic life, since it causes the intestines to contract, and hence, constitutes an excellent remedy for constipation caused by inertia of the digestive tube. Could not the same medicine be made to act upon the absorbent vessels, and communicate to them greater activity, and thus cause the resorption of those effusions connected with a general or local asthenia? This question was proposed by M. Tessier, and his experience, seconded by other authority, has decided the question affirmatively.

Five cases of this kind have been reported by M. Tessier, all of which are significant and conclusive on the subject. In the first, there was œdema of the lower limbs, succeeding a case of diabetes, cured by liquid ammonia. At the end of a month, there existed no trace of swelling, but the diabetes returned. The treatment by ammonia was resumed, and the diabetes again disappeared; then the œdema returned, which was once more treated by nux vomica, and was the second time cured. The second was the case of an individual much enfeebled by imperfect nutrition, and suffering from considerable œdema of the lower extremities, and incipient ascites. Nux vomica was employed, and at the end of eight days there was evident improvement; and by the 25th day the cure was complete. The third was the case of a military man, affected with ascites and œdema of the inferior extremities, the result of an intermittent fever; both quinine and ferruginous preparations had failed. The nux vomica was then administered, and the cure was so far advanced at the end of eight days, that the patient regarded himself cured, and left the hospital. Finally, says M. Tessier, the fourth case was one of œdema of the legs, succeeding an attack of typhoid fever, which left the patient greatly enfeebled, but which was cured in five days. He gave the nux vomica in doses of 2 and 5 *centigrammes* daily.

It is scarcely necessary to remark, that M. Tessier relies upon this medicine only in purely asthenic dropsy. Of course it must fail when any material obstacle is offered to the passage of the blood through the venous trunks.

(*Gazette Med. de Paris.*)

VI.—TREATMENT OF ESSENTIAL PARALYSIS IN CHILDREN.

(*From the Gazette Medicale de Paris, Nov.* 1851.)

Rilliet, of the Geneva Hospital, has written a very elaborate article, on, "Essential Paralysis in Children," in which he discusses, in a very lucid and satisfactory manner, the duration, prognosis, causes, diagnosis, etc., of the disease; but we can only make room for that portion of the essay which relates to the treatment of essential paralysis in infants.

After referring to the mode of treatment recommended by Doctors Kennedy and West, on the supposition that the disease is caused by derangement of the digestive passages, and therefore that purgatives and especially *Hydrargirum cum Creta*, are the best and surest remedies, he proceeds to expound the views recently put forth by Dr. Heine on this subject. According to this gentleman, the following constitute the most important indications to be fulfilled in this disease:

1st. To arouse innervation, whose action in the spinal marrow has been annihilated, and consequently, also the nerves proceeding from it, and distributed to the paralyzed limbs.

2d. To restore to the deformed limbs their usual shape, by means of suitable orthopædic apparatus.

3d. To fortify the whole constitution.

To fulfil the first indication, Dr. Heine employs the tincture of nux vomica, both internally and externally. He prescribes this tincture combined with camphor and pyréthre (?) in the dose of 12 drops twice daily; which dose may be increased. He continues this treatment for some time; at the same time, he has the spine and the lower extremities well rubbed with a compound of tincture of nux vomica and ammonia. At the end of one or two weeks, he puts the patient upon the 1-16th of a grain of the sulphate of strychnia, which he gradually increases to the 1-6th. Dr. H. observes, that independently of the physiological effects of the strychnia, this medicine possesses the power to augment the heat and perspiration of the paralyzed limbs; whilst its influence over the paralysis itself is very slight. He regards the *rhus toxicodendron* as inferior to strychnia, in these cases. He has also tried cod liver oil, but without any other benefit than improving the appearance and complexion of the patient.

Dr. Heine has derived much benefit in the treatment of this form of paralysis, from frictions with phosphorus combined with an etherized animal oil—ammonia and the tincture of cantharides. Baths, especially in the form of the douche, directed along the course of the sacrum, have been highly beneficial. Orthopædic and other mechanical means, are too tedious in their effects for the parents and friends of the patients; and hence, they can be rarely fully tested. Gymnastic exercises, and the use of a peculiar sedan, of which he gives a description, will check the tendency to atrophy and wasting of the limbs.

To close this article—In the early stages of the attack, the treatment should be directed to the correction or abatement of the supposed primary cause of the disease, whether in the primæ viæ or spinal theca; if the child suffers from difficult dentition, incise the gums; if the digestive passages are deranged, administer light, alterative purgatives (calomel and rhubarb answer an excellent purpose—*Ed.*); and if the paralysis be preceded by painful contractions of the muscles, resort to warm baths, frictions, and the like.

VII.--MEDICAL WITNESSES AND LAWYERS.

According to the morning Chronicle of Saturday last, whilst the Lord Chancellor was hearing a lunacy case,the previous day, he is reported to have uttered the following observation: "When a medical gentleman, with a large fee, was sent to visit a patient, his report invariably sustained, to a great extent, the view taken by the party employing him."

Disregarding, altogether, the animus which apparently dictated such language in a court of justice, we must dissent, *in toto*, from its application to medical practitioners; and would respectfully assert, that the profession are quite as honest in giving their opinion as any barrister, consulted upon a point of law by a solicitor. Lord Truro, having once been an attorney, knows better than we could tell his lordship, that should a counsel decide against a client's right of action, that information is never communicated to the opposite party; nor are adverse witnesses ever called, whose evidence might invalidate the plea brought forward. The same proceeding is always followed respecting medical statements and evidence. If unfavorable to the persons employing the professional gentleman consulted, nothing is said thereon; so that the court is never informed, unless in support of the case then advocated. Therefore, to suppose that medical men always decide in favor of the individual who pays them, is fully as erroneous as it would be for a Lord Chief Justice to observe, during the trial of a case before him, "It is very singular, when counsel with a large fee comes to plead in this court, his oration invariably sustains, to a great extent, the views taken by the party employing him!" How the common law bar would grin at such an effusion, may be easily conceived. Nor would the learned wigs be less astonished, were one of the legal fraternity to quote precedents against his own client, or argue in favor of the opposite one.

Another dictum recently expressed, also, deserves animadversion, when it was said that fifty guineas, given to Dr. Winslow, for visiting a patient in Yorkshire, seemed large. On the contrary, we think the amount was less than half what it ought to have been, considering the time employed, and the responsibility that physician thereby incurred.

Instead of criticising medical practitioners, we would advise all judges to condemn all barristers who take large fees from attorneys, to appear in court when particular cases are called, but cannot be found at the critical moment. This would be a much better reform than grudging the honorarium of a medical man, for mental and bodily labor actually performed. With all deference towards the venerable judges of England, we sincerely believe it is injudicious and misplaced, for an occupant of the judicial bench to indulge in tirades which may disparage either his own or any of the other learned professions in public estimation.

(*London Lancet, January*, 1852.)

VIII.—FEAR, A THERAPEUTIC AGENT.

Sir—After reading in your journal lately an account of the influence of *fear* in a case of hernia, I have been tempted to write a few observations on that peculiar principle of our nature, which operates, happily, in certain conditions of the human system, not unfrequently in a manner more beneficial than is commonly supposed, although by the chivalrous and romantic it would be looked upon as contemptible to evoke any such feeling.

The following instance of its salutary effect occurred only a short time since to my special notice :

An acquaintance, between forty and forty-five years of age, long subjected to rheumatic affections of the joints of the inferior extremities, and who had become not a little stiffened or unpliant, by repeated invasions of that complaint, had determined on going to see a sick relative, about ten miles from London. He got into the railway carriage after many irregular locomotive movements, and some difficulty. I seated myself at his side, as I was proceeding on the same route. It happened, unfortunately, that he got into the wrong carriage, as it afterwards proved, for on division of the train into two parts, at a particular junction, or rather a point, as it is understood in railway language, the bell rang for a change and a fresh start to two different directions. The whistle sounded ; my invalid then for the first time discovered his error ; he was clearly in the wrong box. The effect of *fear* of being carried away from his destination was instantaneous, or rather electrical; for simultaneous with the expression of " Good God !" he jumped out of the carriage with as much agility or nimbleness as if he had never undergone stiffening, and proceeded on his journey, wondering at the miraculous effect of a little fright ; and I am able to say, that he has continued much less inflexible than before the sudden convulsion of his system.

Fear, then, is a principle implanted in us for the cure of some diseases, as well as for self-preservation in another sense; so that the old maxim of "screwing one's courage to the sticking place," must not, henceforth, be looked upon by the profession *always* as a virtue, for virtue is in every thing under the sun ; good and evil, courage and fear, have each their essential benefits in the human economy : for out of evil comes good, and out of fear a cure.

> "All served, all serving ; nothing stands alone ;
> The chain holds on, and where it ends unknown."

I am, sir, your obedient servant,

J. C. Atkinson, M. D.

IX.--ON THE INFLUENCE OF THE INTRA-CRANIAL PORTION OF THE SYMPATHETIC NERVE, AND OF THE THIRD, FOURTH, FIFTH AND SIXTH PAIRS UPON THE MOVEMENTS OF THE IRIS.

Waller and Budge, in a communication recently addressed to M. Flourens, relate the result of their combined observations on these subjects. The subjoined facts, based upon actual experiments, will, we feel satisfied, be acceptable to our readers, and we therefore translate it for their instruction.

The action of the trigeminus nerve upon the pupil, is, perhaps, of all the actions to which the iris is subjected, the most difficult to reveal, but at the same time, the most important to be known ; for, according as its action is more or less strong, it may completely veil the influence of the sympathetic nerve upon the pupil, so that by galvanizing on different occasions, precisely the same point, we obtain, sometimes, a powerful contraction of the pupil,—sometimes its extreme dilatation.

According to the researches of Sir C. Bell and his followers, upon the nerves of the fifth pair, the small branch—the non ganglionic branch, or roots, should alone possess a motive power—while the opthalmic and superior maxillary, should be purely sensitive. Our researches, on the contrary, continue MM. Waller and Budge, have led us to the conclusion, that the opthalmic branch

of Willis exercises a motive power upon the iris. All observers, who, since Magendie, have practised an intra-cranial section of the trigeminus nerve, have, with him, noticed, as an invariable effect, considerable constriction of the pupil of the same side; but none of these physiologists have essayed to specify the exact cause of this phenomenon. It is evident, that after the section of the trigeminus alone, this phenomenon becomes complicated by the presence of other nerves—and that it is impossible to determine if it be produced in consequence of a reflex action from the central extremity upon the third pair, or by an action from the peripheral extremity upon the retina, and thence reflected by the optic nerve upon the third pair. This question is still further complicated, from the necessity of taking into consideration a fact observed by Longet, and which we have ourselves frequently verified, viz:—that the constriction is not permanent, but almost always temporary. The immobility of the pupil, and a slight dilatation, are the only effects which we observe after the section of the optic nerve. The section of the 3d, 4th and 6th pair of nerves produces no effect upon the pupil after the section of the optic nerve. If, besides, we make a section of the sympathetic in the neck, we suppress all connection between the brain and the eye, except that established by the 5th pair. The section of the 5th pair being made then, either upon the opthalmic branch, or upon any other point, even up to its apparent origin in the peduncle, always causes a considerable constriction in the opening of the pupil. This constriction of the pupil always takes place in a slow and gradual manner,—after one or two minutes elapses before it is manifested; and the same delay is manifested before it attains its maximum of constriction. If, instead of dividing, we irritate this nerve mechanically, we perceive, especially in pinching the opthalmic at its internal portion, a constriction to take place, in the same manner, but less perfectly, and disappears entirely at the end of a few minutes. The extent of the constriction by complex section is usually considerable; the pupil of three lines is reduced to one; but by simple irritation, the constriction which is produced is much less. Galvanic and mechanical irritation of the central extremity produces no effect upon the pupil of the other eye. The same phenomena are observed in dividing the nerves of the other eye, after the complete ablation of the cerebral hemispheres.

After the division (section) of the trigeminus at its root, we observe a weakening of the sensibility, and of the motor power over the entire body; but, moreover, we find, on the same side of the head—loss of sensibility of the skin —of the face, and of the conjunctiva, as after the division of the 5th pair. At the same time, there is produced more or less constriction of the pupil which is not permanent. Upon the opposite side of the head, sensibility is manifested in a very marked manner. By connection with the lower portions of the body, the greatest loss of sensibility takes place on the side opposite to the section, whilst movement is more feeble on the same side.

Irritation of the 5th pair, at its origin in the bulbe, is followed by a constriction of the pupil, less powerful and less durable than after the section of this part; but this operation is too promptly mortal to produce any significant results. Upon the trunc of the trigeminus, from its posterior part *au rocher*, galvanism produced prepillary constriction; but behind this point, the effects are perhaps less obvious, in consequence of the easy disorganization of this portion of the trunk, and the difficulty of isolating the neighboring parts. The other portions of the nerve, which are connected with the bone and the dura mater, and which are easily reached, are those upon which it is better to operate to obtain conclusive results.

Action of the 3d pair of nerves.—After the division of the optic nerve, the section of this nerve causes no alteration in the size of the pupil. As we have already observed in our first communication, the action of the 3d pair is rapidly exhausted, and galvanism ceases then to produce any effect upon the iris.

The 4th and 6th pair have always appeared to exercise no marked influence upon the pupil, in all our experiments.

Action of the intra-cranial part of the sympathetic nerve upon the pupil.—In experiments upon this part of the sympathetic, it is preferable, in order to isolate its motive power or action from that of the trigeminus, to cut the fifth behind "*du rocher.*" When the constriction, caused by this division, has passed, which requires from fifteen to twenty minutes,—the galvanic irritation of the cervical portion of the sympathetic, produces its ordinary effect. If, instead of waiting for the disappearance of the constriction by the 5th pair, we galvanize immediately, whilst the diameter of the pupil is from one to one and a half lines, we ordinarily find the action of the sympathetic incapable of surmounting that of the trigeminus. If, after the trigeminus is discovered, and we have ascertained the power of the sympathetic to dilate the pupil, we divide the fifth pair at points successively nearer the eye, we discover, that up to the anterior part of the ganglion of Gasser, the sympathetic always preserves its power over the pupil.

But, when the division is carried beyond this anterior limit, all the action of the sympathetic upon the pupil is lost. From this experiment we deduce the fact, that all the motor fibres of the iris, which come from the sympathetic, pass by or through the ganglion of Gasser. We may state, in the same manner, that these fibres accompany the fibres of the opthalmic branch ; for, on making a section of this branch at any point, we paralyze, in the same manner, the action of the cervical sympathetic. Local galvanization of the trigeminus nerve affords us, besides, other proofs of the connection of the ciliary sympathetic with the ganglion of Gasser. As we have said in speaking of the 3d pairs, if we galvanize this nerve undivided, upon a living animal, we shall obtain, at the end of a few minutes, a slow and gradual constriction of the pupil, which may last for 15 or 30 minutes, before it disappears. If the nerve be recently divided, or the animal still very irritable, we shall observe no change in the size of the pupil, probably in consequence of a state of equilibrium between the power of dilatation resident in the sympathetic and that of the constriction of the 5th pair.

X.—SULPHATE OF STRYCHNINE A REMEDY FOR INVOLUNTARY SEMINAL EMISSIONS.

At a sitting of the *Academie de Medecine*, (June 10th, 1851) M. Girard called the attention of the members to the Sulphate of Strychnine as an effectual means of combatting involuntary emissions in the insane. He begins with 2 *centigrammes* of the Sulphate of Strychnine dissolved in 30 *grammes* of syrup, and of this he gives 5 *grammes* at first to the patient—then 7, and so on, increasing the dose to 30 or 40 *grammes* in obstinate cases.

M. Girard has never yet witnessed any appearance of cerebral congestion, strictly speaking, from the prudent use of this medicine in such cases. In three patients, to whom he had administered 110 *grammes* of the syrup, convulsive movements were developed, which, however, soon ceased on withholding the medicine, and by resorting to repeated tepid baths.

(*Journal Medico-Chirurgical, Juillet*, 1851.)

XI.—TANNATE OF QUININE AND OF CINCHONINE.

At a subsequent *seance* of the Academie de Medecine, some observations were made by M. Barreswell on the properties and therapeutic virtues of the Tannate of Quinine and of Cinchonine. His remarks tended to prove, that these salts possess the two-fold advantage of being more active in equal quantities with the alcaloides, than the other preparations of this bark, and that they are nearly destitute of all bitter taste. The Academy appointed, as a committee to report on this subject, MM. Orfila, Bussy and Bouvier. (*Ibid.*)

XII.—CHLORIDE OF PLATINUM IN NERVOUS ASTHMA.

Idiopathic Asthma usually resists the best skill of the profession; but it appears from the October number of the Journal des Connaiss. Med. Chirg. for '51, that Dr. Huss has recently reported to the Medical Society of Sweden, two cases of nervous Asthma, which were promptly relieved by the Chloride of Platinum, in demi-grain doses, three or four times daily—gradually increasing the dose up to two grains.

One of these cases had been a victim to this distressing affliction for 12 years—but was finally, at the end of three months, relieved by the Platinum. Nitric Acid has recently attracted some attention as a remedy in this form of asthma; and some of our exchanges contain reports of cures of this disease by this mineral acid. The only plausible explanation of the modus operandi of this article in the cure of Asthma, is based upon its well known tonic action upon the stomach; hence, it can only prove serviceable in Asthma produced by a dyspeptic state of the stomach; and by rectifying the digestive organs, it cures the asthmatic affection. (*Ed.*)

Part Third.

REVIEWS AND NOTICES OF NEW WORKS.

I.—1. *An Essay on Diet, read before the Physical Society of Guy's Hospital.* By Isaac Lionel Crawcour, M. R. S., &c. &c.

2. *The Properties of some of the Thermal Waters of Asia Minor.* By Dr. J. Lawrence Smith, of New Orleans.

A Treatise on the History, Etiology, and Prophylaxis of Trismus Nascentium. By John M. Watson.

In this Essay (on Diet) the applicability of animal and vegetable diet to the maintenance of health, the effects of each on the organism, with their relative chemical relations, prophylactic and curative, are briefly considered.

The writer we find to be, for the most part, strictly *vegetarian* in his conclusions, and it would not greatly surprise us to learn, that he formed one of the astute body of lawgivers and lawmakers, who, not many months since, assembled in London to the number of several hundreds, aided in their plans by *honorable M. P.*'s, and who, under the name and title of the Society "Vegetarian," gravely announced that "*two penny-worth of peas contained more nutriment than a shilling's worth of beef!*" that "chicken-broth was more *indigestible* than peassoup!" and that "*roast beef was very innutritious!!*" We need not inform our readers that such discoveries were reserved for the members of the *Vegetarian Society.*

The *science of human life* is certainly a grand desideratum, and worthy of all consideration. The strict observance of dietetic rules, which come within the knowledge of most of us, would speedily enable us to

"throw physic to the dogs," and dispense with much of its interesting nausea. But we incline to the opinion, that the good things of this world were sent for our use by the beneficent Creator; and so long as man is to have dominion over the land, and to search the waters of the deep, will he continue to be a carniverous, and as Burke once called him, a *cooking animal.*

The writer has diligently searched authority in favor of his *vegetarian* views; and in Turkey, the South of Europe, and in India, examples are not wanting, we are informed, of physical and mental vigor amongst those who live upon vegetable diet. The same may be said to a great extent of the poorer classes of the people of Ireland. The inhabitants of some portions of the North of Europe, to make amends of any deficiency of animal food, partake largely of fat and oils, which, in cold climates, and with laborious exercise, can readily be assimilated.

That a mixed diet of animal and vegetable food, embracing azotized and non-azotized substances, is best suited for the purposes of assimilation, and the maintenance of all the functions in a normal condition, enabling the stomach to reject, most effectually, miasmatic and noxious influences, and tending to the preservation of the vital fluid in its relative constituents, most conducive to health, is, we think, susceptible of the most ample proof. And even the advocates of the *vegetarian* doctrine must receive, *cum grano salis*, much of the argument which is adduced by our author, in proof of his affirmative position.

To suppose that man was created to feed exclusively upon vegetable, or upon fructiferous substances, is to suppose that a large portion of the animal kingdom was created for no useful purpose, and the failure on the part of man to make them subservient to his use, and to contribute to his sustenance, would not, improbably, lead to the infinite multiplication of some, and to the total extinction of others.

The order, the regularity, the harmony, which pervade the universe, is only maintained by the observance of the laws of a Superintending Power; and hence, man eats fish and flesh (there being neither physiological nor pathological laws contra-indicating their use) with genuine relish, the processes of chylification and chymification being carried on, and resulting in health to the animal economy.

Of the failure of an exclusive animal diet for the purposes of health, we need only adduce sea and land scurvy; California correspondents having recently furnished lamentable proof of its ravages amongst the land pioneers to that distant country; and maritime records supplying us with no less fearful results amongst those long pent up in ships with deprivation of vegetables.

After placing man (upon the authority of Mr. Lawrence) "nearly on the same level with the monkey race, and in fact, as a rule, the comparative length of the alimentary canal in the simiæ, is less than in man," the writer asks, "how, with this peculiar structure, fitting him solely for vegetable food, man should be enabled to subsist, with a fair share of health, on an animal diet?" For although it is true that there is in man an extensive adaptation to circumstances, and by habit and discipline life and health may be supported for a great length of time under privation,—it surely is not a fully established physiological fact, although the human teeth are formed after the plan of the frugiosa, and the salivary gland may be largely developed, that vegetable food is solely fitted for man. If physiological laws were daily and hourly violated, the various races which are spread upon the face of the earth, some of which constitute its greatest adornment, it would be impossible for any of them, as our author affirms, to subsist, for any great length of time, "with a fair share of health on an animal diet," or indeed on any other which he might have suggested.

The celebrated John Hunter troubled himself with no such fanciful speculations, as, whether a man should live or die a *vegetarian*, when he facetiously observes, in one of his lectures: "Some physiologists will have it, that the stomach is a mill; others, that it is a fermenting vat; others, again, that it is a stew-pan; but my view of the matter is, that it is neither a fermenting vat, a mill, nor a stew-pan, but a stomach, gentlemen—a stomach." Nor can we see upon what just ground, in this era of enlightenment, rational men should endeavor to delude us into the belief, that the pheasant, the wood cock, snipe, and other feathered dainties, with many of the finny tribe, which first delight the eye, and then the palate of the angler, as well as those which traverse in deep waters, should be banished our tables, or placed there that we may have, as of old, a Tantalian banquet.

Partizanship is not restricted to politics, and hence we find men indulging in unique propensities for revolutionizing the world, presenting special theories in plausible array, to suit the intellects of over credulous, and, perhaps, somewhat vain coteries, and so distorting truth, or presenting it under such deceptive guise, that it becomes, at times, difficult to sift their fantasies.

Passing on to the conclusion of the essay, we find some observations upon Diabetes and Phthisis. The former, although a functional disorder, is one of the most intractable and distressing that the physician is called upon to treat; sometimes having its origin in mal-assimilation of food, excessive and long-continued debauchery, but more frequently

from exposure to the rigors of a cold climate; from whichever cause it may arise, strict attention to diet is absolutely necessary, without which we can scarcely hope even to palliate the malady. The pathology of Diabetes is imperfectly understood; its treatment, at best, may be somewhat empyrical. Doctors Prout and Bird, Sir Benjamin Brodie, and others, have, we believe, recommended as the most beneficial treatment in this disorder, a concentrated diet, with small quantity of fluid—dietetics the most highly azotized; avoiding, as much as possible, taxing those organs, the secretion of which is already in excess: we cannot, therefore, see the propriety, as our author suggests, of trying, "for the sake of experiment," vegetable diet in Diabetes; especially when we remember, that by adopting such treatment we should, most probably, be aiding in de-fibrinating the blood.

With regard to the treatment of Phthisis, Dr. Crawcour is equally at variance with generally entertained opinions. A few words on this head, and we shall leave the author to his *early vegetation*. We should be expressing no Utopian opinion were we to prefer beefsteak and porter, with pure air, for our tubercular patients, whether looked upon as curative or palliative. Should, however, an exclusively vegetable diet, in the hands of Dr. Crawcour, be successful (of which we must express a reasonable doubt) in staying the course of tubercular diathesis, suffering humanity will have received a priceless boon.

Dr. Smith, in his journey through Asia Minor, must have found much to interest him; and whilst, doubtless, deriving pleasure in passing over ancient and classic ground, in visiting Constantinople, Troy, and Hierapolis, and in scaling Olympus' height—then to descend, and, perhaps, to essay a plunge into some famous bath, where, centuries ago, Greek and Roman were wont to lave their noble limbs.

Hierapolis, the Golden City, with its ruins, Dr. Smith describes as the most interesting part of Asia Minor. The people, formerly, conducted the waters of this city into their gardens and other places, the deposition from which was so rapid, that fences of stone were soon formed. Here, too, is the rill of the Nymphs.

On the Island of Mytilene are several warm springs; one being on the shores of the Gulf of Olives.

A careful analysis of the different waters is given, which, to travellers, cannot fail to be useful.

A perusal of these pages will repay the reader agreeably, for the time bestowed upon them.

Trismus Nascentium is the most fatal disease incident to children. Any rational account of its history, its etiology, or the most reliable

prophylactic course to be pursued, would be read with interest by the medical profession. Under this conviction, Dr. Watson has, in thirty pages, braced himself to the subject.

In speaking of the etiology of the disease, Dr. Watson remarks:— "It is necessary to make a clear distinction between the predisponent cause, and the habit of body or diathesis, which constitutes the predisposition itself. Two persons, for instance, may be exposed to the same predisponent causes, and in one a predisposition to a particular disease may be produced by the yielding susceptibilities of his system, and be resisted by the opposing energies of the other; or the same person may be affected by such causes at one period, and escape their influence at another. Again, a predisposition to a disease may exist as a connate diathesis. Then, let a predisposition to tetanus be the effect of whatever predisponent causes it may, it must be regarded as a *pathological state*, which, though occult and inappreciable by any pathognomonic symptoms, yet it is, doubtless, a tetanic element." Again: "It is not the situation or size of a wound which determines an attack of this disease, but a peculiar occult state of the general system." "Why may not malaria itself, the frequent and great source of so many maladies, impress the system with a strong tetanic predisposition, by producing cerebro-spinal irritation, or irritation of some of the other great ganglionic nervous centres?"

If it be proved that malaria produces a special action upon the cerebro-spinal system, or that its impress is so great upon the nervous centre as to cause a predisposition to tetanic symptoms, then might there be no appreciable cause why malaria should not induce trismus.

Of the exciting causes of Trismus Nascentium, our author says:— "A traumatico-tetanic condition of the umbilicus is, with very few exceptions, the constant exciting cause of this disease." In this remark Dr. Watson is borne out by recent investigations at the Charity Hospital in this city; for, in two autopsies made at this institution, upon the bodies of children who had died of this disease, the umbilical vessels were filled with pus.

"That portion of the cord," continues the writer, "which, after its division, is left in connection with the navel, is as liable to degenerate into an exciting cause of tetanus in the infant, as is a common wound in the adult." It was an old opinion, that the blood remaining in the vessels of that portion of the umbilicus which is attached to the infant, gave rise to disease, although tetanic symptoms were not included by the early writers. Carelessness in the early management of infants,

upon plantations, is stated as a fruitful cause of death by Trismus, dressing the navel, as is common among the negroes, with chimney-soot, has been attended with great fatality, inducing inflammation, which ended in lock-jaw.

We would with pleasure follow Dr. Watson in his interesting subject, but we are admonished to be brief. Upon the treatment of tetanus, Dr. Watson has nothing to offer. His prophylaxis is only a recital of what every intelligent physician is fully aware of. G. T. B.

II.—*Transactions of the Medical Society of the State of Pennsylvania, at its Annual Session, held in the City of Philadelphia, May*, 1851. Vol. 1. Published by the Society.

We feel greatly obliged to this flourishing and excellent Association for their pamphlet, the attentive perusal of which we have just concluded.

Among its members, we recognize the names of those with whom we were once privileged to hold pleasant intercourse in the great schools of that city where their deliberations were held. Good men and true, we know them to be, and standing up, as they do, in associated strength for the defence and improvement of our profession, they stand where we would expect to find them.

The first portion of the "Transactions" contains the proceedings and address of the President, Dr. William Worthington, of Chester County.

In the minutes of the proceedings, we are pleased to note evidences of the zeal with which the Society is striving after accurate information from all the counties of that great commonwealth, in relation to Medical Topography, Epidemics, and Contagious Disorders, within their respective limits. Their efforts for the passage of a law, requiring a registration of Births, Marriages and Deaths, deserves the highest commendation. This law, which is given in the Appendix, strikes us as being eminently adapted to secure the wholesome and beneficent objects for which it was designed. Indeed, so favorably was it regarded by the Legislature of Pennsylvania, that both houses passed it by large majorities; and yet, like the law repealing a former enactment, which refused the use of the county prisons to the Federal authorities, it was destined to fail for want of the signature of the Governor. If the Abolitionists opposed the General Registration Law, it is difficult for us in

this latitude to perceive why, as *all colors* are contemplated among its provisions.

A resolution was offered in the Society, requesting the Governor to affix his signature to the bill as passed by the Legislature; but this was very properly negatived, and a much more dignified course adopted. This was the *late* and not the *present* Governor of Pennsylvania.

We are much delighted with the following tribute to a former friend and fellow student. In his report, Dr. CONDIE says: "In drawing up the bill, and the securing of its passage, the committee feel it their duty to acknowledge the valuable and zealous aid they have received from the Hon. EDWARD ARMSTRONG, a representative from the city of Philadelphia."

After which the Society passed, upon a motion of Dr. Emerson, a resolution of thanks, which, in its terms, must have been highly gratifying to Mr. Armstrong.

The formation of a Pathological Department and Museum for the Society, seems to have been an object of strong desire among its members from the beginning. Accordingly, we find an able report on the subject from Drs. West, Kerfoot, Hays, Worthington and Zulick. Since the days of Hunter, Sœmmering, Abernethy, Prout, Bailey, and many others, like them, distinguished as teachers and writers on pathology, this subject has not failed to engage and retain the attention of investigating minds; thereby developing truths which otherwise might forever have remained unknown.

In the hands of Prout and Stephens, Chemistry has become a key to Pathology. By it they ascertain the analysis of morbid fluids, which, as physicians, they observe, are present in, and associated with, certain forms of disease. We do not hesitate to believe, that to pathological research, chemical experiment, and clinical observation, proceeding hand in hand, as hereafter they must and will do, we are yet to owe some of the most important developments of the seminal principles and curative agents of disease. We therefore congratulate our brethren of the Pennsylvania Society upon the course they are taking on this subject, and rejoice that in conjunction with the "College of Physicians of Philadelphia," they are likely to enjoy ample resources for the carrying out their most laudable purpose.

County Societies are urged, by special resolution, to obtain geological surveys of their respective territories, as a basis of a correct Medical Topography.

One County Society,—that of Berks,—accompanies its annual report with a beautiful geological map; which map is made the foundation of

all the topographical descriptions and reports on the state of health, and the existence and progress of contagious and epidemic diseases within its limits. It is, indeed, "a model report," and reflects the highest credit upon its authors, Drs. Hiester, Stewart and Beaver—the committee of the Society of the City of Reading and County of Berks.

Like other State Societies, that of Pennsylvania has to lament an apparent want of interest in too many members of the profession. Only eleven counties reported, and but eighteen were represented in the Annual Session. Seventy-eight members, in all, participated in the proceedings. This is encouragement of some sort, for Medical Societies in the West and South; for if the State Society of Pennsylvania, so far from being discouraged by the extensive failure of those who ought to be found co-operating in her ranks, is found projecting schemes of greater import, and works of higher beneficence, with a determination to persevere to their accomplishment, why should we become discouraged?

Our Louisiana State Society presents, in the number and spirit of its members, an aspect sufficiently cheering to animate every heart and strengthen every one among us, devoted to the promotion of remedial science; and if a majority of the parishes have not, as yet, sent up their representations, the proportion of those who have, is as great as among the counties of ancient Pennsylvania, in relation to her State Medical organization.

Let us, like our brethren, whose works are before us, steadily endeavor to make the association more worthy the attention, and deserving of the approbation of all the truly enlightened members of our profession.

In his annual address, the President deplores the multiplication of medical schools, as calculated to impair the character of our medical men. Indeed, he most fully endorses and advocates all that has been laid down by the American Medical Association relating to the previous acquirements of young men admitted to study medicine; and the lengthening of the courses of study and instruction in our medical schools. He thinks there cannot be such a superiority of the *American* over the *European* mind, as to enable the former to accomplish in from eight to twelve months, what it requires the latter from thirty to fifty months to achieve.

The reports from the several cities, districts and counties, in reply to circulars sent them from the State Society,—about a score in number,—are of an exceedingly interesting character.

As a general thing, freedom from epidemics seems to have character-

ized the year reported, and with a few exceptions, it has been commended as a year of health; yet, when we come to add together the various forms of fevers, dysentery, exanthemata and thoracic affections, which are admitted to prevail every year to a greater or less extent in every county and district that reported, we have an amount of disease, suffering and loss of time, from inability to labor in those *healthy* regions, well suited to make us content with a home on the *deadly Delta* we inhabit.

A number of excellent tables and brief statistical statements, accompany these county, district and city reports, which possess great value, and fully illustrate the above remarks; but the length to which we have already drawn this notice, precludes a further reference to them.

Prof. JACKSON, of the Pennsylvania University, presented a "*Report on Vaccine, Variola, etc.*," of a very remarkable character; so much so as to cause the adoption of the following resolution by the Society:

"*Resolved*, That a special committee of the Medical Society of the State of Pennsylvania be appointed to investigate the accuracy of the conclusions put forth by Doctors Gregory of London and Cazenave of Paris, in relation to Variola and Vaccination, as referred to by Prof. Jackson, in his report on those subjects."

The President appointed Dr. Emerson, Prof. Jackson, Drs. Joseph Warrington, Isaac Parrish and John D. Griscom, said committee.

A strong array upon an important subject.

The novelties of the report are mainly embraced in the following extract:

Dr. Gregory, from his long experience, and the ample opportunities of observation he has enjoyed as physician to the London Small-pox Hospital, has been regarded as one of the highest authorities on these matters. Whatever emanates from him merits attention. The following summary of Dr. Gregory's views has been taken from the report published in the May number of the Lancet.

1st. Vaccination performed under fifteen years of age gives as complete protection against small-pox as inoculation.

2d. After fifteen years, "another law" comes into operation. The economy acquires a susceptibility to a first attack of small-pox, and is liable to a second attack at fifty or sixty years. According to this proposition, the protective power of vaccination progressively diminishes after the age of fifteen.

3d. That re-vaccination after fifteen years of age is useless. It does not afford protection against an attack of small-pox. It may be resorted to as a placebo, "to satisfy the minds of the public, but is of no moment."

4th. That M. Cazenave, the celebrated Dermatologist of Paris, and others, had ascertained by experiments, that inoculation in persons after fifteen years, who had been previously vaccinated, produced a new form of disease, characterized by papulæ of the skin, unaccompanied by vesicles or pustules.

5th. That this new papular disease is not contagious, is unattended with danger, and gives protection against small-pox for life. These statements Dr. Gregory adopts, endorses them, and asserts "he knew them to be true."

It is certainly anomalous and inexplicable, that the communication of small-pox by inoculation should produce, in those vaccinated before fifteen, not a modification of the disease, but an entirely new disease. According to the statement of Dr. Gregory, such must be the fact.

It is indisputable that persons vaccinated before fifteen, who are affected by the small-pox virus, have the disease either in a modified form, varioloid, or have the true small-pox. Dr. Gregory himself states, that in the last seven years fifteen hundred cases of small-pox, after vaccination, had been admitted into the Small-pox Hospital. It would, then, appear, that the new papular disease is the product of the process of inoculation.

The truth of the preceding statements can only be ascertained by experiments. It is of great importance that an experimental investigation should be made. If they are correct, it is clear that inoculation after fifteen years of age must be substituted for vaccination.

It is respectfully suggested that this Society, in connection with the County Medical Societies, would institute experimental inquiries into the correctness of the facts above stated, as emanating from authorities of high respectability, and involving practical consequences of deep importance to the profession and society.

Dr. Jackson recommended the adoption by the State of adequate measures for the gratuitous vaccination of the poor throughout its borders, and the Society promptly appointed a special committee to memorialize the Legislature for the passage of an act to secure this object.

As one State (Mississippi) has, to our knowledge, taken this humane office upon herself several years ago, we would respectfully recommend to others a reference to her statutes on the subject. Methinks her plan both simple and efficacious; and know, that although somewhat imperfectly administered, it has succeeded thus far almost entirely in preventing Small Pox within her limits.

At the close of the proceedings, Dr. Innes, the newly elected President, informs us that this is the fourth annual meeting of the Society, and that "receiving a new stimulus" from it, he hopes the determination of each will be "never to tire in their exertions until each county in the commonwealth shall have its representatives here; and to this end," says he, "let the word be forward, and each to do his duty."

By the perusal of these interesting proceedings, we are the more convinced, that "*in union is our strength*," and that if we, as a profession, expect to be appreciated and respected as the possessors and exponents of science, we must unite for mutual improvement and defence. Reforms must be begun and carried on in our own body, in order to which organization must first be complete. Legislation by the State will not suffice to restrain, or even abash, that legion of charlatanry, which, by every conceivable means, assiduously labors to overthrow the credit of our profession, and but too successfully deludes an unenlightened public. Every day's experience,—every walk in our streets,—every newspaper we touch, proves that Louisiana, though one of two States retaining penal enactments upon their statute books for the protection of legitimate medical practice, is one of the most quack-ridden regions of the habitable earth.

Astrology, Pow wow, Fetishism, Mesmerism, Homœopathy, Indian, Faith, and Urine Doctors, all flourish among our diversified population, notwithstanding the very plain and obvious requirements which our law makes upon those appointed to administer it in relation to them. We repeat it, if the profession will be just to itself, the recommendations of the American Medical Association,—our general medical congress,—must be carried out in the formation and vigorous sustentation of State and County Societies in every part of our land.

J. S. C.

III.—*Coxe's Companion to the Sea Medicine Chest, and Compendium of Domestic Medicine, &c., &c.*

This little book, as its title indicates, is intended for the especial use of those whose home is upon the great deep; its applicability to domestic purposes, also, must not be overlooked; for in this utilitarian age, it may be regarded as no small desiderata for mothers, through the medium of *handy-books* upon "*domestic medicine*," and familiar treatises upon "*domestic cookery*," to nurture and to train their offspring to the ready appreciation of all good things; amongst the chief of which, the dictates of humanity point us to the mitigation of infantile suffering —hence the propriety of families, "Captains of Vessels, Missionaries, and Colonists," availing themselves of the "Companion" which is placed before them.

The therapeutic effect of many drugs and chemicals ordinarily in use, is concisely treated of; the modus operandi to be pursued in cases of fracture and dislocation, as well as the requisite treatment in lesser accidents, embraced under the head of "Things in Nose," to the equally unpleasant occurrence of "Things in the Eye."

The "Companion" also contains a table of suitable doses, from the tender age of one year to the venerable octogenarian, whose best medicine, either by sea or land, would be, we opine, as a general rule, a careful avoidance of all "domestic medicine," and every "Companion" not suited to their years.

At the close of the book may be found many useful formulæ, in the shape of Cathartics, Emetics, Stomachics, &c., with instructions for the operatives of the *cuisine*, in the preparation of "White Wine Whey," "Chicken Broth," &c., &c.

"Coxe's Companion" is, upon the whole, we think, a useful little book; and as an evidence of the estimation in which it has been held, may be mentioned the fact of its having passed from the thirty-third to the first American edition.

It is for sale at White's.

G. T. B.

IV.—*A Practical Treatise on the Diseases of the Lungs and Heart, including the Principles of Physical Diagnosis.* By Prof. W. H. Walshe, of London.

CRITICALLY REVIEWED BY J. ROUANET, M. D. P., OF NEW ORLEANS.

[*Continued.*]

I wish to advise the reader at the outset of the auscultation of the heart, that, to the best of my judgment, its normal sounds depend exclusively on the tension of the valves, and are, consequently, instantaneous in their formation.

Professor Walshe, with the generality of Physiologists, holds different notions. He maintains the prolongation of these sounds, and the plurality of their causes; mistaking for prolongation the repercussion of the normal sounds in the depth of the circulatory organs, and for true causes some false ones, as will be shown as we proceed. In many points, however, he comes very near the truth, especially where he refers to the clicking of the valves, the abrupt commencement of both sounds, which he happily calls *accentuation*. For my part, I consider the true accentuation of the rhythm as the two genuine normal sounds of the heart; taking no care for their prolongation, or echoing; which has its proper cause, varies in every person, and creates much more confusion than useful information.

14. *Normal Cardiac Sounds.*

"These two sounds differ in all their characters." Page 183.

Here is a too general proposition. The author knows perfectly well, that in many instances the sounds of the heart differ very little, and in some, not at all. "In cases of notable ventricular dilatations," says Laennec, the two sounds can be distinguished neither by their nature nor intensity, but by their coincidence or not with the pulse." Professor Bouillaud "has observed on a certain number of individuals, that the sounds were almost completely similar, both in clearness and duration, the first having lost its dulness." Professor Magendie, and others, have found them so resembling, as to think it impossible to assign them to a different cause. I have been myself more than once unable to discern them one from the other, but by the impulsion of the heart against the side, by the place of either sound in the rhythm, or by the pulse, as Laennec.

This frequent difference and occasional identity of the normal cardiac sounds, gives a very satisfactory account of the subject. In reality, they

arise about the same in the cavities of the organs; for, if the ventricular valves are a third larger than the arterial, which is a cause of dulness, on the other hand, the passive action of the arteries effecting the tension of the semilunar valves, is considerably exceeded by the strain of the ventricles, a cause of clearness for the sound of the same ventricular valves. These two causes neutralizing themselves, the equality is maintained, or nearly so, between the two sounds within the heart, and their difference perceived over the thorax, must be assigned to the unlikeness of the interposed tissues.

15. *Coincidence of the first Sound.*

"The first of these sounds, coincident with the systole of the ventricles, the heart's shock against the side, and the pulse of the arteries nearly joining the heart, is called," etc. Page 183.

The first sound takes place about the beginning of the systole, but does not take the same length of time, and consequently, is not properly coincident with it. The pulsation of the arteries can be felt only after the shutting of the ventricular valves, which permits the pressed blood to open the sygmoids and distend the arteries.

The shock of the heart will be examined at number 22.

16. *Synchronisms of the second Sound.*

"The second of these two sounds, synchronous with the diastole of the ventricle, the recedence of the heart from the side, and the pulseless state of the large arteries, is known," etc. Page 184.

Two synchronous phenomena must have the same limits and duration. But, the second sound appears at the very commencement of the diastole, and ceases immediately, while the diastole itself has much more duration, as will be shown presently.

What must be thought of the recedence of the heart from the side, will appear also at number 22.

17. *Silence.*

"The soundless period succeeding to the first sound, may be called the first or post-systolic silence; that succeeding the second sound, the second or post-diastolic silence.

The first silence is properly systolic; the second purely diastolic. The systolic movement begins a little before the shutting of the ventricular valves, caused by the squeezed and receding blood. It persists till the second sound. The diastolic motion commences with the second sound, and lasts during almost all the second silence. This statement

is evidenced by the abnormal murmurs, which, whatever be their cause, —constrictions, occlusions, or chlorosis,—fill the silence, (or inter-accentuation) in which they take place, testifying the passage of the blood and the movement of the heart.

This doctrine is perhaps of some moment; and yet, I have seen it nowhere, though set forth twenty years ago in my thesis, from which I beg leave to quote the following passage: "When, for instance, the arterial orifice becomes the seat of a stricture, what is offered us by auscultation?—a bellows sound, or a sawing, rapping sound, heard during the first silence (the first inter-accentuation), since the first normal sound till the second. The cause cannot be doubtful; it results from the blood passing through the straitened orifice. But, how could the blood continue to go into the artery, if the ventricle should not continue to contract? Then, the ventricular systole is much more prolonged than the first sound."

18. *The Rhythm.*

"If the period of an entire revolution of the heart be divided into ten equal parts, about four of these will be found to be occupied by the first sound, one by the post-systolic silence, two by the second sound, and three by the post-diastolic silence." Page 184.

According to this statement, the space of time is the same from the first to the second, and from the second to the first accentuation. This is manifestly erroneous; for, what we call the second time of the rhythm (the second inter-accentuation) is about double the first.

As to the length of the sounds of the heart already spoken of, Laennec, believing them to be caused by muscular contraction, was laid under a sort of necessity to admit their duration. This mistake has been perpetuated by the following writers.

Professor Andral is of opinion that Laennec has not declared that the first sound depends upon the contraction of the ventricles, and the second, of the auricles (4th ed. of Laen., t. 3, p. 34). No doubt he has not paid attention to the expressions used by Laennec in many places; "sonorous, blustering contraction of the ventricles; sonorous contraction of the auricles; the sound produced by the contraction of the auricles," &c.

19. "*The right apex region.*" Page 185.

Here is a new designation, at least for me. I have always thought, and I think yet, that both ventricles have their apex in juxtaposition at the apex of the heart. There may be some commodiousness in taking the end of the sternum for the right apex region; but, as for me, this innovation wants an essential condition to be accepted: it is not true.

20. *Causes of the first sound. Muscular Contraction.*

"That the first sound derives its dull, booming prolongation from muscular contraction, seems unquestionable, not only because it retains these characters when the heart contracts after separation from the body, and the action of the ventricular valves is prevented, but because it may, in these characters, be pretty closely imitated by the contraction of voluntary muscles." Page 185.

The booming prolongation is, as said before, the mere repercussion of the sounds of the valves in the cardiac cavities. It increases with the hypertrophy of the ventricles, with the thickness of the walls of the chest; that is to say, with the increase of the repercussing layers. In these conditions, the proper seat of the sounds being more removed from the surface of the thorax, and the sounds themselves being absorbed in a greater quantity by the structure, they are found notably impaired. On the other hand, in proportion as the tissues become thinner, the booming character decreases, and the sounds grow louder and clearer. The sounds grow louder when their pretended causes, the cardiac muscular walls, lose their strength!! Is it logical?

It must not be forgotten, the ventricular contraction is of the same duration as the systolic bellows sound, the same, of course, as the first inter-accentuation; such is not the extent of the first sound. "As to their experimentum crucis," says Dr. Billing, (to show that muscle produces the first sound) "of putting the finger into the heart, after the valves were destroyed, and their hearing a sound proceeding from the contraction of the heart, with air, carneæ columnæ, and bloody moisture in it, without the fingers: doubtless there was *a* sound produced independent of the valves, but not *the* sound of the heart."

Who does not see, that in these experiments, coarsely made in the open air, the normal conditions have been completely neglected, and no precaution has been taken to avoid the friction sounds?

21. *Tension of the Valves.*

"Nor can there be any doubt that the tension and surface collision of the auricular valves, and sharp shock of the blood against their ventricular surfaces, give the comparative sharpness to the first sound; a character which may be detected by attention at its outset," etc. Page 185.

In 1832, in my *Analyse des Bruits du Cœur*, I endeavored to demonstrate, that the sounds of the heart have no other cause than the clicking of the valves; and in 1844, I treated the same subject before the Society of Medicine of Paris, in a report on the *Manuel de Diagnostic des Maladies du Cœur*, by Dr. F. Andry, my colleague in that Society. The report was published by order of the Society (but with

some inattention by the printer) in the *Revue Medicale* of September and October, 1844. I demonstrate my position, 1st, by the clicking sound of every suddenly stretched membraniform structure, in the air and in the liquid. 2d. By the play of natural valves of the heart moved by means of a peculiar apparatus composed of basins and tubes. 3d. By the Clinical consideration, that the sounds (I mean the accentuation) are closely connected with the state of the valves; persisting natural as long as these remain unaltered; increased with the violence of their tension; veiled in the endocarditis, by even slight thickening of the membranes; roughened by their harshness; becoming more and more dull in proportion as the valves lose the faculty of clicking, and finally disappearing with this faculty. In the same report I impugned the theories brought to light since 1832, or unknown to me at that time.

22. *Shock of the Liquids.*

"The projection of the ventricular blood against the orifices of the large vessels, the flattened valves, and the bases of the columns of blood they contain, combined with the sudden extension of the arterial coats beyond, have strong clinical and experimental claims to a share in the first sound." Page 188.

I dare say they have none. In the preceding citation (No. 20) the author makes mention of the sharp shock of the blood against the valves: here against the valves, the arteries, and the blood contained within them; elsewhere he speaks of the collision of the blood elements *inter se*. I can only repeat thereabout what I said in the aforementioned report, "There is no possibility of any shock within the cardiac or arterial cavities. The shock presupposes the distance; bodies always in apposition never strike one against another; but, you will find in the circulation, not a point, not an instant, in which every element, every portion of the liquid taken separately, be not in immediate contact, on all its sides, with others, or with the internal coats of the cavities." Prof. Walsh affords two evidences; here the first.

"A sound is audible in the arteries, synchronous with the heart's systole, under circumstances in which the idea of mere conduction from the heart is quite inadmissible; such sound may be heard in the femoral and even popliteal arteries, sometimes, where no disease of the vessels or of the aorta exists." Page 188.

This point will be readily understood, by fixing our attention on the play of the heart. The blood squeezed by the ventricles cannot open the arterial valves before the shut of the ventricular, opposing the retrocession of the blood into the auricles. Then, at the instant of the formation of the first sound, the sygmoid, as yet closed, oppose its free transmission to the arterial column of the blood. Consequently, the

first sound is neither so strong, nor so far propagated, as the second, in the great arteries. At some distance from the heart, one sound only is seized by auscultation; this sound is the second. But, the progression of sounds in the liquid column may be considered as instantaneous, whilst the process of the blood is successive; so that the second sound may coincide with the pulsation of the artery, and be mistaken for the first, or for a sound resulting from the shock of the blood. We have shown it to be inadmissible.

"Again, in certain cases of mitral regurgitant disease, where the systolic sound of the left apex is completely deficient, (a murmur only existing there) the first sound may be discovered with the quality of health in the aortic base." Page 188.

Where's the wonder, since the thricuspid valve is unaltered?

23. *Shock of the Heart.*

"Lastly, the heart's shock against the side indubitably increases the first sound, and gives it, in particular cases, a knocking character." Page 189.

An eminent physiologist has rendered it necessary, by its singular theory, to make a distinction between the shock and the impulsion, the former being capable of sound, the latter soundless. Both imply the effort of one body against another: effort from some distance in the shock, at the contact, in the case of impulsion. The percussion of the chest, for instance, cannot be exerted without shock and sound, whilst there is only impulsion against the abdomen of a dropsical patient, when, applying the hands over it, we attempt, by sudden depressions, to detect some solid body—liver, spleen, or other—swimming, we presume, in the serum.

Now, the heart does not shock the side; it never departs from the thorax during its regular functions. "With respect to the assertion of a celebrated experimenting physiologist, that the sound is produced by the heart coming pit-a-pat against the parieties of the chest, it is only necessary to refer to Mr. Bryan's beautifully ingenious experiments, (Lancet, Feb. 8, 1834; also December 26, 1835, and Feb. 27, 1836) by which he proved that the heart never quits the anterior wall of the chest, but remains in apposition during both systole and diastole. (Billing, first Pr. of Med. 1834.)

I feel inclined to doubt whether Professor Magendie, or the holders of his opinion, can explain, in a satisfactory manner, the following points:

1st. Why no vacuum has been, as yet, discovered by percussion oppo-

site the apex or the basis of the heart, during its pit-a-pat? 2d. Why the pretended knocking sound elicited from the thorax by the heart, is carried within the principal arteries? 3d. Why the normal sounds persist in the complete agglutination of the pericardial surfaces, preventing the motion, and surely the shock of the heart?

I wish not to weary the reader's mind by retelling the extraordinary conception repeated by Professor Walshe, of the collision of the ventricular surfaces, contributing,probably, says he, to the production of the sound at its close. The structure of the heart does not permit such a collision, which, being supposed possible, would not be more sonorous than the clapping of the hands in water.

24. *Cause of the Second Sound.*

"The most effectual cause is, (as originally taught from clinical observations, by Dr. Carswell) the tension of the sygmoid valves." Page 189.

Dr. Carswell has taught nothing on the tension of the valves. He has uttered orally, and in a dubious form, an idea of shock, which is quite different, and, I must say, wrong; since there is not any real shock when the extremity of the blood-column effects the shutting of the valves swimming within it, and never separated from it. The local origin of the second sound was alone exactly indicated by Dr. Carswell. I did not take from him, as alleged by some, the theory of valvular sounds, which I was exposing two years before, in the *Pavillons* of the *Ecole Pratique*, to my friends and fellow dissectors, Alfaro and Martinez, who have since practised physic with great distinction, the former in Madrid, the latter in Mexico, his native country. In 1835, the same Dr. Martinez del Rio received the London Lancet, and showed me the researches of Dr. A. Billing,that I was completely unacquainted with—of which was ignorant, too, Mr. Bryan, when he published my explanation of the sounds of the heart in the same Lancet, in January, 1833. Dr. Billing, speaking of the valvular theory, says, with ingenuous accuracy, "It would not astonish me if Rouanet had it from the brain as well as myself." It appears plainly, from the work of this eminent author, and from the facts that the valvular tension remained unknown to the insulars till its arrival from the Continent. (Dr. Billing is naturally excepted.)

I pretermit, as evidently insonorous and of trifling interest, some phenomena mentioned by Prof. Walshe as possible causes of sound,viz:

"The arterial systole.....the stroke of the blood against the ventricular walls..... the recedence of the heart's point from the side, from the pericardiam," etc. Page 189.

I will treat more seriously, but only by consideration of the author's opinion of the

25. *Shock of the blood in some particular instances.*

"In cases of highly marked aortic regurgitation, blood falls with notable force into the left ventricle, and may conceivably generate sound." Page 190.

This has been refuted beforehand at No. 21.

"I have unquestionably heard, at the left apex, a distinct sound, in more than one such case, while at the aortic base the ordinary regurgitating murmur only existed."

Because the clicking sound reaches further than murmnrs. It may be ascertained by ausculting, in such occurrences, not the apex alone, but all around the pulmonary valves, from which the sound proceeds, contrarily to the belief of Prof. Walshe.

"I am persuaded this intensified sound cannot be transmitted of the pulmonary valves, because I have found it stronger at the left than the right apex."

It was transmitted particularly by the solids, or comparatively deadened at the right side by the almost constant transmission there of the aortic regurgitating sound.

26. *Shock of the Ventricular Valves against the Ventricles.*

"The fall of the auricular (ventricular) valve against the ventricular surface, is not demonstrably sonorous." Page 191.

Nor demonstrably real; for, the blood, repercussed, as it were, at the internal apex, comes back along the parieties of the ventricles behind the valves, which are almost drawn together by it, at the beginning of the systole. It will be clearly proved by injecting a liquid into the insulated ventricles.

27. *On particular influences over the Sounds.*

"Certain conditions change the combined force and quality of the first sound, by influencing some one of its elements, without affecting the others." Page 192.

I fear this is a mere preconception.

"In continued fever, the general weakness, impairing the muscular power, throws the valvular element into undue prominence, and gives the first sound a clicking character, akin to that of the healthy sound." Page 192.

The prominence of the valvular element suits very ill with the muscular power impaired. The tension of the valves increasing in intensity in proportion as its cause grows weaker, is a new law in physics.

I choose rather to believe, that the clicking character, natural to both sounds, within the cavities where they take rise, is more easily and more nicely transmitted, in proportion as the surrounding tissue becomes thinner, consequently to the disease.

"Again, nervous excitement intensifies and gives a ringing quality to the impulsive portions of the sound, so much as to throw the other into the shade." Page 192.

Here is an arbitrary interpretation; for, besides that the impulsion is incapable of sound, the increased action of the heart necessarily intensifies the clicking of the valves. A strip of paper extended with different degrees of force, will clear this point better than the strongest arguments.

The ringing quality is not proper to the thorax; it arises in the external conduit of the ear, shaken by the heart's apex, through the wall of the chest.

"The second sound is comparatively little affected in either case." Page 192.

The passive walls of the arteries do not partake of the nervous excitement. Their action upon the blood and the valves is limited to the degree of their fulness or emptiness.

28. *Reduplication of the Sounds of the Heart.*

"The essential cause of these various reduplications seems to be, a want of synchronism between the action of the two sides of the heart." Page 201.

No mention has been made, to my knowledge, of such want of synchronism by *vivisectors*. The contraction of the ventricles has always been described as synchronous, as well as of the auricles. We must seek the cause of the reduplication of the first sound only in "certain conditions of the ventricular valves on either side bringing their closure behind time," as the author says.

"But the fact that such reduplication may be audible at one apex only, and perfectly inaudible at the base, is far from being easily explicable." Page 201.

In such case, one sound only is audible at one apex, because the sound of the other side is too feeble to reach there, though not too weak to be heard at its proper side. The same weakness makes it inaudible at the base, which may be, besides, the seat of some regurgitant murmur.

"It appears, too, from a case observed by Mr. Charcelay, that the contraction of the auricles, when slightly hypertrophous, may become sonorous, and so double the first sound." Page 201.

The auricles must be, I believe, out of the question.

"The reduplication is never (as far as I have observed) permanent and invariable. .....It comes and goes in the course of a few beats of the heart." Page 202.

I have very frequently met with permanent reduplication, at its different degrees. Once I auscultated all the patients of one of my wards, in the Charity Hospital. Half only presented both sounds quite pure, and wholly free from perfect or imperfect reduplication.

"The second sound may be continuously doubled at the base, and perfectly pure and single at the apex. How is this explicable on the sygmoid theory of the second sound? A double sound does not become single by conduction over so short a space." Page 202.

One of the two sygmoid sounds reaches the apex, the other does not.

"The first sound may be single at the left apex and at the base, while it is distinctly reduplicate at the right apex. Here the ventricular and arterial portions of the first sound seem to be separated on the right side of the heart." Page 202.

Supposing the fancied arterial portion to be real, will Prof. Walshe explain why these two portions become separated? Then, why exists the separation on the right side, and on the right side alone? I give the preference to my previous interpretation.

"The second sound may be double at the base and single at the aortic, double at the pulmonary, cartilage (or vice versa). This cannot arise from want of synchronism of the two sets of valves, but of the three divisions of one set." Page 202.

The pulmonary sound is more easily transmitted to the base through the right ventricle, than to the aortic cartilage; the contrary may happen by the effect of some particular cause. But the want of synchronism at the three divisions of one set of valves cannot be admitted; their clicking is never separated enough to constitute a reduplication.

"The second sound may be single at the base and double at the left apex." Page 203.

This kind of reduplication is, I think, very rare, and owing neither to splitting of the sound into two, nor to any ventricular origin, but to some circumstance favorable to the transmission of the pulmonary sound towards the apex.

29. *Endocardial Murmurs.*

"They may be pre-systolic, systolic, and post-systolic; pre-diastolic, diastolic, and post-diastolic." Page 204.

They are systolic or diastolic; for the systole and the diastole correspond not to the sounds only, but furthermore to their respective silences.

"A murmur may prevent the natural heart sound from being formed." Page 205.

What prevents the formation of the sounds is the alteration of the valves.

"Thus at the left apex a systolic murmur may completely drown a systolic sound, which is readily audible at the right apex and at the base." Page 205.

Here the mitral valve altered, unable to close its orifice, gives no sound, and permits the regurgitating murmur, while the clicking of the tricuspid is heard at the right side.

30. *Organic Endocardial Murmurs.*

"In the pure widening of the tricuspid and mitral orifices the regurgitation may intelligibly produce murmur by the collision of direct and indirect blood-currents coming from and going back into the auricle." Page 206.

Does Professor Walshe imagine that two contrary blood-currents can take place simultaneously at the same orifice?—that during the ventricular systole, some blood comes from the auricle into the ventricle? This supposition is very surprising.

31. *Cardiac Blood Murmurs.*

"It has been affirmed that plethora, rendering the quantity of blood too great for the cavities of the heart, produces murmur within it. Confirmation of the statement is wanting." Page 210.

In 1847, I had under my care at the Charity Hospital, a strong, plethoric Spaniard, who presented two regurgitating murmurs—systolic at the apex, diastolic at the base—in the vascular turgescency of the first period of yellow fever. As for the rest, the signs of the organic diseases of the heart were all absent. In spite of the most energetic treatment, the patient died the following night, and was examined after death by the internal student of the ward, an able and promising gentleman, who told me the next day with disappointment, he had found no disease in the heart of the Spaniard. I advised him not to forget that rare example of a double regurgitation from simple vascular plenitude.

I saw some months ago a gentleman of about eighteen, with a very thin diastolic murmur, spread all over the right ventricle, and proceeding, if I mistake not, from the fulness of the pulmonary artery, consequent to the imperfect closure of the enlarged mitral orifice. This insufficiency of the bicuspid valve is announced by a strong systolic murmur at the apex.

32. *Dynamic Cardiac Murmurs.*

"A mitral regurgitant murmur may completely or partially cover the first sound at the left apex." Page 212.

In the normal state of the valve, of the pericardium, and the heart, the sound never disappears entirely, so far as I have observed.

33. *Pericardial Murmurs.*

" It has appeared to me that sound is sometimes generated in layers of firm, false membrane, though so perfectly agglutinated together, that attrition or separation of the opposed surfaces is physically impossible." Page 218.

I apprehend that Prof. Walshe is here in a mistake ; no sound has ever been heard in such conditions.

34. *Auscultation of the Arteries. The two transmitted Cardiac Sounds.*

" Their intensity is increased by slight pressure." Page 229.

The pressure favors the transmission without changing the sounds. As to their origin, it is entirely cardiac, as exposed before.

"General dilatation, or simple saccultation of an artery, by altering the direction of the blood current, generates murmur. Narrowing of a vessel produces a similar effect, by increasing the friction." Page 130.

The enlargement permits the vibration of the liquid, independently of the direction of the current. The narrowing is followed by enlargement which becomes the seat of murmur, as accurately settled by Dr. Corrigan. This subject has been treated at number 3.

35. *Venous System.*

" The venous system is the occasional seat of audible murmurs, which possess one invariable character—that of continuousness." Page 234.

The assertion of Dr. Ogier Ward seems to prevail in England, in spite of the poorness of the arguments on which it is grounded. I must rather say argument, in the singular, for I know only this one.

" Venous murmurs are instantaneously silenced by interrupting the circulation in the veins generating them." Page 234.

A proof so peremptory, at first appearance, is, in reality, of almost no moment, when we pay attention to the fugacity of the murmur, to the difficulty, perhaps impossibility, of stopping the venous, without influencing the arterial, current. Who can flatter himself that he operates exclusively on the jugular veins, when he presses any part of the neck. If we may call into question the direct agency of such a pressure on the carotid arteries, its action *a tergo* through the capillaries, seems unquestionable.

"Inspiration increases the loudness of an existing murmur. But on the other hand, suspension of the breath, at first, exercises, even more markedly, the same effect.

The sharp collision of the blood disks, *inter se*, and against the walls, in the struggle to move onwards, probably explain this." Page 235.

I have already dwelt pretty long on the different kinds of collision, as well as on the numerous causes of murmur referred to by Professor Walshe, in the present question : as the

Vessels imperfectly filled, loose, vibratile.—Thin blood, the friction attending its movements thereby increased.—External pressure or muscular action.—Forcible collision of currents arriving from different directions at a conflux, as in Torcular Herophili —Plethora, especially of that kind in which the portion of the red disks is raised, are asserted causes of venous murmurs.—The proportion of white corpuscles, their increase must entail great increase of friction and labor in the circulation.

Let us put aside the vibratile vessels, the friction of the blood, the collision at a conflux, the plethora, and the increase of red disks as well as of white, all incapable of murmur. The external pressure may create vibrating sounds by the stricture it produces in the vessel, which stricture is followed by an enlargement favorable to the whirls of the liquid.

The thinness of the blood is a predisposing cause for the murmur, and a certain disposition of the fluid column is another ; but these two causes remain ineffectual till a third comes, the determining cause bringing them into action ; I mean the rapidity of the current, which is proper to the arteries, never sufficient in the venous system. Is it supposable, for instance, that sonorous vibrations can take place in the ascending blood of the crural vein ? It is plain, moreover, that the venous current is intermittent, sometimes recurrent, near the heart, and unfit to give rise to a continuous murmur.

[*To be continued.*]

V.—*Braithwaite's Retrospect of Practical Medicine and Surgery. Part* 24. New York : 1852. No. XXIV. January.

This abstract of the Medical Sciences continues to come regularly to hand, and never fails to put us in possession of all the recent and best digested views on the various branches of the "divine art." We feel convinced that if our American physicians were better acquainted with the great amount of practical information embraced in this "Retrospect," they would be sure to subscribe for the work—for it is almost impossible to keep pace with the progress of our science without subscribing for, and reading, such a periodical.

J. B. Morgan is the agent for this city.

VI.—*Manual of Diseases of the Skin, from the French of M. M.* Cazenave *and* Schedel. *With Notes and Additions by* H. D. Bulkley,, M. D., &c.

This work was first introduced to the American profession by a translation of the original, which was published in Paris in 1828. The extensive experience of the authors, and the embodiment into the work of the valuable observations upon this branch of the Medical Profession of M. Biett, have placed the present Manual on Diseases of the Skin, in the foremost rank; nor can we withhold our ready approval of some valuable notes by the American Editor, H. D. Bulkley, M. D.

Discarding, in part, the three principal classifications by their respective authors, viz: Mercurialis, Pleuck and Willan, M. Cazenave, has introduced some additional orders to those of the last named author, whose system, for the most part, Cazenave adopts; the additions may be regarded as a refinement upon complexity, rather than as a simplification of a system already extenuated to the utmost limits of rational requirement, but of this the reader can form his own opinion.

From whatever causes cutaneous disorders may arise—and they are exceedingly diversified—including within their range hereditary predisposition,—a certain temperament,—the influence of profession or daily vocation, as exemplified in the artizan, of corroding substances. The seasons, of which the spring favors the development of diseases of the skin,—of climates, the very warm much more than the temperate,—and the idiosyncrasy of some persons, as manifested by a sympathetic affection of the skin upon certain ingesta being received into the stomach—these, and other facts, with the fearful ravages which some of them produce upon nature's fair proportions, are all persuasive in impelling the practitioner to bring the *vis medicatrix* to his aid,tardy though it may be, if not at times inoperative in its effects.

We will now proceed to notice some of the diseases treated of in this book, selecting those, which, owing to their more frequent occurrence, may be presumed to be of most general interest.

And first of Scabies, classified by Willan amongst the Pustulæ, and by Biett amongst the Vesiculæ, and according to our author, known to the Ancients, although confounded with other diseases than those produced by the presence of an insect, the *Acarus Scabiei*—for which fact we are indebted to the researches of M. Renucci, in 1834, which entirely controverted the opinion and experiments of M. Gales, instituted upon more than three hundred persons affected with itch in 1812. Va-

rious experiments have also been conducted by M. Albin Gras, with the view to ascertain the articles most speedily destructive of the life of this insect. Of the solutions thus employed, the Iodide of Potassium was most quickly fatal to life, the insect only surviving, in a solution of this salt, from four to six minutes; whilst in olive oil, a like result took place in two hours; and in a solution of the Acetate of Lead, in one hour; other articles which were used required intermediate periods of time for the destruction of life.

The insect is thus described by Cazenave: "The Acarus Scabiei is a small, round, greyish body, sometimes in motion, and at other times at rest. With good sight, and especially with a magnifying glass, the head and fore legs of the insect can be readily distinguished. Under the microscope, it presents an oval body, the back somewhat convex, on which are marked numerous fine curved lines, parallel with each other, and of unequal length in the different groups. Under the abdomen are eight legs, four of which are in front, and have at their extremities a sucker of trumpet shape, with hairs at their base. The four hind claws are without suckers, and terminate with a hair of greater or less length. The head is covered with fine hairs, and has a trumpet shaped protuberance, shorter than those in the fore legs, with a hair longer than itself on each side of it."

It being established that the Acarus is the cause of itch, our attention will be directed to that course of treatment which will most speedily destroy the animal and cure the patient.

For this purpose, an almost infinity of agents are at hand. Unguents, at the present day, have greatly fallen into disrepute, being inelegant in their application, and not so speedy as other means, generally, in effecting a cure; still, with the following ointment,

℞	Sulph. Sublim.	ʒ ss.	
	Soda Chlorid.	ʒ j	
	Adipis Præp.	ʒ ij	M.

some French physicians claim to have been very successful, taking especial care that it be applied from *head to foot—friction* being an important part in the use of all ointments.

"The problem to be resolved in rational treatment of Scabies," says Cazenave, "is to cure quickly, with few or no complications, at as trifling an expense as possible, and without injury to the clothes. In the endeavor to accomplish this object, one of us, after a great number of trials of different remedies on a large scale, has selected the two fol-

lowing formulæ, as those which have yielded the most satisfactory results:

1. Alcoholic Aromatic Lotions—

Essence of Peppermint,
" " Rosemary,
" " Lavender,
" " Lemon, aa 4 to 6 drops,
Alcohol, ʒ iss,
Weak infusion of Thyme, 3 quarts.

The mean duration of the treatment is eight days.

2d. Iodureted Lotions—

Iodide of Sulphur
" " Potassium, aa ʒ iss
Water, 1 quart.

The mean duration of this plan is six days.

Whatever the lotion employed, it is necessary not only to wash the affected parts, but to prolong its application, so as to produce that kind of maceration which is required to destroy the insect."

First in the order of the Pustulæ we find Variola, which our author divides into "natural and inoculated, according as it is communicated by exposure to the variolus infection, or results from the insertion of the virus in some part of the system; and into two species, the distinct and confluent."

The initiatory phenomena are nearly the same in the inoculated as in the natural Small-pox—"desiccation commonly commencing in the face, and this region being frequently covered with an uninterrupted incrustation, when the pustules are only forming on the limbs."

Of the various applications resorted to with a view of preventing the unsightly deformity of Small-pox, our author has little confidence. The best means, he considers, of preventing cicatrices from forming on the face, consists, in opening carefully each pustule, pressing the matter gently out, and preventing the scales from remaining long, by the application of emollient fomentations. Recently the Tincture of Iodine and Collodion have been recommended for the same purpose.

"The most common pathological lesions observed in subjects dead of Small-Pox, are, various engorgements of the cerebral and thoracic organs, pustules in the mouth, pharynx, œsophagus, and even in the larynx and trachea. The stomach and intestines, with the exception of the rectum, are rarely affected."

Our author considers Vaccination so nearly allied to Variola, that that subject is briefly disposed of—truly observing, however, that Vaccinia is more vesicular than pustular in its character, producing a scab, which is detached from the twentieth to the twenty-fifth day.

Dr. Gregory, in his "Lectures on Eruptive Fevers," says, "Lymph recently derived from the cow, possesses so much intensity, and fixes itself with so much more of a poisonous character upon the skin than lymph long habituated to the human constitution, that a single incision made with it is equivalent to six or eight made with lymph of minor energy."

The American Editor has, for some unexplained reason, deprived us of the benefit of the author's elaborate account of the results of re-vaccination, and contents himself by informing us, "that the periods defined by Heine and Gregory, when the vaccine virus loses its anti-variolous power, and consequently, when re-vaccination becomes necessary, are not fully established. According to the former writer, the period of exemption is seventeen years—according to the latter, fourteen years."

Re-vaccination has been practised in the Prussian army for some years, to the almost entire extirpation of Small-pox.

Before drawing our notice of this work to a close, we must make another selection from its pages, which are replete with instruction, and judicious in arrangement. This one, also, shall be from the Pustulæ.

The first recorded case of the transmission of Glanders from the horse to man, was at the commencement of the present century, although the human race might have been affected with the disease long before this time.

The Memoir of Dr. Elliotson, entitled, "Glanders on the Human Subject," containing three well authenticated cases in the human subject, more fully aroused the profession to scientific investigation; and doubts which had previously existed as to the identity of the disease in the horse and in man, were removed. Recent cases, which have been reported in the London Lancet, as having occurred in Veterinary Surgeons, and in others, having the management of diseased horses, are confirmatory of the observations of Dr. Elliotson.

It has been demonstrated by M. Leblanc—"First, that all forms of Glanders, and Farcy are contagious, but differ in intensity, according to the constitution of the animal, and other obvious circumstances; and secondly, that pus or mucus taken from Glandered men, or horses,

no matter from which, will produce Glanders or Farcy in healthy animals of a similar kind, if inoculated with them, whilst pus or other matter not taken from Glandered or farced animals, will not produce either Glanders or Farcy."

Constitutional disturbance is generally the commencement of Glanders, and when acute, the symptoms are typhoid in character; in the course of a few days the symptoms become more aggravated—diffused abscesses appear—the fever assumes a more malignant form—the disease extends to the air-passages and lungs—general collapse ensues, and finally, death takes place by muttering delirium.

Glanders and Farcy are never developed spontaneously in the human subject, but always by transmission from the lower animals,—although, being contagious in their character, they may readily be propagated from one human being to another. The contagious principle may be transmitted through the medium of the atmosphere, as well as by actual contact, hence they are *infectious*.

Any course of treatment of this disease in the human subject has proved of little efficacy, even to palliate; remedies must be administered *heroically*—of these, antiseptics, stimulants and tonics have been recommended. A cure is said to have been effected in the course of a few weeks by the injection of a solution of creosote up the nostrils.

Pityriasis, Ichthyosis, Elephantiasis Græcorum, Purpura, and many other diseases are treated of in the work under consideration—a careful examination of which, we are confident, will profitably repay the reader.

The book is to be had of White, on Canal street.

G. T. B.

Part Fourth.

MISCELLANEOUS MEDICAL INTELLIGENCE.

(ORIGINAL.)

SELECTED ITEMS OF MICROSCOPIC OBSERVATION.

Being in explanation of Thirty-one Lithographic Figures.

BY J. L. RIDDELL, M. D.
Prof. Chemistry Med. Dep. University of Louisiana.

(*Continued from Jan. No. of this Journal.*)

TAB. IX.

[*Magnified* 1000 *diameters.*]

MICROSCOPIC ANATOMY. PATHOLOGY.

CEREBRAL MATTER.

Figures 81 to 89. Pertaining to the vesicular structure of the human cerebrum. On the 7th of February, Dr. Josiah Hale handed me a small portion of the white medullary matter, in its normal condition, obtained that morning at the Charity Hospital, by the post mortem dissection of a man who had just died. Diffused by agitation and gentle pressure in distilled water, the appearances illustrated by 81,82 and 83,with numberless modifications,presented themselves. Spherules like 84 and 85 were also seen. The cerebral matter was contained in a close cell, with distilled water, in a perforated brass slide, with thin glass on each side. Putting the slide into a vessel of water, with the intention of cleaning it, I suffered it to remain until the 13th February, when I observed that the cerebral matter had softened, so as to become almost semi-fluid; and having the curiosity to subject it again to the microscope, I observed that the structure of the vesicles was apparently much better defined than before. Many of the vesicles seemed to contain from one to several symmet-

rically curved filaments, terminating in what seemed to be a smaller vesicle or spherule. Figures 86, 87 and 88, though drawn with more than the average regularity, will give a good idea of the structure alluded to.

89. A few of the cerebral vesicles presented the fibrous ramified appearance here depicted.

HYDATIDS.

On the 23d January, Dr. Jones gave me some hydatids, part of a large mass, that had been recently discharged from the uterus of a colored woman, under the treatment of Dr. Thomas Hunt. They were slightly connected, of a white color, ovoid and spheroid in shape, and of all sizes, up to the bigness of a Malaga grape. The smaller ones contained a clear, albuminous fluid. In the larger, the contained fluid manifested a slight degree of milky turbidness; and this fluid, examined with the microscope, proved to contain myriads of cells and clusters of cells, appearing as represented in Fig. 90—spherical corpuscles, with numerous nucleoli. More rarely these cells appeared as shown by 91, the nucleoli appearing few and obscure.

To the internal surface of the immature hydatid sack, similar cells and clusters were seen attached.

The membrane or sack constituting the hydatid, was of a mixed fibrous and granular structure; the granules appearing to have a perfectly spherical form. Vide Fig. 92.

TAB. X.

[1000 *diameters.*]

PATHOLOGY.

BRONCHIAL MUCUS.

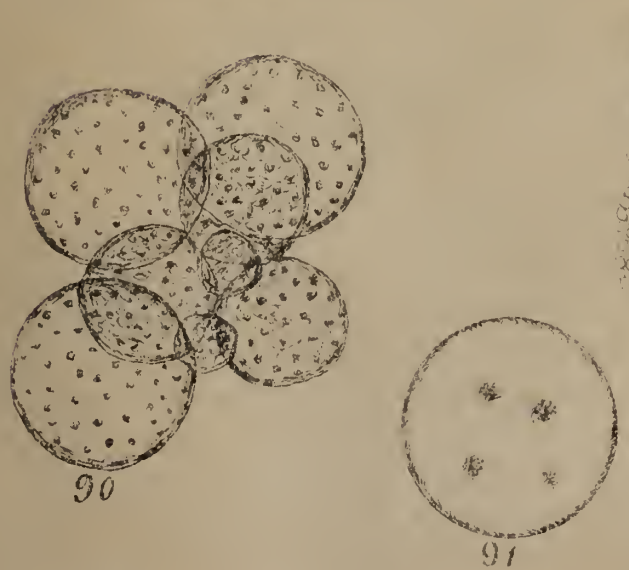
Figures 93 to 97 represent the forms of mucus corpuscle, which were seen to prevail in a sample of bronchial mucus. The sample examined February 1, was expectorated after breakfast, by a middle aged gentleman, who had labored two weeks under a cold. The mass, of near ten grains weight, was tenacious, and very viscid. In it, dark specks were visible to the naked eye, resembling coal dust. It was necessary to mix a little distilled water with the mucus, before it could be well viewed with the microscope.

95 contained black, ragged masses. The contents were not observed to manifest molecular movements.

The granules contained in 93, 94, 96, 97, 98, were about one fifty thousandth part of an inch in diameter; and were noticed to manifest the active molecular movement, or swarming, so often seen by microscopic observers, in the lower algæ.

ALGOID GROWTHS FROM THE URINARY BLADDER IN A DROPSICAL PATIENT.

On the morning of the 4th February, Dr. Josiah Hale, one of the attendant Physicians of the Charity Hospital, brought me a phial of the fresh urine of a dropsical patient, under his charge, accompanied by the following memoranda:



From nature, Engr on stone by J L Riddell

TAB. X


96


93


94

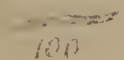

95

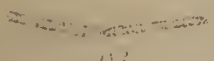

98


97


99


102


100


101


103


104


106


105


107


109


111


108


110

From nature. Engraved on stone by J. L. Riddell.

"Patrick Dogherty, æt. 34, a hard drinker, native of County Sligo, Ireland, was attacked seven years ago, in Attakapas, with intermittent fever, with enlarged spleen, followed, after eleven months, with ascites, for which he was twice tapped. He subsequently so far recovered as to enjoy pretty good health during the summer. His dropsy returned about the middle of January this year. At present, the girth around his abdomen is 42 inches [his height is 5 feet 7 inches] ; spleen much enlarged, complexion sallow, breath fetid, general emaciation, urine scant, and high colored."

Upon examining this urine, immediately upon receiving it, I discovered abounding in it, two species of organized growth, apparently of the nature of algæ.

99, 100, 101. Moving worms, single, (100)—double, (101)—and complex, (99). They are often jointed irregularly together, and manifest the animalcular movements, which are witnessed with some of the algæ.

102, 103, 104. Algoid cells, vaguely concatenated, frequently containing obvious nuclei ; altogether much resembling, though smaller, and otherwise different, from the cells of Tortula Cerevisiæ, *Turpin*, which develop in diabetic urine. Perhaps these cells belong to the genus Penicillum. (Vide Bird's Urinary Deposites, Phil. Edition 1851, page 282.)

PULMONARY TUBERCLE.

On the 12th February, a patient, æt. 50, died in the Charity Hospital, of disease of the heart. By post mortem examination, a few tubercles were found in his lungs,—none of them mature. Dr. Hale brought me one for examination, rather hard, about one fourth of an inch in diameter. Some of the interior of this tubercle cut out, and its substance diffused in part in distilled water, presented the organized forms represented by Fig. 106 to 111. Most of the granular matter seen was more anomalous and irregular in form.

105. Irregular appearance of a fragment of tubercle.

106, 107, 108. Caudated cells, with nucleoli, apparently in a state of transition towards fibrous structure.

109, 110. Elongated cells, containing nucleoli.

111. Spherical cell, containing nucleoli.

None of these nucleoli were observed to manifest molecular movements.

II.—ALABAMA INSANE HOSPITAL.

We are gratified to learn from Dr. A. Lopez, of Mobile, that the Legislature recently in session at the Capital of the State of Alabama, has passed a law establishing and endowing very liberally, an Insane Hospital, to be erected at Tuscaloosa, for the reception and treatment of those afflicted with mental diseases. The State of Alabama grants $25,000 annually, for four years—the necessary buildings are to cost $100,000, and thus endowed, Alabama will set

an example of liberality to the Southern States, which few of her sisters has equalled.

We are gratified to perceive that a committee of both Houses has selected Dr. Lopez to visit the principal Asylums of the United States, in order to ascertain the best and most improved method of constructing such an Hospital,—the internal police of our Insane Institutions,—and also, to make himself acquainted with the best mode of treating their unfortunate subjects. Into better or more competent hands this important trust could not have been committed. We congratulate Dr. Lopez on the success of his mission to the Capital of Alabama.

MOBILE, January, 31st, 1852.

To the Editor of the New Orleans Med. and Surg. Jour.

SIR—In Vol. 1, No. 6, May, 1845, of your valuable Journal, I recorded a case of successful extirpation of the eye ball, for cancerous tumour, and to which reference is now made. The case would probably have passed away from memory, and been buried "in the tomb of the Capulets," or if referred to, been regarded simply as a successful operation, if the sense of duty which I owe to the profession, and the dictates of humanity, did not impel me to acquaint you with the fact, that although seven years have elapsed, the patient has continued in good health, and has had no return of disease.

The tumour was pronounced to be carcinoma by several eminent surgeons and such was my opinion, in consideration of which, and that this disease is as much an opprobrium to Surgery, as Phthisis is to Medicine. I record this cure, hoping it may be a beacon to some—a relief to others—giving still a hope to the Surgeon and his patient.

Yours, respectfully,

E. H. KELLY, M. D

CIRCULAR.

PARIS, (France) January 10, 1852.

At a recent meeting of the American Physicians in Paris, an Association was established, whose object is the promotion of Medical Science. This Association, essentially national, is now progressing under the most favorable auspices; it is intended to be permanent in its nature, and is designated the *American Medical Society in Paris.*

Notwithstanding the vast advantages afforded by the French Metropolis, for the study of Medical and Surgical Science, we feel ourselves isolated from our national medical literature, and, therefore, appeal confidently to the conductors of American periodicals and Journals.

We do this with the less hesitation, feeling assured, that it will be not only a medium of improvement to ourselves, but a means of a more general diffusion and just appreciation of American literature.

By order of the Society,

ALEXANDER J. SEMMES, M. D.,

Cor. Sec'y of the American Medical Society in Paris.

N. B. Editors of secular and professional journals will confer a favor by copying the above Circular.

THE WOUNDED IN THE LATE DISTURBANCES AT PARIS.

L'Union Medicale states that most of the wounded insurgents taken prisoners at the barricades, are being treated in the various hospitals. The Hotel Dieu has admitted the greatest number of cases. On the 8th there were thirty insurgents under the surgeon's care; La Charité had twelve; and the Hospital San Antoine, as well as Ste. Marguerite, though very near the scene of the conflict, have only had sent to them a few of the wounded. The number of cases in the civil hospitals has not altogether exceeded 138 cases, wounded soldiers included. Most of the latter, however, have been since carried to the military hospitals. The Hotel Dieu had received thirty-one wounded soldiers, La Charité twelve, the Maison de Santé fifteen, and the Hospital St. Louis as many.

Now that the soldiers have been removed, the civil hospitals return only seventy-nine wounded; ten of these, who could not be removed, are soldiers, and five women. In a tabular form, the numbers are as follows, for the present time:

	Men.	*Women.*	*Soldiers.*	*Total.*
Hotel Dieu,	20	1	0	21
Charité,	16	3	0	19
Ste. Marguerite,	1	0	4	5
Beaujon,	4	0	0	4
Bon Secours,	2	0	0	2
St. Louis,	18	1	6	25
Clinique,	2	0	0	2
Incurables,	1	0	0	1
	64	5	10	79

As to the soldiers, the number of the wounded is as yet uncertain, since the transfers from the moveable hospitals and the civil institutions to the military hospitals, only took place on the 8th. The Constitutionnel, however, states, that the number of wounded soldiers is 107, among whom are three officers, for the most part severely wounded. At the Val de Grace (the military hospital) there are forty-eight wounded, of whom two are officers; at the Gros Caillon (another military hospital) there are twenty-five; and only a few at a third institution called Roule.

The New-Orleans Medical and Surgical Journal.

VOL. VIII.] NEW-ORLEANS, MARCH 1, 1852. [No. 5.

HEALTH AND MORTALITY OF NEW ORLEANS AND LAFAYETTE,

For the 8 *weeks ending February* 14*th*, 1852.

We believe it may be safely asserted, that the thermometer has fallen lower during the winter which is about to pass, than has been observed in this city at any time during the last forty years. For details on this subject, we refer to our Meteorological Table, at the close of the Journal. About the middle of January, 1852, a snow fell to the depth of six or eight inches, and the thermometer for a few days ranged from 15 to 20 degrees above zero, in a fair exposure. Indeed the freeze was so excessive and intense, that all vegetation drooped and withered before the hyperborean blast. It is apprehended that much damage has been inflicted upon the plants, shrubbery and orange trees of Louisiana. Notwithstanding this unprecedented cold weather, our citizens, although shivering before a blast, to which many of them were so little accustomed, experienced no material change in regard to health,—indeed the cold weather seemed to favor public health, as our mortality during this period fell below the usual number, as will appear from the annexed statement:

Interments in New Orleans and Lafayette, for the 8 *weeks ending*

1852		*Total.*	*Fevers.*	*Cholera.*
December	27th,	105	10	0
January	3d,	111	9	4
"	9th,	102	12	0
"	17th,	103	11	1
"	24th,	112	7	0
"	31st,	122	16	0
February	7th,	116	15	0
"	14th,	105	9	0
	Total,	876	89	5

Of this number, 321 were under 10 years, and 169 colored.

The above figures would lead to the conclusion, that a low range of the thermometer is decidedly favorable to the health of our city ; and since the week ending the 3d of January, not a case of Cholera has been reported by the Board of Health. Typhus Fever still prevails in the large Hospitals, and but for the constant accessions to that disease from *abroad*, we feel convinced that this fever could do us but little harm, and would excite less attention. As usual in the winter, a few sporadic cases of Variola, Scarlatina, Rubeola, &c., have been reported for the last four or five weeks. The city is, at the time of going to press, perfectly healthy.

THE LATE WILLIAM P. HORT, M. D.

It is with unfeigned regret that we are called upon to pay the last tribute of respect to the memory of a departed friend, who, by the inscrutable decrees of an All-Wise Providence, has been hastily summoned from a large circle of friends to the last resting place of all flesh—the mansions of the dead.

The subject of this notice, whose name is prefixed, was born in England, and had recently entered upon his fifty-fourth year. Early in life his father prepared him for college, and at a suitable age to prosecute his collegiate studies, sent him to Oxford, the first classical institution in England, intending his son to take orders for the Established Church. In the course of time, however, his ardent temperament induced him to select some vocation less sedentary in its character, and a situation was obtained for him in some bank, or large commercial establishment. Having gained the confidence of his employers, his services were secured to go to the United States, and having discharged his mission, his taste and inclination induced him to apply himself to medical studies, with the view of making that his profession in after life. It was under the able tuition of Dr. Mott that he graduated in New York, and shortly after wrote a paper upon Quarantine, which was favorably noticed in some of the European journals. From New York Dr. Hort went to North Carolina, and was engaged for some years in a laborious country practice, chiefly upon plantations at remote distances. In this State he was married, and in some few years became a widower. The offspring of this marriage was an only daughter, now about eighteen years old, who, in point of intellect and force of character, is a counterpart of her lamented parent. In her the pride and joy of his heart were centred, and with a tenderness and solicitude rarely equalled, and that will scarcely be surpassed, her wants were ever anticipated, and her wishes cheerfully complied with.

At this time, being somewhat inclined to roam, he made a temporary residence in Florida and Georgia. At length Louisiana became his permanent home, and in Opelousas he was engaged in an extensive and lucrative practice for some years. Through the agency of friends in Georgia, and in Opelousas, Dr. Hort, in 1837, (the time at which the Branch Mint in New Orleans went into operation) received the appointment of Assayer in that institution. The fidelity and exactitude with which he has discharged the duties of his office, are best shown by the circumstance of each successive Administration retaining his valuable services; his duties of late, in consequence of the great influx of California gold, have been exceedingly arduous.

His intellectual capacity was of a very high order. He was familiar with the natural sciences, a lover of polite literature, a good linguist, speaking Spanish and French well, and being versed in the Latin and Greek languages; his scientific and medical attainments have been exhibited in his writings, which were characterized by laborious research, extensive reasoning and methodical arrangement, ever striving, by the force of argument, to elucidate truth, rather than to captivate his readers by fanciful illusions and imaginative essays.

He was an early and able contributor to the New Orleans Medical and Sur-

gical Journal, and amongst his first productions in that valuable periodical, was an article entitled "An application of the Philosophy of various terms of Matter and the Laws of Motion, to the Explanation of the Phenomenon of the Phosphorescence or Luminosity of Animals, Plants and Gems." In subsequent numbers of the same journal his contributions have been numerous; embracing remarks on Cholera—"Its contagion—its animalcular origin—its mode of propagation," etc.,&c. Several papers respecting the distinct and independent vitality of the human blood. His more recent articles have been upon the Microscopical appearances of the Blood, and the Vital Statistics of New Orleans, with numerous reviews and notices of the books of others.

It would be inexpedient on the present occasion to bring before the reader any more than the mere name of some of the writings of Dr. Hort; those who desire to become acquainted with his writings, will find no better plan than to pursue him in his own words in the Journal already indicated.

To the high mental acquirements of Dr. Hort, which would in any position of life render him a prominent man, was superadded a stern, inflexible integrity, a chivalrous spirit, and a love of honor and all truth. His conversational powers were good, and always classical; and whether at the festive board, or in the social circle, in anecdote and repartee, and frequent sallies of wit, he was ever ready; and to promote the comfort and happiness of those around him, was his chief delight. His ear was ever open to the tale of distress, and out of the abundance of a noble and generous heart his worldly means were freely given. With the petty and contemptible feeling of some men, (whose chief aspirations are of envy, and to whom self-laudation is the first of virtues —whose instinct readily points them to the appreciation of *magnanimity in little insult*, and a striving after *greatness by the assumption of retail tyranny!*—) he had no part. Strongly and firmly attached to his friends, he marked their progress with infinite satisfaction.

Besides the official station which he held at the Branch Mint, Dr. Hort was one of the Administrators of the University of Louisiana; and some months ago, the honorable distinction to become one of the "Medical Board of Examiners for the Eastern District of the State of Louisiana," was tendered to him by the Executive of the State, the acceptance of which, in consequence of his onerous duties at the Mint, he was compelled reluctantly to decline.

For about two years we have had the pleasure of being associated with him as a member of the Board of Health of this City, of which body he was not inappropriately termed the father; and in many annual reports emanating from the Board, he was either chairman, or on the committee appointed to draw up the same.

His moral and religious sentiments were in unison with the Christian character, and to the church of his early love (the Episcopal) he continued unwaveringly attached.

We might pursue this sad yet pleasing task to a much greater length, but that we are admonished that the pages of the Journal in which it will be inserted must necessarily be very limited; and even were we under any circumstances

to do so, we might incur the charge of over partiality for an old and valued friend—a condemnation, at which we would not repine. If the caviller will argue, that no blemish in the character of him of whom we write is apparent—our ready answer is, that human perfectibility is not the lot of frail humanity! And to such we will only suggest, that should they have discovered failings, (if such there were) which they would desire to avoid, they will earnestly endeavor to imitate his countless virtues.

The sickness of Dr. Hort was short, and of such character for the last twenty-four hours as to give little hope of recovery; that hope speedily fled with the last breath of his earthly existence. The "ruling passion strong in death," was in him fully exemplified, for in those last hours he was almost constantly quoting his favorite author, Horace, and earnestly addressing those around his bed in Spanish and French. One request a few hours before his death was, that all who were engaged in the Mint might have a good dinner prepared at some hotel in the city, on the fourth of July next, at his expense.

In closing our remarks upon one, with whom we have had almost daily intercourse for some years, we can only deeply regret that society has lost a valuable member; his friends a firm, sincere, and warm adherent; and his only daughter a fond, affectionate and doting parent. To his memory we say—Requiescat in pace. G. T. B.

L'UNION MEDICALE DE LA LOUISIANE.

EDITEUR, CHARLES DELERY, D. M. P.

January and February Nos. 1852.

Both the January and February Nos. of *L'Union Medicale*, under the editorial charge of our estimable and talented confrère, Dr. Charles Delery, have been issued, and it promises, from the evidences before us, to assume a high rank among the medical periodicals of the country. Dr. Delery brings to his new vocation all the lights of a ripe scholarship—a strong attachment to the profession, and a pen not unpractised in the polemics of medical science. The two numbers already issued contain several papers of great scientific interest, and many of them are drawn up with that skill and art in composition, so peculiar to the French school.

We would advise all who can read the French language to subscribe for this excellent Journal. It is issued on the 13th of each month, and will be an able exponent of the views, practice and achievements of that portion of the profession in Louisiana, which claim to be of Gallic extract.

Whilst on the subject of Journals, we may say, *en passant*, that the *New Orleans Monthly Register* is gaining rapidly upon the public favor, and has already been made the vehicle of several valuable papers.

SEVERE WOUND OF THE THROAT—DIVISION OF THE LARYNX AND ANTERIOR WALL OF THE PHARYNX—RECOVERY.

REPORTED BY ———.

In the year 1845, a Frenchman, aged about 40 years, of short stature, and stout, was admitted into the Charity Hospital, on account of one of the most remarkable wounds recorded in the annals of Surgery. He was a gardener by profession, and according to his own account, had been working in the sun, (it was in the middle of August) which caused him to fall ill of a brain fever, attended with a high degree of delirium. His illness had lasted four days before his admission to the Hospital,—when, on the evening of the fourth day, he seized a razor on the table, in the hut where he was, and inflicted a wound on his throat, such as is mentioned above. The razor had entered the upper part of the thyroid cartilage, which it divided, and passing beneath the os hyoides, had entirely divided the larynx as well as the anterior wall of the pharynx. In consequence of the wound being so high in the neck, and the position of the head, which was thrown back, when it was inflicted, the patient having assumed an attitude like one about to be shaved ; no blood-vessel of any consequence had been divided; and at the time of his admission, all hæmorrhage had ceased. The great difficulty which presented itself then was, how was the man to be nourished? All the nourishment taken in at his mouth immediately ran out of his wound; which, as he stood up, was wide gaping, and horrible to behold. The only resource then was, the stomach-tube. This was introduced with great care through the left nostril, pressed gradually backward and downward, until it appeared behind the palate ; then, with a pair of long forceps, it was pressed in its downward passage against the partition wall of the pharynx, when it soon made its appearance at the wound. By means then of the fingers, the end of the tube, in its descent, was guided into the œsophagus, and without further difficulty was conducted past the cardiac orifice into the stomach. Now, by means of a small pewter forcing pump, belonging to a glyster pipe, the stomach was filled with milk or broth at his different meals, and the man was well nourished. After each meal, the patient withdrew the stomach tube himself, and in a few days he gained such confidence in the use of it, that before a looking-glass he was able to introduce it himself, and pump his stomach full of nourishment without the aid of any one. Hardly had a week passed before he was able to dispense with the looking-glass, and to introduce the tube merely by his sense of feeling.

The wound gradually contracted from its extremities, and got so small that he could not insert his finger into it to guide the tube ; but this act, he found, was no longer required, as from force of habit he had gained such skill, that he could pass it through his left nostril and into his stomach without difficulty. At the end of about six weeks he was able to swallow, by which time the wound was entirely healed ; and full of gratitude for his treatment, a few days later he left the Hospital.

Many months afterwards he was seen at his daily work on the Levee, com-

plaining of nothing, save that his voice had degenerated into a mere whisper, by reason of the injury inflicted by the wound on the vocal chords.

Many physicians now in the city will remember the case. It is worthy of remark, that no sutures were used to bring the lips of the wound together—such practice only being resorted to in cases where incised wounds of the throat do not penetrate the larynx or trachea. The lips of the wound were in this case merely kept in contact by the position of the head, which the patient was advised to throw forward as much as possible; and also, by the application of a triangular bandage made of a handkerchief, which was passed over his head, and the two long ends were attached to a belt around his waist.

Experience shows, that not more than eight per cent of those who attempt suicide by cutting the throat, are successful, as they generally cut so high in the neck, that the large arteries entirely escape, from the well known anatomical fact, that low in the neck, just after their emergence from the chest, the carotid arteries are most superficial, and that they are deeper as they ascend to the head.

The reason for not applying sutures to the wound is obvious; because, should hæmorrhage break out afresh, it is all-important that the blood should find its way out, instead of into the trachea. When called to a case of this kind, the proper practice, in my opinion, is, to arrest the hæmorrhage without delay, by the application of ligatures or torsion to the wounded arteries; then to approximate the lips of the wound by position and a proper head bandage; then to apply any simple dressing to the wound, which may be retained in its place by a broad cravat. In case of inability to swallow, the stomach-tube may be used, the introduction of which, provided it be of proper size, is attended with far less difficulty than many persons imagine.

CASE OF PUNCTURED WOUND OF THE ABDOMEN, INVOLVING THE INTESTINES—ARTIFICAL ANUS---RECOVERY.

About four years ago, a young man, aged 25 years, in an affray was stabbed with a pocket-knife in the abdomen, on the left side, midway between the umbilicus and the anterior and superior spinous process of the ilium. The wound in the abdominal wall, as well as that of the intestine, was nearly an inch in breadth. As soon as he was stabbed, the intestine protruded, but it was immediately returned by a bystander. On his admission, the fæcal matter was voided freely by the external wound. Finding such to be the case, a warm poultice was merely applied; antiphlogistic regimen was enjoined; he was afterwards put under the constitutional influence of mercury, and kept quiet. The fæces gradually resumed the natural route; the external wound contracted, and by the end of a month it had closed entirely, when the man left the Hospital, declaring, that save for his weakness, he never had felt better in his life. In this case, the adhesive inflammation had glued the intestine to the abdominal wall, so that the opening in the intestine continued to correspond with that in the wall. In a case where this did not occur, the attachment of the wounded

gut to the wall, by means of suture, would be the only course to pursue; but in the example just cited, nature had obviated the necessity of any such proceeding. Perhaps, too, the natural position of the wounded gut had served to keep the two wounds in that apposition indispensably necessary for recovery.

New Orleans, February, 1852.

A CASE OF VAGINAL TUMOUR IN A YOUNG WOMAN—TAPPED FOUR TIMES.

By D. Macgibbon, M. D., *Visiting Physician to the Charity Hospital, New Orleans.*

Johanna M———, aged 18 years, sandy complexion, a servant girl, unmarried, came into the Charity Hospital on the 17th June last, under my care. She stated, that twelve months ago she first noticed a tumor protruding from her private parts. She was not, she said, conscious of its gradual descent. When she first noticed it, it protruded about half a finger's length; and she knew no cause for its production. She had been in excellent health, and also regular in her monthly courses, up to this period; but after the appearance of the tumor, these ceased, and remained absent five months. During this period, her chief annoyance was caused by a dragging down sensation at the bottom of her belly, which made her often desire to get into a sitting posture. She was, however, able to keep her situation, and she said nothing to any one about her condition.

After remaining down in this position for the space of six months, her menses again returned, and with that the tumor so far lessened in bulk, as to pass within the external labiæ; which position it occupied at the period of her admission into the Hospital.

She remained comparatively free from annoyance since the tumor first appeared, up to two weeks preceding her entrance, when she began to experience in the lower part of the abdomen, pains of a darting character, and of a sufficiently severe kind to compel her to seek for assistance. The physician of the family where she was employed saw her, and by his advice she came into the Hospital. These became worse in the evenings; and for some nights preceding her admission, she represented that she had rested but little on their account.

In the uterine region, a ridge-shaped tumor could be readily felt, through the abdominal parietes, extending from the symphysis pubis upwards, to within two inches of the umbilicus; and in the left iliac fossa, a large irregular tumor could be felt in the same way; this, seemingly, was connected with the former. These masses, when pressed upon, gave some pain. The whole was slightly moveable by the hand from side to side; but was in no way affected by the position which the patient's body might be made to assume.

The lower part of the abdomen, when measured by a line taken from the umbilicus to either of the superior spinous processes of the ilium, was demon-

strated to be fully an inch larger on the left than on the right side. No feeling of fluctuation could be detected in the parts referred to.

Per vaginam, a large tense tumor could be felt through the anterior wall of the vagina; filling up the passage, so as barely to permit the finger's passing up between it and the posterior wall of the same. The upper part of that canal could not be reached by the finger; nor could the *os uteri* be reached, to ascertain any thing of its condition. The most dependent portion of the tumor, of a globular shape, and of a fibrous appearance, streaked with fleshy lines, could be readily seen peeping, as it were, from between the labiæ. In the anterior mesial line, the finger could pass up in front of the tumor, and between it and the urethra, the length of this latter, but no higher. The anterior wall of the vagina was greatly distended, and it evidently formed the free wall of this sack, which was tense with some fluid or other, as evinced by the sense of fluctuation it gave, when pressed upon by the finger. Pressure upon the lower portion of the abdomen, while the finger was retained on the vaginal tumor, increased, in a very perceptible manner, the feeling of tension in the latter.

She had usually some difficulty in passing both her fæces and urine. A catheter could be got readily to pass into the bladder, showing, at least, that this viscus did not form any portion of the tumor, as it sometimes does, by getting into a state of procidentia, from being pressed upon by ovarian tumors.

As already mentioned, her chief annoyance when she entered was, from the lancinating pains referred to. The tumor was so long there, that in itself she did not mind it much.

The nature of this vaginal tumor was not well made out. That it was in some way dependent on the diseased condition of the parts occupying the uterine and left ovarian regions, was the impression conveyed to my mind. That there was now active disease going on in these parts, whatever there might have been at first, was but too evident, both from the enlargement found, and the pain experienced. But the nature of that disease remained somewhat doubtful; though the length of time that had elapsed between the first symptoms of the disease and the occurrence of any severe suffering, together with the general good health of the patient, rendered it more than probable that there was nothing of a malignant character about it.

For treatment, she was put upon the Proto-iodidi Hydrarg.; and to relieve her pains, she was ordered a grain of sulphate of morphine each night. This treatment she continued for some time.

The lancinating pains in the uterine region became gradually, after admission, more and more severe. They extended also down in the course of the vagina. The tumor in this latter became more tense; and the enlargement and tenderness in the lower part of the abdomen had also become greater. On the 8th of July it was determined to open the vaginal tumor and give exit to its contents. A trocar was accordingly introduced into the most dependent part of it, when about a pint and a half of black, ropy fluid escaped, through the canula. A portion of this I preserved; and I also, on the same day, gave a specimen of it to Professor Riddell, for microscopic examination, who found,

besides pus, blood globules, &c., some cells of a crescentic, and others of a fusi-form shape. These latter were of a more rare kind, and might, that gentleman supposed, be of a malignant character. But nothing important was revealed by the inspection.

The discharge from the sac ceased the day following, and she found her condition greatly relieved by the operation. The finger introduced into the vagina, found the tumor quite diminished; a cord-like substance, to the feel, occupied the anterior wall of the vagina, along its mesial line, as high up as the finger could reach. The *os uteri* could now be felt; and both it and the cervex felt natural; but the body of the uterus itself was found to be enlarged. The tumor in the abdomen, also, had been evidently diminished by the operation; she was able to void her urine and fæces with more facility than previously. She passed the period when her courses should have appeared, without any thing being seen. She continued her medicine, and was for some days nearly free of all annoyance, when the same pains again returned, and this time with more severity than ever. The following note, made at this time, will best decribe her condition:

"July 15th. M. does not feel so well this morning. The tenderness in abdomen has again returned; the portion of tumor in region of left ovarium is especially tender when pressed on, and it is also enlarged. A good deal of pain is also experienced in vaginal tumor, which is becoming again distended as before."

Hysteritis and ovaritis set in with some violence. She was cupped over the sacrum for this, with some relief of her symptoms; and she had also tepid baths with advantage. She had anodyne poultices to abdomen, while the pains lasted.

There was, at this time, an accession of febrile symptoms at night, and with a view of checking these, she had, on the 18th, a draught, containing a scruple of sulphate of quinine and a grain of sulphate of morphine, with some relief. On the day following she had the same draught administered, when the more severe symptoms abated; but the enlargement of the abdomen went on until it reached the same size as before; and the tumor in the vagina had become even larger than when it was previously opened.

On the 22d it was again opened, and this time with a common lancet. The fluid which escaped was of the same dark, ropy character as that which previously came away; but it was this time very fœtid, and even more abundant. The operation was followed with the same relief to all her symptoms, as on the preceding occasion; but her general health had suffered from the severe pain and protracted confinement to which she had been subjected. Her appetite had considerably failed. She was, at this time, put upon a solution of *protoiodide ferri*; and had port wine, with light, nourishing diet allowed her. The following note of her case occurs on the 14th August:

"M. has been keeping for some time back rather better; sits up in bed, and employs her time in sewing for the house. Takes her food well, and sleeps well. Is still, occasionally, more or less annoyed with darting pains, but of a slight character, in the old quarter. The swelling in the vagina has been gradually increasing in the interval, until, now, it is as large as at any former pe-

riod. The abdomen has also been enlarging; but has not reached the same point as before. Measurement of the lower abdomen shows a difference of half an inch only between the left and right sides. The mass there has, however, the same irregular feel, when examined through the parietes, as that formerly noted. But there is much less tenderness, on pressure, than when the recent inflammation and accumulation of fluid took place."

The tumor was punctured this morning, with the patient in the erect position, when about the same quantity of (this time) yellow, gelatinous looking pus flowed into a hand basin, placed for the purpose at her feet. This had no bad odor whatever. After the more fluid portion had escaped, a gelatinous-like cord hung a few inches from the wound; this was gradually pulled out three or four feet long, before the substance was exhausted. When spread out, it had a membranous appearance, and destitute of all traces of organization. The gelatinous character of the fluid resembled much what we sometimes obtain from ovarian sacs.

The general improvement previously observed in her condition, went on; she continued the same solution still, and had full diet. She was also able to be up and moving about the house, without suffering any inconvenience.

The fluid again accumulated in the vaginal tumor; this time, however, much slower, and with but little accompanying annoyance. It was opened before the same degree of distention had been permitted to take place; the patient herself, from her previous experience of relief from the operation, rather desiring than objecting to it. The fluid was of the same character as that of the preceding occasion. This was on the 17th September, nearly a month from the last operation; and two days after she was moving about as easily as ever. She had not menstruated since she entered the house. Her general health was, nevertheless, quite good; and as it was her desire to go out, she was discharged on the 22d September, promising to return, should the tumor render that necessary.

On the 20th December she called at my house. She stated that she had been in right good health since she left the Hospital, and that she had her courses regularly every three weeks since then. That up till five days ago she experienced no annoyance whatever from her old complaint, when she began to feel some uneasiness when she would sit down. She was, however, conscious, previous to this, that the tumour was again filling in the vagina. Digital examination showed the cyst to be distended with fluid, though that was not yet so large as on the previous occasions. The region of the left ovarian felt somewhat tender when pressed upon. She was anxious to have the cyst opened soon, before experiencing any further annoyance from it, and mentioned that she had given up her place for a few days, with the intention of entering the Hospital for that purpose, which she did that same day. Here she passed into the hands of Dr. Cenas, but before any thing had been done for it, it burst of itself, at the old point, on the morning of the 26th, while she was asleep in bed, giving exit to a quantity of darkish colored fluid, something like, she said, what came away the two first times, but without any smell. She experienced

so much relief from this occurrence, that she expected to be out and at her service again in a day or two after.

If it be simply a pelvic cyst which thus finds its way to this point, then the occasional filling of it up may be the worst feature about it. The ovaritis and other circumstances connected with the case at the outset, made me, however, feel, that there was considerable probability of its not being altogether of this simple character. I am anxious to learn more of it, and she has promised to see me again, if necessary.

Charity Hospital, January, 1852.

"TRIBUERE CUIQUE SUUM."

We have for some time noticed, that certain of our cotemporaries frequently copy articles from our obscure sheets, forgetting to award the customary credit. For this injustice we feel aggrieved, and although disposed, through charity, to ascribe it to an oversight on the part of editors, or the neglect of the printer, yet we beg, in a spirit of confraternity, to invite the attention of such to this our cause of complaint. In one or two instances we have failed to give the proper credit, chargeable alone to the printer; and yet we received a cutting rebuke for this unintentional omission. In the regular receipt of several *French* journals, we, after considerable labor and time, translate, in an abridged form, such articles as may appear to us of much practical utility,—and in due season, when our excellent and valuable exchanges reach us, we are not a little surprised and mortified to find the same articles copied into them, giving the credit alone to the French journals.

"He that filches from me my ———
Steals trash."———

TO OUR DELINQUENT SUBSCRIBERS.

The 8th volume of the Journal is rapidly drawing to a close, and we regret to find that a large number of our subscribers are in arrears to us for the amount of their subscriptions. To those who have paid us promptly and regularly, we return many thanks, and can assure them, that without their aid, we should have thrown down our pen in despair. Many are indebted to us for two or more years' subscription to the Journal; and we now call upon all such—those of them especially who are actuated by just and honorable feelings, to remit us their dues by mail, at our risk. We desire no subscribers on our books who are not willing to pay the price of subscription. "Verb. sapientibus."

Mr. Henry Green, whom we commend to our subscribers and friends in Mississippi, is duly authorized to procure subscribers and receive moneys for the New Orleans Medical and Surgical Journal.

Mortality in the City of New-Orleans and Lafayette, for the year 1851. *With a Classification of the Diseases.*
(Prepared from the Records of the Board of Health.)

DISEASES.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.
Zimostics - - - -	64	187	183	314	305	295	268	154	176	166	224	136	2572
Sporadics - - - -	31	41	35	37	32	28	39	36	43	46	45	50	463
Nervous System - - -	85	93	111	97	105	94	131	151	127	108	104	81	1287
Respirative do. - - -	120	99	134	98	78	64	57	61	67	71	92	102	1043
Circulative do. - - -	13	10	14	14	10	8	7	8	3	8	9	10	114
Digestive do. - - -	48	38	59	65	63	96	83	49	57	33	47	36	674
Urinative do. - - -	1	0	5	0	0	0	3	3	1	0	0	0	13
Generative do. - - -	2	4	4	5	4	4	4	3	3	1	3	2	39
Locomotive do. - - -	1	1	1	1	2	1	2	2	0	1	1	3	16
Integumentive System - -													00
Old Age - - - -	17	10	9	14	3	5	3	8	4	9	9	9	100
External Causes - - -	25	15	17	28	31	25	12	24	28	32	16	17	270
Not Specified - - -	90	62	68	52	67	48	57	43	43	47	53	54	684
TOTAL.	497	560	640	725	700	668	666	542	552	522	603	500	7275

Of which number there died under 5 years - - - - - - - 2,586
" " " " " " 10 " 257
TOTAL. 60 years and over " - - - - - - r - 284

A glance at the above Table shows at once, that the *Zymotics* take the lead in the great work of death—amounting, in the aggregate, to 2,572. Next, in the magnitude of its numbers, is the class ranged under the diseases of the "*Nervous System*," being 1,278—a fraction above one half the deaths by the Zymotics. The third class in numbers, comes under the *Respiratory System*, reaching 1043. Hence, it appears that the Zymotic class outnumbers both the Nervous and Respiratory Systems.

The Table also shows a very small mortality from diseases of the "Urinative System," (16) which can partly be explained on the ground of favorable climatic influences on our population. Again, can we not account for this remarkable exemption from serious diseases of the *urinative* organs, by reason of the vicarious activity of the cutaneous surface, superinduced by a warm, often humid, and for the most part, genial climate ? That there exists a compensating sympathy between the skin and the urinative organs, is a well attested fact; and the "million" know that in warm weather, when the cutaneous surface eliminates a large amount of perspirable matter, the urinative organs are, in the same ratio, relieved in part of their accustomed burden. Hence, the simplicity and curability of affections of the urinative system in the latitude of New Orleans.

Of the 7275 deaths for the year 1851, in this city and Lafayette, 1871 perished in the Charity Hospital—more than three fourths of whom should be deducted from our resident population.

Although no deaths are embraced under the "Tegumentive" System—yet, perhaps, on a strict analysis of the causes of death, a few cases might be found under this head. We are persuaded, both from our own and the experience of other physicians of this city, that obstinate and chronic diseases of the tegumentary system are of infrequent occurrence in our climate. We sometimes meet with an imported case,—which may have resisted treatment elsewhere,—but even the same remedies which had previously failed in other climes, will succeed when brought to bear upon the disease in our latitude. Let those thus afflicted avail themselves of this important hint, and remember, that if, as the Latin Poet observes, a change of climate does not always affect the mind,—yet, in many instances, it will aid essentially in modifying the covering of the body.

CHARLESTON PREPARATORY MEDICAL SCHOOL.

Those interested in the subject of medical education, are directed to the circular in the business department of the Journal, of Doctors Miles,Cain, Porcher, Flagg and Prioleau, of Charleston, South Carolina. These gentlemen, of acknowledged talents, and already experienced in teaching, propose to establish a Preparatory School of Medicine, for the benefit of those who may wish to acquire the elementary principles of our science, prior to entering upon a full course of lectures. We commend their new enterprise to the fostering care and patronage of the medical profession throughout the South and West.

NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.

This number contains a large amount, and a great variety, of *original* matter—embracing, for the most part, such information and useful hints, on practical *Medicine* and *Surgery*, as are rarely to be found in any of our previous numbers. We are striving to give position, rank and influence to our Journal, and if our subscribers and the friends of the work will continue to cooperate with us, we shall be enabled, in a short time, to embody a mass of facts, on *practical* medicine, which, we believe, will redound to the credit of Southern Medicine, and impart additional zeal to the cause which we have espoused.

This number goes forth embellished with the original microscopic observations, made by Prof. Riddell, on morbid structures and pathological specimens. Both in accuracy and artistic finish, these cuts will reflect credit upon him who made and executed them. These microscopic observations, on the minute structure of morbid growths and abnormal products, will be continued in our future numbers.

Every day brings with it accessions to our list of subscribers; and from this fact we conclude, that our humble efforts, in behalf of the medical profession, are duly appreciated—not to say, over-estimated. Our exchange list embraces every *American*, and a large number of *Foreign* Medical Journals—thus offering a field for our selections, which is as varied as it is rich and fruitful. As our means and facilities increase, we shall amplify and enrich the Journal. Such is the aim and object of our ambition.

MEDICAL MEN AS WITNESSES IN COURT.

It is confessedly the duty of every good citizen to aid in carrying out the laws which protect him and his property, and to contribute his mite in promoting the cause of justice and of truth. Thus far he may be made to act. But when our Courts assume the prerogative to compel medical men to come into Court, and there discuss and expound questions of a purely medical and scientific nature, we think a decent respect for the fraternity should prompt our Courts of *Justice* to allow a fair equivalent for such professional testimony, without which neither the ends of justice nor the rights of man could be secured. In all our large cities, where much litigation is carried on, and where many deaths are brought about by violence, the opinions and evidence of medical men are constantly in demand; and the active practitioner is almost daily cited to leave his patients, and to appear before our Criminal Courts, to describe the nature, extent, effects, etc., etc., of wounds and other serious injuries—by which death may have been brought about in certain cases. Without such investigations, we know, the course of justice would be obstructed; but as the testimony is strictly on *professional* points, and involves a serious responsibility, we do contend that the *medical* witness, for this compulsory assumption of responsibility, and the time consumed in waiting upon the "law's delay," should be suitably rewarded as in other cases beyond the precincts of the bar, where his professional opinion is solicited.

We have been induced to allude to this subject,not only because we have often been summoned in such cases, and that, too, when pressed for time, but also on account of the oft repeated complaints which have reached us from a number of our medical friends of this city.

We know some Surgeons and Physicians, who positively refuse to attend, when summoned, persons who may be wounded in street skirmishes, and combats, alleging for reason, that their evidence may be required in Court, in the case, and they are unwilling to take part in any such proceedings—to the serious loss of their time, and the neglect of their professional business. If the State were to allow a fair and liberal fee for such services, the community would be benefitted, and the great interests of humanity subserved.

TO THE SUBSCRIBERS OF L'UNION MEDICALE DE LA LOUISIANE, AND TO THE PUBLIC.

Through the patronage of the public, and the aid and encouragement of the Physicians, *L'Union Medicale* is now permanently established.

To aid him in his editorial labors, and to give greater interest to the pages of the journal, the undersigned has associated with him Dr EDWARD MARTIN, of this city. L'Union Medicale will hereafter appear with 32 pages,without any additional charge.

CHARLES DELERY, D M P.

New Orleans, March, 1852.

UNITED STATES MARINE HOSPITAL, NEW ORLEANS.

P. B. MCKELVY, SURGEON.

Remaining in the Hospital, January 1st, 1851,	83	
Admitted during the year, - - -	1476	
	——	1559
Discharged during the year, - - -	1413	
Died " " " - - -	47	
	——	1460
Total number remaining January 1st, 1852, - -		99

J. WINCHESTER BREEDLOVE, Resident Physician.

ABSTRACT OF A METEOROLOGICAL JOURNAL FOR 1852.

BY D. T. LILLIE & Co., at the City of New Orleans.

Latitude, 29 deg. 57 min.; Longitude, 90 deg. 07 min. West of Greenwich.

WEEKLY — 1851.	THERMOMETER.			BAROMETER.			COURSE OF THE WIND.	FORCE OF THE WIND, Ratio 1 to 10.	Number of Rainy Days.	Quantity of RAIN — Inches.
	Max.	Min.	Range.	Max.	Min.	Range.				
Dec. 25	74.0	32.0	42.0	30.40	30.10	0.30	SE.	2.70	2	1.600
1852.										
Jan'y 1	76.0	46.0	30.0	30.25	30.00	0.25	S..	2.45	2	1 440
" 8	59.0	36.0	23.0	30.30	29.95	0.35	N.	3.00	1	0.320
" 15	72.0	24.5	47.5	30.60	30.00	0.60	N.	2.60	0	0.000
" 22	65.0	16.0	49.0	30.70	30.05	0.65	N.	2.80	2	0.720
" 29	70.0	33.0	39.0	30.55	30.15	0.35	NW.	2.10	1	0.250
Feb. 5	69.0	45.0	24.0	30.45	30.00	0.45	S.E.	2.50	1	0.025
" 12	74.0	45.0	29.0	30.32	29.95	0.37	NW.	2.45	2	0.550
" 19	72.0	43.0	29.0	30.40	29.95	0.45	W.	2.50	1	0.185

The Thermometer used for these observations is a self-registering one, placed in a fair exposure. Regular hours of observation: 8 A. M., 2 P. M., and 8 P. M.

LOUISIANA STATE MEDICAL SOCIETY.

The Annual Meeting of the "Louisiana State Medical Society" will be held on Monday, the 9th of March next, in the Hall of the Medical College. All Licentiates of Medicine and Apothecaries are respectfully requested to attend.

P. B. McKELVEY. Recording Secretary.

New Orleans, Feb. 25, 1852.

ERRATA.

Page 649, line 18, instead of *true* accentuation, read *two*.

Page 649, last line, instead of *gives* a very, etc., read *bears*.

Page 649, last line, the words *of the subject*, must be omitted.

Page 655, line 6, instead of *retelling*, read *refelling*.

ADVERTISEMENTS.

THE NEW-ORLEANS

MEDICAL AND SURGICAL JOURNAL.

MAY, 1852.

Part First.

ORIGINAL COMMUNICATIONS.

I.—THE VITAL STATISTICS AND SANITARY CONDITION OF MEMPHIS, TENN.*

An Anniversary Address, delivered by appointment, before the Memphis Medical Society, on the 5th of February, 1852.

BY GEO. R. GRANT, M. D.

Mr. President and Gentlemen :

Before I had selected, and whilst I was casting about for a subject suited to this occasion, I was induced, from the perusal of several articles on the subject of Vital Statistics, which fell into my hands, to direct my attention to an investigation of the Vital Statistics of this City. My object was to learn, from our *mortuary* returns, our relative *sanitary* condition. The field of inquiry was the more inviting from the fact, that, so far as I knew, it had never before been explored. That the materials with which I had to do the work were few, I was well aware; but I did not know, until I had proceeded a goodly distance along the path of inquiry, how full our few records were of melancholy interest, and gloomy truth. The impression made upon my mind, by the facts

* This interesting paper was prepared for the 3d volume of Dr. Fenner's *Southern Medical Reports*, but as he will not bring out a volume this year, at the request of the author he has kindly handed it over to me. (*Ed.*)

disclosed during this investigation, is so discordant with any preconceived and often expressed opinions, respecting the healthfulness of this locality, that I have concluded to place the data I have collected before you, this evening; and to make them, and the reflections which they may suggest, the subjects for our present consideration.

Before proceeding with the subjects immediately appertaining to our inquiry, permit me to remark, that the *motive* which led me to the investigation of our Vital Statistics, was the conviction, entertained for several years, that Memphis is one of the healthiest places on the Mississippi river; and that a comparison of our sanitary condition with other places in this great valley, and also with other cities in the Union, would conclusively establish the truth of this opinion. In the second volume of the "Southern Medical Reports," edited by Dr. Fenner, of New Orleans, and from other reliable sources, an abundance of materials were to be had, wherewith to institute the comparison. With the statistics furnished by these sources before me, I entered with alacrity on the self-imposed task of searching diligently the records of our Vital Statistics, to prove, by figures, the oft-repeated statements of the press, and of the people of this city generally, that great injustice was done to Memphis abroad, when she was charged, as was often done, with being "*a sickly place.*"

How little dependence is to be placed on mere opinions, and on statements predicated on one's own observation, when compared with the facts demonstrated by figures, we shall have occasion to elucidate by the details I shall presently submit in your hearing.

It is to be regretted that so little attention has been paid, in this city, to the registration of the *dead.* In this, as in many other matters of importance to the well-being of society, we are lamentably behind the times and the age in which we live. Antecedent to the year just passed, there is no record, so far as I have been able to learn, of the deaths that have taken place in any *previous* year. The book furnished by the City Council for the use of the Secretary of the Board of Health, and admirably arranged for the purposes for which it is intended, bears the marks of having been mutilated, and most of the records destroyed, before it passed into the hands of either of the gentlemen who acted as Secretaries for the Board during last year; leaving nothing of any consequence, except the returns kept by them, for our information and instruction.

Some time during the early part of last year, the Board of Mayor and Aldermen passed an ordinance, requiring the sextons engaged in bury-

ing the dead, to make weekly returns of the interments within the city limits to the Secretary of the Board of Health, giving the names, ages, and sex of the deceased, with the name of the disease of which the person had died, certified to by the attending Physician. For non-compliance with the requisitions of this wholesome ordinance, a penalty, in the form of a fine, was imposed, to be collected by the proper officer from the party violating it. That the law has not been enforced, we judge from the fact, that, except the *names* of the deceased, with the *dates* of their burial, nothing else of reliable data is to be found recorded on the book. For even this little, however, we feel thankful, as it has furnished us with at least *one* important item—an approximation to the number of people that have died within the corporate limits of this city during the year 1851.

It is to be hoped that the City Council, with the commencement of the present year, will vigorously enforce the ordinance to which we have just alluded. The name, age and sex of deceased persons, can be readily obtained from surviving friends; and the Physician who attended the case, would not refuse to give the name of the disease, if called on by the sexton, as the law requires. The ordinance is a good one, and the information it is calculated to place on our records, can be made available for wise and valuable purposes; whilst it imposes no onerous duties on those engaged in keeping the mortuary returns.

In addition to the information derived from the records of the Board of Health, through the kindness of the Hospital Physician, I was permitted to examine the books of that institution, and to collect therefrom such data as had any bearing on the subject of our present inquiry. For, notwithstanding the Hospital is located beyond the city limits, it is unquestionably true, that, excepting the few sick persons taken thither from the river, a very large majority of its patients go from the city, and being a part of this population, the mortality there occurring ought, in justice, to be included in our mortuary statistics. It is done, we believe, every where else. The 1884 deaths reported by Dr. Simonds as having taken place at the Charity Hospital of New Orleans, in 1850, is by him added to the mortality of that city for the same year, and aids materially in increasing its enormous per centage of deaths.

For *comparing* our sanitary condition with that of other cities, it is to be regretted, as I before remarked, that we have no regularly kept bills of mortality for a series of years. The returns of one or two years only do not furnish a sufficiency of data for this purpose; as these one or two years may have been unusually *healthy*, or uncommonly *sickly*. With us, the latter was the case last year. It is generally conceded to

have been among the sickliest, if not the most unhealthy, of any season that has preceded it for the past ten years, or since Memphis began her rapid increase in population. A fact which will be but too truly apparent when we come to show its great fatality.

Important information respecting our comparative sanitary condition can be derived from the census returns taken of the County, by the Deputy Marshal, embracing the period included between the 1st of June, 1849, and the 1st of June, 1850. These returns we have carefully examined, and find that a separate table has been kept by that officer of the Vital and Mortuary Statistics of Memphis proper; and also of the County at large, exclusive of the City. As these statistics have a priority of date to those of 1851, and being, moreover, of great value in estimating our sanitary condition during the period embraced by them, I shall introduce the important facts which they disclose before entering upon the returns collected from the past year. The vital and mortuary statistics contained in the late census returns, when compared with similar statistical returns of other places, will aid materially in forming an opinion of the sanitary condition of this City; and, if we are not greatly mistaken, will but too surely prove, that the causes of disease and death have been busy in other seasons than the past.

The *white* population of Memphis, according to the census of 1850, was 6,369. Of this number 3,587 were males, and 2,782 were females. There were, also, 44 free *colored* males, and 65 free *colored* females. As the deaths among these 109 free persons of color were not kept separate, but included in the returns among the whites as free persons, their numbers must be added to the whites, in order to arrive at the per centage of mortality among the persons, white and colored, composing our white population. Among this white and colored free population, the returns give 238 deaths; a per centage of 3.67, or 36 in every thousand. From the same authority we learn, that the slave population numbered 2,362; of whom 116 had died; making the per centage of deaths among this class 4.91, or 49 out of every thousand. The average mortality of these two classes together, gives the astonishing result of a fraction over 4 per cent, or 1 death in every 25 living!

The returns of the City and County being kept separate, made it, comparatively, an easy task to examine the *vital statistics of* our immediate neighborhood, and therefrom collect materials wherewith to compare our sanitary condition with that of the people by whom we are surrounded. These statistics show a population in the county, exclu-

sive of the City, of 10,317 free persons, and 11,998 slaves; making a total of 22,315. The deaths among the free were 190, being 1.84 per cent; and among the slaves, 279, giving 2.32 per cent. The average ratio of mortality among our neighbors turn out to be only 2.$\frac{1}{10}$ per cent of the entire population, or one in every 47 living. Here we have proved to us, by unmistakeable data, that whilst one in every 25 had died in town, the people who are separated from us by a mere compass line, have lost but *one*, by death, out of every 47 living. This difference in the mortality of the City over the County, of very nearly *two to one*, is well calculated to excite the surprise of the statist, and the sympathy of the philanthropist; while it offers to the medical philosopher an open and interesting field for etiological investigation.

If the foregoing statements are calculated to astonish us, what will we say when we compare our sanitary condition with that of New Orleans, as shown from the late census returns of that city, the vital statistics of which have been carefully collected by Dr. Barton, and published in the last volume of the "Southern Medical Reports." According to these returns, we find the mortality in New Orleans and Lafayette, *exclusive* of Cholera, to be a fraction less than 2 per cent, (1.96) and *including* Cholera, it is less than 2$\frac{1}{2}$ per cent; being 2.44. This shows a lower rate of mortality, by more than one and a half per cent, in New Orleans than occurred in Memphis during the same period of time; the facts being collected in a similar manner; ours, by one of our own citizens, who is in every respect well qualified for the proper performance of the duties the office enjoined.

It would be a fruitless labor to extend our inquiries to other cities of the Union, with the hope of finding in the census returns of 1850, any mortuary statistics at all approximating to the figures exhibited by the recorded deaths among our population, for the period embraced therein. Every comparison of the sort would only be to our disadvantage.

It is proper to observe, before leaving this part of our subject, that between the 1st of June, 1849, and the 1st of June, 1850,—the period when our mortality reached 4 per cent,—we had, for a few weeks, the severest visitation of epidemic Cholera we have experienced since it has invaded this country, the second time. From its ravages, during the period mentioned, our mortuary returns were greatly increased. With this exception, there was no unusual amount of sickness prevalent in the remaining larger portion of the time. During the past year, also, upon the sanitary condition of which we are about to enter, Cholera likewise prevailed, but only in a sporadic form. The number of deaths

occasioned by it, alone, will be mentioned as we proceed with the investigation of the statistics next to engage our attention.

The population of Memphis on the 1st of June, 1850, as has already been shown, was 8,840. To enable us to arrive at a correct estimate of the ratio of mortality for the past year, we must assume what has been the increase in our population during the eighteen months that have elapsed since the census was last taken, and the first of January of the present year. Various opinions have been expressed in relation to this point by those with whom we have conversed on the subject; but as nothing positive can be obtained respecting it, I have concluded to place it at 20 per cent; a rate of increase which ought to satisfy, we think, the most strenuous advocates for large estimates, when calculating the increase of population in this growing city. One fifth, or 20 per cent, added to 8,840, would make our population 10,608; and admitting this number to constitute the present population of Memphis, we will proceed to apply to it the mortuary returns obtained from the Hospital, and from the records of the Board of Health, and thereby ascertain our sanitary condition during the year just past.

The total number of admissions into the Memphis Charity Hospital for the year ending on the 31st of December last, was 474. The books show that 116 of these had died; making a mortality of 24.47 per cent; wanting a fraction only of being one out of every four, or very nearly 24½ out of every hundred!! That this is a terrific mortality, will become quite evident by comparing it with the annual mortality witnessed in other Hospitals—some of them in localities confessedly insalubrious.

From estimates made from twelve years' observations by Dr. Playfair, in the Hospitals of Liverpool and Manchester, the mortality was 3.57 per cent, or one in every 28. From a statement published in the January number of the "London Lancet" for the present year, we learn that there had been admitted into all the Hospitals of Paris, during the year 1850, 84,044 patients. Of these, 6,855 had died; making an average mortality of 8.15 per cent, or one in every 12⅓.

In the Marine Hospital at Louisville, Kentucky, as we are informed by Dr. Rogers, in the December number of the Western Medical and Surgical Journal of last year, the mortality was a small fraction over 7 per cent, or one in every 14.

According to a statement published by Dr. McKelvey, the Surgeon to the United States Marine Hospital at New Orleans, out of 1,116 admissions in the year 1849, there occurred but 64 deaths; making a

mortality of only 5.73 per cent, or one in every 17. In the Charity Hospital,—that immense lazaretto of New Orleans,—the admissions in 1850 numbered 18,676 patients, of whom 1,884 died—being a mortality of 10 per cent, or one in every 10.

From these comparative hospital statistics, it is but too evident that the mortality at our Hospital is more than twice as large as that of the Charity Hospital at New Orleans, which has always been considered, in this quarter, as the great Southern receptacle of the sick and the dying!

As any farther inquiry would serve only to increase the melancholy reflections which naturally intrude, when we compare the picture presented by our Hospital returns, with that of similar institutions in this or other countries, we will leave this branch of our investigation, and proceed to give the returns collected from the records kept by the Secretary of the Board of Health.

As the *dates* of the interments, as well as the *names* of deceased persons, were registered on the mortuary records of last year, it was not difficult, in tracing the successive months and weeks, to discover any missing link that might be wanting to make the chain complete. With the exception of August, the returns appear to have been faithfully kept. In this month—which was one of the most unhealthy of the past year—we find no mortuary returns recorded during its second and third weeks, and only a total of 29 deaths for the first and fourth weeks. Without intending to question the correctness of the statement, that there were but 29 interments during the two weeks specified, we think we may safely add on a like number, for the two missing weeks, to make the returns complete,—as 58, the aggregate thus obtained for the entire month, is considerably less than that given by either the month that preceded or that followed—the mortality in July being 87, and in September 73.

With the foregoing correction, the total mortuary return of the past year, as shown by the records of the Board of Health, was 679, of whom 361 were white males; 201 white females; and 135 colored. With the deaths that occurred at the Hospital added to these, our total mortuary statistics for 1851 will be found to be 813, in a population of 10,608; allowing that population to have increased 20 per cent since the first of June, 1850.

From these data it will be found, that the ratio of mortality, including the entire returns from the Hospital and the City proper, gives the alarming amount of $7\frac{2}{3}$ per cent; being 76 in every thousand, and

very nearly one in every thirteen living. If the 116 deaths furnished by the Hospital are left out of the computation entirely, the figures will then show a mortality of $6\frac{2}{3}$ per cent, or 66 in every thousand, and one in every fifteen living. If we go still further, and exclude from the bills of mortality the 116 deaths from the Hospital, and the 84 deaths from *Cholera* during the year, as found in the sexton's return to the Board of Health, even then the mortality is frightful, being 5.77 per cent, or 57 in every thousand, and one out of every seventeen living!!!

We have seen, by comparisons already instituted, that from the statistics of the *last census*, we present a higher rate of mortality than any other city, perhaps, in the Union. We have seen, also, that our *Hospital* shows a rate of mortality among its patients, without a parallel, so far as we know, in the history of such institutions; and we are greatly mistaken if a still further comparison of our vital statistics of the past year, will not show our sanitary condition to have been extremely bad.

In an elaborate article on the sanitary condition of New Orleans, furnished by Dr. Simonds, and published in the second volume of the "Southern Medical Reports," is to be found a tabular statement of the average mortality of most of the principal cities in our country, compiled from reliable sources, with much care. To these tables, and to some other published statements in my possession, I am indebted for the statistical information I am about to submit, as standards for comparing our sanitary condition, as shown from last year's returns, with that of several of the cities in our Union.

The average mortality in Boston, for 39 years, from 1811 to 1849, gives a fraction *less* than $2\frac{1}{2}$ per cent.

In New York, for 45 years, from 1805 to 1849, it is 3 per cent.

In Philadelphia, for 34 years, from 1807 to 1840, it is a fraction *over* $2\frac{1}{2}$ per cent.

In Baltimore, for 14 years, from 1836 to 1849, it is *less* than $2\frac{1}{2}$ per cent. In Charleston, for 27 years, from 1822 to 1848, it is a little *over* $2\frac{1}{2}$ per cent. In Savannah, for 8 years, it is 4 per cent.

In Mobile, for 6 years, from 1845 to 1850, according to Dr. Ketchum of that city, it is a fraction *over* 3 per cent.

In Natchez, for 10 years, from 1840 to 1850, it is a small fraction only *over* 3 per cent, as we are informed by Dr. Magoun of that City, in the January number, for the present year, of the New Orleans Medical and Surgical Journal.

In New Orleans and Lafayette, according to Dr. Barton, the mortality in 1850 was a fraction less than 7 per cent. Dr. Simonds makes the mortality of the same places, for 4½ years, from September, 1840, to January, 1851, $8\frac{1}{10}$ per cent.

From these figures it is apparent that Memphis presents a higher rate of mortality, in 1851, than does either of the nine cities mentioned, during the periods included in their returns, with the exception of New Orleans and Lafayette; and the exception does not apply to these,even, if Dr. Barton's statistics for 1850 are to be credited. And it will be seen, that a mere fractional difference only exists in favor of our sanitary condition, over that of New Orleans and Lafayette, when we compare our mortality with the high, and we doubt not true, returns of mortality of these places, during the periods examined by Dr. Simonds. It is painful to be compelled to admit, that the mortality here is more than twice as great as the mortality in Mobile, Natchez, and New York; and that it is as 3 to 1 compared with Boston, Philadelphia, Baltimore and Charleston, although the years of 1832 and '33, during which epidemic Cholera prevailed, are included in the returns of all the last named cities, with the exception of Baltimore.

It is undoubtedly true, that a portion of the mortality found on our records is due to the *strangers*, whose mortal remains find resting places in our cemeteries. But the same is true of every other city, in which mortuary statistics are kept. That it is so in New Orleans, we have the direct testimony of Dr. Hester, the Secretary of the Board of Health, and the talented editor of the Medical and Surgical Journal, published in that place. In the January number of his Journal, for the present year, Dr. Hester remarks: "In estimating the mortality of this city, (as caused by disease) we are necessarily compelled to include a large number in the list, who are either killed, drowned, or destroyed by accidents—such as by explosions of steamboats, &c. If an explosion takes place on the Mississippi, on the Lakes, or in any of the streams communicating with the Mississippi river, within three or four hundred miles of the City, the wounded and dead are generally brought to the City; the former, to be treated in our Hospitals, and the latter, to be interred in our cemeteries. This is a notorious fact, and yet the deaths caused by these, and many other accidents, even beyond the Parish of Orleans, are included in our mortuary statistics, and go to swell the grand total of our deaths."

Efforts have been made by those engaged i the good work of Sanitary Reform, to ascertain the average number of the *sick*, in different

communities, compared with the number that *die.* So far as our researches have enabled us to discover, the estimates range from 17 to 28. Between these extremes it will be safe to take for the calculation we are about to institute---as has been done elsewhere—the number 20, to show the amount of *sickness* among our population, during the past year, from our bills of mortality, allowing for every death which happened that there were twenty persons afflicted with disease. 813 being the total of deaths, this number multiplied by 20, will give 16,260 cases of sickness ; which being 5,552 more cases of disease than the entire population of Memphis numbers, would give to every man, woman, and child, if equally distributed, not one spell of illness only, but to more than half of our people, *two* attacks of sickness, last year !

It is now pretty generally believed, that the mortality of no locality ought to exceed *two* per cent, or one in every fifty. It is contended by those who have given to this subject the greatest share of attention, that, by proper sanitary regulations, the healthfulness of every spot on the habitable globe may be so improved, as to ensure this natural rate of exit from the world, of the human family. This result has been obtained over large sections of country in some portions of Europe, heretofore unhealthy, by the adoption of a system of medical police, founded on rational and scientific principles.

If it be true—and no one who has kept himself informed on the subject of vital statistics can doubt it—that 2 per cent of mortality only is attainable by the adoption of such measures as are known to be in a very high degree promotive of the public health, is it not painfully evident, from the exhibit we have presented from our vital statistics, that an improved sanitary condition of this city is not only necessary to insure a continued increase of its population and wealth, but is most urgently demanded by those higher and nobler sympathies of our nature, which cause us to shudder at the sight of human woe, and human suffering.

To attempt to conceal our present unhealthy condition, lest its publicity may prove injurious to the rapid growth and prosperity of Memphis, is certainly not our true policy. A course like this would justly bring down upon us the scorn and contempt, not only of the moralist and the philanthropist, but of sensible and reflecting men every where ; and after a few years more of suffering from existing evils, would tell upon the welfare of the place with ten-fold force.

If it be true, as our comparisons with our immediate neighborhood,

and with other places, have shown, that the chances for health and longevity are more precarious and uncertain here than in almost every other section of the country, it cannot be known too soon. "To be *fore-warned*," it has been truly said, "is to be *fore-armed*." If the seeds of disease, sown broadcast and thickly in our midst, are yielding a pestilential harvest of poisonous agencies, with their concomitant evils; and the unrelenting destroyer is plucking from our hearts and homes their dearest treasures, in fearful numbers, it becomes an imperious *necessity*, to say nothing of duty, to improve the healthfulness of the place, by the speedy adoption of such hygienic measures—let them cost what they may—as an enlightened prudence may suggest, and the existing condition of things absolutely requires.

To the honor of our profession be it spoken, its enlightened members have ever been foremost in pointing out, not only the *sources* of disease, but they have greatly aided, by their benevolent and disinterested efforts in the *removal* of evils, upon the continuance of which their revenues depended. Ever since Hippocrates "delivered Athens from a dreadful pestilence, 430 years before the Christian era, the great end and aim of many of the wisest and best men among us have been, not the mitigation alone of human misery and actual suffering,—the never-failing attendants on existing disease,—but the *prevention* of these, by urging upon those in authority the adoption of such needful measures, as would secure health and its blessings to large masses of their fellow-beings. In imitation of their example, let us endeavor to point out some of the most prominent causes of the sickness and mortality which have been so potently and fearfully at work among us during the periods we have been examining, and that are still in existence at the present moment.

This is not the first time that this Society—although it has been in existence but for one year—has raised its voice, through its organs, in favor of *sanitary reform*, in Memphis. In the early part of last May, when Cholera made its appearance among us, after an absence of many months, a committee was appointed, with our excellent President, Dr. Merrill, for its chairman, to prepare a report on the then sanitary condition of this city. This report was published in all our daily newspapers, for the benefit of those whom it most concerned. If the sound philosophic views which it inculcated had been justly appreciated; and had its wise and well-timed recommendations respecting the importance of cleanliness, at that particular juncture, been fully carried out, we hesitate not to affirm, that we would have been spared the melan-

choly duty of announcing to you, as we have had to do this evening, a mortality of seven and two thirds per cent of our people, for the past year!

To insure to man HEALTH, the greatest blessing of his existence, the Author of nature, in his wisdom and goodness, provided him with a *pure atmosphere*, proper *food* and *drink*, the means of securing himself from the inclemency of *the seasons*, and so divided *time*, as to adapt it to his necessities for exertion and repose. It is not my purpose to enter, at large, upon the general discussion of these topics, at this time, as that would lead us far beyond our present design, but to indicate, in a few words, the manner in which some of these important provisions for our common welfare, are vitiated and perverted, through the neglect and apathy of our citizens.

That abundant sources for contaminating the *purity of the atmosphere* exist in this city, no one, at all competent to judge of the subject, will be disposed to deny. On examination, it will be seen, that the *grading* of the streets has caused their elevation, in many places, several feet above the level of the contiguous lots; and that, as a consequence, the spaces included between lines of streets crossing each other at right angles, become, in wet weather, *artificial ponds*, without an outlet; containing more or less of organic remains; where the only authorized *scavengers*—as if conscious that these receptacles of filth were prepared expressly for their use, as a compensation for services rendered—have rooted and wallowed in seeming pride, and self-satisfied indulgence.

Whoever will traverse the alleys running parallel with our principal streets, and dividing the lots fronting on the latter from each other, will see enough of dirt and filth, not only in these alleys, but in the rear part of most of the improved places in Memphis, to satisfy the most casual observer, that cleanliness of our streets and inclosures is not an important item in our domestic or city regulations. On inspecting these alleys—on which the temples of Cloacina are here mostly located—we will have presented to our gaze the disgusting spectacle of accumulated piles of "night-soil;" and the olfactories will be greeted with odors, which remind one neither of "the sweet scents of Arabia," or of "the pure waters of Helicon."

Aside from the disgust excited by seeing exposed to view piles of human fæcal deposites, it may be safely questioned whether, in this form, they are as prejudicial to health, as are the same materials accumulated in the narrow and shallow pits required for their concealment,

by the laws of the city. Pits nine feet *deep*, and three or four feet *wide*, walled in with bricks and mortar, only serve to place the effete matters they contain sufficiently near the surface to undergo rapidly the putrefactive process, in warm weather; whilst the chance of speedy dessication is prevented by the fluids in which they are kept constantly immersed.

On some of our principal streets, and in the midst of the most populous and business parts of the city, there are ranged along, in pretty close proximity, an unusual number of *Livery Stables*, for a town the size of ours. That they add nothing to the cleanliness of their vicinities, is most evident. That they aid materially in deteriorating the atmosphere in more ways than one, is just as certain.

Extending from South to North almost the entire length of the City, and dividing it very nearly into two equal parts, is the *Bayou Gayoso*, a natural *sewer*, that might be made, under proper management, of incalculable value, for the important purposes of drainage and sewerage. This Bayou forms a junction with Wolf river, just before the latter disembogues its waters into the Mississippi. This "natural advantage" —like many others of which our people boast—if we are not greatly mistaken, is, in its present condition, the most fruitful source of disease among us. Scattered along, on either side of it, are the little wooden temples, similar to those that adorn the alleys. They are so constructed, that the deposits made in them find their way, not *into* the bayou *bank*, but *on* it; to be chucked out by the heavy rains, or not, without the least seeming concern on the part of *depositors*, or the guardians of the public welfare. And, as if to give variety to its ornamental nuisances, and to "cap the climax" of our perverseness and folly, in matters appertaining to health, *cattle and slaughter pens* have been erected, and have been permitted to continue on it, for several years, with their filth and their stench.

The slope of the City from the bluff in front, and on the West, being to the *bayou*, and from its Eastern boundary in the rear, the slope being likewise towards the same, it is evident that every thing washed from the streets and gutters finds its way into this receptacle, in addition to what is placed therein by direct agencies. Besides all this, when it is remembered that the back-water from the Mississippi river, when it reaches a certain stage, finds its way into this bayou; that during every "June rise" of the river the bayou is kept more or less full, according to the heighth which the former attains; that much of the detritus of this turbid water is deposited during its period of rest in this reservoir,

before it recedes through the same channels by which it entered, and this at the commencement of summer, we are constrained to admit, that there are here placed together, along the very centre of Memphis, the appreciable materials in abundance, from which the sun's rays evolve, in profusion, noxious exhalations to vitiate our atmosphere, and to poison those who are compelled to breathe it.

From such a condition of things as we have shown actually to exist in our midst, it is but too apparent that we are far from enjoying, in this City, that inestimable gift of God to man, *a pure atmosphere* ; and that the sickness and death among us are the effects of causes which we can, in a great measure, control, if we would.

To insure health and longevity—or the maintenance of life in a high degree for a long period of time—with their never-failing accompaniments, happiness and enjoyment, a free circulation of pure air is an essential requisite, both *in* and *out* of our dwellings. Hence, as has been aptly said by one who profoundly studied this subjeet, " the *scavenger* and the *architect* are among our best allies." What use has been made of these important personages in our streets and backgrounds, and in the construction of our dwellings, I shall not attempt to say, for I cannot trust myself to speak of our shameful neglect in respect to these matters, lest I might say too much.

As the respiration of an atmosphere charged with emanations from decaying organic matter, must, necessarily, produce a strong *predisposition* in the animal economy, to take on morbid actions, it follows, that where such an atmosphere exists, it requires, in a particular manner, a strict observance of Hygienic precautions, especially an avoidance of all *exciting causes* tending to develop the pathological predisposition, to escape from disease. As the exciting causes of many diseases are intimately connected with individual conduct, it will be found that they who are temperate in all things are those who enjoy health and its blessings in the largest degree, especially in sickly localities. On the other hand, it is susceptible of the clearest proof, that where numbers of persons are crowded together in small sleeping apartments—when due care is not observed in the proper selection and preparation of the diet and drinks—that exposure of the body, necessarily or otherwise, to the inclemencies of the seasons, with carelessness in adapting the apparel to meet the vicissitudes of our variable climate ;—in short, that these, with every form of dissipation, by infringing and violating the nicely adjusted laws of our physical organization, excite into action

morbid predispositions that might, under different circumstances, have passed off without being developed in the form of disease.

It is a fact well known to every man of observation, that the mortality among our citizens is greatest with that class who are least careful in the observance of the wholesome restraints enjoined by the dictates of reason and philosophy, as well as by the divine precepts of the moral law.

In order to ascertain to what extent a life of sobriety and virtue will prevent actual disease in persons compelled to inhale a poisoned atmosphere, I addressed a note to each of the *nine* Protestant Clergymen of this City, having charge of as many different congregations, asking them to give me the *number of members* in their respective churches *resident within the city limits;* and requesting them, also, to inform me how many of these had *died* during the past sickly year. From the replies of these intelligent gentlemen, to whom I am much indebted for the promptness of their responses, it is ascertained, that the aggregate number of *white persons*, of both sexes, in connection with these nine churches, is 1131 ; and that, during the course of the year, 26 *deaths* had occurred among them. The average of mortality, the figures will show, among this class of our population, turns out to be only 2.29 per cent; whilst the general mortality for the City at large, for the same period, is seven and two thirds per cent. Here, then, is a fact, which speaks more than volumes, in favor of the blessings to be enjoyed, and the evils that may be shunned, by an adherence to that code of morality enjoined in the Scriptures, which "gives the promise of the life that *now is*, as well as of that which is to come." It is, indeed, refreshing, after the exhibits we have previously been compelled to make of the Vital Statistics of Memphis for the past year, as illustrated from our mortuary returns, to be enabled to show a report so favorable as that presented by the *churches*. It proves, moreover, that though we are placed in circumstances daily endangering the lives of our citizens until they are remedied, yet, by pursuing a course of conduct recommended by Revelation, and sanctioned by Science, we may evade the sufferings, by avoiding the excitants of disease.

This is not the time or the place, neither is it our province, to point out the particular modes by which the *causes* producing our overgrown bills of mortality are to be remedied. "The starting point of a scheme of sanitary reform," says Dr. Rogers," "is the correct ascertainment of the precise sanitary condition of the place in which the reform is to be made." The "precise sanitary condition" of this City, to some

extent, we have in the foregoing remarks endeavored to bring to view. It behooves those possessing the power and authority, to accomplish the work requisite to abate the evils that exist, by *sanitary reform.* The people of Memphis, if they consult their welfare, ought to devote a little of their leisure to the consideration of the public good—spare an occasional moment from attention to that selfish propensity for lucre, that absorbs their thoughts, and is their reproach, and see to it immediately, and earnestly, that something be done to promote the sanitary condition of the City. The City Council is composed of gentlemen, whose interests are largely identified with the place, and who would, doubtless, gladly and cordially set about the needed improvements, if they were assured that their course would meet the public approbation, and that their efforts would be sustained by the co-operation of the citizens. If an efficient and competent *Board of Health* was appointed, and our municipal functionaries, encouraged by the press and the people, would act in accordance with the advice and recommendations of this Board, it would not be long before Memphis would compare favorably with other cities in the Union, in a sanitary point of view. But if the expedients which the existing exigencies demand, continue to be neglected, as heretofore, *the past*, with unerring certainty, *predicts our future.*

Amidst the disease and mortality which have been so rife among us, permit me to ask, how has the *medical profession* sustained its part? Is it, or is it not, more or less responsible for the unusual amount of fatality that characterized the diseases of the by-gone year? These are important questions; and they are well calculated to bring before the minds of those who have been observant witnesses of passing events, a train of painful associations and solemn reflections. In this City *sixty* persons returned themselves as Physicians, to the Deputy Marshal, when the last census was taken. The number, it is to be presumed, has not been diminished since. Taking our estimate of the increase of population here since 1850, to be correct, it gives, when equally divided among us, a Physician to every 176 inhabitants. The want of a sufficient number of practitioners, therefore, cannot be pleaded in extenuation of the fatality of our diseases. The extent of the qualifications of these sixty medical men, is a question upon the merits of which we have no desire to enter. It is sufficient for the present to remark, that as Tennessee has no laws in force to protect the lives of her citizens from ignorant medical pretenders, the door is thrown *wide open* to quackery, in every shape and form, and many are they who enter in thereat.

We hear much said, in our day, about this age of improvement,—

this period of progress,—this highly enlightened middle of the nineteenth century, when men are uniting their energies for the attainment of vast purposes, and the accomplishment of great and magnificent projects. But when the *missionary* and the *schoolmaster* come closely to scan how we are sustaining our part in the great drama of the world's improvement, they will find here, we fear, but little of that advancement in the moral, social, literary, and scientific attainments of our people, which the times would lead them to expect. The existing condition of the medical profession in this city, and its achievements, would certainly excite their surprise and pity. They would find that an effort had been made among us, a year ago, to organize a Medical Society for the praiseworthy purposes of "allaying professional jealousies and animosities; for establishing an honorable code of ethical regulations to govern our professional intercourse; and for contributing the results of our observations and experience in the diseases which we are daily treating, for our mutual improvement, and the well-being of the sick." What would be their amazement, we can well imagine, when they were told, that only *nine* Physicians could be found in this City, famous for the number of its doctors, who showed their willingness to engage in an enterprize so noble and so much needed, although every prominent man in the profession had been cordially invited, in person or by letter, to aid in its formation. How awfully shocked their sensibilities would be, when, instead of finding the profession, like a well-informed and well-disciplined body of "regulars," united like brothers in a common cause against a common enemy, they shall see it actually engaged in a worse than savage warfare; making battle, not only against the common enemy, but against each other; not to gratify a noble ambition, or to procure an imperishable renown,—nor for the good of others,—but solely to secure the spoils and possess the treasures. From this existing reality, so far behind the spirit of the age, and so discordant with the sentiments of a higher civilization, methinks we see the kind-hearted missionary and teacher turning away with sincere sorrow and hearty disgust.

In this inglorious and unmanly strife, gentlemen, let us not participate. Whilst others are *contending*, let us be *preparing* for the faithful discharge of the duties of our high vocation. Let us at all times, and under all circumstances, endeavor to act well our parts—be fruitful in good works; and look on HIGH for our rewards.

II.—ON THE SANITARY CONDITION OF MEMPHIS, TENN.—BEING A REPLY TO DR. GRANT'S PAPER, PRECEDING THIS.

BY G. A. SMITH, M. D.,

Surgeon to the Memphis Charity Hospital.

The following paper is intended as a reply to the one drawn up by Dr. Grant, on the "Vital Statistics," &c. of Memphis, and which appears in this number of the Journal. As *both* essays were read before the *same* Medical Society, of which both gentlemen are members, we see no impropriety in inserting the reply of Dr. Smith; but we must state at the same time, that we object to some of the expressions by which Dr. S. seeks to correct the errors into which he seems to think Dr. G. has fallen, in his article on the health of Memphis. If we publish the one, and refuse admission to the other, we shall be accused of partiality. We trust, that if, hereafter, this subject should elicit any more discussion, the parties will pursue it in a calm and philosophical spirit, and free from all personalities. (*Ed.*)

Mr. President and Gentlemen:

At the last regular meeting of this Society, a paper was read by Dr. Grant, which, while it reflected on the entire Medical Faculty of the City of Memphis, contained some statements, involving my reputation, that demand some notice. I shall show that Dr. Grant's paper, and particularly that part of it in which reference is made to the Hospital under my supervision, is illogical and incorrect. When a medical man assails the reputation of a whole medical community, and designates, in terms of exceeding disrespect, that portion of it with whom he pretends to act, it is quite time that he be rebuked in the most decided manner; and while I do not take upon myself to vindicate my brethren, I feel authorized, and do unhesitatingly denounce the course pursued by Dr. Grant, as unworthy the character of a member of the "Memphis Medical Society," and a member of the Medical Profession. His effort seems to have been directed against the Medical gentlemen of Memphis, and his aim to destroy their good name and fair reputation, and upon the ruins to rear his own. He has called Daboll and Cocker to his aid, and with an array of figures, he has endeavored to convince us, that one out of every 13 of our citizens die annually; and that of those who have the good luck, or good sense, to keep alive, none are satisfied unless they have at least *one* "spell," and more than half *two* "spells" of illness, every year. Indeed, it is not a little surprising, that the gentleman himself was not terrified by the fearful form he had conjured up;

and I can only account for his still remaining in the land of the living, by his being a self-constituted officer, "Curatores Cloacorum Urbis," whose duty it was to take care of the common sewers. Now, whether the Doctor's official connection with the goddess C * * * shields him from the various ills to which flesh is heir, I know not; but he seems to preserve a tolerably good condition, and a wonderful degree of gravity, while dissecting our reputations.

It is not my purpose, however, to bring him down with the shaft of ridicule. I wish to present a plain, common sense statement of facts, that will at the same time contradict his assertions, and vindicate myself and our profession. While I shall show that Dr. Grant's report is incorrect, as regards the mortuary statistics of the City generally,—it is particularly my object to notice so much of it as is contained in the following statement: "The total number of admissions into the Memphis Charity Hospital for the year ending on the 31st December last, was 474. The books show that 116 of these have died; making a mortality of 24.47 per cent; wanting a fraction only of being one out of every four, or very nearly 24½ out of every hundred!! That this is a terrific mortality, will become quite evident, by comparing it with the annual mortality experienced in other Hospitals, some of them in localities confessedly insalubrious"—and then instituting comparisons; and having made the matter appear in its very worst aspect, without an effort to defend the reputation of a professional brother; and, as it were, mourning over the destruction he had himself sought to accomplish, proceeds—"That as any farther inquiry would serve only to increase the melancholy reflections which naturally intrude when we compare our Hospital returns with those of similar institutions in this or other countries, we leave this branch of our subject."

This Hospital is compared with other similar institutions,—and in the comparison not a word is mentioned as to the police or arrangements of our Hospital. Dr. Grant knew, when he was making out that report, that the support of our Hospital was very inadequate—that we have never, until the past few months, since I have been the Physician, had more than a single nurse—that we have had no apothecary—no assistant, who may be applied to in any emergency; and that frequently it is impossible to obtain the remedies which are required for the treatment of the cases. Could he not have mentioned these facts, or does he not know what is necessary in the regulation of a well-arranged Hospital? There is not a Hospital that I am acquainted with, that is not supplied with at least one, and generally two, nurses to every ward; nor do I know of another institution, where it is impossible to obtain, not only

any remedy, but a skilful person to put up the Physician's prescription, and to attend, if necessary, to its administration.

But there is another item to which I wish to direct the attention of the Society—and it is, the state in which many of the patients are received into the Hospital. Before making any remarks on this head, to show that it is proper for me to allude to it, I quote from the report of the Resident Physician of Bellevue Hospital, New York, in which were treated upwards of 7000 patients in the year. He says—"During the past year, three have died at the very door, in the vehicles in which they were brought; 10 more within two or three hours after admission; and 40 within the first week."

Again, he says—"Very many are sent from the City Hospital, where they have been for months under treatment, then pronounced incurable, and dismissed for us to take charge of for the rest of their lives. Others come directly from the city, with the certificates of Physicians, who have for a length of time attended them, and who, finding that their remedies are of no avail, or, what is more probable, that the purses of their patients are entirely emptied, send them to the Hospital to die."

Dr. James D. Fitch, the Physician in chief of another Charity Hospital in New York, in which, during the year, he treated 464 (28 less than the number treated in our Hospital) and out of whom there were 90 deaths from ordinary disease—there being no Cholera or other epidemic disease—states, "The number of deaths may seem at first sight large; but when it is recollected that more than half the number admitted have been received in a state of great wretchedness—broken down by disease and want—many having died within a few hours of their reception—even before they could be cleansed of their filth, or made in any way comfortable—so far gone, indeed, that no attempt at medical treatment could be made—it must cease to be a matter of surprise."

Now, I ask, how do these extracts compare with the condition of things in the Memphis Hospital? At the Bellevue Hospital, there were upwards of 7000 patients treated. "Three," says the report, "died at the door; 10 within a few hours of admission, and above 40 within the first week." At the Memphis Hospital, there have been, out of those terminating fatally, during the last year, 40 occurring within 12 hours, and 34 others within three days—making a total of 74 deaths within three days of admission. Indeed, the condition of things has been so much in my favor, that the Trustees, in their report to the Legislature, use the following language. After stating the number of ad-

missions, discharges and deaths, they say—"This, at first glance, may seem to be a very large per centum, in comparison with the number admitted; but when it is taken into consideration, that not over one in six of the applicants is admitted, owing to the inability of the institution, for the want of means, to receive more, it is necessarily the case, that none but the most needy and worn out by disease, are received. We would further remark, that it is a very common occurrence,—especially during the prevalence of Cholera,—that many have died within a few hours after they arrived, and some while on the way; so that the large number of deaths cannot fairly indicate the success of treating disease in this Hospital, in comparison with many others, for the reasons above stated."

Another point to which I wish to direct the attention of the Society, is, that Dr. Grant has selected a year that was confessedly the most sickly one we have ever had, and from the mortuary returns of that year, has drawn his conclusions as to the vital statistics of not only the Hospital, but the City. That this is absurd, must be apparent to all; and he seems himself to be aware that he was doing an unjust act, for he distinctly admits, in his paper, that it is unfair to take the returns for one or two years, as it might be unusually healthy, or uncommonly sickly; "with us the latter was the case last year; it is generally conceded to have been among the sickliest, if not the most unhealthy of any season that has preceded for the past ten years, or since Memphis began her rapid increase in population." Knowing this to be the case, why has he chosen the most unhealthy year, and by comparing it with the statistical returns of other cities for a series of years, deduced the absurd conclusion, that ours is the most unhealthy city in the United States? He ought to have seen enough to know, that a report like the one he presented, would have a deleterious effect on Memphis—on the increase of its population—its commerce and business generally—on the value of its real estate and other fixed property—and, indeed, on all the efforts that are being made to ensure its prosperity. But more—does he attribute the fatality to the proper causes? Does he take into consideration the number of persons brought here for burial from abroad? Not so. The transient, literally, floating population of Memphis—I mean strangers, and persons on or connected with the flatboats, who furnish very many of the deaths, he has reckoned as residents of Memphis, in making out his mortuary returns, but has not added their numbers to his vital statistics. I learn from Mr. Wolff, the wharfmaster, that during the year, the number of flatboat men here who are liable to disease, amount, in the aggregate, to the sum total of the entire popu-

lation of the City. These are not reckoned, as residents of Memphis, in the census, and yet they furnish a very large proportion of the deaths, and probably much more of the disease and deaths than the real residents, because they are, from their habits, manner of living, and exposure, necessarily incident to their way of living, more liable to contract disease, and from the little care that can be given them by their associates, their chances for recovery, greatly lessened. It is true, that there are reckoned, as residents, the inhabitants of 60 boats, that remain here the most of the time, and that these 60 boats average four porsons to each boat; and, consequently, add 240 persons to the population of the town.

To return to the Hospital. There were admitted during the year 1851, 27 cases of Cholera. Of these 20 died. Two of the cases which terminated fatally, were treated by other Physicians; and 10 others died within a few hours after admission. If, now, I leave out these cases of Cholera, and those other cases, which died before they were placed under my medical treatment, I will compare my treatment with that of any other Hospital in the United States, taking into consideration the disadvantages under which I have labored, for want of proper attendants, there being no person to receive the patients, and I not seeing them, generally, until the day after admission. These, and other circumstances, already alluded to, will make my report as favorable as that of any other institution.

Take those diseases which have been most prevalent, and which have furnished the majority of cases: Of Bilious Fever, there were admitted 59 cases, of which 6 died. Of Typhoid Fever, 35 cases, of which 7 died. Intermittent Fever, 70, of which none died. Of Dysentery, presenting some of the characteristics of Cholera, 25, and 12 deaths. Diarrhœa, 35 cases, and 2 died. Mania a Potu, 12 cases, and 4 died. Of Pleurisy, 9 cases, and no deaths. Of Ascites, 9 cases, and 2 deaths. Of Anemia, 7 cases, and no deaths. Of Small-pox, 24 cases, and 3 deaths. Or a total of 286 cases, and 36 deaths.

I shall now proceed to compare my practice, at the Memphis Charity Hospital, with that of the Physicians who have preceded me. Dr. Doyle was Physician to the Hospital from the 25th of March, 1846, to the 2d of October, '47, a period of 18 months and one week. During this time he treated 288 cases. Out of this number there were 84 deaths, or a per centage of 29.26. Or, take the statistics for one year, from the 25th of March, when he took charge of the Institution. In this year there were 216 cases admitted. Of these cases 62 terminated fatally; a per centage of 28.24. It is to be borne in mind, that not only did

Dr. Doyle reside at the Hospital—that the same amount, $5000, was appropriated by the Legislatnre, for the support of 216 patients, in his time, as is for 492 patients in mine—but that, in addition, he had the valuable aid of a medical student, to see that his instructions were obeyed, and to superintend, under him, the regulations of the Hospital. No person will attempt to derogate from the professional skill and attainments of Dr. Doyle ; he was justly honored as a scholar, and was at the head of his profession. More than this, he was a colleague of Dr. Grant in the Memphis Medical Cellege, in which Institution he filled the Chair of Surgery with distinguished ability.

Dr. Doyle was followed by Dr. Sappington, and it affords me pleasure to accede to his request, and make a statement as regards the Hospital, during his service as Physician. There were received into the Hospital, during his time, from October 7th, 1847, until the 5th of February, 1849—a period of 16 months—356 cases. According to his books, 159 of these were Volunteers in the Mexican war, and were attended by the Surgeons of their Regiment. The remainder, 197 cases, came under his immediate care. It is proper I should state, that Dr. Sappington, for a period of two months, or more, was prevented by an accident from attendance at the Hospital. Of these 159 Volunteers treated at the Institution, 28 died ; or a per centage of 17.61. These Volunteers, it must be remembered, were a far superior class of patients to those usually admitted into the Hospital. Of the 197 cases who were not Volunteers, 56 terminated fatally, or 28.47 per cent.

I took charge of the Hospital on the 5th of February, 1849. Uncertain whether I should be appointed Hospital Physician, for a period of two months, until my election by the Trustees, I kept no account of the patients. From April 5th, 1849, to January 1st, 1850, a period of nine months, 157 cases were treated. In 1850, 292 cases were treated. In 1851, 492 ; and this year, so far, 79. In all, 1020. Of this number, 14 cases were treated by other Physicians, leaving 1006. Of the 14 cases not mine, 8 terminated fatally. Of the whole number, 240 have died ; a per centage of 23.52. Subtracting the eight fatal cases treated by other Physicians, the per centage of deaths occurring in my own practice, is 23.06—a per centage of deaths very considerably less than that of either of my predecessors.

In passing, I may allude to the fact, that Hospital patients would seem to be safer in the hands of the Hospital Physician ; since of the 14 cases treated by others at the Hospital, eight died—a per centage very much greater than can be made out under my treatment.

During the time the Hospital has been under my care, the Small-pox and Cholera have visited our City in an epidemic form ; the latter disease adding considerably to the mortuary list. At no period, since the establishment of the Hospital, previous to the 22d of December, 1848, not quite two months before I took charge of the Hospital, were there any cases of Cholera. During Dr. Sappington's connection with it, but two cases only are recorded. After my appointment, the cases began rapidly to increase, and there have been two visitations of it, since it has been under my charge.

Speaking of Cholera, I may mention a fact, still fresh in the minds of most of the members of the Society. The author of the essay read at our last regular meeting—I mean Dr. Grant—penned a communication, the paternity of which he will not deny, signed "A Physician," which appeared in the "Memphis Eagle," of January 3d, or 4th, 1849, in which his logic is so very like that exhibited in the essay under consideration, that I refer to it to illustrate his mode of reasoning, and the confidence to which it is entitled. He says : "With the facts before us, that the present epidemic Cholera is pursuing the same line of march as the former pestilence followed—that it is delayed in its progress by cold weather, and that the first reported case of the present disease occurred in London a little over two months ago only,—a sufficiency of data on which we can rely is at our command, to justify us in the assertion, that epidemic Asiatic Cholera is not at present prevailing in the City of New Orleans, and cannot be for months to come." And why ? Because, forsooth, it would not have pursued its *former line of march*, by the way of the Canadas, and the Lakes, and so *down* the Mississippi river ! !

For some time previous to its publication, the papers were filled with the reports of the Cholera in New Orleans, and in the paper next following that in which A Physician's communication appeared. there is contained a report of the New Orleans Board of Health, taken from the "Delta," in which it is stated, "The Board regrets to have it to state to the public, that the Cholera continues to prevail, in several portions of the city and faubourgs, in an *epidemic* form, and that seventy hours of good weather has not, as the Board hoped for, checked the ravages of the disease."

Now, here are facts, against logic, but it is logic of a pseudo sort—such as is so richly dished up in the intellectual feast of words and figures, furnished us at our last regular meeting. But as the Frenchman said in a similar case, "so much the worse for the facts." It may

be thought out of place, that I should allude to the communication on Cholera by Dr. Grant; but I do so to show the errors of his reasoning. He believed and stated, that the *Cholera could not travel up* a river—that it *must come down.* That he could easily believe,—like the boy in climbing a greased pole,—the coming *down* was easy enough, but the getting *up* was quite another affair.

But, gentlemen, I have done. I have accomplished my object. I have shown, that the patients received into the Hospital are in the most abject state of destitution and disease—that my treatment has been more successful than that of either of my predecessors, notwithstanding the advantage which one of them possessed, of a residence at the Hospital—notwithstanding the very inadequate support of the Hospital—the want of proper attendants—the prevalence of Epidemic Cholera—the prevalence of Epidemic Small-pox. As a Physician, my reputation is more valuable to me than any thing on earth, and if I have said harsh things, it is giving blow for blow. I allow no man to assail my professional character.

In bringing my paper to a close, it is unnecessary for me to repeat my candid belief, that Dr. Grant has made an unfair statement of the vital statistics of the City. He admits, that in his mortuary returns he has included those who have not died here. They cannot belong to, nor should they be reckoned among, the deaths, which are chargeable to causes which exist in our midst—the state of our streets—the condition of our bayou—nor even to the temples of Cloacina—of which he writes so pathetically.

The number of flatboat men—averaging the sum total of the actual population of the city—who swell so greatly our mortuary returns, are not alluded to in Dr. Grant's paper; or if alluded to, it is in such an ad captandum style, as destroys all confidence in his accuracy. He may, perhaps, contend, that it is unimportant where such persons are taken sick, or where they die, so that they find sepulture within the corporate limits of the town, they are to be reckoned on our mortuary list. This is as fair as it would be for him to enter one of our cemeteries, and summing up the number of graves, deduce the ridiculous and absurd conclusion, that to the graveyard was due the causes which had led to the death of all buried therein.

It is not my purpose to reply to the whole paper read by him, and I throw out these suggestions for the consideration of the Society. I feel confident I have made such an exhibition of his unfairness, as relates to the Hospital, as will throw discredit upon the whole subject of his paper.

The vital statistics of a city bear too intimate a relation to its prosperity, to be drawn up in any way other than the most careful and judicious. That the paper of Dr. Grant is not so drawn up—that his statements are loose—and notwithstanding he has shown himself an adept in figures, that he has miscalculated the influence of endemic causes of disease, are truths too evident to need farther comment.

III.—REPORT ON THE "ADULTERATION OF DRUGS AND THE SALE OF NOSTRUMS."

Read before the Louisiana State Medical Society, March, 1852.

BY EDWARD C. BOLTON, ESQ.

The whole earth has been laid under contribution to furnish articles for the Materia Medica; and the vain pursuit after an "Elixir Vitæ," or Universal Panacea, has given place to the more reasonable desire to discover, amidst the wonderful and inexhaustible products of nature, such substances as are calculated to prolong the life of man, and alleviate its attendant infirmities. The silent wilderness, disturbed only by the foot of the Cascarillero who descries from an occasional eminence the fragrant blossom of the Cinchona; the interminable jungle, where poison lurks amid the exudation of the medicinal gums; the lofty mountain, enriched with the polished foliage of the Laurel, or capped with the eternal fires of the nether world; the smiling valley, the vast and lonely desert, and the very bowels of the earth, have all been sought diligently for remedies to baffle the destroyer.

In a practical point of view, too much labor and too much suffering are experienced in the work of gathering these products, unless they finally reach the hands of the medical practitioner in the condition indicated by the Pharmacopiæ, as medicines for the treatment of disease. From the earliest periods in the history of medicine, the adulteration of Drugs has been noticed by numerous writers; especially with reference to those of an expensive character. Thus, more than two thousand years ago, Diascorides complains of the adulteration of Scammony, (a drug that has held a high reputation at different periods) with a flour, supposed to be derived from the Bitter Vetch, a species of pulse. In England, in 1540, the evil had become so great, that the Physicians of London were appointed "to search, view, and see Apothecaries' wares,

drugs and stuffs, and to destroy such as they found corrupt and unfit for use." In 1553 these powers were confirmed. In 1671, Dr. Merret says of the Apothecaries, "They use medicines quite contrary to the prescriptions; myrtle leaves for Senna, &c.; they falsify the grand compositions of the London Dispensatory; and such manufacturing Chymists which sell preparations honestly made, complain that few of the Apothecaries will go to the price of them."

It is proper to state, however, with reference to these accusations, that they are considerably imbued with the spirit of animosity exhibited at that time by the different classes of medical men towards each other in Great Britain. The "Physician," the "Apothecary, or general practitioner," and the "Chemist and Druggist," all waging a war in favor of exclusive interests, and presenting that confused condition of medical affairs, which is at once disgraceful and irresponsible. It is not to be supposed that any generous emulation could exist amidst such strife, in furnishing pure remedies for the cure or alleviation of disease. But to come down to a more recent date, no longer ago than the year 1838, Dr. Christison, in a Report to the Royal College of Physicians of Edinburgh, in introducing some observations on the adulteration of Drugs, complains, that "whilst in every other kingdom, the profession of 'retail druggist' is a highly respectable one, closely allied to science, incorporated by statutes, and exercised only by those who have undergone an express course of study, and licensed after examination, in Britain alone is it allowable for any man, no matter how ignorant, to assume the name of 'Chemist and Druggist' unchallenged." And as a consequence, he furnishes the College with the result of numerous examinations made by him into the condition of some of the popular remedies, taken promiscuously from the stores:

Iodide of Potassium, adulterated with from 10 to 90 per cent of Carbonate of Potash, Muriate of Soda, and Chlorate of Potash.

Iodine, adulterated with Manganese, and containing often from 15 to 20 per cent water.

Spirits Nitric Ether, sold variously at 2s., 3s. 6d., and 4s. 6d. per pound.

Hydrocianic Acid, frequently totally inert.

Strychnia, adulterated with Brucia and inert coloring matter.

Opium, which should furnish 12 per cent Morphia, often furnishing but 6 per cent.

Laudanum, 14 specimens examined—relative proportion of Opium from 7 to 22 per cent.

Calomel, generally *pure*, of 5 specimens all contained 96 per cent of

the genuine salt; and of 10 specimens, not one contained the 500th of its weight of Corros. Sublimate.

In regard to *Calomel*, however, Messrs. J. & H. Smith, in a letter to the Lancet, remark, in view of Dr. Christison's report, that *they* examined Calomel, and found it to average 1 grain Corros. Sublimate in 48 grains.*

As an additional illustration of the system of adulteration at that period in England, a few other articles are noticed.

Rhubarb Root was selling in the London market at 5s. 9d. per pound; it requires nearly four pounds of root to make one pound of Extract, and yet the Extract was selling at 10 shillings—half the price of a genuine Extract, with charges for making.

Peruvian Bark was selling for 3s. per pound; it requires 10 ounces to make one ounce of Extract; and yet the Extract was selling at 14s. the pound.

In this state of affairs, Dr. Christison recommended simple criterions to be furnished in the Pharmacopiæ for distinguishing genuine drugs, the visiting of shops, and the publication of authentic lists of the wholesale prices of drugs.

Whatever measures were taken, or restrictions exercised, through the authority of the Government, it is very certain that the establishment, in 1842, of the present "Pharmaceutical Society of Great Britain," has done more to winnow the wheat from the superabundant chaff, than any other cause; and this, in the gratifying spirit of emulation. This Society, composed now of the large body of Chemists and Druggists of the land, has its Pharmaceutical Journal, its School of Pharmacy, Lectures; a fine Library, and rooms devoted to specimens of Chemical, Pharmaceutical, and Botanical products, which are sent, in the way of contribution, from time to time, with a view to keep alive a spirit of improvement and inquiry, attendant with more beneficial results than all the inspecting laws under Government. By this means, a high standard of excellence in the quality of medicines has been cultivated, and most medicinal articles can be purchased from the London druggist, with every satisfaction as to quality.

We have pursued the history of adulterations in medicines in Great Britain, up to the period of the formation of this "Pharmaceutical So-

* Calomel, probably, seldom contains Corros. Sublimate; where a trace of it is found occasionally, it is due to deficient washing of the salt. This being a simple process, is probably generally sufficiently attended to by the manufacturers.

ciety," for the express purpose of pointing to the particular fact, that inasmuch as the same causes exist in this country for the prevalence of fraud and sophistication, namely, ignorance, irresponsibility, and the desire of gain, so they must be met by the same remedy—the elevation of the standard of character among Pharmaceutists. Without this (and it should be accomplished among themselves) though Government restrictions may prevent the importation of inferior Drugs, we can never reach the system of *domestic* adulteration.

We come now to the condition of things in this country. Prior to the year 1848, no restrictive laws existed in the United States, to prevent the admission of spurious or adulterated Drugs. No matter how bad the quality, the inspector was obliged to pass them through the Customhouse, provided, only, they were invoiced at their full value. Most articles of the Materia Medica are gathered by the native or aboriginal inhabitants of the various countries from whence they are obtained. Eking out a wretched livelihood in the arduous and oftentimes dangerous pursuit, it cannot be supposed that they will exercise much discrimination as to quality. To procure a marketable article is their sole aim, and among the numerous ports to which shipments may be made, it is fair to presume that but little is condemned as unfit for shipment at the place of exportation. The unscientific and careless mode of gathering incidental to the habits of a rude race—their loose manner of preparing, (especially the concrete gums or juices of plants, drying them upon leaves, etc.) and the exposure of these products to the effects of atmospheric changes, all contribute to those accidental impurities from which they are scarcely ever free. The quality of Drugs, however, destined for any particular part of the world, depends *very much* upon the standard existing *there*, with reference to their use.

London is the great distributing mart of the world, especially for the products of the East, and it is to be supposed that articles of all qualities go into her warehouses. Drugs unfit, by their inferiority, for home use, are destined for a foreign market, and the accessible ports of the United States; the wants and necessities of a new and constantly increasing population, the absence of all restrictions in regard to quality, with a generally low standard of medicines, (taking the whole country in view) combined to render the United States the great receptacle for all the refuse drugs of the world.

The impunity with which our markets could be supplied with articles of inferior quality, was a direct premium for their introduction. Remnants of old stocks, nearly worthless, in medicinal value—condemned lots of later importation—(the base accumulations of an exten-

sive market) beside immense quantities of Pharmaceutical articles of inferior strength, prepared expressly for the United States, all found their way to this country; and while the purer were selected or reserved for the Atlantic cities, it was considered that "any thing would do for the Western country." Possessing none of those safeguards already adopted in Great Britain, for the prevention of fraud—having no laws regulating the traffic in medicines—no National School of Pharmacy to stand sentinel at the port of entry, it is no great wonder that foreign speculators were successful in pouring in upon us their cargoes of fraudulent material.

Competition in trade—the augmented demand arising from the rapid development of a new country, and the attractive influence of the cheapening principle, all conspired to exclude medicines of prime quality, and substitute articles of little value, at the lowest price. As a general rule, the Apothecaries, in the larger cities, have always been able to obtain, by a proper selection, articles of fair quality from the wholesale dealer; but a very large portion of the purchasers of Drugs are the country store-keepers. Knowing little of their medicinal value, they buy them as they buy their calicoes—at the lowest market price; and as they keep generally a varied stock, consisting of Groceries, Dry Goods, Hardware and Stationery, to which Drugs and Medicines are added, to comply with the usual demand upon a country storekeeper, (who is obliged to have a little of every thing) it is not to be supposed that his ability to choose Drugs is comparable with his proficiency in selecting the more important and heavier articles in which he deals. The peculiar characteristics of purity in medicine not being distinguishable by external signs and the usual evidences of the senses, (which may be satisfactorily exercised with reference to most other articles of trade) he buys them without much discrimination.

The competition among the wholesale dealers in supplying these country store-keepers, is so great, that many large houses send their agents, their printed circulars, &c., &c., to all parts of the country; and one of the strongest inducements offered to the solicited retailer, comes in the form of a cheap list of prices current.

Were the retailers always Apothecaries, the gradually improving standard of medical education in this country, aided by the noble efforts of the Pharmaceutical Societies, (now rapidly increasing in all the principal cities of the Union) would, perhaps, have prevented the system of adulteration which was so extensively practised. But, considering the immense amount of medicines sold to store-keepers, who are incapable of judging of their purity, but who take the place of the Apo-

thecary, in dispensing to the large population of the interior, it has been found necessary to enact a law, to prevent the importation of spurious drugs. To the Hon. T. O. Edwards, Member of Congress from Ohio, all praise is due for his efforts in this matter. Himself a Physician, his attention was early directed to the subject of this nefarious traffic; and his perseverance in bringing it before the attention of Congress, elicited from that body the appointment of a committee, from whom the following facts were derived:

The importations of Drugs into the City of New York, constitute, fully, three fourths of the entire amount of that species of merchandise imported into the United States.

In 1847, they amounted to over a million and a half of dollars.

Camphor -	117,403 lbs.	Sarsaparilla Root	75,000 lbs.
Opium - -	85,228 "	Oil of Aniseed -	7,342 "
Peruvian Bark -	495,300 "	Tartaric Acid -	57,770 "
Rhubarb Root -	87,640 "	Cream Tartar -	805,000 "
Gum Arabic -	245,270 "	Gum Ammoniac -	9,490 "
Gum Myrrh -	7,300 "	Gum Assafœtida -	18,960 "
Iodide Potassium -	18,450 "	Iodine - -	6,340 "
Calomel - -	5,680 "	Blue Pill Mass -	4,475 "
Morphine -	5,600 oz.	Sulph. Quinine -	11,700 oz.
Magnesia, Cal. and Carb.	147,300 lbs.	Sup. Carb. Soda -	344,270 lbs.
Jalap Root -	26,350 "	Epsom Salts -	60,900 "
Refined Borax -	248,360 "	Carb. Ammonia -	180,000 "
Acetic Acid -	19,700 "	Senna - -	51,300 "
Oil of Cassia -	9,830 "	Balsam Tolu, -	5,800 "
Ext. of Liquorice	462,000 "	" Copaiba -	108,350 "

Or, besides 5,600 ounces Morphia, and 11,700 ounces Quinia, 3-710,-808 pounds of Drugs were imported.

Of these, more than one half were inferior, or adulterated, and yet, according to the construction of the existing laws, the inspector was compelled to pass them, (not that they were comparatively pure) provided that they were entered at their full value, and found to be the articles enumerated in the invoice.

Seven thousand pounds of Rhubarb were found to have been passed within ninety days, invoiced, not at 35 to 45 cents per pound, (the price of a good article at the Indies) but at from $2\frac{1}{2}$ to 7d. Sterling, or 5 to 14 cents per pound.

Cinchona, which should command from 30 to 75 cents for Lima and Soda Barks, and from 80 cents to $1 50 for yellow and red, at the ports of South America, came in, by thousands of pounds, invoiced at from 2 to 7 cents! (More recently 14,000 pounds of Maracaibo Bark was attempted to be entered at the New York Customhouse, upon the plea that it was intended for tooth-powder, and for purposes of dyeing.)

Opium, deprived of two-thirds of its Morphia, adulterated with Liquorice, some bitter extract, leaves, etc., its price varying from 3 cents to $3 45 per pound; the latter being a fair price, at wholesale, for the pure article.

Scammony, the Virgin Aleppo, which should command from six to eight dollars per pound, wholly substituted by a worthless article, of impure variety, itself adulterated, and invoiced at from two to three dollars.

Blue Pill, which should contain 33⅓ pr. ct. Mercury, a vile mixture of clay, Prussian Blue and Saccharine matter, with only 7 per cent of the metal.

Sulphate Quinine, adulterated with Chalk, Salacine, Gypsum, Mannite or Stearine, invoiced as low as 90 cents per ounce, while the pure article could not be manufactured under $2 25 per ounce.

Calomel, adulterated with argillaceous earths, white clay, or Sub-Nitrate Bismuth.

Iodide Potassium, with Chloride or Bromide of Potassium, Nitre, etc.

Some of these articles, as Rhubarb, and other roots, were either worm-eaten or decayed; the Opium infested with insects; Cinnamon exhausted of its essential oil; Cinchona of its Quinia, etc.

Beside the evil of admitting such Drugs from abroad, what were the effects upon the home market? To compete with the price of the foreign article, adulteration became the order of the day, and domestic sophistication was practised without concealment. In this deplorable condition of affairs, it was apparent that something should be done. It was difficult to fix the blame upon any particular class. The importer urged that Drugs were shipped to him as *commercial articles*, to be sold at the current market prices. Adulterated medicines furnished no more profit, in the way of commissions, than pure ones; but to meet the demands of dealers, who *would* buy at prices known to be insufficient and inadequate, articles, such as Blue Mass, etc., were imported by him of various degrees of strength.

On the other hand, the retailer excused himself on the plea that *his* articles were *just as imported;* and the conscientious Apothecary, aware of this ignoble state of things, was compelled to go through the most tedious manipulations with his own pestle and mortar, upon his counter, in order to supply himself with articles of officinal strength.

It was wisely considered, that by elevating the character of our foreign Drugs, domestic articles would improve in quality in proportion. In order, therefore, to strike at the root of the evil, the "Drug Law" was

passed by Congress on the 26th June, 1848, prohibiting the introduction of all Drugs and Medicines of a quality below a proper medicinal standard, and Examiners were appointed at the different ports for their proper inspection. This law took effect in New York on the 12th July, and from that date to May 1st of the following year, a period of nine months,

About 20,000	pounds	of Bark,	2500	"	Myrrh,
3,000	"	Opium,	1100	"	Valerian,
17,000	"	Rhubarb,	1500	"	Sarsaparilla,
12,000	"	Jalap,	5000	ounces	Iodine,
1500	"	Gamboge,	1000	"	Croton Oil,
6000	"	Senna,			

were rejected by Dr. Bailey.

Consider the effect of nearly 70,000 pounds of impure medicines being thrown upon the country from a single port, in a period of nine months! And remember, too, that every ounce, so long as it bore resemblance to a Drug, sooner or later would have been sold, or made into a medicine! Is it any wonder that people should have exercised a well-grounded faith in some of the popular fallacies of the day—or resorted to patent medicines, and the simples of the Botanic practice?

The effects of this law are apparent to every Druggist. In effectually checking the importation of adulterated Drugs, a spirit of inquiry has been awakened with the Apothecary, as to the condition of his stock. Analytical processes have become a subject of study, where, heretofore, the reputation of the seller was deemed a sufficient guarantee. Articles of every kind are improved in quality; the necessary garbling which the crude Drug formerly required, to render it fit for sale as a medicine, was an expensive tax upon the retailer, often adding from 10 to 25 per cent to the original cost; and the increased price of the foreign articles now received, is more than compensated for by the improvement in quality.

Dr. Bailey, the able Inspector at New York, says: "The law works, thus far, admirably; and with the exception of some few manufacturers, who were in the habit of importing inferior articles, for the purpose, solely, of manufacturing chemicals, (for which purpose they answered as well, and more economically, than those of medicinal purity) discontent is almost silenced. The revenues have not been reduced by the law; many high-priced Drugs, which were never imported before, now come freely in, and most leading articles, being a hundred per cent bet-

ter in quality and price, more than compensate, by an ad valorem duty, any loss sustained by revenue on articles rejected."*

But few foreign Drugs are received at the port of New Orleans, and these are chiefly Mexican products: Cochineal, Sarsaparilla, Vanilla, and Jalap. The three former possess such distinctive characteristics, as to be easily examined as to quality; the latter, however, is more difficult to determine, owing to the varieties of the plant; and no doubt thousands of pounds of false Jalap have annually, during former years, passed through this port, not to be sold as Jalap Root, but, through its great similarity, as to odor and color, to adulterate the powder of the genuine drug.

The worthy Examiner at this port states, that by far the larger portion of medicines received here from abroad, are French Patent Medicines, Sirups, Elixirs, and Pills of unknown formulæ.

Some slight modification of the Drug Law, to meet the wishes of those who import articles of a quality below the medicinal strength, *solely* for use in the arts, or for purposes of manufacturing, and a tariff of standards for the use of the Examiners, seem to be all that is necessary to prevent imposition from abroad. Some circumspection is required, with reference to the exceptions alluded to: Iodine, (not resublimed) if found to contain over 2 per cent of water, should be rejected as a medicine; but this impurity would scarcely be objectionable where it is to be used for the manufacturing of its chemical compounds. The inferior qualities of Acacia, and of Extract of Liquorice—the former for confectionary purposes, and the latter so largely used in the process of manufacturing Tobacco, as well as all gums for the making of Varnishes, may very properly come under this rule. And as regards the fitness of quality among the exclusively medicinal Drugs, a suitable tariff of standards is in course of preparation at the North, which will, doubtless, soon be placed in the hands of the Examiners at the various ports.

But in closing the door against foreign adulteration, it was thought that home adulteration would largely increase. Such, however, does not appear to be the case. As a natural consequence of an examination into the character of imported drugs, a general inquiry in regard to the purity of all the officinal remedies has been awakened, and many base practices have only to be fully examined into, to be as peremptorily abolished. Thus, in the business of Drug grinding—articles in the

* It is said that the "making up" of the valuations has more than paid the salaries of the Examiners.

powdered condition could formerly be purchased at a less price than the crude material! How was this accomplished? In the first place, the very worst of a lot of Drugs would always "do for powdering;" worm-eaten Rhubarb—unassorted Cinchonas, plentifully sprinkled with the Maracaibo variety—and the long list of roots, herbs and barks, in a damaged and worthless condition. Besides this, a conventional rule existed, with reference to the loss in powdering, and a premium thus offered to the Drug grinder to make up for all losses by an unscrupulous system of adulteration. For instance: A quantity of Opium would be sent to the mill; it must first be dried; if in a soft state, the drying would make it lose 15 to 20 per cent; if hard, it would lose, on an average, from 6 to 8 per cent; but only 6 per cent was allowed to the miller —(this being the established rule, without discrimination as to the condition of the drug). The *least* loss, in powdering the article, as it averages in the case, is 8 per cent. If it lost 20 per cent (as was frequently the case) by actual drying, the result would be a punishment for the honesty of the miller in the shape of a scolding, or the withdrawal of patronage. Is it any wonder that he silenced all complaint in a plentiful use of "the powder of post?"

All this is now changed; the Druggists, themselves, attend to the comminution and pulverization of Drugs, selecting the finest qualities for the purpose. The Medicinal Extracts, which used to be so inferior as almost to have gone into disuse, now come to us in nearly a perfect condition; and American Chemicals can be obtained from manufacturers, whose label alone may be considered a safe guarantee for officinal purity. A spirit of rivalry has been started, as to who shall supply these remedies in the finest condition, and the once popular sign of "Cheap Drug Store" has been metamorphosed into an advertisement of "inspected medicine." Besides this, the law, by excluding the competition of impure and low-priced articles, has, no doubt, indirectly encouraged our home products.

Finally, it remains to be seen whether the Apothecary, with all the aids and restrictions of law and public opinion to furnish him with pure Drugs, will endeavor to keep every article of such a quality, as to be fully up to the officinal standard. The preparation of medicines is, *popularly*, a mysterious science; and irresponsible as the Apothecary is to any supervising authority, his vocation may be said to be, emphatically, founded upon conscientious principle. Commensurate with this position should be his scrupulous care to maintain a reputation for proficiency in his art, and fairness in his dealings; the strictest integrity in dispensing, and in the preparation of all Pharmaceutical compounds,

should be his pride, as it must be his interest.* His business is not to sell *Drugs*, but *Medicines*; the very fact of his being a dispenser of medicines, concedes to him not only a qualification as to ability in compounding them, but a superior judgment as to their selection. Constant vigilance is therefore necessary in laying in his stock; and so far as adulteration, and the addition of inert, if not dangerous, dilutions is concerned, the utterance of base coin is a venial offence in comparison; for the latter is only a pecuniary imposition, while the other trifles with human life; and like some of the lower order of reptiles, if not dangerous, is at least useless, and disgusting to the moral sense.

Disappointment, in the effect of medicines, is the Physician's daily experience. If adequate causes can be suggested, independently of the various idiosyncracies which exist, and the peculiar modifications of disease upon the action of remedies, they ought certainly to be pointed out. Much of this disappointment arises, doubtless, from the imperfect condition of many articles used constantly in prescription, and especially their variableness as to strength. Unreliable medicines not only frustrate the medical practitioner, but jeopardize the life of the invalid, and tend to destroy the confidence of the community generally, in the efficacy and ameliorative tendency of medical science. Now, if an article like Laudanum be so reduced in strength at one store, as to make a teaspoonful the dose necessary for ordinary purposes, suppose the purchaser removes to a different locality, and purchases an article of officinal strength? A teaspoonful, or fluid drachm of Laudanum, contains 120 drops, equivalent to nearly 5 grains Opium. Again—a Physician desires to make use of Hydrocyanic Acid; disappointed in its imperfect action, he orders the dose to be increased until the desired effect is produced. Simultaneously with this change in the dose, the prescription is obtained from another Apothecary, who uses an Acid of officinal strength; the increased dose being administered, the effects might be unpleasant, indeed.

Dr. Christison mentions a case: "A man affected with Palsy, took every evening gradually increasing doses of a Strychnia less pure than the average; till at length, one evening, the dose was directed to be increased from two-thirds to three-fourths of a grain in two pills. At the same time, the Apothecary changed the article to one of snowy whiteness, and consequently more pure. Through some lucky whim, the patient took but one pill. In the night he was attacked with violent Tetanic Convulsions, protracted spasms of the extremities, severe

* It will not do for him to trust to importers and manufacturers for the quality of his medicines; he must examine for himself.

locked-jaw, violent opisthotonos, spasmodic twitching of the chest, and all the other formidable symptoms of poisoning with this Alkaloid ; in which state he continued for *several hours*. Had he taken both pills, the issue might have been fatal."

Hundreds of instances might be cited in illustration of the necessity of perfect uniformity in the purity and relative strength of Pharmaceutical preparations ; and as the prescription of the medical practitioner is based upon such uniformity, the duty of the Apothecary is clear upon this point. It is equally important for a mutual understanding, that Physicians should rigidly adhere, in writing their prescriptions, to the nomenclature of the United States Dispensatory.

In order to give a practical character to this Report, the Committee have taken some pains to examine into the quality of a few of the leading articles, as sold among the Apothecaries, and used by them in prescriptions, taken promiscuously from the stores in this city. A very limited amount of leisure was devoted to this examination ; it is therefore limited in its character; the chief object being, to arrive rather at an approximative estimation of the therapeutic value of a few of the more important remedies, than to furnish a chemical result. The articles were obtained from different parts of the city, and from all classes of stores.

One ounce of *Laudanum*, U. S. D., contains from 19 to 22 grains of the soluble portion of Opium. Eight specimens were examined—one held 21 grains ; one 15 grains ; one 14 grains ; one 13 grains ; and four but 12 grains. Morphia was found in all, in greater or less proportion.

50 grains of *Blue Mass*, U. S. D., should contain from $15\frac{1}{2}$ to $16\frac{1}{3}$ grains of Mercury, or one-third. Six specimens were examined—one held $16\frac{1}{2}$ grains ; one $14\frac{1}{2}$ grains ; two 14 ; and two $12\frac{1}{2}$ grains, or one-fourth.*

One ounce avoirdupois of *Mercurial Ointment*, U. S. D., should contain 240 grains (one-half) of Mercury. Six specimens were examined —one held 200 grains ; one 150 ; one 97; one 78 ; one 32 ; and one 23 grains.

* Some of the specimens of Blue Mass, though containing nearly its proper proportion of the metal, were very badly prepared. Instead of the Mercury being extinguished by proper trituration, in two specimens it could be squeezed out with the hand. As the efficacy of this preparation is proportionate to the extinction of the Mercury—its therapeutic action being the result rather of a minute division than an oxidation of the metal—it is necessary that the Mass should be well examined, at least *optically*, by the Apothecary, even when it comes from a reliable source.

Seven specimens of *Calcined Magnesia* were examined—five showed no impurities, and two were all Carbonate of Magnesia—powdered.

Six specimens of *Iodide Potassium* were examined, and proved to be pure.

Five specimens of *Calomel* were examined—they all sublimed entirely, and showed no trace of either Corrosive Sublimate or of Lead.

Six specimens of *Quinine* were examined—five appeared to be chemically pure; while one remains uncertain; it responded to all the tests for the usual impurities: was dissipated entirely at a red heat, showing Sulphate of Lime: showed no Ammoniacal Salt upon the addition of Caustic Potassa; dissolved perfectly in Alcohol at 92 degrees; showed no stearine by solution in dilute Sulphuric Acid; nor Salacine by the concentrated Acid in a platinum capsule. Dissolved freely in Acetic Acid; very slightly in Sulph. Ether. On the other hand, it required but about 15 parts of boiling water to dissolve it, while Quinia requires 30, and could not be precipitated from its acid solution by Carbonate Potash—being apparently equally soluble in the Alcali.

Thus, we find Laudanum containing a very little over one-half the quantity of Opium directed in the Pharmacopia. Mercurial Ointment with less than one-tenth part Mercury; Carbonate of Magnesia in the pulverized state, sold for Calcined; and at least one specimen of what appeared to be Sulphate of Quinia, turns out to be, most probably, Phloredzine—*an Alkaloid obtained from the apple tree bark.* As a general rule, the quality of the articles was in a ratio proportionate with the price—an argument against what are called "Cheap Drug Stores."*

Too much stress cannot be laid upon the importance of a strict adherence to the Pharmacopia of the United States. It should be the sole authority of the American Pharmaceutist; and it may well be questioned, as to how much of the discrepancy which exists in the strength of Pharmaceutical preparations, is due to a neglect of its instructions.

Under the old arrangement, before its introduction, every Apothecary was left to his own choice in making a selection from the various re-

* The low price at which "Bi-tartrate of Potash" is sold for culinary purposes at some of the stores, indicated a suspicion of adulteration—especially as it has been said to be largely adulterated with Alum. All the specimens examined by your Committee, however, proved to be pure—the deficiency in profit on this article being amply compensated in the condition of the more expensive articles.

ceipts in foreign Pharmacopias, for the manufacture of the articles that filled his shelves. The consequence was, that the fluid medicines, particularly such as Tinctures, Syrups, etc., obtained at one store, varied materially in strength from similar articles procured at another. But now, with a Pharmacopia of our own, all preference for foreign formulæ should give way to the importance of perfect uniformity, and the United States Dispensatory should govern the Apothecary in all his manipulations.

One of its particular injunctions is, the use of Troy weights in the preparation of medicines. Is not this frequently disregarded, and the avoirdupois substituted? Now, the difference between the pound and its divisions is a very serious matter in the preparation of some of the more active remedies. The difference is nearly 20 per cent. The powdering of Opium for Laudanum, too, (directed by the Pharmacopia, to ensure its dryness) should always be attended to. Great care is necessary, too, especially in this climate, in the proper preservation of medicines—the volatile, deliquescent, and efflorescent salts, and those, like Acetate of Lead and Carbonate of Ammonia, which attract Carbonic Acid from the Atmosphere, and become, consequently, either poisonous or comparatively inert. Extracts should be carefully guarded against mould; and it is suggested whether the fermenting Syrups,—those of Ipecac and Senegæ especially,—might not be well substituted (in this climate, at least) by oxymels of the plants; practical experience appearing to prove, that Honey, at 1.32, is less liable to change than Syrup of a corresponding density.

A book of simple criterions and tests, for the determination of the purity of medicines, is much needed among the Apothecaries; and it is hoped that the initiatory publications in the late numbers of the American Manual of Pharmacy, of this character, will eventually furnish a compilation of considerable value.

In conclusion—it is utterly impossible, by legal enactments, entirely to prevent the adulteration of medicines. The condition of an Apothecary's stock must depend, in a great degree, upon his capacity, integrity, and the attention which he devotes to his business. The first will prevent a bad selection of Drugs; and the last will secure to every preparation of a Pharmaceutical character, that precision and care which are indicated by the Pharmacopiæ.

It is believed that the establishment of a College of Pharmacy in this city would render Pharmaceutical character independent of the inefficient laws with reference to medical examination now existing; furnish a suitable platform for mutual association, a nursery for obtain-

ing competent assistants, and advance the cause of medical science by instilling a share of that "esprit du corps" which has been proved to be the soul of honest emulation.

Every branch of industry, whether scientific or laborious, should be as little as possible dependent upon legal enactments. This kind of protection is unpopular ; whilst a self-protective principle, founded upon a suitable code of ethics, would prove adequate in its results, embrace all the better class of Pharmaceutists, and give the fraternity a position to which they are entitled, and which they ought to establish and maintain. Philadelphia, New York and Boston have each their College of Pharmacy ; publishing their monthly or quarterly journals, and affording suitable lectures and other means of instruction to Apothecaries' Clerks. A College at Richmond, Virginia, is also contemplated. Surely, if a small city like Richmond, with 30,000 inhabitants, can establish such an institution, New Orleans should not be without one. It should be established and supported by the Apothecaries, and a membership considered a certificate of Pharmaceutic ability.

The Committee, before closing, beg leave to call the attention of the members of the Medical Society to a few suggestions, with reference to some articles of a doubtful character, which are frequently prescribed ; and as a principal object in their report is to meet the views of the medical practitioner, it is hoped that these remarks will not prove irrelevant.

What is Syrup of Morphia ? It is believed to be generally prepared of a corresponding strength with the *solution* of the Pharmacopiæ, viz : one grain to the ounce. But as there is no officinal Syrup to be found in the Dispensatory, would it not be well always to prescribe the strength required, by an indication in brackets ? For an article so important, and so powerful in the overdose, too much looseness exists in its prescription. As a Syrup, one-fourth of a grain, and one grain to the ounce, are generally kept in the stores ; is the latter generally understood as the proper strength among Physicians ?

Then we have Laudanum, U. S. D., 1 grain to 25 drops. Sydenham's Laudanum, containing, probably, 50 per cent more Opium ; Rousseau's Laudanum, 1 grain in 7 drops ; and the "Gouttes Calmantes de Majendie," containing 16 grains of Morphine to the fluid ounce. The slightest neglect in indicating which of these is required, or inexperience on the part of newly settled Apothecaries, might be attended with dangerous results. Of course the Tincture of Opium of the U. S. Pharmacopiæ, is generally known—the rest should be banished from the stores, and left to extemporaneous prescription.

Cinchona, in prescription, should always be designated. The Calisaya, or finest yellow, contains the largest proportion of Quinia, and in intermittents, should always be preferred. The pale barks contain more of the Cinchona and less Quinia, while the red, holding both the Salts in large and nearly equal proportion, is probably superior in its tonic qualities. The last edition of the Pharmacopiæ orders the Compound Tincture to be prepared from the red—in all other cases the Calisaya is believed to be generally intended. Indefinitely prescribed, as the article too frequently is, the inert Maracaibo variety may be used—left, as it is, to the judgment of the Apothecary to choose between them.

Tincture of Aconite U. S. D., made from the leaves; and the Sublimated Tincture of the Root, (alias Fleming's Tincture) should likewise be distinctly designated.

It is recommended, also, to banish the use of "drops" in prescriptions, and encourage, thereby, the use of minim measures among the Apothecaries. Mr. Aisop, several years ago, published the result of some experiments, showing the extremes of variation to which the mode of measuring by drops is liable. These variations are influenced by the size of the bottle, or rather the extent of circumference of the lip, viz:

	Dropped from a large bottle.	*Small bottle.*
1 fl'd drachm.—Scheele's Hydrocianic Acid	35 drops	70 drops
Distilled Water	31 "	54 "
Diluted Sulphuric Acid	24 "	84 "
Solution of Ammonia	40 "	48 "
Tincture of Opium	84 "	135 "
Rectified Spirit	100 "	130 "
Tincture Muriate of Iron	100 "	150 "

In Turkey, grains of corn are used for measuring drops; it is questionable if ours have any superior claim to uniformity.

As regards the subject of Nostrums, the Committee have nothing to report; they are probably as numerous as ever, each retaining, as it comes into vogue, a short-lived reputation. They are coincident with human credulity, and their greatest merit consists in the negative one of harmlessness. In some parts of the country they supply the place of both Physician and Apothecary, and they are swallowed with an amount of faith commensurate with the unscrupulous ability displayed by the author who manufactures the advertisement.

It has been proposed, in the Legislative Assemblies of some of the States, to enact a law, requiring the printed formulæ of contents to ac-

company each bottle. Nothing, however, has been done to protect the community, with the exception of (in Pennsylvania) laying an especial tax upon all Apothecaries and other storekeepers who vend them. The law, however, is unsatisfactory in its character, as it embraces, in its practical effect, such articles as Henry's Magnesia, which is not a quack medicine, but a *Magnesia, simply*, prepared by a peculiar process of condensing. It should be, therefore, outside the law, which was intended to strike at preparations of unknown composition. The sale of quack medicines should be discouraged by all Apothecaries, and the responsibility of their use rest entirely with the purchaser.

New Orleans, March 8, 1852.

IV.—TAMPA, (Fa.) AS A WINTER RESORT FOR INVALIDS.

BY C. C. BILLINGSLEA, M. D., OF SELMA, ALA.

(*Extract from a letter to Pro. Riddell.*)

Tampa, (Fa.) Feb. 7th, 1852.

Prof. J. L. Riddell.

Dear Sir—I have this day put on board the schooner Madonna, bound for New Orleans, to start in the morning, a box of small size, to your address, care of Benson & Hogues, New Orleans. The box will be in the care of Mr. A. Campbell, of this place, while going over. He is a passenger.

The box contains a few shells, some sand, a Sea-cow Fish, a Toad-fish, and some other things, all marked except the Cassava (pronounced here Cassawar). This, to my mind, is worth all the rest. It is a sub stitute for the arrow root and sweet potatoe ; said to be fine for hogs, and makes a better pudding than the sweet potatoe. I do not know whether the root will vegetate ; they most commonly plant the stalk, like sugar cane, and it puts out plants at every eye. I hope some of the pieces I send will vegetate, and you can propagate it to any extent hereafter. The stalk was killed here by the frost this winter, which is very unusual. In Louisiaua, I suppose, the stalk will have to be secured from frost. In consequence of the freeze here, the article is quite scarce, as but few persons took the care to house any of the stalk.

The citizens here most commonly dig it, as they do their sweet potatoes—only as they want them to eat, and most commonly they are growing all winter.

I am happy to inform you that myself and lady and daughter, and Dr. John, my son-in-law, are much improved. The climate is very mild, dry and healthful. I think it is the pleasantest and healthiest winter residence I have ever seen. There is scarcely any disease here through the winter. I regret your brother-in-law did not come with us. You may tell your medical friends to send their phthisical patients to Tampa, with a certainty of their being benefitted, and if in the early stage, cured. I have seen a great number of sound and healthy looking people in this country, who were considered in a hopeless condition when they came here. All say they improve more here in summer than in winter. Their disease is checked in the winter after they reach here, and they then commence convalescing in summer.

The thermometer was as low as 24 ° on two nights during January, and is the coldest weather they ever have had at Tampa.

Yours, truly,

V.—REPORT OF THE COMMITTEE ON "THE METEOROLOGY AND HYGIENE OF THE STATE AND ITS VITAL STATISTICS," TO THE LOUISIANA STATE MEDICAL SOCIETY.

BY J. C. SIMONDS, M. D., CHAIRMAN.

The Committee on the Meteorology and Hygiene of the State and its Vital Statistics, must offer to the Society their congratulations on the evidently increased attention bestowed of late upon the subjects on which it has to report. Within the last three years our medical journals have contained, probably, twice as many articles on these subjects as heretofore in the same length of time. Our Southern literature on this subject has increased in even greater proportion, and in various parts of the country, the collection and publication of facts illustrative of the sanitary condition of the different localities is proceeding so actively, that ere long it is hoped a sufficient amount of *data* will have heen collected to be available for the determination of most important principles. In our own State, the improvement in the tables published by the Board of Health of New Orleans, and in the statistical papers in the

New Orleans Medical and Surgical Journal, is quite apparent. The newly established Medical Register, besides containing a most admirable analysis of the monthly mortality of the city, has commenced a new era for the science of meteorology, in the publication of a detailed Meteorological Table. While but few have the patience and method requisite for recording meteorological observations, many are qualified to analyze those made by others, and will do so, when accessible, in the form of printed tables, which, being less bulky than MS. tables, admit of more facile examination.

Your committee will not enter upon the subject of Meteorology, for as yet the number of observers in this State is too few to institute comparisons of different localities, and the inferences deducible from an examination of a single series of observations, can be better made by those who have bestowed more attention upon the subject than your committee.

The subject of Hygiene will also be passed by, for as yet too few facts have been collected in the rural districts of the State to furnish reliable deductions as to their sanitary condition. *While the causes of death are unknown, science cannot point out means for improving the salubrity of a locality.* The memorial recently presented to the Legislature on behalf of this Society, urging the adoption of a general system for the Registration of Births, Marriages and Deaths, must supersede any plea which might be introduced here, and may be considered a part of this Report.

If your committee were restricted to the collections and developments of the past year, the subject of Vital Statistics would also have to be summarily dismissed, for without a systematic registration and concentration in one office of all those isolated facts, which together constitute Vital Statistics, and the deductions from which are so important to the welfare of the community and to the development of a knowledge of its actual condition, it is impossible to do more than to refer to a few observations pertaining to particular localities.

Having been kindly furnished by Dr. Barton with a synopsis of the general Vital Statistics of the State, as collected by the Government of the United States in 1850, and furnished to him by the Superintendent of the Census, it is deemed not inappropriate to offer such deductions as they furnish—especially as they constitute the only *data* ever collected throughout the State to elucidate its Vital Statistics. A few preliminary remarks on their general character and reliability may be premised.

So far as regards the numbers of the different classes of the living,

the census returns, doubtless, approximate closely to the truth. They are the only *data* for estimating the population, and are more worthy of trust than any guesses, which must necessarily be vague and destitute of foundation. If not absolutely correct, they are sufficiently so, and to whatever errors they are liable, these errors prevail equally in places similarly circumstanced, and nearly equally in all places. Thus, in large cities, it is equally probable that errors may exist; also in similar rural districts. Between the city and the country, the chances of error become nearly equal, though the causes may be different. A part of a commercial population may be omitted, in consequence of temporary absence; but in a sparsely settled country, habitations may be unknown, or so remote as to be willingly forgotten.

The returns of deaths, we may know *a priori*, will be much less accurate, and the errors in different localities will vary greatly. These returns are not dependent upon the diligence of the collectors of the facts, but upon the memory of numerous individuals, whose recollection is appealed to, in some cases, for the preceding eighteen or twenty months. The habits of the community, as respects permanence of abode, will influence their recollection of the deaths in the family; in many instances, the death of the head of a family will be overlooked in consequence of the scattering of his family; and generally the deaths of young men, strangers in any place, will be entirely forgotten. Again, the errors in the returns of deaths for the different classes of the population, as Whites, Free Colored and Slaves, will vary much in the degree to which they approximate to the truth. It cannot for a moment be supposed, that among the degraded free blacks of our northern cities, the deaths will be duly noted; nor will the deaths of slaves be so accurately stated as those of whites. Further, the deaths will be more fully stated where they have been fully recorded; and where human life is more highly valued, than in other places where the reverse obtains.

With these remarks on the reliance to be placed on the census returns, some of which will be hereafter illustrated, we may proceed to an analysis thereof.

Table A. gives for each parish the number of whites, of free colored and of slaves, with the total population, the total number of deaths, and the mortality in each hundred of the total population. The last figure of the calculated ratio of mortality may be incorrect by a unit, but it is at least as accurate as the *data* from which it has been made, and greater accuracy is unnecessary. To facilitate the examination of the relative mortality of the different parishes, they are here inserted in the order of least mortality.

Mortality per cent of the Parishes of the State of Louisiana, according to the Census Returns of 1850.

Lafourche,	.0944	Feliciana, East,	1.979
Calcasieu,	.5365	St. John Baptist,	2.118
Lafayette,	.6548	St. Martin,	2.202
St. Bernard,	.7103	Concordia,	2.217
St. Mary,	.7446	LOUISIANA,	2.308
Washington,	.8509	Moorehouse,	2.326
Terrebonne,	.8913	Washita,	2.336
St. Helena,	1.118	De Soto	2.370
Jackson,	1.222	St. Charles,	2.441
Claiborne,	1.231	Caldwell,	2.486
Vermillion,	1.262	Baton Rouge, East,	2.596
Ascension,	1.302	Assumption,	2.657
Point Coupee,	1.305	Jefferson,	2.675
Sabine,	1.329	Caddo,	2.836
Union,	1.390	Feliciana, West,	2.846
St. Landry,	1.461	Iberville,	2.851
Bienville,	1.480	Catahoula,	2.861
St. Tammany,	1.618	Orleans,	3.050
Livingston,	1.685	Plaquemines,	3.343
Rapides,	1.690	Tensas,	3.418
Bossier,	1.853	Baton Rouge, West,	3.525
Avoyelles,	1.876	Carroll,	4.504
Natchitoches,	1.901	Madison,	4.753
St. James,	1.965	Franklin,	4.767

Twenty-eight parishes show a mortality less than that of the whole State, and nineteen show a greater mortality. This table shows, on its very face, errors of great magnitude. It cannot be supposed that in Lafourche,only nine deaths occurred in a population of nine thousand five hundred persons; and we would fain hope that the mortality of Franklin, Madison and Carroll, which, however, are contiguous parishes, has been overrated. Six parishes show a greater mortality than the parish of Orleans, notwithstanding the advantage in collecting the deaths in the latter from the records of the Charity Hospital, which furnished 2194 out of the 3643 deaths reported. If these be deducted, the number of deaths would be 1449, and the mortality would be reduced to .1214 per cent; a close approximation to that of La Fourche, and equally erroneous. Of course, if 60 per cent of the reported deaths are deducted in Orleans, the same should be deducted from the deaths in other parishes, and their relative position would be changed.

In Table B is given, for the whole State, for the parish of Orleans, and for the remainder of the State deducting Orleans, the deaths according to the assigned causes thereof, classified according to the plan

explained in the Transactions of the American Medical Association, Vol. IV., in Fenner's Southern Medical Reports, Vol. II., and in the Charleston Med. Jour. Vol. VI.; together with proportions calculated therefrom. In the fourth column is given the proportion that the population and the deaths in the several classes of causes in Orleans bears to those in the whole State of Louisiana. It will be noticed, that while the population of Orleans is 23 per cent of the whole State, the deaths reported are 30 per cent. In the three divisions of causes of death, Zymotic, Sporadic and External, the proportion of Orleans exceeds that of the State; the same is true of most of the important classes. In diseases of the Digestive and Urinary Organs, deaths from Old Age, the Still-born, Casualties and Exopathic* causes, the proportion is less; but in the last three, and probably also in the first two, it is so erroneously.

In the next two columns, the proportion of the several classes to the divisions to which they respectively belong, of the division to the specified causes, and of the specified and unknown to the total deaths, is shown for Orleans and for the rest of the State. Here it is seen that a greater proportion of "unknown" are reported in the country than in the city; and while the proportion of Zymotic diseases is less, that from Sporadic and External causes is greater. Among Zymotic diseases, while endemic causes are relatively less, the deaths from Monoxysmal† diseases is proportionally greater. The greater prevalence of diseases of the Digestive System will here be noted; and it must be remarked that the Cholera commenced its ravages in New Orleans in December, 1848, and its virulence here was expended before the first of July, 1849, at which date the census returns of deaths commenced, and that during the fall of this year it prevailed on the Mississippi river, and must have been the cause of a large proportion of the deaths reported. Among the External causes of death, the disproportion of the several classes in Orleans and the rest of the State is particularly remarkable. The following is the explanation of the causes of the disproportion that we would suggest. The source from which so large a portion of the deaths in Orleans was obtained (the Charity Hospital) will, in part, account for the disproportion referred to. Violent deaths more often fall into the hands of the Coroner than of a Physician, while

* Signifying that the cause of death originated *without*, and implying that the death is the result of the infliction of *another person.*

† Includes those diseases to which the whole human race is subject, and subject but once, such as Hooping Cough, Measles and Small-pox.

the results of Esopathic* causes will be more abundantly seen in cities, and especially in Hospitals. In the rural districts, violent deaths, whether classed as casualties or originating in the vicious propensities of ones neighbors, are those most certain to be remembered, and are reported by their true names. In Orleans, the truth is concealed under a scientific term. One executed, is reported as dying of fracture of the neck; kicks cause inflammation of the bowels, which is reported as the cause of death; a blow on the head may be reported as congestion of the brain; suffocation as asphyxia; a wound as internal hæmorrhage, etc., etc.; the explosion of a steamboat may cause several deaths from amputation, or gangrene, or erysipelas. The tendency is to state the result rather than the cause, which is the very fact that should be stated in certificates for interment, being the only one deducible therefrom of any value.

The object being in this table to contrast the causes of deaths in the city and rural parishes, the preceding columns have been calculated for facility of comparison. The most correct method, however, is, by comparing the deaths in the several classes with the total population. This is done in the last two columns of the table, all the numbers of which may be directly compared together, as they have all been reduced to the same common standard. The preceding remarks will be verified by examining them in connection with the figures in these columns, and supersede any further discussion thereof.

Respectfully submitted,

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* Indicates that the death was directly or indirectly due to the individual's own misconduct and his violation of the laws of morality, etc.

TABLE A.

Showing the number of whites, of free colored and of slaves, the total population and the total number of deaths and the ratio of mortality in each Parish of the State of Louisiana according to the United States Census returns of 1850.

PARISHES.	*POPULATION.*				*Total Deaths.*	*Mortality pr. ct.*
	Whites.	*Colored*	*Slaves.*	*Total.*		
Ascension	3,339	147	7,266	10,752	140	1.302
Assumption	5,170	27	5,344	10,538	280	2.657
Avoyelles	4,066	99	5,161	9,326	175	1.876
Baton Rouge, East	5,347	279	6,351	11,977	311	2.596
Baton Rouge, West	1,818	102	4,350	6,270	221	3.525
Bienville	3,623	21	1,895	5,539	82	1.480
Bossier	2,507		4,455	6,962	129	1.853
Caddo	3,637	39	5,208	8,884	252	2 836
Calcasieu	2,716	241	957	3,914	21	.536
Caldwell	1,584		1,231	2,815	70	2.486
Carroll	2,336	10	6,443	8,789	405	4.504
Catahoula	3,585	19	3,528	7,132	204	2.861
Claiborne	4,949		2,522	7,471	92	1.231
Concordia	823	1	6,934	7,758	172	2.217
De Soto	3,548	25	4,446	8,019	190	2.370
Feliciana, East	4,061	23	9,514	13,598	269	1.979
Feliciana, West	2,473	106	10,666	13,245	377	2.846
Franklin	1,664	14	1,573	3,251	155	4.767
Iberville	3,568	104	8,607	12,279	350	2.851
Jackson	3,406	2	2,158	5,566	68	1.222
Jefferson	18,021	874	6,196	25,091	671	2.675
Lafayette	3,390	160	3,170	6,720	44	.655
Lafourche	5,143	22	4,368	39,533	9	.094
Livingston	2,523	20	842	3,385	57	1.685
Madison	1,416	4	7,353	8,773	417	4.753
Moorehouse	1,877	30	2,006	3,913	91	2.326
Natchitoches	5,466	881	7,854	14.201	270	1.901
Orleans	91,355	10,038	18,068	119,461	3,643	3.050
Plaquemines	2,221	390	4,779	7,390	247	3.343
Pointe Coupee	2,967	561	7,811	11,339	148	1.305
Rapides	5,037	184	11,340	16,561	280	1.690
Sabine	3,347		1,168	4,515	60	1.329
St. Bernard	1,406	73	2,323	3,802	27	.710
St. Charles	867	121	4,132	5,120	125	2.441
St. Helena	2,354	11	2,196	4,561	51	1.118
St. James	3,285	62	7,751	11,098	218	1.965
St. John Baptist	2,586	191	4,540	7,317	155	2.118
St. Landry	10,139	1,243	10,871	22,253	325	1.461
St. Martin	4,741	531	6,493	11,765	259	2.202
St. Mary	3,423	424	9,853	13,700	102	.745
St. Tammany	3,642	359	2,363	6,364	103	1.618
Tensas	900	2	8,138	9,040	309	3.418
Terrebonne	3,324	72	4,328	7,724	69	.891
Union	4,778		3,921	8,203	114	1 390
Vermillion	2,328	14	1,067	3,409	43	1.262
Wachita	2,293	7	2,708	5,008	117	2.336
Washington	2,367	4	1,037	3,408	29	.851
TOTAL	225,416	17,537	244,786	517,739	11,948	2.308

TABLE B.

Showing for each class of diseases the number of deaths reported for the whole State, the Parish of Orleans, and the remainder of the State: the proportion of the deaths in Orleans to those in the whole State; that of the different classes to their respective divisions and to the whole population for Orleans and the remainder of the State.

	Whole State.	*Orleans.*	*Rest of State.*	*Orleans to Louisian.*	*Of Classes.*		*To Population.*	
					Orleans.	Rest of La.	Orleans.	Rest of La.
Population.	517 739	119 461	398 278	23.08			119461	398278
Total.	11 954	3 643	8 311	30.49			3.050	2.086
Unknown.	1 431	340	1 091	23.76	9.333	13.120	.285	.274
Specified.	10 523	3 303	7 220	31.47	90.650	86,860	2.765	1.812
A Zymotic	5 998	1 996	4 002	33.29	60.430	55.440	1.671	1.005
B Sporadic	3 736	1 117	2 619	29.88	33.810	36.270	.935	.658
C External	789	190	599	24.08	5.753	8.296	.159	.150
1 Epidemic								
2 Endemic	5 598	1 912	3 686	34.15	95.760	91.870	1.601	.925
3 Monoxysmal	400	84	316	21.00	4.208	7.896	.070	.079
4 Variable	749	245	504	32.71	21.950	19.240	.205	.127
5 Nervous	835	274	561	32.82	24.540	21.420	.229	.141
6 Respiratory	1 170	386	784	32.99	34.570	29.930	.323	.197
7 Circulatory	52	21	31	40.38	1.879	1.184	.018	.008
8 Digestive	544	103	441	18.93	9.223	16.840	.086	.111
9 Urinary	23	5	18	21.74	.448	.687	.004	.005
10 Of Males								
11 Of Females	133	39	94	29.32	3.493	3.589	.033	.024
12 Locomotive	42	19	23	45.25	1 702	.878	.016	.006
13 Integument.	17	4	13	23.54	.358	.496	.003	.003
14 Of Senses	1	1		100.00	.090		.001	
15 Old Age	154	20	134	12.99	1.791	5.117	.017	.034
16 Still Born	16		16			.611		.004
17 Casualties	604	113	491	18.71	59.470	81.980	.095	.123
18 Exopathic	85	3	82	3 53	1.579	13.690	.003	.021
19 Eropathic	93	70	23	75.26	36.840	3.840	.059	.006
20 Treatment.	7	4	3	57.16	2 105	.501	.003	.001

VI.—SOME REMARKS ON THE CAUSES, SYMPTOMS AND TREATMENT OF THE SO-CALLED TYPHOID VARIETY OF REMITTENT FEVER, AS MET WITH IN THE SOUTHERN ATLANTIC AND GULF STATES.

BY JAMES C. HARRIS, M. D., OF WETUMPKA, ALA.

In an article by the writer, which appeared in the Transylvania Medical Journal for July, 1849, entitled "An Account of the several forms of Periodical or Malarial Fever in the United States," we observe, page 33, that "in entering upon the performance of our task, the first problem that presents itself for consideration and solution is, what are the several forms of malarial fever, and until this query is met and satisfactorily settled, every account, no matter however perfect, that does not embrace all the varieties, must be necessarily, and to a considerable extent, defective, in view; and for the purpose of avoiding this difficulty, and giving to the subject that full and impartial consideration to which we think it entitled, we have concluded, in the way of introduction to state, that we hold malaria to be the result alone of vegetable matter undergoing decomposition, and in connexion with atmospheric alterations of the locality, the remote cause of all the forms of *periodical fever*, known and described by systematic writers under the names of *Intermittent*, *Remittent*, *Continued*, *Congestive and Yellow Fevers*; and that these are all that can be strictly embraced under this head known to the geographical limits of the Union. In this connexion, an attempt to show the unity of malaria, or in what these atmospheric alterations consist, could not be considered in any other light than irrelevant. But that heat, light, electricity and moisture, acting on vegetable matter under determinate laws, do evolve, modify or augment the poisonous properties of this mysterious agent, we think can be very conclusively shown; at least, experiments made for the purpose of illustrating and settling these points, show that similar atmospheric variations over surfaces either equally or unequally supplied with vegetable matter, give rise, in connexion with individual predisposition, to different varieties of fever; and that it is rather upon these principles that we must account for their specific differences, than actual dissimilarity of the remote causes."

With these declarations as regards the probable remote cause of fever, we then go on and state, page 41, that "an attack of Bilious Remittent Fever is most generally preceded, for several days, by languor, slight headache, nausea, disagreeable taste, with loss of appetite and pain in the limbs and joints;" concluding the description by observing,

page 43, that "in a large majority of cases the *cold stage* is scarcely ever so long, or so clearly marked as it is in Intermittent Fever; and except under circumstances presently to be mentioned, *never returns.* There is also an augmentation of all the other symptoms in violence and duration; *and although there are slight remissions and exacerbations occurring daily, or every other day, they are generally, if noticeable at all, most clearly marked on every other day.*

Now, when we recollect that *Remittent Fever is a continued form of Fever, and that its type is instantly changed by the loss of this feature,* we ought not to be any more surprised at meeting with a slight or entire loss of its remissional features, with a corresponding increase and lengthening out of the febrile stage, than the reverse, and that this is frequently the case, we think all experience bears us out."

After then speaking, page 43, of the symptoms and terminations of the inflammatory variety, and in which, from the early occurrence of *local hyperæmias,* and consequent loss of periodicity, is doubtless frequently mistaken for *Typhus mitior,* and which, under the transforming influences of locality and season, in some of its leading features, it very much resembles, we then continue by describing the *Typhoid variety and stage of Remittent Fever,* thus: "Ever since our first settlement in Alabama, during the fall season in certain localities, the uplands and off the rivers and creeks, we have occasionally met with cases, at first of a *slightly remittent type that have gradually assumed a continued and low grade of febrile action.* These kind of cases are generally characterized at first by great debility and entire loss of appetite, headache, pains in the back and limbs, thirst, heat of skin, and quick pulse, attended with dullness and confusion of intellect, gradually passing into restlessness and delirium, twitching of the tendons, and occasionally epistaxis. After the persistence of these symptoms for an indefinite period, slight sordes collect around the teeth, accompanied with a dry, red, cracked or brown tongue, sometimes tremulous on protrusion, attended throughout with more or less looseness of the bowels, the stools being watery and of a dark black, yellowish or bloody appearance, and terminating from eight to fifteen or twenty days in low muttering delirium, subsultus tendinum, picking at the bedclothes, suppression of urine, or involuntary evacuations from the bladder or bowels, coldness of the extremities, hiccough and death."

In presenting the foregoing symptomatic pictures, particularly that of the so-called Typhoid variety, we were perfectly aware at the time how needless it was for us to state, that they were with great care and labor selected and detailed, for the purpose alone of showing how and when

some cases of malarial fever could leave their paroxysmal features and assume the continued type; and not in mild attacks, or in fact in any, under a well directed plan of cure, as presenting their common symptoms and terminations, with which our books are full, and every tyro in the practice familiar.

Again, when we recollect that *Remittent and Continued Fever are convertible into each other*, and that the elements necessary for the production of their supposed remote cause are present throughout a great portion, if not the entire extent of the Southern and Southwestern States, why should we be surprised at finding them in different localities, seasons and individuals, presenting slight modifications in some even of their leading features? Nothing else than an occurrence of this sort, we think, would be more natural; but that they are ever, either in their pure or modified forms, under any circumstances, so far metamorphosed as to become *contagious*, we think the nature of their remote cause utterly forbids. The oft repeated theory, to prove this assertion, of large portions of whole families of negroes, that are hard worked, badly clothed, and worse housed and fed, being attacked during the latter autumn and early winter, with rather a low grade of malarial fever, attended with irregular exacerbations, and marked by exceedingly obscure remissions, and possessing the power of self-propagation, is to us no more strange, divested of its contagious features, than that others, on adjoining plantations, differently treated and situated, should escape.

Assuming, then, as true, the foregoing positions, and showing that simple and inflammatory remittents are frequently converted into the continued type; and that under this phaze, with their lost laurels, and newly acquired trophies, do present us with either a high or low grade of febrile excitement, we will now, without further comment, proceed to detail briefly our plan of treatment, and which, we are happy to state, has in our hands been almost universally attended with success.

TREATMENT.

If called in during the continuance of the slight remissional features, we immediately attempt to destroy these, by the liberal administration of Quinine; and then correct the disordered secretions, and finish the cure by the administration of an occasional dose of calomel, and if needs be, more Quinine. But, on the other hand, should our first visit not be made until after the fever has lost its remissional features, attended with local determinations, and a loose state of the bowels, we

then endeavor to arrest the bowels, restore the lost secretions, and break up the local congestions,by the administration of *Calomel* and *Opium*; for the purpose of arresting the bowels, we generally give at once a decided dose of solid Opium or Morphine, and then by the administration every two or three hours of a pill, composed of 3 or 4 grains of *Calomel*, with as much additional Opium as the patient can bear without producing too much stupor, endeavor to keep them in check, and as before observed, relieve the congestions, and restore the lost secretions ; one of these pills is repeated until four or five are given. Should they arrest the purging, which they frequently do, and the bowels remain in a torpid state for twelve or fifteen hours after the administration of the last one, we then give, for the purpose of carrying off the accum ulations thus acquired, some mild laxative,—a dose of Rhubarb and Magnesia, or Castor Oil. But, as sometimes happens, the first pills of Calomel and Opium run off, apparently, exhausting the patient very much; in this event, and under these circumstances, we give two or three 5 grain doses of Tannin, or one or two of Sacharum Saturini at short intervals, in combination with a sufficient quantity of Opium or Morphine, and then again recur to the pills of Calomel and Opium, as above directed. By persisting in this course for three or four days, we scarcely ever fail in procuring, finally, free, consistent, bilious discharges, and in the course of from six to ten days, restoring the secretions and relieving the hyperæmias, so far as to find the fever giving way, and the case assuming again its original *paroxysmal features.* This done, we then complete the cure by the liberal administration of Quinine, (10 grain doses,) repeatedevery two or three hours, until sometimes three or four portions are given—causing the patient at the same time to drink freely of some warm tea—Sage, Balm, or Virginia Snakeroot, answer very well. As these remissions most generally make their reappearance just before day, a time when the attendants are generally asleep, and as they are sometimes so obscure as to require the most careful observation to detect them, we would advise, particularly the young practitioner, to make it convenient to visit his patient about this time, so as to satisfy himself as to the exact type of the fever, and be ready, also, to take advantage with his Quinine, of whatever remission may occur. In addition to the above remedies, if there is much tenderness on pressure over the epigastrium and bowels, the warm bath, sinapisms and warm stimulating poultices—and if inflammation, cups and blisters over the suffering organs, are not only useful, but actually necessary. Notwithstanding we are aware that our treatment in the foregoing variety of *fever*, the outlines of which we have just detailed, may, and doubtless

will appear strange to many of our medical brethren; still, the fact that we have spent more than eighteen years in the daily practice of our profession, during which time we have treated, and observed in the hands of others, more perhaps than five thousand cases of fever, ought, and we hope will, before they unconditionally condemn it, secure for it at their hands, at least a trial and report, and if it should be discovered that we have said any thing that is in the least calculated to *disabuse their minds of the fear of debility*, and press upon them the importance of preventing, by the timely administration of Quinine, and the breaking up, when formed, with Calomel, these local congestions and inflammations, upon which the continuance of the fever mainly depends—we shall feel more than repaid for the time and labor the preparation of these remarks has cost us.

VII.—CATALOGUS FLORÆ LUDOVICIANÆ.

AUCTORE, J. L. RIDDELL, M. D., CHEM. PROF. UNIV. LA.

The following systematic list, embodying the results of a great many years of observation, by Dr. Josiah Hale, by the late Prof. W. M. Carpenter, and by the author, has been abridged from a manuscript work, contributed by the author, in 1851, to the Smithsonian Institution. The MS. work alluded to is entitled, "Plants of Louisiana." It comprises the technical and the vulgar names of the flowering and filicoid species of plants, well ascertained as growing within the limits of the State of Louisiana, [nearly all of which are represented by specimens in the author's herbarium],—with special localities, times of flowering, and full descriptions of the new species. The Cyperaceæ and Gramineæ, specially contributed by Dr. Hale, are not included in the present abridgment.

RANUNCULACEÆ.

Clematideæ.

Clematis Virginiana, L.
holosericea, Pursh.
cylindrica, Sims.
crispa, L.
reticulata, Walt.

Anemoneæ.

Anemone Caroliniana, Walt.
Hepatica triloba, Chaix.
var. obtusa, Pursh.
acuta, Torr. & Gr.
Adonis autumnalis, L.

Ranunculeæ.

Ranunculus Flammula, L.

pusillus, Poir.
var. denticulata, T. & G.
var. oblongifolius, T. & G.
abortivus, L.
repens, L.
var. linearilobus, D.C.
Marilandicus, T. & G.
recurvatus, Poir.
bulbosus, L.
sceleratus, L.
muricatus, L.
parviflorus, L.
Purshii, Rich.
Carolinianus, D. C.
Mysorus minimus, L.

Helleboreæ.

Delphinium azureum, Michx.
exaltatum, Ait.

Cimifugeæ.

Actæa alba, Bigel.
Thalictrum dioicum, L.
Cornuti, L.

MAGNOLIACEÆ.

Wintereæ.

Illicium Floridanum, Ellis.

Magnoliæ.

Magnolia grandiflora, L.
glauca, L.
Umbrella, Lam.
acuminata, L.
cordata, Michx.
macrophylla, Michx.
Liriodendron tulipifera, L.

Schizandreæ.

Schizandra coccinea, Michx.

ANONACEÆ.

Uvaria triloba, Torr. & Gr.
parviflora, Torr. & Gr.
obovata, Torr. & Gr.

MENISPERMACEÆ.

Cocculus Carolinus, D. C.
Menispermum Canadense, L.
Lyoni, Pursh.

BERBERIDACEÆ.

Podophyllum peltatum, L.

CABOMBACEÆ.

Cabomba Caroliniana, Gray.
Brassenia peltata, Pursh.

NELUMBIACEÆ.

Nelumbium luteum, Willd.

NYMPHÆACEÆ

Nymphæa odorata, Ait.
Nuphar lutea, Smith.
advena, Ait.

SARRACENIACEÆ.

Sarracenia purpurea, L.
rubra, Walt.
Drummondii, Croom.
psittacina, Michx.
variolaris, Michx.
flava, L.

PAPAVERACEÆ.

Papaver somniferum, L. Intr.
Rhæas, L. Intr.
dubium, L. Intr.
Argemone Mexicana. L.
var. albiflora, D. C.
Chryseis Californica, L. Intr.
Sanguinaria Canadensis, L.

FUMARIACEÆ.

Corydalis aurea, Willd.

CRUCIFERÆ.

Cheiranthus hesperidoides, T. & G.
Nasturtium officinale, R. Br.
tanacetifolium, Hook & Arn.
sinuatum, Nutt.
palustre, D. C.
obtusum, Nutt.
limosum, Nutt.
natans, D. C.
var. Americanum, Gray.
Barbarea vulgaris, R. Br.
Cardamine rotundifolia, Michx.
hirsuta, L.
var. parviflora, Nutt.
Virginica, T. & Gr.
Ludoviciana, Hook.
oligosperma, Nutt.
Dentaria laciniata, Muhl.

Sinapis nigra, L. Intr.
Herpestris matronalis, L.
Sisymbrium officinale, Scop.
canescens, Nutt.
Draba brachycarpa, Nutt.
var. fastigiata, Nutt.
Caroliniana, Walt.
micrantha, Nutt.
Camelina sativa, Crantz, Intr.
Senebiera pinnatifida, D. C.
Lepidium Virginicum, L.
ruderale, L.
Capsella Bursa-pastoris, Moench, Intr.

CAPPARIDACEÆ.

Gynandropsis pentaphylla, D. C. Intr.
Polanisia graveolens, Raf.
Cristatella erosa, Nutt.

VIOLACEÆ.

Viola pedata, L.
palmata, L.
cucullata, Ait.
septemloba, Le Conte.
sagittata, Ait.
var. ovata, Torr. & Gr.
villosa, Walt.
primulæfolia, L.
lanceolata, L.
Muhlenbergii, Torr. & Gr.
var. multicaulis, Torr. & Gr.
tricolor, L.
var. arvensis, D. C.
striata, Ait.

DROSERACEÆ.

Drosera brevifolia, Pursh.
rotundifolia, L.
longifolia, L.
filiformis, Raf.
Parnassia Caroliniana, Michx.
var. grandifolia.

CISTACEÆ.

Helianthemum Canadense, Michx.
Caroliniana, Michx.
corymbosum, Michx
Lechea major, Michx.
thymifolia, Pursh.
minor, Lam. var. exaltata.
" villosa.
" verticillata
Drummondii, Torr. & Gr.

HYPERICACEÆ.

Ascyrum Crux-Andræa. L.
var. angustifolia, Nutt.
pumilum, Michx.
stans, Michx.
var. ovatum, Chapman.
amplexicaule, Michx.
Hypericum prolificum, L.
var. galiodes.
galiodes, Lam.
fasciculatum, Lam.
corymbosum, Muhl.
maculatum, Walt.
aureum, Bartram.
myrtifolium, Lam.
nudiflorum, Michx.
pilosum, Walt.
angulosum, Michx.
ellipticum, Hook.
mutilum, L.
Canadense, L.
Sarothra, Michx.
Drummondii, Torr. & Gr.
sphærocarpon, Michx.
gymnanthum, Eng. & Gr.
Elodea Virginica, Nutt.
petiolata, Pursh.

ELATINACEÆ.

Elatine Americana, Arn.

CARYOPHYLLACEÆ.

Mollugo verticillata, L.
Sagina procumbens, L.
decumbens, Torr. and Gr.
Stellaria media, Smith.
Nuttallii, Torr. and Gr.
uniflora, Walt.
longifolia, Muhl.
aquatica, Pollich.
macropetala, Torr. and Gr.
lanuginosa, Torr. and Gr.
Cerastium vulgatum, L.
viscosum, L.
var. semidecandrum.
" elongatum, Hook.

arvense, L.
nutans, Raf.
Silene stellata, Ait.
Antirrhina, L.
Pennsylvanica, Michx.
Virginica, L.
regia, Simms.
ovata, Pursh.
Lychnis Githago, Lam. Intr.
Saponaria officinalis, L. Intr.
Vaccaria, L. Intr.
Dianthus barbatus, L. Intr.
caryophyllus, L. Intr.
Siphonychia Americana, T. & G.

TAMARICACEÆ.

Tamarix Gallica, Willd. Intr.

PORTULACCACEÆ.

Portulacca oleracea, L.
Talinum teretifolium, Pursh.
Claytonia Virginica, L.

MALVACEÆ.

Malva Papaver, Cav.
rotundifolia, L.
Modiola multifida, Moench.
Malvaviscus Drummondii, Torr. & Gr. Intr.
Gossypium herbaceum, L. Intr.
Abutilon Avicennæ, Gært. Intr.
Sida spinosa, L.
Elliottii, Torr. and Gr.
rhombifolia, L.
Hibiscus Virginicus, L.
Manihot, L.
aculeatus, Walt.
Moscheutos, L.
incanus, Wendl.
militaris, Cav.
coccineus Walt.
grandiflorus, Michx.

TILIACEÆ.

Corchorus siliquosus, L.
Tilia Americana, L.
heterophylla ? Vent.
pubescens, Ait.

TERNSTRŒMIACEÆ.

Gordonia Lasianthus, L.
Stuartia Malachodendron, L.

AURANTIACEÆ.

Citrus medica, Risso, Intr.
Limetta, " "
Limonum, " "
Aurantium, " "

MELIACEÆ.

Melia Azedarach, L. Intr.

LINACEÆ.

Linum rigidum, Pursh.
var. Berendieri, T. & G.
Virginianum, L.
usitatissimum, L. Intr.
perenne, L.

GERANIACEÆ.

Geranium maculatum, L.
Carolinianum, L.
Erodium cicutarium, L'Her. Intr.

OXALIDACEÆ.

Oxalis violacea, L.
corniculata, L.
stricta, L.
Acetosella, L.

BALSAMINACEÆ.

Impatiens pallida, Nutt.
fulva, Nutt.
var. apetala, Carp.
balsamina, L. Intr.

TROPŒOLACEÆ.

Tropœolum majus, L. Intr.

RUTACEÆ.

Ruta graveolens, L. Intr.

ZANTHOXYLLACEÆ.

Zanthoxyllum Carolinianum, L.
Ptelea trifoliata, L.

ANACARDIACEÆ.

Rhus cotinus, L. Intr.
typhina, L.
glabra, L.
copallina, L.
Vernix, L.
Toxicodendron, L.
var. quercifolium, Michx.
" radicans, Torr.
" microcarpon, Michx.

aromatica, Ait.

ACERACEÆ.

Acer saccharinum, L.
dasycarpum, Ehr.
rubrum, L.
Drummondii, Hook & Arn.
Negundo aceroides, Mœnch.

SAPINDACEÆ.

Sapindus marginatus, Willd.
Cardiospermum Halicacabum, L.
Æsculus Pavia, L.
var. discolor. Torr. & Gr.

CELASTRACEÆ.

Euonymus Americanus, L.

RHAMMANACEÆ.

Rhamnus Carolinianus, Walt.
lanceolatus, Pursh.
ferrugineus, Nutt.
Ceanothus Americanus, L.
var. herbaceus, Torr. & Gr.
" intermedius, Torr. & Gr.
Berchemia volubilis, D. C.

VITACEÆ.

Vitis bipinnata, Torr. & Gr.
incisa, Nutt.
indivisa, Willd.
labrusca, L.
æstivalis, Michx.
cordifolia, "
riparia, "
vulpina, L.
Ampelopsis quinquefolia, Michx.

POLYGALACEÆ.

Polygala cruciata, L.
lutea, L.
nana, D. C.
cymosa, Walt.
Baldwinii, Nutt.
incarnata, L.
setacea, Michx.
polygama, Walt.
grandiflora, Walt.
attenuata, Hook and Arn.
Nuttallii, Torr. and Gr.
verticillata, L.
sanguinea, L.
ambigua, Nutt.
bicolor, Kunth.
leptocaulis, Torr. and Gr.
Boykinii, Nutt.
Chapmanii, Torr. and Gr.

LEGUMINOSÆ.

Papilionaceæ.

Vicia Americana, Muhl.
Cracca, L.
Caroliniana, Walt.
Ludoviciana, Nutt.
Leavenworthii, Torr. and Gr.
micrantha, Nutt.
sativa, L. Intr.
Ervum hirsutum, L. Intr.
Lthyraus pusillus, Eli.
venosus, Muhl.
Phaseolus perennis, Walt.
diversifolus, Pers.
helvolus, L.
leiospermus, T. and G.
Vigna glabra, Sav.
Dolichos multiflorus, Torr. and Gr.
Erythrina herbacea, L.
Apios tuberosa, Mœnch.
Wistaria frutescens, D. C.
var. macrostachya, Torr. & Gr.
Rhynchosia minima, D. C.
tomentosa, Torr. and Gr.
var. monophylla, T. & G.
" intermedia, " "
" volubilis, " "
" erecta, " "
" mollissima, " "
latifolia, Nutt.
reniformis, D. C.
Galactia glabella, Michx.
pilosa, Nutt.
var. angustifolia, T & G.
mollis, Michx.
canescens, Benth.
sessiliflora, Torr. and Gr.
Clitoria Mariana, L.
Centrosema Virginiana, Benth.
plumieri, Ren.
Sesbania, macrocarpa, Muhl.
Glotidium Floridanum, D. C.
Robinia Pseudacacia, L.

hispida, L.
Tephrosia Virginiana, Pers.
var. holosericea, T.&G.
onobrychoides, Nutt.
spicata, Torr. and Gr.
hispidula, Pursh.
var. parvifolia, Carp.
chrysophylla, Pursh.
Indigofera, Anil. L. Intr.
Psoralea esculenta, Pursh.
melilotoides, Michx.
eglandulosa, Ell.
floribunda, Nutt.
Amorpha fruticosa, L.
Caroliniana, Croom.
herbacea, Walt.
lævigata, Nutt.
paniculata, Torr. and Gr.
canescens, Nutt.
Petalostemon candidum, Michx.
griseum, Torr and Gr.
violaceum, Michx.
carneum, "
corymbosum, "
Trifolium pratense, L. Intr.
medium, L.
amphianthum, Torr. and Gr.
repens, L.
Carolinianum, Michx.
Melilotus officinalis, Willd. Intr.
parviflora, Desf. Intr.
Medicago sativa, L. Intr.
maculata, Willd.
denticulata, Willd, Intr.
lupulina, L. Intr.
nigra, Willd. Intr.
intertexta, Willd. Intr.
Hosackia Purshiana, Benth.
Astragalus Canadensis, L.
trichocalyx, Torr. and Gr.
leptocarpus, " "
Nuttallianus, D. C.
Zornia tetraphylla, Michx.
Stylosanthes elatior, Swartz.
Æschynomene hispida, Willd.
Desmodium nudiflorum, D. C.
acuminatum, "
pauciflorum, "
canescens, "
Dillenii, Darl.
cuspidatum, Torr. and Gr.
viridiflorum, Beck.
rhombifolium, D. C.
glabellum, "
Marilandicum "
ciliare, "
rigidum, "
sessilifolium, Torr. and Gr.
tenuifolium, " "
strictum, D. C.
panlculatum, "
rotundifolium, "
lineatum, "
Lespedeza procumbens, Michx.
repens, Torr. and Gr.
violacea, Pers.
Stuvei, Nutt.
hirta, L.
capitata, Michx.
Arachis hypogæa, L. Intr.
Crotallaria sagittalis, L.
Purshii, D. C.
ovalis, Pursh.
Lupinus perennis, L.
Baptisia lanceolata, Ell.
leucophæa, Nutt.
australis, R. Br.
leucantha, Torr. and Gr.
var. spicata, Carp.
Cercis Canadensis, L.
Cassia occidentalis, L.
obtusifolia, L.
Marilandica, L.
chamæcrista, L.
nictitans, L.
Gleditschia triacanthos, L.
monosperma, Walt.

Mimoseæ.

Mimosa strigillosa, Torr. and Gr.
pudica, L. Intr.
Schrankia runcinata, Willd.
angustata, Torr. and Gr.
Darlingtonia, brachyloba, D. C.
var. Illinoenses, T. & G.
intermedia, " "
glandulosa, D. C.
Acacia lutea, Leav.
hirta, Nutt.
Julibrissin, Willd. Intr.
Vachelia Farnesiana, W. and Arn.

ROSACEÆ.

Amygdaleæ.

Prunus Americana, Marshall.
Chicasa, Michx.
maritima, Wang.
Cerasus umbellata, Ell.
Virginiana, D. C.
serotina "
Caroliniana, Michx.
vulgaris, L. Intr.
Amygdalus communis, L. Intr.
Persica vulgaris, Miller, Intr.
Armeniaca vulgaris, "

Rosaceæ.

Gillenia trifoliata, Moench.
stipulacea, Nutt.
Geum Virginianum, L.
Agrimonia eupatoria, L.
parviflora, Ait.
Potentilla Canadensis, L.
Fragaria Virginiana, Ehrh.
vesca, L. Intr.
Rubus villosus, Ait.
Canadensis, L.
trivialis, Michx.
hispidus, L.
Rosa setigera, Michx.
lucida, Ehrh.
rubiginosa, L. Intr.
lævigata, Michx. Intr.
Carolina, L.
bracteata, Wendl. Intr.

Pomeæ.

Crategus crus-galli, L.
coccinea, L.
punctata, Jacq.
arborescens, Ell.
apiifolia, Michx.
spathulata, "
æstivalis, Torr. and Gr.
tomentosa, L.
flava, Ait.
elliptica, Ait.
parvifolia, "
berberifolia, Torr. and Gr.
Pyrus coronaria, L.
angustifolia, Ait.
malus, L. Intr.
arbutifolia, L.
Amelanchier, Canadensis, var.
Botryapium, Torr. and Gr.
Mespilus Germanica, L. Intr.

CALYCANTHACEÆ.

Calycanthus Floridus, L.

MYRTACEÆ.

Punica Granatum, L. Intr.

MELASTOMACEÆ.

Rhexia Mariana, L.
lanceolata, Walt.
Virginica, L.
stricta, Pursh.
glabella, Michx.
ciliosa, "
serrulata, Nutt.
lutea, Walt.

LYTHRACEÆ.

Lagerstrœmia Indica, Willd. Intr.
Hypobrichia Nuttallii, Torr. & Gr.
Ammannia latifolia, L.
humilis, Michx.
Lythrum alatum, Pursh.
lineare, L.
Decodon verticillatum, Ell.
Cuphea viscosissima, Jacq.

ONAGRACEÆ.

Œnothera biennis, L.
var. vulgaris, Torr. & Gr.
" grandiflora, "
sinuata, L.
var. minima, Nutt.
fruticosa, L.
var. phyllopus, Torr. & Gr
glauca, Michx.
linearis, "
Spachiana, Torr. and Gr.
linifolia, Nutt.
albicaulis, Nutt.
Gaura angustifolia, Michx.
filipes, Spach.
parviflora, Dougl. and Arn.
Jussiæa repens, L.
grandiflora, Michx.
occidentalis, Nutt.
leptocarpa, Nutt.
decurrens, D. C.
Ludwidgia alternifolia, L.
hirtella, Raf.

virgata, Michx.
linearis, Walt.
linifolia, Poir.
cylindrica, Ell.
var. brachycarpa, T. & G.
pilosa, Walt.
alata, Ell.
sphærocarpa, Ell.
microcarpa, Michx.
palustris, Ell.
natans, "
Circœa lutetania, L.

HALORAGEÆ.

Proserpinaca palustris, L.
pectinacea, Lam.
Myriophyllum heterophyllum, Mich.
scabratum, "

CACTACEÆ.

Opuntia vulgaris, Mill.

GROSSULACEÆ.

Ribes gracile, Michx.
rotundifolium, Michx.

PASSIFLORACEÆ.

Passiflora incarnata, L.
lutea, L.

CUCURBITACEÆ.

Bryonia Boykinii, Torr. and Gr.
Melothria pendula, L.
grandifolia, Torr. and Gr.
punctata, Riddell, Plants of La., No. 546.
Sicyos angulatus, L.
Momordica Charantia, L. Intr.
Cucurbita verrucosa, L. Intr.
Cucumis sativus, "
melo, "
Anguira, "
megacarpus, Dough.
odoratissimus, Carp.
Lagenaria vulgaris, L.

CRASSULACEÆ.

Tillæa Drummondii, Torr. and Gr.
Penthorum sedoides, L.

SAXIFRAGACEÆ.

Heuchera Americana, L.
Leuropetalum spathulatum, Ell.
Itea Virginica, L.
Hydrangea arborescens, L.
quercifolia, Bartram.
Decumaria barbara, L.

HAMAMELACEÆ.

Hamamelis Virginiana, L.
var. parviflora, Nutt.

UMBELLIFERÆ.

Hydrocotyle Americana, L.
interrupta, Muhl.
umbellata, L.
var. incrassata, Carp.
repanda Pers.
ranunculoides, L.
Crantzia lineata, Nutt.
Sanicula Marilandica, L.
var. gracile, Carp.
Eryngium aquaticum, L.
Virginianum, Lam.
Virgatum, Lam.
Baldwinii, Spreng.
Helosciadium leptophyllum, D. C.
Discopleura capillacea, "
var. costata, "
Nuttallii, "
Leptocaulis patens, Nutt.
Cicuta maculata, L.
var. verna, Carp.
Sium latifolium, L.
lineare, Michx.
Cryptotænia Canadensis, D. C.
Zizia aurea, Koch.
integerrima, D. C.
Thaspium cordatum, Torr. and Gr.
Cynosciadum, digitatum, "
Tiedmannia teretifolia, D. C.
Archemora rigida, "
ternata, Nutt.
Pastinacca sativa L.
Polytænia Nuttallii, D. C.
Treptocarpus Æthusæ Nutt.
Daucus Carota, L.
pusillus, Michx.
Chærophyllum procumbens, Lam.
Tainturieri, Hook & Arn.
Atrema Americana, D. C.
Osmorhiza longistylis, "

Conium maculatum, L.

ARALIACEÆ.

Aralia spinosa, L.
Panax quinquefolium, L.

CORNACEÆ.

Cornus stolonifera, Michx.
paniculata, L'Her.
stricta, Lam.
sericea, L.
florida, L.
asperifolia, Michx.

CAPRIFOLIACEÆ.

Lonicera sempervirens, Ait.
grata, Ait.
Triosteum angustifolium, L.
Sambucus pubens, Michx.
Canadensis, L.
Viburnum nudum, L.
prunifolium, L.
obovatum, Walt.
dentatum, L.
var. scabrellum, T. & G.
acerifolium, L.

RUBIACEÆ.

Galium Aparine, L.
virgatum, Nutt.
hispidulum, Michx.
uniflorum, "
trifidum, L.
asprellum, Michx.
triflorum, "
pilosum, Ait.
circœzans, Michx.
Spermacoce glabra, "
Chapmanii, Torr. and Gr.
Diodia Virginiana, L.
teres, Walt.
Mitchella repens, L.
Cephalanthus occidentalis, L.
Hedyotis minima, Torr. and Gr.
cœrulea, Hook.
rotundifolia, Torr. and Gr.
stenophylla, "
Boscii, D. C.
glomerata, Ell.
Halei, Torr. and Gr.
Mitreola petiolata, "
sessilifolia, "
Polypremum procumbens, L.

VALERIANACEÆ.

Fedia olitoria, Vahl.
radiata, Michx.

COMPOSITÆ.

Vernonia Noveboracensis, Willd.
var. tomentosa.
fasciculata, Michx.
var. puberula.
" altissima, Nutt.
angustifolia, Michx.
var. scaberrima, Nutt.
" lanceolata.
Stokesia cyanea, L'Her.
Elephantopus Carolinianus, Willd.
tomentosus,
scaber, L.
Carphephorus Pseudo-Liatris, Cass
var. racemosa.
Liatris elegans, Willd.
var. speciosa.
squarrosa, Willd.
var. floribunda, T. & G.
" compacta, "
" intermedia, "
cylindracea, Michx.
mucronata, D. C.
tenuifolia, Nutt.
gracilis, Pursh.
acidota, Eng. and Gr.
graminifolia, Willd.
spicata, Willd.
pycnostachya, Torr. and Gr
scariosa, Willd.
odoratissima, Willd.
Kuhnea eupatorioides, L.
var. corymbosa, Torr. & Gr.
" gracilis, "
Eupatorium ivæfolium, L.
var. Ludovicianum, T. & G.
purpureum, L.
var. maculatum, Darl.
hyssopifolium, L.
var. elongatum.
" venosum.
" Torreyanum, Short.
leucolepis, Torr. and Gr.

parviflorum, Ell.
var. lancifolium, T. & G.
altissimum, L.
album, L.
teucrifolium, Willd.
rotundifolium, L.
perfoliatum, L.
var. cuneatum, Eng.
serotinum, Michx.
ageratoides, L.
aromaticum, L.
incarnatum, Walt.
coronopifolium ? Willd.
pubescens ? Muhl.
Milkania scandens, Willd.
var. pubescens, Torr. & Gr.
Conoclinium cœlestinum, D. C.
Sericocarpus solidagineus, Nees.
tortifolius, Nees.
Aster paludosus, Ait.
sericeus, Vent.
phyllolepis, Torr. and Gr.
concolor, L.
adnatus, Nutt.
patens, Ait.
var. gracilus, Torr. and Gr.
" patentissimus, "
" phlogifolius, "
virgatus, Ell.
var. Boykinii,
" attenuatus.
turbinellus, Lindl.
azureus, "
undulatus, L.
asperulus, Torr. and Gr.
cordifolius, L.
Drummondii, Lindl.
ericoides, L.
multiflorus, Ait.
racemosus, Ell.
Baldwinii, Torr. and Gr.
dumosus, L.
var. cordifolius, Torr. & Gr.
" subulæfolius, "
Tradescanti, L.
var. fragilis, Torr. and Gr.
miser, Ait.
var. miserimus, Torr. & Gr.
" diffusus, "
lævis, L
tenuifolius, L.
carneus, Nees.
var. subasper, Torr. and Gr
longifolius, Lam.
cærulescens, D. C.
adulterinus, Willd.
flexuosus, Nutt.
linifolius, L.
divaricatus, Nutt.
exilis, Ell.
Erigeron Canadense, L.
divaricatum, Michx.
bellidifolium, Muhl.
Philadelphicum, L.
quercifolium, Lam.
tenue, Torr. and Gr.
annuum, Pers.
strigosum, Muhl.
var. integrifolium.
vernum, Torr. and Gr.
scaposum, D. C.
Diplopappus linarifolius, Hook.
cornifolius, Darl.
amygdalinus, Torr. and Gr.
var. ramosus.
" rigidus.
Boltonia asteroides, L'Her.
glastifolia, "
diffusa, Ell.
Solidago discoidea, Torr. and Gr.
cæsia, L.
virgata, Michx.
pulverulenta, Nutt.
petiolaris, Ait.
angusta, Torr. and Gr.
speciosa, Nutt.
var. rigidiuscula, T. & G.
nitida, Torr. and Gr.
sempervirens, L.
patula, Muhl.
var. strictula, Torr. & Gr.
arguata, Ait.
Bootii, Hook.
var. glauca.
" pubescens.
" attenuata.
" rigida.
altissima, L.
ulmifolia, Muhl.
Drummondii, Torr. and Gr.

amplexicaulis, Martens?
pilosa, Walt.
odora, Ait.
tortifolia, Ell.
nemoralis, Ait.
var. scabra.
Radula, Nutt.
Missouriensis, Nutt.
Canadensis, Ait.
var. scabra, Muhl.
serotina, Ait.
gigantea, "
paucifloscula, Michx.
lanceolata, L.
tenuifolia, Pursh.
leptocephala, Torr. and Gr.
angustifolia, Ell.
elliptica, Ait.
Bigelovia nudata, D. C.
var. virgata, T. and G.
Isopappus divaricatus, "
Grindelia lanceolata, Nutt.
Heterotheca scabra, D. C.
Chrysopsis graminifolia, Nutt.
var. tenuifolia.
Mariana, Nutt.
trichophylla, Nutt.
var. hyssopifolia, T&G
pilosa, Nutt.
Baccharis angustifolia, Michx.
glomeruliflora, Pers.
hamilifolia, L.
Pluchea bifrons, D. C.
fœtida, D. C.
camphorata, D. C.
Inula Helenium, L.
Borrichia frutescens, D. C.
Eclipta erecta, L.
var. brachypoda, T & G
Polymnia Canadensis, L.
Uvedalia, L.
Chrysogonum Virginianum, L.
Silphium laciniatum, L.
terebinthinaceum, L.
pinnatifidum, Ell.
Astericus, L.
scaberrimum, Ell.
var. paniculatum.
integrifolium, Michx.
Berlandiera Texana, D. C.
var. betonicæfolia, T.&G.
tomentosa, Torr
Parthenium integrifolium, L.
Hysterophorus, L.
Iva ciliata, Willd.
var. Pitcheri.
frutescens, L.
imbricata, Walt.
angustifolia, Nutt.
Ambrosia trifida, L.
var. palmata.
artemisiæfolia, L.
var. paniculata, Michx.
coronopifolia, T. and G.
bidentata, Michx.
Xanthium strumarium, L.
var. Canadense, T. and G.
Melanthera hastata, Michx.
Zinnia multiflora, L. Intr.
Heliopsis lævis, Pers.
var. gracilis, Torr. and Gr.
Tetragonotheca helianthoides, L.
Halea Ludoviciana, Torr. and Gr.
Echinacea purpurea, Moench.
var. serotina, Nutt.
angustifolia, D. C.
var. sanguinea.
atrorubens, Nutt.
Rudbeckia hirta, L.
fulgida, Ait.
var. discolor.
triloba, L.
subtomentosa, Pursh.
alismæfolia, Torr. and Gr
laciniata, L.
heterophylla, T. and Gr.
maxima, "
nitida, Nutt.
Lepachys pinnata, Torr. and Gr.
Dracopis amplexicaulis, Cass.
Helianthus, annuus, L. Intr.
debilis, Nutt.
angustifolius, L.
heterophyllus, Nutt.
atrorubens, L.
rigidus, Desf.
mollis, Lam.
grosse-serratus, Martens,
strumosus, L.
var. leptophyllus, T&G.

hirsutus, Raf.
var. stenophyllus, T & G
divaricatus, L.
microcephalus, T. and Gr.
var. ferrugineus.
longifolius, Pursh.
pauciflorus, Nutt.
tomentosus, Michx.
Actinomeris squarrosa, Nutt.
alba, Torr. and Gr.
helianthoides. Nutt.
nudicaulis? Nutt.
Coreopsis discoidea, Torr and Gr.
aurea, Ait.
aristosa, Michx.
tripteris, L.
auriculata, L.
var. elongata.
lanceolata, L.
grandiflora, Nutt.
senifolia, Michx.
gladiata, Walt.
Drummondii, Torr. & G.
tinctoria, Nutt.
cardaminæfolia, T. & G.
angustifolia, Ait.
Bidens frondosa, L.
chrysanthemoides, Michx.
var. serrulata.
bipinnata, L.
connata, Muhl.
Spilanthes repens, Michx.
Nuttallii, Torr. and Gr.
Verbesina Virginica, L.
var. villosa.
sinuata, L.
Gaillardia lanceolata, Michx.
pulchella, Foug.
Hymenopappus scabisæus, L'Her.
Helenium autumnale, L.
tenuifolium, Nutt.
quadridentatum, Labill.
Leptopoda Helenium, Nutt.
brachypoda, Torr. and G.
Baldwinia uniflora, Nutt.
Marshallia angustifolia, Pursh.
cæspitosa, Nutt.
Maruta Cotula, D. C. Intr.
Anthemis arvensis, L. Intr.
nobilis, "
Achillea Millefolium, L. Intr.
Leucanthemum vulgare, Lam. Intr.
Artemisia biennis, Willd.
Gnaphalium polycephalum, Michx.
purpureum, L.
var. falcatum, T.&G.
uliginosum, Michx.
Antennaria plantaginifolia, Hook.
var. monocephala, T.&G
Erechtites hieracifolia, Raf.
Cacalia ovata, Walt.
tuberosa, Nutt.
lanceolata, Nutt.
atriplicifolia, L.
Senecio aureus, L.
tomentosus, Michx.
lobatus, Pers.
vulgaris, L.
Centaurea Americana, Nutt.
Cyanus, L. Intr.
Carthamus tinctorius, Willd. Intr.
Lappa major, Gært.
Cyanara Scolymus, L. Intr.
Cnicus benedictus, "
Cirsium altissimum, Spreng.
Virginiamum, Michx.
muticum, "
var. glabrum.
Lecontei, Torr. and Gr.
repandum, Michx.
horridulum, "
discolor, Spreng.
Chaptalia tomentosa, Vent.
Apogon humilis, Ell.
var. lyrata, Torr. and Gr.
Krigia Virginica, Willd.
Caroliniana, Nutt.
Cynthia Dandelion, D. C.
Virginica, Don.
Hieracium Gronovii, L.
scabrum, Michx.
venosum, L.
paniculatum, L.
Nabalus albus, Hook.
altissimus, Hook.
asper, Torr. and Gr.
Troximon glaucum, Nutt.
Pyrrhopappus Carolinianus, D. C.
Lactuca sativa, L. Intr.
graminifolia, Michx.
elongata, Muhl.

var. sanguinea, T. & G.
" albiflora "
" integrifolia, "
Ludoviciana, D. C.
Mulgedium acuminatum, "
Floridanum, "
leucophæum, "
Sonchus oleraceus, L.
asper, Vill.

LOBELIACEÆ.

Lobelia cardinalis, L.
syphilitica, L.
puberula, Michx.
var. glabella, Ell.
inflata, L.
Kalmii, L.
Claytoniana, Michx.
var. Carpenterii, Riddell, Plants La. No. 1013
grandulosa, Walt.
amœna, Michx.
paludosa, Nutt.

CAMPANULACEAE.

Campanula amplexicaulis, Michx.
Ludoviciana, Riddell, Plants La. No. 1018
aparinoides, Pursh

SPHENOCLEACEAE.

Sphenoclea Zeylanica, Gært.

ERICACEAE.

Andromeda arborea, L.
paniculata, Willd.
nitida, Walt.
ferruginea, L.
axillaris, L.
Mylocarium, ligustrinum, Willd.
Cyrilla racemiflora, L.
Kalmia hirsuta, L.
Azalea nudiflora, L.
viscosa, L.
bicolor, Pursh.
Vaccinium stamineum, L.
corymbosum, L.
Pennsylvanicum, Lam.
arboreum, Marshall.
dumosum, Andr.
fuscatum, Att.
galezans, Michx.
nitidum, Ait.
virgatum, Ell.
frondosum ? L.
Monotropa uniflora, L.
lanuginosa, Michx.

AQUIFOLIACEAE.

Ilex opaca, Ait.
prinoides, Willd.
vomitoria, Ait.
Prinos glaber, L.
coriaceus Pursh.
verticillatus, L.
ambiguus, Michx.
lanceolatus, "

EBENACEAE.

Diospyros Virginiana, L.

STYRACEAE.

Styrax grandifolium, L.
lævc, Walt.
glabrum, Bot. Mag.
pulverulentum, Michx.
Halesia diptera, L.
tetraptera, L.
Hopea tinctoria, L.

SAPOTACEAE.

Bumelia lycioides, Gært.
lanuginosa, Pers.
tenax, L.
oblongifolia, Nutt.
tomentosa, D. C.

PRIMULACEAE.

Dodecatheon Meadia, L.
integrifolium, Michx.
var. alba, Nutt.
Lysimachia ciliata, L.
var. heterophylla, Michx.
procumbens, Riddell, Plants La. No. 1071.
Carpenterii, Riddell, Plts. La. No. 1072.
Centunculus lanceolatus, Michx.
Micranthemum orbiculatum, "
var. emarginatum.
Samolus floribunda, Kunth.
Hottonia inflata, Ell.

PLANTAGINACEAE.

Plantago major, L.
cordata ? Lam.
aristata, Michx.
Virginica, L.
lanceolata, ;L.
pusilla, Nutt.
Ludoviciana, Riddell,—Plants La. No. 1084.

PLUMBAGINACEAE.

Statice Caroliniana, Walt.

LENTIBULACEAE.

Utricularia vulgaris, L.
inflata, Walt.
fibrosa, Walt.
gibba, L.
longirostris, LeConte.
fornicata, "
cornuta, Michx.
personata, Le Conte.
subulata, L.
bipartita, Ell.
purpurea, Walt.
Pinguicula pumila, Michx.
lutea, Walt.

OROBANCHACEAE.

Conopholis Americana, Wallr.
Epiphegus Virginiana, Bart.
Aphyllon uniflorum, Torr. and Gr.
Hypopithis lanuginosa, Nutt.

BIGNONIACEAE.

Bignonia capreolata, L.
Tecoma radicans, Juss.
var. major, Lindl.
" minor, "
Catalpa bignonioides, Walt.
Martynia proboscidea, Glox.

ACANTHACEAE.

Dipteracanthus strepens, Ness.
var. calycinus, "
" strictus, "
" oblongifolius, "
ciliosus, "
var. hybridus, "
noctiflorus, "
var. humilis, "
Dianthera Americana, L.
humilis,Michx.
Dicliptera brachiata, Pursh.
Halei, Riddell, Plants La. No. 1120.
Hygrophila lacustris, Nees.

SCROPHULARIACEAE.

Verbascum Thapsus, L.
Blattaria, L.
Serophularia nodosa, L.
Veronica arvensis, L.
peregrina, L.
Virginica, L.
agrestis, L.
Linaria Canadensis, Spreng.
var. tenella, Riddell, Plants La. No 1130
vulgaris, Mill.
Elatine, "
Mimulus ringens, L.
alatus, Ait.
Herpestris amplexicaulis, Pursh
rotundifolia, "
nigrescens, Benth.
monnieria, D. C.
micrantha, Pursh.
Gratiola aurea, Muhl.
Virginiana, L.
viscosa, Schw.
quadridentata, Michx.
sphærocarpa, Ell.
pilosa, Michx,
Drummondii, Benth.
Ilysanthes gratioloides, "
refracta, Ell.
Pentstemon Digitalis, Nutt.
pubescens, Soland.
var. multiflorus,Ben.
" angustifolis, Ait.
" acuminatus, Carp.
Plants La.No 1153
Conobea multifida, Benth.
Buchnera Americana, L.
Seymeria tenuifolia, Pursh.
pectinata, "
Gerardia setacea, Walt.
var. parvifolia, Benth.
tenuifolia, Vahl.
purpurea, Willd.
linifolia, Nutt.

strictifolia ? Benth.
filifolia, Nutt.
aphylla, Nutt.
heterophylla, Nutt.
Dasystoma pubescens, Benth.
quercifolia, "
pedicularia, "
Drummondii, "
Macranthera fuchsioides, Torr.
Castilleja coccinea, Spreng.
purpurea, Don.
Schwalbea Americana, L.
Pedicularis Canadensis, L.

VERBENACEAE.

Verbena hastata, L.
urticifolia, L.
spuria, L.
angustifolia, Michx.
stricta, Vent.
Caroliniana, Willd.
bipinnatifida, Nutt.
bracteosa, Michx.
Aubletia, L.
officinalis, L.
Lucæna, Walp.
Zapania nodiflora, Lam.
Phryma leptostachya, L.
Callicarpa Americana, L.

LABIATAE.

Mentha rotundifolia, L. Intr.
piperita, "
viridis, "
Lycopus Virginicus, L.
sinuatus, Ell.
var. angustifolius, Benth.
Collinsonia Canadensis, L.
punctata, "
Hedeoma hispida, Pursh.
Monarda, fistulosa, L.
punctata, "
aristata, Nutt.
Salvia lyrata, L.
azurea, Lam.
obovata, Ell.
coccinea, L. Intr. ?
Physostegia Virginiana, Benth.
Nepeta, Cataria, L. Intr.
Marrubium vulgare, L.
Prunella vulgaris, L.
Leonurus Cardiaca, "
Hyptis radiata, Willd.
Scutellaria versicolor, Nutt.
pilosa, Michx.
integrifolia, L.
parvula, Michx.
lateriflora, L.
Lamium amplexicaule, "
Trichostema lineare, Nutt.
dichotomum, L.
Dicerandra linearifolia, Benth.
Pycnanthemum hyssopifolium, B.
albescens, T & G
incanum, Michx.
Loomsii, Nutt.
Tullia, Benth.
aristatum, Michx.
muticum, Pers.
lanceolatum, Pursh
linifolium, "
Teucrium Canadense, L.
Stachys aspera, Michx.
glabra, Riddell.

BORAGINACEAE.

Myosotis palustris, With.
stricta, Link.
laxa, Lehm.
Echium vulgare, L.
Symphytum officinale, L. Intr.
Lithospermum arvense, L.
hirtum, Lehm.
canescens, "
latifolium, Michx.
Torreyi.
Echinospermum Virginicum, Leh.
Onosmodium Carolinianum, D. C.
Virginianum, "
molle, Michx.
Cynoglossum Virginicum, L.
Heliotropum Indicum, "
Europæum, "
Curassavicum, "

HYDROPHYLLACEAE.

Nemophila parviflora, Benth.
Ellisia Nyctelæa, L.
microcalyx, Nutt.
Phacelia Purshii, Buckley.
parviflora, Pursh.

HYDROLACEAE.

Hydrolea quadrivalvis, Walt.
ovata, Nutt.

POLOMONIACEAE.

Phlox divaricata, L.
reptans, Michx.
pilosa, L.
glaberrima, L.
Carolina, "
aristata Michx.
Cantua Floridana, Nutt.

CONVOLVULACEAE.

Calystegia Sepium, R. Br.
spithamæa, Pursh.
Catesbeiana, "
Convolvulus Pickeringii, Torr.
aquaticus, Walt.
tenellus, Willd.
purpureus, L.
panduratus, "
Jalapa, "
lacunosus, Spreng.
tamnifolius, Willd.
tricocarpus, Michx.
Batatas, L Intr.
Nil, "
Quamoclit, coccinea, Mœnch. Intr.
vulgaris, Chois. Intr.
Evolvulus argenteus, Pursh,
Dichondra Caroliniensis, Michx.
Cuscuta Epilinum, Weihe.
compacta, Juss.
Gronovii, Willd.
chlorocarpa, Engl.

SOLANACEAE.

Solanum Caroliniense, L.
nigrum, "
Melongena, L. Intr.
tuberosum, "
pseudo-capsicum, "
Lycopersicum esculentum, Mill. Int
Nicandra physaloides, Gært.
Datura Strammonium, L.
Lycium Barbarum, L. Intr.
Carolinianum, Walt.
Nicotiana Tabacum, L.
rustica, "
Capsicum annuum, L. Intr.
longum, D.C. "
luteum, Lam. "
baccatum, L. "
Physalis viscosa, L.
var. obscura, Michx.
" angulata, Walt.
" pruinosa, Ell.
pumila, Nutt,
lanceolata, Michx.
pubescens, L.
angustifolia, Nutt.
Carpenterii, Riddell,—
Plants La. No 1312.

GENTIANACEAE.

Gentiana Saponaria, L.
crinita Frœl.
quinqueflora, Lam.
ochroleuca, Frœl.
glaucifolius, Nutt.
Frasera Caroliniensis, Walt.
Lisianthus glaucifolius, Nutt.
Limnanthemum lacunosum, Griseb
trachyspermum, Michx.
Obolaria Virginica, L.
Centaurella paniculata, Mich.
verna, Michx.
Moseri, Steud.
Sabbatia stellaris, Pursh,
angularis, "
gracilis, Michx.
chloroides, "
var. erecta, Ell.
brachiata, Ell.
calycosa, Michx.
campanulata, Torr.
gentianoides, Ell.
corymbosa, Bald.
paniculata, Ell.
campestris, Nutt.
macrophylla, Hook.

APOCYNACEAE.

Apocynum androsæmifolium, L.
cannabinum, L.
Amsonia tabernæmontana, Walt.
salicifolia, Pursh.
Forsteronia diformis, D. C.
Nerium Oleander, L. Intr.

LOGANIACEAE.

Gelsemium nitidum, Michx.
Spigelia Marilandica, L.

ASCLEPIADACEAE.

Asclepias obtusifolia, Michx.
laurifolia, "
paupercula, "
obovata, Ell.
angustifolia, Ell.
variegata, L.
tuberosa, "
verticillata, L.
nivea, "
phytolaccoides, Pursh.
parviflora, "
cinerea, Walt.
Curassavica, L. Intr.
Acerates viridiflora, Raf.
longifolia, Ell.
lanuginosa, D. C.
angustifolia, "
paniculata, "
connivens, "
Seutera maritima, "
Enslenia albida, Nutt.
Gonolobus Nuttallii? D. C.
hirsutus, Michx.
macrophyllus, Michx.

OLEACEÆ.

Fraxinus pubescens, Walt.
Americana, L.
triptera, Nutt.
platycarpa, Michx.
Chionanthus Virginica, L.

ARISTOLOCHIACEÆ.

Aristolochia Serpentaria, L.
reticulata, Nutt.
hastata, "
Asarum Virginicum, L.
arifolium, Michx.

PHYTOLACCACEÆ.

Phytolacca decandra, L.
Rivina lævis, L.

SALSOLACEÆ.

Chenopodium album, L.
anthelminticum, L.
murale, L.
ambrosioides, L.
Beta vulgaris, L. Intr.

AMARANTACEÆ.

Amarantus spinosus,
hybridus, L.
paniculatus, Moq.
retroflexus, L.
Blitum, Moq.
humilis? Raf.
Euxolus lividus, Moq.
viridis, "
Acnida cannabina, L.
var. concatenata, Moq.
rusocarpa, Michx.
Oplotheca Floridana, Nutt.
Iresine celosioides, L.
Telanthera polygonoides, Moq.
Alternanthera Achryantha, R. Br.

NYCTAGINACEÆ.

Böerhaavia erecta, L.
paniculata? Rich.
Oxybaphus albidus, Sweet.
angustifolius, "
nyctagineus, "
Mirabilis Jalapa, L. Intr.

POLYGONACEÆ.

Polygonum aviculare, L.
erectum, L.
tenue, Michx.
maritimum, L.
Persicaria, L.
Hydropiper, L.
setaceum, Bald.
Pennsylvanicum, L.
lapathifolium, L.
Virginianum, L.
hirsutum, Walt.
amphibium, L.
orientale, L. Intr.
macrophyllum, Nutt.
gracile, "
polygamum, Vent.
sagittatum, L.
arifolium, L.
Convolvulus, L.
dumetorum, L.

Opelousanum, Riddell, Plants La. No.1431
geniculatum Riddell, Plants La. No.1432
Fagopyrum esculentum,Moench,In
Brunnichia cirrhosa, Michx.
Rumex crispus, L.
obtusifolius, L.
aquaticus, L.
verticillatus, L.
Acetosella, L.
hastatulus? Bald.
Eriogonum tomentosum, Michx.
heraclioides, Nutt.
annuum, "

LAURACEÆ.

Laurus Sassafras, L.
Caroliniensis, Michx.
Dyospyrus, Pursh.
geniculata, Walt.
Benzoin, L.

THYMELACEÆ.

Dirca palustris, L.

NYSSACEÆ.

Nyssa multiflora, Walt.
aquatica, L.
capitata, Walt.
tomentosa, Michx.
uniflora, Walt.

LORANTHACEÆ.

Viscum flavescens, Pursh.

ULMACEÆ.

Ulmus Americana, L.
racemosa, Thomas.
fulva, Michx.
crassifolia, Nutt.
alata, Michx.
Planera Gmelini, "
Celtis occidentalis, L.
alba, Raf.
pumila, Pursh.

SAURURACEÆ.

Saururus cernuus, L.

CERATOPHYLLACEÆ.

Ceratophyllum echinatum, A. Gr.
demersum, L.

CALLITRICHACEÆ.

Callitriche verna, L.
autumnalis, L.
pedunculosa, Nutt.
peploides, Nutt.
terrestris, Raf.

EUPHORBIACEÆ.

Euphorbia Helioscopa, L.
Peplus, L.
paniculata, Ell.
platyphylla, L.
dentata, Michx.
corollata, L.
maculata, L.
depressa, Ell.
thymifolia, L.
cordifolia, Ell.
marginata, Pursh.
herniarioides, Nutt.
Arkansana, Eng. & Gr.
hypericifolia, L.
Acalypha Virginica, L.
var.rhombifolia, Riddell
" intermedia, "
" ovalifolia, "
" gracilens, "
" ramosa, "
" Texana, "
(Vide Plants La. Nos. 1488 to 1493.
Caroliniana, Walt.
Crotonopsis linearis, Michx.
Croton maritimum, Walt.
capitatum, Michx.
glandulosum, L.
ellipticum, Nutt.
argyranthemum, Michx.
Tragia marcrocarpa, Willd.
urticifolia, Michx.
urens, L.
betonicæfolia, Nutt.
angustifolia, "
linearifolia, Ell.
Jatropha stimulosa, Michx.
Stillingia sylvatica, L.
ligustrina, Michx.
sebifera, L. Intr.

Forestiera acuminata, Poir.
Pachysandra procumbens, Michx.
Buxus sempervirens, L. Intr.
Ricinus communis, Willd.

EMPETRACEÆ.

Ceratiola ericoides, Michx.

JUGLANDACEÆ.

Carya alba, Nutt.
sulcata, "
tomentosa, Nutt.
amara, "
porcina, "
aquatica, Michx.
olivæformis, Willd.
microcarpa, Nutt.
glabra, Torr.
Juglans nigra, L.

CUPULIFERÆ.

Fagus ferruginea, Ait.
Castanea vesca, L.
pumila, Michx.
alnifolia, Nutt.
Corylus Americana, Walt.
Carpinus Americana, Michx.
Ostrya Virginica, Willd.
Quercus alba, L.
obtusiloba, Michx.
lyrata, Walt.
aquatica, Willd.
hemispherica, Willd.
falcata, Michx.
nana, Willd.
nigra, "
tinctoria, Bartram.
coccinea, Wang.
rubra, L.
palustris, Du Roi.
Prinus, L.
Michauxii, Nutt.
Phellos, L.
laurifolia? Michx.
cinerea, "
virens, Willd.
Carpenterii, Riddell, Plants La., No. 1552.
Peckiana, Ridd. Ib. 1553.
Andromeda, " " 1554.
rhombifolia, " " 1555.
bumeliæfolia, " " 1556.

MYRICACEÆ.

Myrica cerifera, L.
Caroliniensis, L.

BETULACEÆ.

Betula nigra, L.
Alnus serrulata, Ait.

SALICACEÆ.

Salix nigra, Marshall,
Houstoniana, Pursh.
longifolia, Muhl.
Muhlenbergiana, Willd.
Babylonica, Tourn. Intr.
Populus angulata, Ait.

BALSAMIFLUÆ.

Liquidambar styraciflua, L.

PLATANACEÆ.

Platanus occidentalis, L.

URTICACEÆ.

Moreæ.

Morus rubra, L.
alba, L. Intr.
Brousonetia papyrifera, Willd. Int.

Cannabineæ.

Humulus Lupulus, L.

Urticeæ.

Bœhmeria cylindrica, Willd.
Parietaria Pennsylvanica, Nutt.
Floridana? "
Pilea pumila, A. Gr.
Urtica Canadensis, L.
purpurascens, Nutt.
verna, Raf.
Aureliana, Riddell, Plants La. No. 1582.

CONIFERÆ.

Pinus australis, Michx.
mitis, Michx.
tæda, L.
var. heterophylla, Ell.
Cupressus thyoides, L.
Taxodium distichum, Richard.

Juniperus Virginiana, L.
Barbadensis, Willd.

PALMÆ.

Sabal Adansonii, Guerns.
minima ? Nutt.
Chamærops serrulata, Willd.
Cocos nucifera, Willd. Intr.
Phenix dactylifera, "

ARACEÆ.

Arum triphyllum, L.
Dracontium, L.
Peltandra Virginica, Raf.
Orontium aquaticum, L.
Acorus Calamus, L.

TYPHACEÆ.

Typha latifolia, L.
angustifolia, L.
Sparganium ramosum, L.
Americanum, Nutt.

LEMNACEÆ.

Pistia spathulata, Michx.
Lema minor, L.
polyrhiza, L.

NAIDACEÆ.

Nais flexilis, Rostk.
Zostera marina, L.
Zannichellia, palustris, L.
Potamogeton natans, L.
fluitans, Roth.
pulcher, Tuck.
pectinatus, L.
pauciflorus, Pursh.
hybridus, Michx.
fulvus, Riddell, Plants La. No. 1617.

ALISMACEÆ.

Echinodorus radicans, Eng.
Sagittaria sagittifolia, L.
Purshii, Richard.
graminea, Michx.
falcata, Pursh.
rigida, "
simplex, "
gigantea, Riddell, Plants La. No. 1625.
paradoxa, Carpenter, in Plants La. 1626.

HYDROCHARIDACEÆ.

Limnobium Spongia, Rich.
Vallisneria spiralis, L.

BURMANNIACEÆ.

Apteria setacea, Nutt.
Tripterella capitata, Michx.
cœrulea, Ell.

ORCHIDACEÆ.

Habenaria ciliaris, R. Br.
flava, Gray.
integra, Spreng.
cristata, Michx.
lacera, Gray.
nivea, Nutt.
tridentata, Hook.
repens, Nutt.
Michauxii, Nutt.
herbeola, R. Br.
Microstylis ophioglossoides, Nutt.
Epidendrum Magnoliæ, Muhl.
Bletia aphylla, Nutt.
Tipularia, discolor, Nutt.
Pogonia ophioglossoides, Nutt.
verticillata, "
pendula, Lindl.
Corallorhiza multiflora, Nutt.
Callopogon pulchellus, R. Br.
Spiranthes gracilis, Bigel.
cernua, Rich.
tortilis, Rich.
latifolia, Torr.
odorata, Willd.
vernalis, Gr. & Eng.
Goodyera quercicola, Lindl.
Cypripedium pubescens, Willd.
parviflorum, Salisb.
spectabile, Swartz.

ZINGIBERACEÆ.

Zingiber officinale, Ross, Intr.

CANNACEÆ.

Canna angustifolia, Willd, Intr.
flaccida, Roscoe,
Indica, " Intr.
Thalia dealbata, L.

MUSACEÆ.

Musa paradisiaca, Willd. Intr.
Sapientum, "

BROMELIACEÆ.

Bromelia Ananas, Willd. Intr.
Tillandsia usneoides, L.

HÆMODORACEÆ.

Lachnanthes tinctoria, L.
Aletris farinosa, L.
aurea, Walt.

AMARYLLIDACEÆ.

Agave Americana, Willd. Intr.
Virginica, L.
Pancratium Mexicanum, Walt.
coronarium, LeConte.
occidentale, "
Crinum Americanum, Willd.
Cooperia Drummondii, Herbert.
Hypoxis erecta, L.
filifolia, Ell.
juncea, Smith.

IRIDACEÆ.

Iris cristata, Ait.
versicolor, L.
hexagona, Walt.
cuprea, Pursh.
Nemostylis cœlestina, Nutt.
Eustylis purpurea, Eng. & Gr.
Sisyrinchium Bermudianum, L.
anceps, Willd.
mucronatum, Michx.
minus, Eng. & Gr.

DIOSCOREACEÆ.

Dioscorea villosa, L.

SMILACEÆ.

Smilax tamnioides, L.
laurifolia, L.
rotundifolia, L.
quadrangularis, Muhl.
glauca, Walt.
Pseudo-China, L.
hispida, Pursh.
herbacea, L.
lanceolata, L.
hastata, Willd.
bona-nox, L.
pumila, Walt.
Walteri, Pursh.
hispida, Muhl.
Trillium sessile, L.

LILIACEÆ.

Lilium superbum, L.
Carolinianum, Michx.
Yucca filamentosa, L.
gloriosa, L.
aloifolia, Walt.
Allium Canadense, Kalm.
cernuum, Roth.
mutabile, Michx.
Purshii (A. striatum, Pursh.)
Cepa, L. Intr.
sativum, L. Intr.
Scilla esculenta, Ker.
var. angusta, Eng.
crocea, Michx.
Polygonatum canaliculatum, Pursh.
pubescens, Pursh.

PONTEDERIACEÆ.

Pontederia cordata, L.
Heteranthera reniformis, Ruiz.
ovalis, Michx.
Syena fluviatilis, Willd.

MELANTHACEÆ.

Melanthium Virginicum, L.
hybridum, Walt.
Stenanthium angustifolium, Gray.
Tofielda pubens, Ait.
glabra, Nutt.
Chamælirium luteum, Gray.
Uvularia perfoliata, L.

JUNCACEÆ.

Luzula campestris, D. C.
pilosa, Willd.
Juncus effusus, L.
setaceus Rostk.
maritimus, Lam.
squarrosus L.
tenuis, Willd.
aristulatus, Michx.
bufonius, L.
repens, Michx.
autumnalis, Michx.
nodosus, L.
subtilis, Ell.
dichotomus, Ell.
scirpoides, Lam.
echinatus, Ell.

COMMELYNACEÆ.

Commelyna communis, L.
angustifolia, Michx.
erecta, L.
Virginica, Willd.
agraria, Kunth.
Tradescantia, Virginica, L.
rosea, Vent.
pilosa, Lehm.

XYRIDACEAE.

Xyris fimbriata, Ell.
brevifolia, Michx.
Caroliniana, Walt.
Baldwiniana, Kunth.
torta, Smith.

ERIOCAULONACEAE.

Eriocaulon septangulare, With.
decangulare, L.
villosum, Michx.
gnaphalioides, Michx.

EQUISETACEAE.

Equisetum hyemale, L.

FILICES.

Polypodium incanum, Willd.
hexagonopterum, Mich
Pteris aquilina, L.
Adiantum pedatum, L.
Woodwardia angustifolia Smith.
Virginica, Willd.
Asplenium ebeneum, Ait.
angustifolium, Michx.
thelypteroides, "
Filix-fœmina, R. Br.
Cystopteris bulbifera? Bernh.
Dryopteris Thelypteris, A. Gr.
Aureliana, Riddell, Plts. La. No. 1783.
Rafinesquiana, Riddell, Plants La. No. 1784.
Lastræa petiolata, Riddell, Plants La. No. 1785.
Polystichum acrostichoides, Schott.
Onoclea sensibilis, L.
Osmunda spectabilis, Willd.
cinnamonea, L.
Botrychium lunarioides, Swartz.
Virginicum, "
Ophioglossum vulgatum, L.
bulbosum, Michx.

LYCOPODIACEAE.

Selaginella apus, Spreng.
Lycopodium alopecurioides, L.
clavatum, L.
corallinum, Riddell—Plants La. No. 1797.

HYDROPTERIDES.

Azolla Caroliniana, Willd.
Marsilea, quadrifolia, L.
uncinata, Braun.

Part Second.

EXCERPTA.

I.—DIAGNOSIS OF INCIPIENT PHTHISIS PULMONALIS.

From the late excellent work of Dr. Walshe on the "*Heart and Lungs*," which has been critically analyzed by Dr. Rouanet, in this and preceding numbers, we extract the following graphic summary of the diagnostic signs of incipient Phthisis. (*Ed.*)

(*a*) A young adult, who has had an obstinate cough, which commenced without coryza. and without any very obvious cause, a cough at first dry and subsequently attended for a time with watery or mucilaginous-looking expectoration, and who has wandering pains about the chest, and loses flesh even slightly, is, in all probability, phthisical. (*b*) If there be hæmoptysis to the amount of a drachm, even, the diagnosis becomes, if the patient be a male, and positively free from aneurism and mitral disease, almost positive. (*c*) If, in addition, there be slight dulness under percussion at one apex, with jerking or divided and harsh respiration, while the resonance at the sternal notch is natural, the diagnosis of the first stage of phthisis becomes next to absolutely certain. But not absolutely certain; for I have known every one of the conditions in *a*, *b* and *c*, exist, (except hæmoptysis, the deficiency of which was purely accidental) when one apex was infiltrated with encephaloid cancer, and no cancer had been discovered elsewhere to suggest to the physician its presence in the lung. (*e*) If there be cough, such as described, and permanent weakness and hoarseness of the voice, the chances are very strong (provided he be non-syphilitic) that the patient is phthisical. (*f*) decidedly harsh respiration exist at the left apex, or at the right apex behind, if the rhythm of the act be such as I have called *cogged-wheel*, and there be dulness, so slight even as to require the dynamic test for its discovery, there can be little doubt of the existence of phthisis. (*g*) If, with the same combination of circumstances, deep inspiration evokes a few clicks of dry crackling rhonchus, the diagnosis of phthisis, so far as I have observed, is absolutely certain. (*h*) If these clicks, on subsequent examination, grow more liquid, the transition from the first to the second stage may be positively announced. (*i*) If there be slight flattening under one clavicle, with deficiency of expansion movement, harsh respiration and slight dulness under percussion, without the local or general symptoms of phthisis, the first stage of tuberculization cannot be diagnosticated with any surety, unless there be incipient signs at the other apex also; the conditions in question, limited to one side, might depend on chronic pneumonia, or on thick induration-matter in the pleura. (*k*) The existence of limited though marked, dulness,

under one clavicle, with bronchial respiration and pectoriliquy, so powerful as to be painful to the ear, the other apex giving natural results, will not justify the diagnosis of phthisis. I have known this combination when the apex of the lung was of model health, and a fibrous mass, the size of a walnut, lay between the two laminæ of the pleura. I would even go further, and say that the combination in question is rather hostile, than otherwise, to the admission of phthisis ; as, had tuberculous excavation formed at one side, the other lung would, in infinite probability, have been affected in an earlier stage. (*l*) Pneumonia, limited to the supra and infra-clavicular region on one side, and not extending backwards, is commonly, but not always, tuberculous. (*m*) Subcrepitant rhonchus, limited to one base posteriorly, is not, as has been said, peculiar to tubercle ; it may exist in emphysema, and in mitral disease. (*n*) Chronic peritonitis, in a person aged more than fifteen years, provided cancer can be excluded, involves, as a necessity, the existence of tubercles in the lungs. To this law of Louis's, it is necessary to add the qualification, provided Bright's disease be also absent. (*o*) Pleurisy with effusion, which runs a chronic course, in spite of ordinary treatment, is, in the majority of cases, tuberculous or cancerous ; the character of the symptoms, previously to the pleurisy, will generally decide between the two. (*p*) Double pleurisy, with effusion, is not, as has been said, significant of tubercle ; for it may depend on Bright's disease. If the latter disease can be excluded, carcinoma and pyohæmia remain, as other possible causes. (*q*) If a young adult, free from dysentery, and who has not resided in tropical climates, suffers from obstinate diarrhœa, which goes on, month after month, with slight remissions or intermissions, even though there be no cough, he is, in most strong probability, phthisical. If physical signs, to the slightest amount, exist at either apex, he is, almost to absolute certainty, phthisical. (*r*) If a young adult free from secondary syphilis and spermatorrhœa, and not dissolute in his habits, steadily lose weight, without clear cause, he is, in all probability, phthisical, even though no subjective chest-symptoms exist. (*s*) But he is not by any means certainly so; for he may have latent cancer in some unimportant organ, or he may have chronic pneumonia. (*t*) Nay, more, he may steadily lose weight, have dry cough, occasional diarrhœa, and night-sweats, and present dulness under percussion, and bronchial respiration under both clavicles, and yet be non-phthisical. I have known all this occur in cases, both when the lungs were infiltrated superiorly with primary encephaloid cancer, and when they contained secondary nodules of the same kind. (*u*) Failure of weight becomes less valuable as a sign of phthisis, the longer the thirtieth year has been passed. (*v.*) The discovery of cardiac disease, with marked symptoms, deposes against, but does not exclude, the existence of active tuberculization. (*w*) The existence of cancer in any organ, is unfavorable to the presence of tuberculous disease ; but tubercle and cancer *may* co-exist, even in the same lung.

II.—REMARKS ON ACID AND ALKALINE URINE.

BY DR. H. BENCE JONES, F. R. S.

One of the most remarkable characteristics of urine, is the re-action which it always presents to test-paper. If the whole quantity of urine passed in the twenty-four hours be collected and examined, it will give an acid reaction. If the water passed at different hours of the day is examined, then the degree of acidity will be found to be always changing. So that there is no one

constant, permanent degree of acidity of the urine. It is as varying as is the state of the acidity of the stomach. It may be said, generally, two, three, or more hours after food is taken, that the quantity of acid in the stomach attains its greatest height. The food then begins to be absorbed, or to pass out through the pylorus, when the acid begins to diminish, until the stomach is again empty, when it returns to a neutral or a slightly alkaline state.

In the "Philosophical Transactions" for 1849, Part II., you will see some elaborate diagrams, showing the effects of different diets on the acidity of the urine—different lines, showing, respectively, the effect of animal food, vegetable food, mixed diet, and abstinence from all food. From the time when food is taken, the acidity of the urine begins to descend; and after two, three or more hours, the acidity is at its lowest point. Thus, at the time when the acidity of the stomach is at its highest, the acidity of the urine is at its lowest point. Frequently, indeed, the acidity of the urine is so low, that it passes the neutral state, and becomes distinctly alkaline; and this may occur in healthy persons, whose stomachs are slightly irritable; certainly it does occur in those who are not subject to any disease which seriously interferes with the process of digestion. After two or three hours, it is found that the acidity of the urine again increases, arising at first rapidly, then more slowly, until the period when food is again taken, when it again begins to fall. Thus you will see, that as regards acidity, there is an inverse relation between the state of the stomach and the state of the urine. I have shown you the acid reaction of the gastric juice after food has been taken; now let me show you the reaction of the urine, as regards acidity, before and after food. I have here four different specimens of urine, passed at different periods of the day. The first was passed just before food, and on examination, it will give a decidedly acid reaction; it was passed just before breakfast, by a healthy person. Here is the next specimen, passed three hours after breakfast was taken; you see that there is scarcely any acid reaction; it was passed by the same person. The third specimen was passed two hours after the second; and you see the acidity distinctly returning. The fourth specimen was passed two hours later than the third, and the acidity is very much more evident—closely approximating, indeed, to that of the first specimen. (Experiment with test-paper.) The mode that I have adopted for marking these variations of acidity of the urine, (for the test-paper is not sufficient to determine the actual degree of these variations) is the following: I have here a tube, graduated into a hundred measures. Pure carbonate of soda is dissolved in so much water, that every measure of this tube contains the twelfth of a grain of carbonate of soda. This forms a test alkali. I have a test acid prepared in a similar way, one measure of the tube containing as much acid as will saturate the twelfth of a grain of carbonate of soda. I then take 1000 grain bottle, and weigh the bottle full of urine, and pour it into a little basin, adding the test alkali or acid, whilst the basin is constantly stirred and gently heated, until I bring it to the point of neutrality. Thus, the number of measures of test alkali required to effect the neutralization, gives the quantity of carbonate of soda which will neutralize the acidity of the urine. I find that this is usually much greater in urine passed just before food than in that passed two or three hours after food. I find, even, sometimes, that test acid has to be added to the urine which is passed after food, to bring it back to the neutral state. By this method we obtain a sufficiently exact measure of the alkalescence or the acidity of the urine; and it is thus tables may be constructed—

(No. 1.) *Variations of the Uric Acid and Acidity.*

Mixed Diet.	Specific Gravity.	Per 100 grs. Urine Uric Acid.	Per 1000 grs. Urine Acidity.
Urine at 2 p. m.	1025.0	0.52 grs.	13.07 meas.
Dinner at 7 "	1025.7	0.12 "	26.12 "
11 "	1026.7	0.62 "	13.81 "
Vegetable Food.			
at 2 p. m.	1021.6	0.56 "	8.29 "
Dinner at $6\frac{1}{2}$ "	1024.0	0.05 "	26.36 "
$10\frac{1}{2}$ "	1026.2	0.64 "	3.29 "
$6\frac{1}{2}$ a. m.	1034.2	0.66 "	19.52 "
Animal Food.			
$2\frac{1}{2}$ p. m.	1022.7	0.24 "	7.82 "
Dinner at $6\frac{1}{2}$ "	1024.8	0.05 "	21.46 "
$11\frac{1}{2}$ "	1029.9	0.77 "	16.50 "

My table in the third column represents the number of measures of test alkali required to neutralize 1000 grains of urine passed at different times, and when various diets were taken. I was induced to follow out these variations, from observing the action of the urine on test paper, in urine precisely similar to that which you have seen me test a few minutes since. Before breakfast, the reaction was highly acid, while in the water passed after breakfast, the reaction was alkaline ; and, in a few hours afterwards, the secretion was highly acid again. I found, that by making careful examinations, the same variations followed, meal after meal, day after day, and for days together.

To determine whether these variations in the acidity of the urine were, really, caused by variations in the acidity of the stomach, was not difficult, for this reason—if these changes depended on the state of the stomach, it was very clear, that by allowing the stomach to remain unacted upon by food, provided no acid was secreted in the stomach, no great variation in the acidity of the urine ought to be found. During fasting, none of those changes which are apparent in the urine, when food is taken, ought to occur. Thus, by simply abstaining from food, I tested whether the variations of the acidity of the urine were really produced by the variations of the acidity of the stomach or not.

It was found, that when perfect abstinence was observed, scarcely any change took place in the acidity of the urine, when the specific gravity of the urine was not materially changed. After ten or twelve hours, food was taken, and instantly the acidity of the urine fell, and, in the course of a short time, was below the neutral line. No more accurate test of the influence of the stomach could be applied than this. Nothing can be more evident than the intimate relation which exists between the state of the stomach and the state of the urine.

Let me point out one or two other results, which I obtained when examining the variations in the acidity of the urine after different kinds of food were taken. I found, (contrary to what might have been supposed) that when animal food alone was taken, the quantity of test acid required to render the urine neutral after such food, was greater than when vegetable food was taken ; that is to say, that the acidity of the urine after animal food, is less than after vegetable food. Supposing it to be true, that at any one period of the day the acidity of the stomach is inversely proportioned to the acidity of the urine, this would show, that vegetable food does not cause so much acid to be thrown into the stomach as is caused when animal food is taken. I have mentioned that the acidity of the gastric juice is the effective agent in dissolving albuminous food ;

perhaps a less remote cause may be found in the following statement. When food is taken into the stomach, the acid is poured out there. Of this acid I have already spoken, and have shown you that some portions of it consist of hydrochloric acid, and, probably, of phosphoric acid. If hydrochloric acid and phosphoric acid are set free in the stomach, there must be some decomposition of chloride of sodium or phosphate of soda. If acid is poured out in the stomach, alkali must be set free somewhere else; and it seems to me most probable, that the hydrochloric acid is set free in the stomach, whilst the soda (the alkali) remains in the blood; so that during digestion, the blood is more alkaline than it is at other periods. If the blood is in a more alkaline state, then the secretions which take place from that blood ought at that time to become more alkaline. You will remember, in my lecture on the saliva, I mentioned that Dr. Wright of Birmingham, observed, that the saliva was more alkaline during digestion than at other times. So, also, according to my own experiments, the urine is at this time more alkaline than at other times; so much so, that sometimes during digestion the urine is so alkaline, that it requires as much as 30 measures of the acid solution, equivalent to $2\frac{1}{2}$ grains of carbonate of soda, to render 1000 grains of urine neutral.

Having satisfied myself as to the variations in the acidity of the urine, it became an interesting point to determine what was the effect of different medicines. But my time will not permit me to enter fully into this subject. I must refer you to the two papers in the "Philosophical Transactions"—one in 1849, and the other in 1850—which give the results of experiments during one day, on which no medicine was taken, three days on which the medicine was tried, and then a fifth day, on which no medicine was taken. Thus, by means of these five days' experiments, I have attained a pretty tolerable certainty regarding the effects of different medicines upon the acidity of the urine. I may say, that the medicines that were tried were sulphuric acid and tartaric acid; and, to see the effect of alkalies, caustic potash, carbonate of ammonia, tartrate of potash, and tartrate of ammonia, were made use of. These substances were prepared with considerable care, so as to insure that there should be no interference in consequence of any impurity being present in them. The most interesting result of all, and the only one on which I shall now dwell, was the comparative effect of tartrate of potash and tartrate of ammonia. It was well known, and stated by many authors long before I commenced these experiments, that tartrate of potash caused the urine to be alkaline. I found that it did so; but I found that it caused it in a different way from what had been stated by the authors who had made experiments on the subject.

[Dr. Bence Jones here introduces a table, showing the variations in the acidity of urine, when tartrate of potash and tartrate of ammonia were given, and then goes on to say:]

The undotted line in my wood cut represents the effect of tartrate of potash, and at first sight it is evident, that the line which represents the state of the urine is much lower than that which marks the variation when tartrate of ammonia was taken. Let us trace this undotted line a little closer. It commences about breakfast time, soon after which it passes the neutral line, showing that the urine then was alkaline; about two it rises, recrosses the line, and then, when the urine had become acid, a dose of five drachms of tartrate of potash was taken, and almost immediately the line descends, in consequence of the urine becoming alkaline again. It does not remain so for any length of time, for very rapidly the line descends to its lowest point, and then rises again above the neutral line, and ascends almost as high as it would have done if no tartrate of potash had been taken. You might suppose from this, that the effect on the urine was ended; but it is not; for look at the undotted line. When dinner was taken the highest point had been reached, for after food the line descends, and it reaches a point some hours after food far lower than it proba-

bly would have reached, if no tartrate of potash had been taken. Thus it may be said, the tartrate of potash does not interfere with the variations produced by the state of the stomach, except, that a short time after it is taken it renders the urine alkaline, and that the effect of the tartrate of potash becomes again apparent when it afterwards acts with the state of the stomach; then it renders the urine more alkaline than it otherwise would have been. I repeated the experiment on the succeeding day, with three drachms of tartrate of potash, the effect of the previous dose still continuing. After breakfast, the line marks the alkalescence of the urine. By twelve o'clock the acidity arose, and reached by two o'clock to a high degree. Then the three drachms of tartrate of potash were taken—smaller doses than before—but almost immediately the urine became alkaline again. But this was not permanent, for the acidity soon began to rise again, until dinner was taken; then the medicine again showed its effect, when it was acting in conjunction with the alkali left in the blood, by the acid going, for the purpose of digestion, to the stomach. On the third day, a repetition of the tartrate of potash caused the same alternation to take place, though the dose then was two drachms.

I found that 120 grains of tartrate of potash caused an immediate effect on the acidity of the urine, rendering it alkaline in thirty-five minutes; but that this first effect passed away quickly. This accounts for the statement made by one author, that tartrate of potash does not make the urine alkaline. The real fact is, that the first effect lasts only for a short time, and that you must look for its greatest effect when it is acting in conjunction with, and not in opposition to, the state of the stomach—in other words, the effect of the tartrate of potash will be greatest when acid is secreted in the stomach, and the effect will be least when the acid is passing out of the stomach; and it is not improbable, that then it might be altogether overlooked.

Having traced the effect of tartrate of potash, look at the dotted line, which shows the effect of tartrate of ammonia. The first day two drachms were taken; the second day nearly four drachms; the third day three drachms; so that about ten drachms were taken in the three days. The quantity was nearly the same as in the experiments with tartrate of ammonia; but the ammonia salt did not affect the urine in the same way as the potash salt did. However large the dose. I could not make the urine alkaline; the variations in the acidity of the urine proceeding as if no medicine had been taken, with this exception, that the acidity appeared to be increased by the tartrate of ammonia. From this result it appeared to me highly probable, that even tartrate of ammonia was oxidized. I have already shown you that this conjecture was confirmed, by my finding nitrous acid in the urine when tartrate of ammonia or other salts of ammonia were taken into the stomach.

Thus much for the variations of the acidity of the urine. This will enable me to bring before you the chief object of this lecture, which is, to show why it is that the red deposits in the urine take place so copiously. The most frequent form is that which you see in the specimens in the two bottles before you, which are rendered thick by it. This deposit quickly dissolves on the application of heat. It consists of urate of ammonia, and very frequently, probably, of urate of soda. It occurs so frequently with almost every one, that it cannot be considered as a sign of disease, nor even of indigestion. While the urine is warm at the temperature of the body, the deposit is held in solution; and, as I said, it can be at any time re-dissolved by the application of heat. There are two other causes, in addition to the decrease of temperature, which effect this deposit; and, unless these are recognized, you cannot account for those strange variations which are apt to occur in all people. I have here three specimens of urine, passed at different periods of the day; first, just before breakfast; second, after breakfast; third, much longer after breakfast. The first is thick, the next is clear, and the third thick again. Your

first supposition would probably be, that the thick specimens contained more of the matter which forms the deposit than the clear one; but you would be totally wrong in judging by the eye, as to the quantity present. For example —the first specimen contains a deposit of urate of ammonia, and the second specimen is quite clear, free from deposit. Now, if you were right in your judgment, I ought to find, in determining the amount of urates by the balance, that the first specimen contains much of this substance, whilst the second contains but little; moreover, the third specimen, which is the thickest, should contain considerably more than the first. But by analysing the specimens, I obtain a totally different result; I find that the specimen which is clear contains most uric acid, and the thickest specimen does not contain so much uric acid as the cloudy specimen. The explanation is this: the first specimen is strongly acid, whilst the clear specimen is neutral, or very slightly acid, and the third specimen is much more acid than the first. This shows that a state of increased acidity may lead to the deposit of urate of ammonia; and that a state of decreased acidity will mislead the eye that judges from appearances.

Let me illustrate the variations of the uric acid more fully, by referring to the table at the commencement of this lecture; you will see that the urine passed at two o'clock, p. m., after the digestion of mixed food, contains, on an average, 0.52 gr. of uric acid; and its acidity is such, that it requires 13 measures of test alkali to neutralize it. At seven o'clock, p. m., before dinner, the amount of uric acid is 0.12 gr.; and the acidity requires, to neutralize it, 26.12 measures—the specific gravity of the urine, however, remaining nearly the same. After vegetable food, at two o'clock, p. m., the quantity of uric acid is 0.56, and the acidity is represented by 8.89 measures. Long after food, the quantity of uric acid is only 0.05, the acidity requiring 26.36 measures of test alkali to neutralize it. At night, after food, the uric acid is increased, but the acidity much diminished. The same table (No. 1) shows also the variations effected with animal food.

The following table shows the highest and lowest amount of uric acid that I have met with in health, after animal and after vegetable food.

Highest and lowest amounts of Uric Acid.

Highest after animal food	1.02 grains	per 1000 urine	1027.8
" vegetable food	1.01	"	1025.6
Lowest after animal food	0.05	"	1024.8
" vegetable food	0.05	"	1024.0

From this table you see that it makes no material difference in the quantity of uric acid in the urine, whether animal or vegetable food is taken. Here is a most conclusive diagram, which shows the amount of uric acid, together with the degree of acidity, and the appearance of the urine passed at the same time on three different days:

Variations of the appearance, the acidity, and the amount of Uric Acid.

PM.	Grs.	Sp. Gr.	Acidity.	Uric Acid.	Appearance.
7 Urine	1000	1029 +	15.5 measures	0.29 grs.	thick.
10 "	"	1027 —	0 "	0 33 grs.	clear.
8 "	"	1030 +	21.5 "	0.81 grs.	thick.
11 "	"	1030 —	0 "	0.96 grs.	clear.
5 "	"	1028 +	14.9 "	0.52 grs.	thick.
11 "	"	1031 +	2.9 "	0.87 grs.	clear.

These experiments must clearly prove, that the deposit does not depend upon animal food or upon vegetable food; that these do not produce a distinct effect

upon the quantity of urate of ammonia or uric acid in the urine; but that the thickness in the urine depends upon the degree of the acidity. If the degree of acidity is slight, a large quantity of urate of ammonia may remain in solution; if the acidity is considerable, then even a small quantity of urates may give a precipitate.

The way to determine the amount of uric acid is the following: About one or two thousand grains of urine are taken; hydrcchloric acid is added in the proportion of about two drachms to one thousand grains of urine. The urate of ammonia is decomposed; and, on standing for at least twenty-four hours, the greater part of the uric acid crystallizes out. The crystals are thrown on a fine filter, washed with distilled water, dried and weighed, and thus the quantity of uric acid can be determined.

Let me show you the first effect of the acid. I have here a glass jar, containing a liquid which we may suppose to represent urine, but it is really the excrement of the serpent dissolved in caustic potash. You see there is in the solution a slight deposit of urate of potash, but you get no idea as to the quantity of uric acid dissolved by merely inspecting it. As long as it remains alkaline, there will be little, if any separation of urate of potash from the liquid; but if I add to it hydrochloric acid, see then what will happen. Look at the curdy mass which will be precipitated, so solid, that this heavy glass rod will easily stand in it. (Experiment.)

Thus, you can form no conjecture as to the quantity of uric acid in solution in any fluid by simply looking at it. All the uric acid present must be first precipitated. I added a considerable quantity of hydrochloric acid to the jar. If I had added but a small quantity, I should have precipitated only a portion of the uric acid which was in solution, but by adding an excess of hydrochloric acid, all the uric acid has fallen as a precipitate. It is interesting to notice the form in which this is first precipitated. You have seen that at first it is quite gelatinous, and the glass rod will easily stand in it; but in the course of a short time a change will be effected, and the mass will become much more liquid, so that the rod falls, as you see it falling, and in a short time the contents of the jar become so fluid that they can be poured out. The first precipitate is undecomposed urate of potash; it has been called hydrated uric acid, but I do not believe that it is so. The first precipitate is urate of potash, because the uric acid is not set free immediately; it requires that the hydrochloric acid should be sometime in contact with the urate of potash to decompose it. So also, if you slowly add hydrochloric acid to urine, you will frequently find a thick deposit formed rapidly; this deposit will re-dissolve by heat; it will not become changed into an insoluble substance; it will require, for this purpose, to stand for twelve, twenty-four, or perhaps forty-eight hours, and then the precipitate will be far less bulky than before. If the quantity of uric acid be small, and the quantity of acid added be small also, it will require a long time before the whole urate of ammonia will be decomposed, and the uric acid will be deposited in a crystalline form. I have no doubt that this is a most happy preservative from the more frequent formation of uric acid calculi. We have free acid passing off with urate of ammonia in the urine, and they may remain in contact therein for a time, provided the quantity of free acid be not great, without the uric acid being set free, so as to form red gravel. Most commonly urine, containing free acid, must stand some hours after it has passed from the bladder, before red crystals become apparent; nevertheless, sometimes the urine contains so much free acid, that the uric acid crystals are found in the bladder, and even the kidney. I have dwelt on the fact of urate of ammonia not being immediately decomposed by free acid, because I do not doubt that thereby we are daily saved from the formation of that gravel which constitutes that kind of calculus which is found most frequently to occur.

I have tried to bring before you the causes which lead to the deposit of urate of ammonia, and to the formation of uric acid calculi. I might say, that the acidity produced by the stomach is the cause; and that, in comparison, all other causes may be neglected. The quantity of acid set free in the stomach is not easily calculated; it certainly produces a greater effect on the urine than three drachms of diluted sulphuric acid do—most probably the gastric juice produces a greater effect on the urine than six drachms, or perhaps more than one ounce of diluted oil of vitriol. As to the quantity of acid in the gastric juice, no right conjecture can be formed as to its amount. We must collect the whole of the gastric juice, and even if we could, it would be impossible to say how much of the acidity comes from changes in the starch and sugar of the food. However, the variations of the acidity of the urine, when animal food only is taken, show how much the acidity of the stomach affects the acidity of the urine.

The liberation of acid in the stomach is one great cause of the acid reaction of the urine, and occasional increased acidity of the stomach first gives rise to occasional deposits of urate of ammonia in the urine. When the acidity of the stomach becomes more frequent, these deposits become more frequent in the urine; and when the acidity of the stomach becomes increased in intensity as well as in frequency, then the deposit of urate of ammonia gives place to a formation of uric acid crystals, which ultimately form these immense masses of calcalous matter which you see on the table before you.

(*Medical Times—Braithwaite's Retrospect.*)

III.—ON OBSTRUCTION OF THE INTESTINE WITHIN THE ABDOMEN.

In a highly instructive paper on the treatment of obstructed bowels within the cavity of the abdomen, written by R. R. Robinson, and published in the last number of Braithwaite's Retrospect, we find the following summary at the close of the article. (*Ed.*)

1. The ilium is that part of the intestinal canal where internal obstruction is most likely to occur.
2. Membraneous bands (probably the result of former peritonitis) are the most frequent causes of obstruction.
3. Partial, is more likely, than general peritonitis, to lead to obstruction.
4. All the convolutions of the intestines may be united together without obstruction.
5. Mechanical, although the direct, is not the sole cause of obstruction, as there is reason to suppose the mechanical cause has been in existence some time before the symptoms show themselves; other causes, therefore, must arise, to produce them, and the most frequent of these are sudden and violent exercise, and errors in the quantity or quality of food.
6. It is *possible* for a spontaneous cure to arise from inflammation and ulceration of an obstructing band.
7. The same consequences are seen in internal intestinal obstruction as are seen in other obstructed canals—viz: hypertrophy and dilatation above the stricture; atrophy and contraction below it.

8. The symptoms vary considerably in different cases.
9. The order in which the symptoms arise is as important as the symptoms themselves.
10. There are no symptoms by which one obstructing cause can be clearly distinguished from another.
11. The duration of the disease varies much in different cases.
12. The strength of the patient should be maintained.
13. Bleeding should be employed with great caution.
14. The seat of obstruction may be very apparent, and yet deceptive.
15. An operation is only justifiable as a forlorn hope.
16. As a rule, when an operation is resorted to, the central incision is to be preferred.
17. There is reason to believe that metallic mercury has proved useful ; and it is in obstruction from membraneous bands chiefly, if not solely, that benefit is to be expected from its use.—*London Jour. of Med.*

IV--ON BLISTERING IN GLEET.

BY JOHN L. MILTON, ESQ.

[In refractory cases of gleet, Mr. Milton proposes to revive, or introduce the practice of blistering the penis. Although little known or used, he states it to be the most powerful remedy that can be applied. He says :]

Not merely will a single blister frequently cure the most prolonged gleet—not merely will it rapidly sweep away all dregs of the disease in its ordinary course, but it will often cure those runnings, which have resisted all known and used methods. I have seen two blisters, with a mild injection or two, at once cure a clap which had defied the most energetic treatment; and *as I never found a case which resisted blistering and injections together, that was not complicated with stricture, or affection of testicle*, I am slowly arriving at the conviction, *that every case of clap or gleet, however obstinate, may, if uncomplicated, be cured by blistering, singly or combined.*

To illustrate and urge forward this operation by every means in my power —to invite attention to it, that it may be put to the severe test of practice, to attest it by cases which I have collected and watched—to point out the necessity of quitting the beaten paths of treatment, and try a new remedy, more powerful than those in use, is the object of this paper. But as so many remedies have fallen into disuse from the indiscriminate use or misapplication of them, and as so many which are in favor have been arrested on their path by obstacles issuing from the same sources, I must here enter my protest against being supposed to recommend blistering in gleet, unless properly applied, and in the cases I have referred to.

In order that a blister be properly applied, there are some points, which, however trifling they may seem, require as much attention as the leading features of the case. Where these are neglected, blistering is apt to produce such a filthy excoriated mass, that the patient will not submit to it a second time ; whereas, if carefully laid on and dressed, it is, from its being out of the reach of friction, in the ordinary movements of the body, even less troublesome than if on a limb, or the trunk. Before putting it on, the hair at the root of the penis is cut off, and, if the foreskin be naturally retracted, it must be drawn

a little forward over the glans. A piece of paper is then to be fitted on the penis, and cut till it exactly covers it, from the root to within half an inch of the mouth of the urethra. This is then laid down on the blister, which is cut out by it, wrapped round the penis, and fastened with threads behind the glans and near the root. The patient should remain perfectly quiet during the time it is on, lest any motion should bring the blister against the scrotum, and vesicate it; but he must not apply it on going to bed, or he will most likely fall asleep, and not awake till the penis is one mass of vesications—a state productive of an unnecessary amount of suffering.

In the milder cases, or where the skin is tender, an hour, or an hour and a half, will be sufficient. The blister is then removed; if there are any vesicated spots, they are covered with pieces of linen spread with zinc ointment, and then a layer of cotton is bound over these, and covered with a piece of linen, kept on by a thread, or, what is better, two very thin rings of vulcanized India rubber.

Where a severer case renders a more energetic employment of the remedy necessary, it must be kept on two or four hours, until free vesication is produced; zinc ointment is then applied.

To protect the penis from friction, a T bandage, with a linen bag sown into the part which receives the penis, or a handkerchief carried round the waist, and dipping in front, so as to receive the penis, and keep it up against the abdomen, is necessary.

The first effect of this application is, to increase the discharge considerably, which then terminates, either by altering its character, becoming ropy and mucous, and finally disappearing in a few days, or by remaining somewhat more persistent, and requiring a few injections, when the penis is so far advanced towards healing, that it can be handled without pain, or demanding even a second blister. One of the most cleanly and convenient, and least painful forms of blister, is Brown's blistering tissue; it causes much less irritation, and heals much more quickly than the ordinary blister. The blistering fluids, if strong enough to vesicate, caused such pain, that I soon renounced the use of them.

How does this remedy act? By counter-irritation, will, perhaps, be the answer. But, if this were the case, why should there be increased action in the urethra for a few days, and why should the discharge from the urethra begin to disappear, when the counter irritant-surface is healing up? It would seem as if the organized constituents of the urethra are capable of keeping up a certain amount of over-action for an indefinite time; but that when hurried beyond this by a healthy stimulant, *a rebound* takes place, which leaves them less capable than before of furnishing a secretion, morbid in amount or in quality, or in both. We see something similar in prurigo pubis, where a blister causes an exacerbation of the symptoms, succeeded, however, in some cases, by a healthier state of the skin; in bubo, treated by blister, etc.

V.—ON THE CAUSES NOW OPERATING TO PRODUCE PHYSIOLOGICAL CHANGES AND MODIFICATIONS OF DISEASE IN THE FUTURE INHABITANTS OF THE UNINED STATES.

BY GEO. BURR, M. D., OF BINGHAMPTON, N. Y.

The human race appears to be subject to the operation of laws, which stamp the inhabitants of the different quarters of the globe with distinct and peculiar characteristics. The five great varieties which are usually mentioned as em-

bracing the leading distinctive traits of character and conformation, are subject to a still greater number of subdivisions. These are to be met with in the peculiar national characteristics of the different countries of Europe; in the various Indian tribes of North and South America; in the shades of difference to be seen in the African race, in their different localities, and the still greater diversity to be found in the Asiatic or Mongolian race. Whatever may have been man's original physical condition, or his primitive form and organization, subsequent generations have certainly departed from it, and from each other, until a great variety of the race is now presented, differing from each other in intellectual capacity, in physical development, in regularity of form, in activity, enterprise, habits of life, regulations of society, etc. We may also mention as not among the least of these variations, physiological differences, liability to attacks of some forms of disease, and exemption from others, national idiosyncracies, the power of resisting endemic influences, acclimation, etc.

The causes of these changes, undoubtedly, are incident to man's organization, and commencing with his creation, they have continued in operation down to the present time. We can trace their effects in the numerous varieties of the human race that are now to be found in the different quarters of the earth. Many of these causes we can understand and appreciate, others we cannot. They all arise from the multiform circumstances by which man is surrounded, and which have been multiplying and becoming more complex as the numbers of his race have increased, and the varieties of his condition augmented. To trace out all these changes, to comprehend their action, to become familiar with the gradual separation of one man from his fellow, and the insensible acquirement of distinguishing peculiarities, would be to master one of the most difficult problems of our being, and would throw a flood of light upon the natural history of our race.

The science of medicine has a deep interest in noting all the influences that affect the condition of man; for whatever phase he may present in regard to civilization or social condition, or whatever variations in climate or locality he may experience, a corresponding difference is to be seen in the diseases to which he is subject. The records of our profession give us many instances of these variations. The apparent discrepancies which occur in our literature—the seeming conflicting facts that are recorded as having been observed, may all be reconciled by remembering, that such observations were undoubtedly made under different circumstances and from opposite points of view.

Many a medical knight has shivered his lance against the shield of an antagonist, and has received in return the severest blows upon his own helmet, over questions in physiology and medicine arising solely from the different points of observation they each had occupied. A change in their relations would probably have satisfied them that both were right, and that their differences arose solely from the very limited view they had taken of the questions over which they had been exhausting their strength, and their ignorance of the different aspect the disputed points would have presented, had an observation been made from an opposite direction.

With the progress of time these changes in the condition of the human race, must continue to increase, and to become more complex. The men of one century must differ from the men of another, not in the general outlines of their organization, or in any striking departure from the original form; but in degree of development, in temperament, in habits, in energy, and in every thing else that goes to distinguish one man, or set of men, from another. Accompanying these changes we have corresponding diversities in the character of disease, and the physicians of succeeding generations will meet with new and diverse forms of morbid derangements, resulting from new conditions, and new relations that are yet to be created. There is to be no cycle in human affairs, no period when all possible forms of combinations having been ex-

hausted, we shall return to the original primitive condition, to commence anew the round already run. The human race will continue on, and as generation after generation passes over the stage of life, new forms, new arrangements, and new phases will continue to appear.

Our own country will hereafter present some extraordinary opportunities for observing many of the phenomena which we have now alluded to, viz: the effect of new relations and new conditions, both physical and social, upon a greatly extended and compound race of men. Nor will the opportunities it will thus afford be of lesser consequence to the interests of science, than has been the establishment of this republic to the political world.

Politically, the importance of this republic, in its effect upon human institutions, is already generally acknowledged. Its example, as a free and independent people, governed solely by the popular will—the unexampled rapidity with which it has taken rank among the nations of the earth—the resources which it possesses—the enterprise which it has displayed—the achievements which it has accomplished, unite to command the admiration, and divert the attention of the entire civilized world. The sudden rise of the United States in power and commercial importance, has produced an entire revolution in the commerce of the world. A similar revolution awaits the current of scientific enquiry, and here, in this free and vigorous young republic, where the human mind is unshackled by tyranny, and where the heel of the oppressor does not crush to destruction the energies of our people, a field for scientific exploration is laid open, under circumstances never before occurring, and where results will be arrived at never before attained. The effects of all this upon the character, the temperament, the different forms of disease, the epidemics that will prevail, are subjects that the physician will be interested in contemplating. What will be the prevalent diseases? How will they differ from those now occurring, when out of the chaos that now exists in our population, something like order shall appear, and a new race, *sui generis*, shall people the immense tracts of valley and plain, that now lie unoccupied, reaching to the Pacific ocean? What causes, likewise, will be in operation, to change the character, and modify the diseases of the future race? Will any of the leading or peculiar diseases of the present time be wanting, and if so, will their places be supplied by new forms of morbid action? What, in one word, will be the future etiological characteristics of the United States, and what causes will operate to produce variations from what is at present to be met with?

There are many diseases, no doubt, upon which time, and even changes in physiological characteristics, will have but little effect. Such diseases "occur independently of all known external influences, which affect individuals of all races, and present in all cases, substantially, the same symptoms and lesions of structure; of which cancer, fungus hæmatodes, melanosis, wens, cataract ossifications, apoplexy, and various chronic affections of the skin, may be cited as examples. There are others, depending on known and common causes, to which man is exposed in all countries, climates, and states of society, such as inflammation from mechanical injury, burns, or the ingestion of acid poisons, which, respectively, present nearly the same characteristics, whenever or in whatever race they occur. Others, again, result from specific causes, which are reproduced in the bodies of the sick, whereby they spread with great uniformity of symptoms to all who are exposed, such as small-pox, cow-pox, measles and whooping cough.

In reference to all these, and other diseases which might be mentioned, it may be said, that the observations made in our country are in the main equally applicable to any other. The maladies are the common scourges of our race, and the knowledge of their symptoms, lesions and treatment, the common he-

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* Dr. Drake.

ritage of our profession."* Nor is it probable that time, or changes in the several conditions of a people, or locality, or topographical peculiarities, climate, habits, etc., operate materially to vary the character of these diseases. From the time we have first had knowledge of them, there seems to have been no perceptible variation under any known circumstances.

It is in diseases of this latter class that in the United States a series of successive generations will bring about in their etiology and natural character, changes and transformations. But we shall never behold them. Their transition will be too slow for the present generation of physicians, or those that immediately succeed them, to witness the full effects of the change. It will be for the Physicians of later centuries to note the results, and to meet the variations as they arise.

The causes from which such changes are to be anticipated, will arise from the situation, climate, and the general topography of this country, and from the peculiar circumstances attending its settlement and extension hy emigration.

It is a well known fact that climate, social condition and geographical situation, make their impress upon a population—that a people, to a certain extent, will possess characteristics corresponding to the nature of the country they inhabit. Some portions of the earth being more favorable for the development of man than others. The United States, or rather North America, (for we must, in this matter, be governed by physical conformation, rather than by political divisions) has its peculiar geographical configuration. It is placed in the midst of the ocean, between the eastern extreme of Asia and the Western boundary of Europe--extending from the frozen regions of the North Pole to the high temperature of the tropics. It has likewise a width of territory of one hundred and twenty degrees of longitude, and contains an area of eight millions of square miles. Its position, nearly equi-distant from the extremes of the old world, admirably adapts it for commercial intercourse and trade. Its internal geographical arrangements are equally well adapted for the convenience and operations of an active, bustling, busy, commercial people. The chain of lakes or inland seas of the North, united by navigable rivers, and discharging their waters by a single outlet; the vast territory South that forms the western valley, whose streams converge to a single point, and the numerous rivers on the Atlantic slope of the Alleghanies, as well as the various indentations of the coast, forming bays and sounds, are so many highways for commerce; and their arrangement seems to indicate an intention, on the part of Providence, that this land should be, what it is sure to become, the home of an extraordinary, active and energetic people; that its future inhabitants should be constitutionally adapted to the magnificent thoroughfares here provided, and that, from taste and habit, the people of the different quarters of the country should meet upon their common highways in the exchange of products, or in the pursuit of pleasure. The effect of this free intercourse, among those who dwell upon, and who navigate the rivers of the North American continent, will be to assimilate their tastes and interests, and will rapidly promote the formation of a dis-

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* Dr. Drake says—

"On the other hand, there are diseases which scarcely ever occur but in certain climates, localities, or states of societies; of which we may select, for illustration, yellow fever, autumnal, intermittent and remittent fever, plague, pneumonia, goitre, cretinism, gout, scurvy and mania, most of which, in different countries, ages and races, exhibit some variety of type, and demand some peculiarity of treatment. Here is the foundation of local medical history and practice; as a basis which does not support the whole nosology, and yet is broad enough for a large superstructure, whenever an extended region constitutes the field of enquiry."

tinct national character. The activity to be seen in every direction will stimulate the most sluggish, and the temperament of succeeding generations will feel the impulse, while the mind, surrounded by the most extensive and magnificent works of nature, will become expanded to larger views and more extended undertakings.

The effects of the extremes of climate, will be softened down by the frequent intercourse of those who live in different degrees of latitude. No one external influence has more effect in giving character to a people than temperature. The effects of low temperature are to be seen in those who inhabit the northern portions of this continent, in Greenland and the coasts of Labrador. They are stinted in growth, deficient in size, without energy or activity. The animal functions are performed slowly, and a large amount of food is requisite to give heat and force sufficient to keep in play the vital motions. An opposite condition is found in the Southern extreme of this continent. Reaching nearly to the equator, those who inhabit this section are exposed to all the influences of tropical heat and climate. While the inhabitant of the frigid zone is wanting in vital force and energy, the animal functions of the inhabitant of the torrid zone are carried on with great activity, so much so, as to cause enervation and lassitude from over excitement. In the United States, though we do not extend to the two extremes of temperature, we yet approximate towards them, while we have every intermediate variety. One effect of our long extended navigable rivers will be, to soften down and blend all the peculiarities of climate. The sluggish denizen of the far Northwest will have his blood quickened, and his powers of life increased, by exposure to the heat of the lower Mississippi, while the enervated Louisianian or Texan, will receive fresh vigor from frequent visits in summer, to the healthy regions of Lake Superior, the Lake of the Woods, or the Upper Missouri. The facilities for intercommunication, will be greatly increased by the construction of artificial thoroughfares, such as railroads, canals, etc.; and when the vast plains of the West are filled with a dense population, as they one day will be, it will then be found that the peculiarities of the North and the South, the East and the West, have disappeared; that constant intercourse has blended all distinctions of locality or descent, and that a race has succeeded of uniform peculiarities and of national characteristics.

Thus, from the physical conformation of the country, and its geographical peculiarities, we have causes operating, the influence of which will tend to form a people, whose leading characteristics will be activity and capacity—with great development of the nervous and sanguiferous systems—a race capable of great endurance and of indomitable courage and perseverance.

Another very important modifying cause, which will affect the character of the future inhabitants of this country, is the practice of emigration. At the present time, the population of the United States is of a mixed and greatly diversified character. Her people have come from every clime of the old world, to settle and cultivate the new. Here are congregated English, Dutch, French, Spanish, Irish, Norwegian, and others, from every country of Europe, and from other parts of the world. They come here, not with arms in their hands, to overrun by force a feeble and dilapidated republic, but in the spirit of fraternity, to enter upon and ocupy a territory vacant, and without inhabitants. Their descendants will become wedded to the soil of their fathers' adoption, and in their intercourse with each other as American citizens, and by constant intermarriages, will forget the different countries of Europe from which they sprang; will lose all their former distinctive traits, and the result will be a new national compound—a people peculiar to this country, possessing distinctive traits, both physical and mental.

We have already considered the effect of the physical geography of the United States upon the future generations that are to dwell within their boun-

daries; and have seen that the configuration of the country appears designed and possesses every facility for, a superior, active population. The admixture of so many varieties of our species as is to be found here, blending their peculiarities, will greatly tend to give a distinct and uniform character to their descendants. A race will spring from them, corresponding in energy and form in development and size, with the mountains, lakes and rivers with which they will be surrounded. In all their enterprises, whether peaceful or warlike, their efforts will be as resistless as the current of the Mississippi, while in cast of mind, and reach of thought, they will take lessons from the boundless prairies upon which they dwell.

The basis of this new compound will be the Anglo-Saxon, which will continue to be, as it now is, the leading feature in the new race. The Anglo-Saxon is itself a compound race, and owes its power and energy to the different materials of which it is composed. It acquired its peculiarities amid the turbulence and strife attending the earlier days of the British empire. Its original materials were barbarous, though warlike and brave; but in the course of time, its asperities have been softened, and its energies developed, until now it has become the leading variety of the globe. This change from the primitive character of the ancient Britains, has been brought about by admixture with their successive conquerors—by a favorable situation for extensive intercourse with other nations, and by mild and genial climatic influences, favoring physical development and intellectual improvement.

Under a continuance of these favorable conditions for developing the perfections of the human race, with such extensive opportunities for admixture, and the existence of other favorable circumstances, we cannot doubt but that it is destined for the North American States to produce a race of men far superior to any nation now existing—a race, on which shall be centered the attention of the whole world, as an example of superior excellence in physical and political condition—a people, among whom the seats of learning of the old world are destined to be removed, and whose advancement in all the arts and sciences shall keep pace with their exalted condition as a people.

Habits of life, regimen, etc., form another important modifying cause in the peculiarities of the human race. We have seen that the geographical configuration, climate, and the mixing of the different varieties, now filling up the wastes of the new world, unite to produce a race of men, perhaps superior to any that have ever existed. Such, undoubtedly, would be the result, if no draw backs were met with, and nothing to interrupt their regular legitimate action encountered. With nothing to retard, we should have a people of unusual physical development, of sanguine temperament, capable of great endurance, and obnoxious to few diseases. But there are some causes, the operation of which will tend to prevent the full effects of the before mentioned favorable influences, and which will serve to entail upon succeeding generations more or less disease. The chief of these causes relate to the personal habits, mode of living, habitations, and regimen in its extended sense.

The habits of life in our country are somewhat peculiar, and to those who emigrate here from the countries of Europe, the contrast is striking. Generally the people of this country are better clothed, and better sheltered, than almost any other. They are well protected from the inclemencies of the season, and have an abundance of fuel for artificial warmth. In their diet the change is very great. A large majority of the emigrants coming here, undergo a complete revolution in their habits of eating, and in the quality and quantity of food they take. In the old world, the class who generally emigrate subsist on the coarser articles of food, and use but little, if any meat. The Irish, in particular, from the poverty of the lower classes of the population, are compelled to live chiefly upon the potato, without tasting animal food for months, if ever. The change in this country, in regard to animal food, is very great.

Large quantities of meats are eaten by all classes, as well as plenty of fish and game. In many portions of the country, particularly in the Western and Southern States, much more animal food is eaten than in New England or New York. No meal there is considered complete, if meat is wanting. Hence, the fashion prevails on board of every steamboat, in every hotel and boarding house, to provide it in great abundance. I have never seen a public table set, even for tea, in the Western States, without its being well supplied with beefsteak and boiled ham, besides a variety of cold meats from the previous dinner table.

The half starved emigrants from Europe find this a land of plenty ; they see within their reach most of the luxuries of life, and they generally are not behind hand in availing themselves of their use. Their habits, in consequence, undergo a material change.

The peculiar characteristic of the living in this country is fullness and plenty. Every thing abounds in profusion, and is within the reach of almost every individual. None need starve, while most have a surfeit. The effect of this abundance upon the health of the people will be, to render them more irritable, to induce local disease, particularly of the digestive organs. Habits of such free living, particularly in the young, will materially affect their development, temperament, and physical condition, as it will, likewise, in those who change from the scanty living of the old world, to the more full and free habits of the new.

From this, and from kindred causes, a large proportion of the diseases of the vascular system, which, in the active habits our future population will possess, and which will undoubtedly become peculiar to them, will become modified and mixed with many nervous derangements and local congestions. The fevers that will prevail will be more of an irritative character, and typhus and typhoid will be the prevalent fevers of the land. Gastrites and entero-gastrites will also become a national disease. Inflammatory affections of the thoracic viscera will not be materially changed. Our now frequent intermittent and remittent fevers will undoubtedly diminish. The cultivation of the soil will tend to diminish the production of malaria, and that fruitful source of so much suffering will be cut off. The people, also, by a kind of acclimation, will at length gain an immunity from its attack, and diseases of an intermitting character will gradually disappear. With the decline of malarial diseases, indurations of the liver and spleen, the legitimate effects of malarial influence, will also become less frequent.

The free indulging of the appetite, in this land of plenty, will undoubtedly operate to favor the appearance of gout ; while the exposure and muscular exercise of a large class of people engaged in navigating the waters of the country, and in other laborious pursuits, will favor the increase of rheumatic diseases. It may therefore be reasonably anticipated that gout and rheumatism will, with the lapse of time, be found more frequent.

In constitutional and hereditary diseases we shall, in all probability, find still further departures from what is to be seen at the present time. Some may possibly be eradicated, while others will occur more frequently, and will become more complicated, as the intermixture of races progresses.

Consumption and scrofula will continue. These scourges of our race will be handed down from one generation to another, gaining, as they continue on, in virulence and in their power to do mischief. In the Northern portions of the country, particularly, we have no reason to expect any falling off of cases of tubercular disease. The exciting causes will continue, for we may not expect much change in the temperature or humidity of the atmosphere ; while with every successive generation we may look for an increased proportion of those who have a tubercular taint. The same may be said of scrofulous diseases proper. They will undoubtedly prevail as much as now, and in all probability will assume forms that at this time would be anomalous and strange. It is true, that the active, busy portion of the population of this country, those who till the soil, or who transport its products, may possibly claim a greater exemption from scrofulous diseases ; but it must be recollected, that accompanying the filling up of the present unoccupied tracts of our Western country, large cities will spring up, where will always be found a crowded population, filthy habitations, and ill ventilated residences. These conditions will favor the increase of cachectic diseases ; and as the country grows older, and crowded cities multiply, they will always

be found to abound in diseases of a scrofulous character of almost every form, however free from their effects those living in the country may remain.

Diseases of a syphilitic character will also become more common. Not in its primary or secondary forms, perhaps, but in its remote effects, in its consequences when transmitted from parent to child. Already, in the older countries of Europe, the syphilitic taint is so manifest, and is so interwoven with almost every form of morbid derangement, that there is some foundation in the prominence which Hahnemann has given to syphilitic poison, as a cause of chronic disease. The older a people becomes, the more syphilitic complications will be found. The people of this country will not be of a character to be wanting in the means of distributing this poisonous virus, and generations yet to come will have to pay the penalty of their forefathers' trangressions, in the form of many kinds of anomalous disease. To a certain extent, we may at the present time see some of the consequences of syphilitic taint; and where chronic derangements presented themselves in a form inexplicable and strange, my suspicions would now be excited, and I should search for evidences of venereal contamination, either in the patient before me, or in some of his immediate ancestors. The course of these complications cannot, in all probability, be checked, but will continue to multiply until their consequences will form no inconsiderable portion of the future chronic diseases of this people.

Insanity, and affections of the mind generally, will also become a prominent disease. The ratio of insane cases in the United States is now believed to be increasing, while the varieties of the different forms of derangement of the mind have certainly multiplied to a considerable extent. Dr. Brigham, late Superintendent of the State Lunatic Asylum at Utica, corroborates this view when he says, "liberty, so favorable to the development of the human intellect, multiplies the causes of its derangement. Hence, in countries where there is the most intelligence and freedom, there will be found the greatest mental activity, and the most cases of insanity. We are of the opinion, and it is an opinion formed after much enquiry, that there is more insanity in this country, especially in the Northern and Eastern States, than in any other, and that it is fearfully on the increase." These remarks apply with equal force to the multiplication of new forms of insane diseases. The causes tending to increase the number of cases of mental derangement among the people, will also operate to give new forms and varieties to their manifestations; and the future unfortunate subjects of insane attacks, that will be met with in succeeding generations, will present peculiar and novel phases in the irregular mental phenomena which they will exhibit. Dr. Luther V. Bell, of the McLean Asylum for the Insane, has already described what he terms a new form of mental disease, (vide Journal of Insanity, October, 1849) and his observation is quite correct, where he observes, "that a new disease should be manifested in this advanced day, in the calendar of medical history, is not without many precedents." In diseases of the mind, more than in any other class of morbid affections, will be found a succession of new phenomena, as the future combinations of our social condition become more widely extended, and more complicated in their character.

The causes that are, and will continue to be, operating to increase the ratio of insanity among the future population of this country, in addition to those perpetuated by hereditary transmission, will be connected with the great activity and freedom of mind that will continue to characterize the people of the United States. The public mind will here be as restless as the waves of the sea, and almost as often will it be lashed into fury by the storms of popular passion. Conflicting questions in religion, morals and politics, will continue to have each their full quota of hot-headed and excited partisans. The excitement of large business operations, speculation, the acquisition of wealth, or its sudden loss, as often occurs, and in fact all that constitutes the basis of the enterprise and activity of our people, will have an effect to increase their liability to mental derangements. Other but minor causes, connected with personal habits, practices and pursuits, will also have an important influence in swelling the number of the insane.

The means of preventing, so far as possible, the increase of insanity in our own population, is a subject that may well claim the closest attention on the part of the medical profession. But the limits of this essay will not permit them to be considered at the present time. They of themselves are sufficient to form the subject of an extended paper. (*From Transactions of N. Y. Medical Association.*)

VI—COMPRESSION OF THE SUPERIOR PORTION OF THE SPINAL MARROW, BY THE ODONTOID APOPHYSIS.

M. Jobert (of Gamelle) has communicated the particulars of a case of compression of the superior part of the spinal marrow, by the odontoid apophysis, followed by rapid asphyxia and death—a fact which he believes sustains the opinion recently announced and strenuously maintained by M. Flourens, upon the physiological importance assigned to this portion of the medulla oblongata, which he designates the *knot*, or the *vital point*.

A young girl entered into the service of M. Joubert for a tumor, with a fistula in the upper cervical region. The patient, whose general condition excited no alarm for her safety, suddenly dropped dead, after a slight movement of the head. On examination, it was found that the ligaments which fixed the odontoid process, had been ruptured by the movement of the head! This rupture permitted the apophysis to glide backwards,and thus compress the *medulla oblongata*. The patient,says M. Joubert, was extinguished like blowing out a candle. The above is a very remarkable case, and so far as we are acquainted, without a parallel in the books.—(From the French.) (*Ed.*)

VII—OF THE TREATMENT OF DROPSY BY IODINE INJECTIONS.

In an elaborate and statistical memoir, published in the *Gazette Medicale de Paris*, by M. Boinet, on the efficacy of iodine injections in the treatment of ascites, we find the following curious and novel operation. The article is too long for our pages; but we give such portions of it only as may recommend the remedy to the attention of the profession.

In a table embracing 23 cases of dropsy, M. Boinet employed injections 19 times upon adults, 9 times on females, 8 times on males, and 4 times on persons under 17 years. In all, the ages varied from 18 months to 58 years. The presumed causes of the dropsy in the 23 cases were not the same; some were unknown, of course. Two were caused by suppression, and one by derangement of the menses; 4 were the result of intermittent fevers; 2, chronic gastro-enterites; 3, disease of the liver; one by hæmatemesis; one, disease of the heart; one, chronic peritonitis; and one an affection of the respiratory apparatus; one, an abdominal disease, unascertained; and finally, one caused by an abdominal tumor. Of the 3 cases of dropsy caused by derangement of the courses, two were cured by vinous injections, and the other by iodone injections. Those produced by intermittent fevers, owed their recovery, one to the injection of tepid water and the decoction of cinchona, and 3 to iodine injections. The dropsies caused by affections of the liver were treated, the first with success, by the gaseous protoxide of nitrogen, the two others without success, by the tincture of iodine. Those who were not cured by the dropsy experienced no inconvenience from the treatment adopted. In the 4 cases of dropsy produced by abdominal diseases, three of them were cured by injections of iodine; and one, on whom the protoxide of nitrogen was employed, was not cured.

This treatment succeeded in two cases of dropsy produced, the one, by chronic peritonitis, and the other by disease of the heart. One case of dropsy, as the result of

hæmatamæsis was cured by vinous injections. In fine, iodine injections effected eleven cures out of thirteen cases; and vinous injections, as also injections with the gaseous protoxide of nitrogen, cured three out of four cases submitted to the treatment. Such were the results of the treatment, although the ascites originated from different causes, as the following table will indicate, viz:

Supposed causes of the Ascites treated by Iodine Injections.

Obs. 19.	Drinking spirituous liquors,	cured.
18.	Suppression of courses,	"
17.	Intermittent fever,	"
15.	Cirrhosis of liver,	failed.
22.	Degeneration of liver,	"
11.	Chronic Diarrhœa,	cured.
14.	Affection of Lungs,	,,
16.	Abdominal disease,	"
13.	Essential Dropsy,	"
12.	Unknown cause,	"
21.	Intermittent Fever,	"
22.	" "	"
23.	Abdominal Tumor,	"

Causes of Ascites Treated by Vinous Injections.

Obs. 1.	Suppression of Courses,	cured.
2.	" "	"
3.	Hæmatemæsis,	"
4.	Unknown cause,	failed.

Causes of Ascites treated by Gaseous Protoxide of Nitrogen.

Obs. 6.	Disease of Liver,	cured.
8.	Gastro-Enteritis,	failed.
5.	Disease of Heart,	cured.
7.	Chronic Peritonitis,	"

Treated by Injection of Tepid Water and Decoction of Cinchona.

Obs. 10. Intermittent Fever, cured.

Treated by Alcoholic Injections.

Obs. 9. Cause unknown, cured.

In all the foregoing observations, the cases were of a bad constitution and shattered health; almost all had been subjected to a long treatment without success, and some had been frequently punctured and the water drawn off; one of them had been punctured 18 times; the others 9, 8, 6 and 5 times (as in *Obs.* 3, 5, 11, 13, 17, 23).

The ascites in all these cases had been of long standing—from six months to three years. In one case, (obs. 4) it was of 29 years standing. The antiquity of the dropsy did not appear to have any influence over the result of the injections. In many cases it was necessary to repeat the injection three or four times; yet no bad effects followed, in such cases.

The quantity of fluid drawn off, previous to the injection being used, varied from 8 to 24 *litres*; it was serous in all but one; in this, purulent.

The quantity of liquid iodine injected varied from 90, 250 to 600 *grammes*. In all

the injections used, the composition of the liquid was about the same—that is to say, from 25 to 30 *grammes* of the alcoholic tincture of iodine added to 150 or 200 *grammes* of distilled water; in some cases a small portion of the iodide of potassium was added to the injection. M. B. generally uses the following formula for the injection:

℞	Aqua,	200	grammes
	Alcoholic Tincture Iodine,	30	"
	Iodide Potass.	4	"

Fit. Inject. M.

As a general rule, not more than one sixth or one seventh of iodine should enter into the composition of the injection.

It is an important point to decide upon the particular kind of injection adapted to each case of ascites.

The author of the foregoing observations gives a decided preference to iodine injections, not only because they are most efficacious; but also because they are less liable to produce serious accidents. The fears entertained at one time by medical men, that injecting iodine into the peritoneal cavity, was liable to produce agglutination—adhesion, etc., between the contiguous surfaces of the intestines, and thereby interfere materially with their functions, have been, in a great measure, dissipated by the experiments of Velpeau and others. The patient in whose peritoneal cavity the tincture of iodine has been injected, experiences a sense of agreeable heat, with absence of all pain; others, again, realize a slight pain, a sensation of tension, of heat in the abdomen. In all, there is a slight fever; a little meteorism of the belly; a sensation of slight pressure; some colic, with loss of sleep. Symptoms of Peritonitis were only manifested in two or three cases; in one it was intense. But all these morbid symptoms disappear in a few days. These uneasy sensations—these morbid symptoms, seem necessary to effect a cure; for when they are not developed, we may expect the remedy to fail of a cure. The only treatment required to subdue these usually trifling accidents are, repose, strict diet, emollients, and antiphlogistics. In order to comprehend the mode of action of the iodine injections, we must first inquire what actually takes place in cases of ascites. Evidently, there is a want of harmony between the two phenomena which constitute the recrementitial function of the serous membrane, and which depend, in such cases, upon a sur-activity of the exhalent vessels of the serous membranes, coinciding with an insufficiency of the absorbent vessels; and in other cases, in an almost normal activity of the exhalent vessels of the serous tissue, coinciding with a state of atony, or a defect of activity of the absorbent vessels. What is the effect of the iodine injections in such cases? Clearly a change in the anormal mode of vitality of exhalation and of absorbtion of the serous membranes, as that the influence, motion or irritation caused by the injection of iodine re-establishes the interrupted equilibrium between these two functions—*id est*, absorption and secretion,—modifies the peritoneal surfaces, and thus restores to health the diseased parts. The action of iodine injections in these cases has a tendency to stimulate and restore the absorbent functions, and thus induce the resorption of the effused fluids. This action is, so to speak, special and specific.

The author concludes this interesting paper, of which we have only reproduced a mere outline, in the following synopsis:

1st. That different fluids may be injected into the peritoneal cavity, not only without danger, but with decided efficacy, in the treatment of ascites.

2d. That these fluids are in the following order of efficacy: Injections of tincture

of iodine; the gaseous protoxide of nitrogen; the vapor of spirits; alcohol diluted with water; and tepid water combined with a decoction of cinchona.

3d. That we should not use as injections tepid water and diluted alcohol, because of eɟq difficulty of their employment, and the accidents to which they may give rise, before the cure can be effected.

4th, and finally. That iodine injections should be preferred to the gaseous protoxide of nitrogen, because of the facility with which they may be employed, and their entire innocency; and also the very marked success which has attended their use in almost all kinds of ascites.

We have greatly abridged from its original dimensions and scope, the foregoing paper; but we trust we have given enough of it to direct attention to the treatmont of ascites by injections of the tincture of iodine diluted. It aims to cure a form of disease, confessedly difficult to manage, and which, if unopposed, ultimately induces a formidable train of symptoms, which no art, hitherto brought to bear upon it, can control. (*Ed.*)

VIII—OF THE CAUSES OF THE PESENCE OF SUGAR IN URINE.

M. Reynoso made a communication to the Academie des Sciences, (December, 1851) on the presence of sugar in the urine. M. R. has endeavored to prove, that a connection exists between respiration and the presence of sugar in the urine; and hence it follows, that any thing which disturbs or interferes with the function of respiration, causes the secretion of sugar by the kidneys. Patients treated with the carbonate of iron always void urine loaded with sugar. M. Reynoso has detected sugar in the urine of tubercular subjects; and the quantity of sugar was in the exact ratio to the advanced stage of the disease. This is a curious fact and worthy of special notice. In pleurisy and in chronic bronchitis, there is also sugar in the urine; so also in asthma. It may be likewise found in the urine of epileptic and hysterical patients. Sugar should also be found in the urine of cholera subjects; for, according to the experiments of Roger, the lungs in this disease produce scarcely any change in the atmosphere during respiration. (*Ed.*)

IX.—STRANGULATED HERNIA REDUCED DURING THE ACT OF VOMITING.

Dr. Kuttsinger of Erlangen reports, in a late German Journal, a case of strangulated hernia, which he could only reduce by the taxis whilst the patient was in the very act of vomiting. The patient, a female, aged 64 years, had a crural hernia of the right side, and after having exhausted, without success, all the usual means resorted to in such cases, Dr. K. seized the tumor between his fingers, and while the patient was in the act of vomiting, reduced the hernia without more difficulty. At a subsequent period, the patient again suffered from strangulated hernia, and was again relieved by the same means. (*Jour. des Connaiss. Med. Chir.*)

Part Third.

REVIEWS AND NOTICES OF NEW WORKS.

I.—1. *The True Physician. An Address to the Graduating Class of the Memphis Medical College, Session* 1851-2. By Charles Todd Quintard, M. D., Professor of Physiology and Pathological Anatomy.

2. *Second Biennial Report of the Board of Administrators of the Insane Asylum of Louisiana to the Legislature.*

3. *Report of the Pennsylvania Hospital for the Insane, for the year* 1851. By Thomas S. Kirkbride, M. D., Physician to the Institution.

4. *Discourses delivered before the Cincinnati Medical Library Association, January,* 1852, By Daniel Drake, M. D.

We are glad to find in the address of Dr. Quintard much good sense and salutary advice, conveyed in an agreeable manner, a quality which does not always fall to the lot of those who endeavor to shed light, and to strew with radiant hope the pathway of those, whose future is a hidden mystery in the womb of time.

To give good advice, and to give it in an acceptable way, *even to ears refined*, is a desideratum in which Dr. Quintard has made no trifling advancement; basing his views upon principle, we shall scarcely err if we attribute to him correct practice, and in the happy blending of *Philosophy with Physic*, he becomes the imitator of a noble sire.

Addresses upon other subjects than those of medicine, are not infrequently made the *vehicle* by which is conveyed to an eager auditory so large an admixture of self-sufficiency, that the ceremony becomes one of *painful infliction*, rather than of profitable employment. Of such

character is not the Address with which we have to do. Dr. Quintard's first aim is to impress upon those who are about to launch forth upon the untried experiment of medical professional duties, and who may probably be called upon to minister to the mind diseased, as well as to the body racked with physical ailments, the paramount duty of simple devotedness to its requirements; on which occasion the Doctor uses the following language: Beware of those exciting and distracting pursuits, which, with little gain, bring much sorrow. Above all, beware of politics. I mean party politics. It is the glorious privilege of an American citizen to do his endeavors for his country's weal; and he is unworthy of those privileges, who will not struggle for them when they are endangered; but the brawling demagogue, the political quack, can have no high conception of either truth or science."

And lest those to whom he addresses himself should think too lightly of their newly assumed responsibilities, or perchance not think at all, for "thought to the man who never thinks, were as difficult as when awake to dream," he admonishes them that "there are moments, sad and bitter moments, in which all the Physician is merged in the man, and he absolutely trembles under an overpowering sense of his responsibilities."

It is not necessary to pursue Dr. Quintard further in his address than to remark, that the spirit and language of it throughout are in much good taste, and should his "speech distil as the dew," refreshing his hearers with genial influence and lessons for future usefulness, the satisfaction will be his of not having labored in vain.

THE INSANE ASYLUM OF LOUISIANA.

This is the Second Report of the Board of Administrators of this institution to the State Senate and House of Representatives. Since the last report, in January, 1848, some of the Asylum buildings, then in the course of erection, have been finished and occupied by those unfortunate fellow creatures who have claims upon our humanity, our sympathy and our care. This has been accomplished by an appropriation of $20,000, made in March, 1848.

We observe that amongst the accessaries to the new building, three large cypress cisterns, lined with sheet lead, have been erected, containing, in the aggregate, about 18,000 gallons of water, two of which are situated on the third story, and receive rain water, and the third is supplied by means of a force pump worked by horse power, from a large well.

The men and women who are able to perform manual labor, have some occupation assigned to them ; thus, the women are employed in making and mending their own, as well as all the clothes for the men, besides sheets, towels, and various kinds of needle work ; and some of the men work from six to seven hours per day in the brick yard, in which about 150,000 have been burnt for the construction of some proposed additional buildings, which, when completed, are designed for the accommodation of persons from the adjoining States, whose situation, unfortunately, demands the aid of such an institution. Ten thousand dollars were appropriated by the Legislature for the *two years* preceding the present session, and a like sum has been asked for the term of two years of the present legislative body.

For a statement of the financial affairs of the institution, the reader is referred to the Treasurer's report, which is contained in the pamphlet before us ; as also for a tabular view of the age, sex, apparent character of the disease at the time of admission, with the result of treatment, etc., etc., by Preston Pond, M. D., Physician to the Asylum.

One circumstance, however, is worthy of remark, showing a state of things precisely at variance with the observations of Esquirol, as contained in his great work upon Insanity. The admissions into the Asylum, under the "apparent form" of *Dementia*, are thirty-seven ; of these twenty-four were under the age of forty years, four were forty, and nine were over forty ; hence, we have two-thirds, within a fraction, under the age of forty. Esquirol says, "The age during which Dementia is numerically most frequent, is from forty to fifty years ; but, in comparison with the population, the frequency of this malady is in a direct relation with the progress of age." In examining a table from this work, we find that out of two hundred and thirty-five cases of Dementia, ninety-seven, a little more than one-third, occur prior to the age of forty years ; while the remaining one hundred and thirty-eight or nearly *two-thirds*, are from the age of forty and upwards. The difference therefore is, that whilst in France, about two-thirds, out of a given number of cases, occur at or *above* the age of forty years ; in Louisiana, out of a given number of cases, about two-thirds are found to have taken place *under* the age of forty, taking the time of admission as our data.

Dementia, like all other forms of Insanity, has its origin in a variety of causes, physical as well as moral, and the different ages in which it is manifested in the tables referred to, may in part be explained, from the fact that a portion of those related by Esquirol belonged to the higher and wealthy class of society, who often riot in excessive pleasure,

giving full sway to inordinate passions and gross errors of regimen, which, by injuring the brain, dispose to Dementia in after life; whilst those in our own Asylum have, most probably, been taken from the humbler walks of life, and living in a high Southern latitude, where cerebral affections, from exposure to the sun, are more common, and to which might be added the pernicious and fatal effects of onanism, all of which favor the development of Dementia at an earlier period of life.

Without further speculation upon this point, we turn to the

REPORT OF THE PENNSYLVANIA HOSPITAL FOR THE INSANE,

the tables in which are much more full and explicit, showing the previous occupation of the inmates, the ages at which insanity first appeared, and the duration of the disease at the time of admission, etc., etc. Fully sensible of the importance and benefit arising from outdoor exercise and amusement, as well as from the cultivation of the soil, the managers have, in a productive state, a farm and garden, with pleasure grounds and conservatories; four hundred pounds of grapes were produced last year, which were used in the Hospital; evening entertainments, combining instruction in the form of lectures, with special illustration, and frequently music alone, constitute part of the regular treatment at this institution. There is also a library and reading rooms, which afford pleasure to a large number of the patients.

An enlarged supply of water has within the last year been obtained, and steam substituted for horse power, by which means three thousand gallons can be raised per hour.

The total expenditures for the year 1851 amounted to $49,002 91; nett receipts $45,803 92; excess of expenditures, $3,198 99.

At a meeting of "The Association of Medical Superintendents of American Institutions for the Insane," the following propositions were unanimously adopted:

1. Every hospital for the insane should be in the country, not within less than two miles of a large town, and easily accessible at all seasons.
2. No hospital for the insane, however limited its capacity, should have less than fifty acres of land, devoted to gardens and pleasure grounds for its patients. At least one hundred acres should be possessed by every State hospital, or other institution, for 200 patients, to which number these propositions apply, unless otherwise mentioned.
3. Means should be provided to raise 10,000 gallons of water, daily, to reservoirs that will supply the highest parts of the building.
4. No hospital for the insane should be built, without the plan having been first submitted to some physician or physicians, who have had charge of a similar establishment, or are practically acquainted with all the details of their arrangements, and received his or their full approbation.

5. The highest number that can with propriety be treated in one building is 250, while 200 is a preferable maximum.

6. All such buildings should be constructed of stone or brick, have slate or metallic roofs, and as far as possible, be made secure from accidents by fire.

7. Every hospital, having provision for 200 or more patients, should have in it at least eight distinct wards for each sex, making 16 classes in the entire establishment.

8. Each ward should have in it a parlor, a corridor, single lodging rooms for patients, an associated dormitory, communicating with a chamber for two attendants; a clothes room, a bath room, a water closet, a dining room, a dumb waiter, and a speaking tube leading to the kitchen, or other central part of building.

9. No apartments should ever be provided for the confinement of patients, or as their lodging rooms, that are not entirely above ground.

10. No class of rooms should ever be constructed without some kind of window in each, communicating directly with the external atmosphere.

11. No chamber for the use of a single patient should ever be less than 8 by 10 feet, nor should the ceiling of any story occupied by patients be less than 12 feet in height.

12. The floors of patients' apartments should always be of wood.

13. The stairways should always be of iron, stone, or other indestructible material, ample in size and number, and easy of ascent, to afford convenient egress in case of accident from fire.

14. A large hospital should consist of a main central building with wings.

15. The main central building should contain the offices, receiving rooms for company, and apartments entirely private, for the superintending physician and his family, in case that officer resides in the hospital building.

16. The wings should be so arranged, that if rooms are placed on both sides of a corridor, the corriders should be furnished at both ends with movable glazed sashes, for the free admission of light and air.

17. The lighting should be by gas, on account of its convenience, cleanliness, safety and economy.

18. The apartments for washing clothing, etc., should be detached from the hospital building.

19. The drainage should be under ground, and all the inlets to the sewers should be properly secured. to prevent offensive emanations.

20. All hospitals should be warmed by passing an abundance of pure, fresh air from the external atmosphere, over pipes or plates, containing steam under low pressure, or hot water, the temperature of which at the boiler does not exceed 212 ° Fah., and placed in the basement or cellar of the building to be heated.

21. A complete system of forced ventilation, in connection with the heating, is indispensable to give purity to the air of a hospital for the insane, and no expense that is required to effect this object thoroughly can be deemed either misplaced or injudicious.

22. The boilers for generating steam for warming the building should be in a detached structure, connected with which may be the engine for pumping the water, for driving the washing apparatus, and the other machinery.

23. All water closets should, as far as possible, be made of indestructible materials, be simple in their arrangement, and have a strong downward ventilation connected with them.

24. The floors of bath rooms, water closets and basement stories, should, as far as possible, be composed of such materials as will not absorb moisture.

25. The wards for the most excited class should be constructed with rooms

on but one side of a corrider, not less than ten feet wide, the external window of which should be large, and have pleasant views from them.

26. Wherever practicable, the pleasure grounds of a hospital for the insane should be surrounded by a substantial wall, so placed as not to be unpleasantly visible from the building.

Dr. Drake's first discourse refers to the early medical times in Cincinnati, in which the pioneers, we are informed, were for the most part Surgeons of the Army, whose custom was to give gratuitous attendance on the people (of the then village) and also to furnish medicine from the Army Hospital Chests. That period extending from 1788 to 1810, is passed over, making mention of such incidents as suggested themselves to the mind of the writer, and giving a biographical sketch of those whose usefulness and energy in the discharge of their professional duties entitle them to retain a name in the medical history of our country.

In the second discourse, Dr. Drake speaks of the origin and influence of medical periodical literature, and the benefits of public medical libraries, in reference to which he uses the following language : "Since the emancipation of mind from a slavish devotion to the mind which went before it, periodical literature in every department of knowledge, has waxed greater and greater in volume and originality, until not only in medicine, but all the sciences, it has become a paramount element. It is not only the first to present not only all discoveries and inventions, but actually supplies to the masses almost every thing they read. The review is a book they prefer to the book itself. If the reviewer condemn it, they think it unworthy of being read ; if he praise it, they may purchase, but will not study it."

From New York the first American Medical Journal emanated, under the title of the "New York Medical Repository," in July, 1797, and was continued in quarterly issues till twenty volumes were published. The second periodical was commenced in Philadelphia in 1803, by Prof. Benjamin Smith Barton, and was called "The Philadelphia Medical and Physical Journal. Baltimore and Boston quickly followed the example of their predecessors, and other Cities and States, with no mean spirit of emulation, soon circulated their Journals in the western wilds ; and now the South, vieing with the North, floats its medical literature upon the bosom of the Mississippi, refreshing those who give as well as those who receive.

In the young sisterhood of cities for medical teaching, Dr. Drake has rather *unkindly* omitted New Orleans, and thought St. Louis, Louisville and Cincinnati especially worthy his commendation ; we shall not tra-

vel out of the legitimate course of our review in order to correct a false impression under which the Doctor labors, or to present the advantages of New Orleans.

Dr. Drake would have closed his second discourse with appropriate language had he embraced in it a more extended and comprehensive view than the limitation to *three cities*—but possibly in his early love he forgot the *ties of other men*, and with that, *some* of the claims of justice! "Carry forward," says Dr. Drake, in speaking of medical education, "the noble work which they began—make it better than you found it, and then hand it on to posterity." G. T. B.

II.—*A Treatise on the Diseases of the Chest—Being a Course of Lectures delivered at the New York Hospital.* By JOHN A. SWEET, M. D., Physician to the New York Hospital. New York: D. Appleton & Co. 1852.

We are truly glad to meet with an American work on a speciality—one that will reflect credit on the medical profession and the publishers of this country. The work embraces XXXV. Lectures, 22 of which are on the "Diseases of the Lungs," and the remainder are devoted to the "*Diseases of the Heart.*" These Lectures were published about ten years since in the *New York Lancet;* but they are now presented to the public in the form of a splendid volume, of nearly 600 pages—thoroughly revised—much enlarged, and containing the experience and observations made by the author since their first publication.—Doctor Sweet, in these lectures, has given the most intelligible description of the signs of chest diseases, of any writer of which we have any knowledge. His work is truly invaluable to the young Physician who may not have had extensive hospital practice; and must consequently rely upon standard writers for his guide in studying the affections of the lungs and heart.

So far as we have examined the work, it is, beyond question, the most clear and satisfactory of any that has fallen into our hands, on the same subject; and we feel confident the Profession, when made acquainted with the book, will bear us out in the assertion. It is elegantly printed and brought out in handsome style.

In the Appendix are furnished plates, showing the microscopic composition of tubercle and cancer, all executed with artistic skill. We regret that these plates are so few; and can but think that the value of

the work would have been greatly enhanced by the addition of numerous microscopic observations, illustrative of the pathological changes which the author so well describes. In the next edition, which we feel satisfied will soon be called for, we hope the omission mentioned will be supplied.

The publishers will receive our thanks for an elegant copy of the work, through J. B. Steel, 60 Camp street, where copies may be had.

III.—*Lectures on Scarlet Fever.* By Caspar Morris, M. D., Lecturer, etc. Philadelphia: Lindsay & Blakiston. 1851.

These lectures make a handsome little volume of over 100 pages, and embrace a good deal of practical information. They contain, the author tells us, the fruits of twenty-five years' observations, made in the Philadelphia Dispensatory, the Philadelphia Orphan House, the House of Refuge for Juvenile Delinquents, and the Pennsylvania Institution for the Instruction of the Blind, and the routine of private practice. Beyond an accurate and full description of the various symptoms with which the several forms of this disease are characterized, we do not see much in the lectures before us to claim especial attention. When the disease is simple in its character and free from complication, the treatment required is purely expectant; but when it assumes an anginose or malignant form, great care is requisite to conduct the case to a happy termination.

During the stage of the excitement marked by a quick, rather corded and rapid pulse, internal heat and great dryness of skin, *cold* sponging, constantly kept up, is actually indispensable, and will do more to subdue the excitement of the heart and arteries, and allay heat and thirst, than any agent that can be used under the circumstances. We rely, almost exclusively, upon spunging the body, either with cold or tepid water, being governed by the feelings of the patient, in the early and febrile stage of the disease. Purgatives and diaphoretics, by irritating the mucous membrane of the stomach and bowels, usually aggravate the heat of the skin, and quicken the action of the heart and arteries; they therefore should be used sparingly in the majority of cases. Our practice is to keep the skin constantly moist with sponging; and we have seldom found, under this treatment, any serious difficulty in conducting the worst forms of the disease to a happy termination.

The sequalæ of scarlet fever often entail upon the patient serious and

sometimes irremediable mischief,—hence the propriety of using great care during the period of convalescence. Premature exposure, or improper diet, will often cause, in the convalescent from this fever, dropsy, general anasarca, and their evil effects.

The patient is never beyond the reach of danger, until the functions of the skin, indicated by perfect desquamation, are restored. Effusions upon the brain sometimes take place in relapses, causing coma, convulsions and death. The book is useful and deserves perusal.

Steel, 60 Camp street, has the work for sale.

V.—*An Analytical Compendium of the various branches of Medical Science, for the use and examination of Students.* By John Neill, M. D., and Francis G. Smith, M. D. Second edition, revised and improved. Philadelphia: Blanchard & Lea. 1852.

Compendiums of Medicine are popular with those who are in search of a "royal" road to eminence and the *Doctorate;* but with the really hard student, and him who delights to grapple with, and overcome all opposing obstacles, such systems are of little worth, and seldom acquire any great degree of popularity.

To the indolent—the idle student, who is content with a smattering of medical science, such works are ever acceptable, beyond which they deem it superfluous to push their inquiries.

To collate such a work as is before us, however, requires, on the part of the Editors, sound judgment, great industry and a thorough acquaintance with the various branches of medicine. From the very nature of the work, and the object at which it aims, it is impossible to give any thing like an abstract of its contents.

In every page—in every division of the volume, we find abundant evidence of the accuracy and scientific attainments of its authors. We have had occasion, from time to time, to allude to such works, and always expressed the opinion that with many they prove injurious, because they supercede other works, more comprehensive in their nature, and entering more into detail, on the several branches comprehended in what is called the science of medicine. To aid a defective memory, and to suggest to the mind once familiar with the technicalities of the art, certain kinds of knowledge—Compendiums become powerful auxiliaries, and are indeed indispensable to the general practitioner, who has neither the leisure nor inclination to examine more elaborate books on practical points.

Every branch of science embraced in the volume is illustrated with plates, neatly executed, and generally copied from the standard works of the day.

When on the point of closing this brief notice, we accidentally opened the book and read the following on the "*treatment of Yellow Fever.*" Say the authors: "Early in the disease (yellow fever), before there is much irritability of the stomach, an *emetic* is of great service, particularly if the stomach be loaded," etc. They also recommend bloodletting in the early stage of the disease. To this we have nothing to say. "Mercurials," say Doctors Smith and Neill, "are on all sides declared to be of great service in this disease. After using them with a view to their cathartic effect, we should then hasten to produce its specific influence on the system as quickly as possible." Whence did Doctors Neill and Smith get the above important information, that the specific influence of mercury on the system in yellow fever, was so desirable and so salutary? Certainly not from those of the present day, who have had to grapple with the disease—not from those who seldom give mercury, but rely, almost exclusively, upon local depletion, and large sedative doses of sulphate of quinine, combined or not with full doses of opium. The mercurial practice has long since been condemned "*on all sides*" by those who have seen, studied, and treated this form of fever. We are not a little surprised to find such nonsense—such gross errors put forth in a work, which is destined to influence the views and practice of thousands of our young men who may be about to enter the profession. It would be well if these gentlemen, before they pretend to instruct others in the treatment of yellow fever, would take care first to inform themselves on the subject.

White has the work.

V.—*Homœopathy: An Examination of its Doctrines and Evidences.* By Worthington Hooker, M. D., author of "Physician and Patient," "Medical Delusions." New York: 1851. pps. 146.

This is the "*Fiske Fund Prize Dissertation of the Rhode Island Medical Society,*" and fully sustains the rising reputation of its talented author. Dr. Hooker is one of the readiest and best writers we have in the profession in this country, and is destined to figure conspicuously in its annals, if he continues his labors. He has ever taken an active part in the proceedings of the American Medical Association, and his Report on Medical Education, read at its last meeting, is one of the ablest ever presented to that learned body.

This Essay is published in very neat style, and we sincerely hope it may obtain extensive circulation, as it is well calculated to counteract and refute one of the most preposterous *humbugs* that was ever foisted on the community. The subject of Homœopathy is here examined in a critical and logical manner, and, at the same time, with such fairness and liberality, as to convince any unbiassed mind that all its pretended philosophy is nought but the most *sublimated nonsense.* Dr. Hooker gives a brief biographical sketch of its founder, Hahnemann, showing that in the early part of his career he was guilty of selling *secret nostrums* at exorbitant prices, and it was doubtless at this period that he learnt the important lesson of the *unbounded gullibility* of mankind, which induced him to test it to its highest pitch, by proposing his system of *Homœopathy.* Whenever the minds of men mount up to the regions of the *trascendental* and the *supernatural*, they should set no bounds to their *boldness.* The more astounding and unreasonable their dogmas, the better—a few practical hits, no matter how grossly misinterpreted, are all that is necessary to give currency to the wildest chimera that ever flitted across the imagination. 'Tis vain to expostulate with intelligent people about the impropriety and folly of fostering such nonsense as is pronounced *philosophy* by Hahnemann; it must have its run, and can only be suppressed by the great arbiters of all truth, *time and experience.* In the course of events, it will doubtless be consigned to the tomb of oblivion, in company with its worthy ante-types, the Royal Touch and Perkins's Metallic Tractors. If the *soi-disant* principles of Homœopathy be true, our boasted philosophy must be *foolishness*; and Bacon, Descartes, Newton, Franklin and LaPlace must be considered *asses—old fogies*, whose visionary reveries have been considered philosophy by an ignorant and benighted world. All our ratiocination must be reversed, and the millionth of an atom must be admitted to possess more power than the whole.

It is now fifty years since the system of Homœopathy was promulgated, during which time it has been thoroughly tested by some of the ablest physicians of the age, and pronounced to be utterly false and unworthy of confidence. M. Andral, one of the best practical observers in medicine that France has produced, experimented in connection with several in *health* with Cinchona, Aconite, &c., during the space of a whole year, and the promises of the Homœopathists were not verified by these trials in a single instance. Of the trials upon the *sick*, Doctor Hooker quotes the following statement of M. Andral:

"I have submitted this doctrine to experiment; I can reckon at this time from one hundred and thirty to one hundred and forty cases recorded with

perfect fairness in a great hospital, under the eye of numerous witnesses; to avoid every objection, I obtained my remedies of M. Guibourt, who keeps a Homœopathy pharmacy, and whose strict exactness is well known. The regimen has been scrupulously observed, and I obtained from the Sisters attached to the hospital a special regimen, such as Hahnemann orders. I was told, however, some months since, that I had not been faithful to all the rules of the doctrine. I therefore took the trouble to begin again. I have studied the practice of the Parisian Homœopathists, as I had studied their books, and I became convinced that they treated their patients as I had treated mine, and I affirm that I have been as rigorously exact as any other person."

Though these trials were made with such boasted articles as Cinchona, Aconite, Belladonna, etc., yet Andral says he could not see that they produced any effect. He administered Aconite in more than forty cases marked by those feverish symptoms, which, according to Homœopathists, it so uniformly removes, but he could not perceive the slightest effect upon the pulse, or upon the temperature of the skin in any of these cases.

Every educated physician of the present day is capable of appreciating such testimony as this.

Very few enlightened and honorable physicians have been converted to the new doctrine, in the half century that it has been before the profession. The most conspicuous one, Professor Henderson of Edinburgh, has recently been expelled with disgrace from the Medical Society of that city, on account of it. Both in Europe and America, it has been adopted only by men of inferior standing—such as could only get into practice by the aid of humbuggery. It is gravely charged upon such as have left the ranks of the regular profession to follow this new light that they practice the grossest imposition upon their employers, by availing themselves of whatever popularity may attach to the new system, whilst they pursue mainly the old. Such conduct merits, and must sooner or later obtain, the scorn and contempt of all honorable men.

Knowing the passion for *novelties* that prevails amongst mankind, we expect to see this new system of practice have an extensive run. Our advice is, to give it scope and let it run. Whatever efforts the advocates of a more rational system may make, beyond such as is here made by Dr. Hooker, will be received with suspicion, and the motives which prompt them will not be justly appreciated. Those who adopt this new and unreasonable doctrine, must be permitted to have their way. It cannot be very long before some sad calamity—the loss of a dear relative or valued friend, will serve eventually to bring them back to their senses and a just appreciation of the honor, dignity and importance of an enlightened medical faculty.

We shall not attempt to give a critical analysis of the work before us, as it is itself only an analysis of a preposterous system of doctrines

and practice. We can only advise those who take an interest in the subject to read Dr. Hooker's little work, and after doing that, if they can have any confidence in Homœopathy, why let them follow it to their heart's content. Fortunately for mankind, the majority of complaints for which physicians are consulted, do not necessarily endanger life, and may get well under almost any plan of treatment; but woe to the patient afflicted with a disease of fatal tendency, who relies for safety upon the vain promises of Homœopathy. E. D. F.

VI.—*Illustrated Manual of Operative Surgery and Surgical Anatomy.* By MM. Cl. Bernard, D. M. P., and Ch. Huette. With Notes, by Drs. Van Buren and Isaacs, of New York. Illustrated with steel engravings from nature. New York: H. Bailliere. 1852. Part First.

The directions contained in this little work for all the minor as well as the capital surgical operations, are so concise and accurate, as to entitle it to the confidence and commendation of the profession. Eminently simple in its arrangements, and unencumbered with the tedious and unprofitable details of lla the steps of an operation, the work of MM. Bernard and Huette will become a manual indeed for the operating room, and thus displace larger and more costly works on the same subject

All that is absolutely necessary to conduct an operation to a successful termination, is here briefly and correctly laid down in the text—whilst the elegantly finished steel engravings, which are made to accompany the text, and to aid in the elucidation of the subject, will supply all the requisite information for the mere tyro in the profession. We therefore commend the work, for its neatness and simplicity, to the profession.

J. B. Steel, 60 Camp street, has the work for sale.

VII.—*Lectures on Materia Medica and Therapeutics.* By John B. Beck, M. D., late Professor of Materia Medica and Medical Jurisprudence. Prepared for the press by C. R. Gilman, Professor of Obstetrics, etc. New York: The Woods, Publishers. 1851.

This handsome volume of over 500 pages, contains the last labors of the late distinguished John B. Beck. It is essentially an American

work, and without any strong claims to originality, it is nevertheless a practical and useful work, and may be consulted with satisfaction by the general practitioner.

Far less elaborate and scientific than the work of Pareira on the same subject, and much more concise at the same time, it does not, of course, claim any thing like equal learning. In his introductory remarks, Professor Beck treats with much clearness and practical learning, of the various modes in which medicines act upon the organism, and of the multifarious circumstances which interfere in the modification of our therapeutic agents. In the main his views will be popular, and are pretty generally sustained by the experience of the profession.

The volume has been brought out in good style under the editoria supervision of Prof. Gilman, and may be had at T. L. White's, No. 53 Canal street.

VIII.—*A Practical Treatise on the Diseases of the Lungs and Heart, including the principles of Physical Diagnosis.* By Prof. W. H. Walshe, of London.

CRITICALLY REVIEWED BY J. ROUANET, D. M. P., OF NEW ORLEANS

[*Continued.*]

36. *Pleurodynia.*

"Friction sound is of little use in the distinction of the two affections, (Pleurodynia and Pleurisy)—for the grazing variety that appertains to dry pleurisy is often wanting in that disease, and the jerking rythm of pleurodynic respiration may so closely simulate it as to leave a cautious observer in doubt." Page 239.

The difficulty of discerning between pleuritic grazing friction sound and pleurodynic jerking respiration, will appear, I expect, somewhat exaggerated by Prof. Walshe; and indeed the grazing friction, as he writes himself, at page 122, "is audible over a very limited extent of surface;" and besides, it takes place, in most cases, independently of the jerking motion of the chest; whilst the jerking respiratory sound is much more extended over the surface of the thorax, which invariably partakes of the jerking pleurodynic movement.

37. *Pleurisy.*

"Death is so rare a result of the disease, (pleurisy) when attacking individuals free from organic affections, that I have neither myself lost a patient from pure primary idiopathic pleurisy, with or without effusion, nor know of an occurrence of the kind in the practice of others." Page 269.

Death from pleurisy is perhaps not so rare in this country, whe reI have met with two cases since I came here (1847). One was a young man about twenty, the other a child three or four years old. I exam ined both after death only. The young man was too weak, and suffering, to be auscultated, when I saw him in the Charity Hospital. The child was very sick, too; but, notwithstanding this, I would not have failed to ascertain the condition of the chest, had not the attending physician, a pretty accurate auscultator, declared to me that this cavity had been examined by him, and found perfectly free from disease. After death, the left lung of the young man and the right lung of the child, were found much shrunken, and the corresponding pleura roughened, and quite full of transparent, a little flaky liquid. The two patients, exempt from other affections, and probably curable if timely auscultated, were literally smothered by pleuritic effusion.

38. *Peritoneal Friction Sound.*

"Friction in the peritoneum is, especially at the upper part of the abdomen with difficulty distinguished, as its rythm is respiratory, from similar sounds in the pleura." Page 272.

The peritoneal sound is readily suppressed by pressing the abdomen, or causing the patient to change his position.

39. *Pneumonia.*

"Unless when very frequent, the pulse is habitually full and resisting; when feeble and small, this sometimes depends on embarrassed circulation produced by *distension of the right cavities of the heart with blood.*" Page 297.

The cause here enunciated of the feeblenes of the pulse, is not very obvious. The fulness of the right cavities of the heart must, at all events, be considered as a consequence of the embarrassed circulation of the capillaries of the lungs.

40. *Musculi Papillares.*

"A systolic murmur at the mitral apex may be generated by irregular action of the musculi papillares." Page 382.

The interesting function of the columnæ carnæ is, perhaps, not well understood by some. They do not raise, as professed by M. Bouillaud, but maintain the valves at the same level during the systolic motion. While the apex, by the effect of contraction, comes nearer to the base, the musculi papillares, shortened synchronously with the ventricles, hold the free edge of the valves at the same distance from the base of

the heart. Is it probable that these musculi, a part of the larger muscle constituting the heart, can play independently of it, and be subject to any peculiar action? I think not.

41. *Angina Pectoris.*

"Angina Pectoris seems to be constituted by spasm of the heart and neuralgic pain." Page 388.

The normal action of the heart being perfectly spasmodic. I hardly understand what kind of extraordinary spasm the author means; as for the neuralgic character, it may be remarked that angina pectoris sometimes kills the patients, which is rarely the case with neuralgia, as well as spasm.

42. *Pericarditis. Exudation Stage.*

"The essential sign of this stage is pericardial friction sound, of which the properties have already been described." Page 393.

In acute diseases of the serous membranes, the friction sound is rather a sign of inflammation than of exudation, as it may exist before, and even without any exudation. (See No. 11.)

43. *Effusion Stage.*

"The possibility of systolic basic murmur being produced by pressure of fluid on the great vessels, has already been considered." (Page 107: "It was suggested by Martin Solon, that the pressure of the heart or great vessels by abundant pericardial effusion might cause blowing murmur; in a case of the kind murmur was well marked in recumbency, disappearing when the patient stood up.")

The sign pointed out by Martin Solon, and never found, it appears, by Prof. Walshe, is a valuable one, permitting us to conclude upon hydropericardium, provided there be no contradictory symptoms. I have ascertained that blowing murmur in several instances, once especially with Dr. Daret of this city, on a colored woman, sickly, languid for some months, and complaining of pains about the pericardial region; a systolic murmur opposite the mouth of the aorta was heard in a recumbent, and ceased almost entirely in a standing or sitting posture. I confess, however, that in many cases of otherwise manifest extensive pericardial dropsy, I have failed in detecting this sign, on account, surely, of the hardness and thickening of the aorta, unfit to be straitened by surrounding accumulated liquid.

"In some instances the voice sounds with an œgophonic twang at the edge of the effusion." Page 394.

I have long since noticed what I call *hydrophonic voice*, (voix hydrique) but in medial inferior pericardic effusion, at a point that may be considered as the focus of the vocal rays, transmitted there from the largest bronchi through the liquid. The hydrophonic voice partakes somewhat of the œgophonic character, and may be heard in the pleural dropsy also. The respiratory murmur itself undergoes a special change in the same circumstances.

44. *Murmurs of Acute Endocarditis—Their Cause.*

"The murmurs of acute endocarditis are produced by roughness of the surfaces, by interwined lymph (or mere fibrine) interfering with the play of the chordæ tendinæ; or, probably, by non-closure of orifices, through the irregular action of the papillary muscles." Page 405.

As a cause of murmur, the roughness is, in this case, insufficient, the interfering of the lymph, hypothetical, as well as the irregular action of the papillary muscles. The true cause of the said murmurs will be found in the thickening of the edges of the valves fluttering in the blood when it moves onward, or opposing perfect closure of these membranes, and giving rise to regurgitating sound.

45. *Their distinction from Normal Cardiac Sounds.*

"Probably at the outset they (the heart sounds) are both intensified; and murmurish prolongation of the first, before it actually becomes a murmur, is sometimes noticeable." Page 405.

The natural sounds of the heart (or accentuations) are present or absent, genuine or altered, according to the state of the valves; they never become murmurs; their cause is perfectly distinct.

46. *Hypertrophy.*

"In simple hypertrophy the first sound is dull, muffled, prolonged, weakened in some cases almost to actual extinction, directly over the ventricle; under these circumstances a tolerably full systolic sound may, nevertheless, frequently be found at the base and at the ensiform cartilage." Page 406.

There is a vulgar notion, that the intensity of sounds increases with the number of the instruments, when musical; of their actual causes, whatever they may be. By what a singular exception the first sound of the heart, if really originating in the contraction of ventricular fibres, would be weakened in proportion to their greater number, and weakened almost to extinction, this may be called a mere physical countersense.

The systolic sound heard at the base in such circumstances, obviously proceeds from the tricuspid valve.

47. *Organic Mitral Regurgitation.*

"Organic mitral regurgitation may pro tempore be murmurless." Page 432.

I do not recollect having met with any such regurgitation, but I have seen intense organic murmurs be overlooked, the practioners failing to apply the ear to the proper spot of the thorax. When, for instance, mitral regurgitation is attended with a high degree of hypertrophy of the heart, the apex being notably driven to the left, the murmur is sometimes inaudible in the precordial region, and can only be perceived at a notable distance beyond the nipple. An example of the kind was offered us in the case of the late Dr. Luzenberg of this city, deceased, three years since, of mitral regurgitation with ossification of the valve and bulky size of the heart; three alterations ascertained during life.

48. *Diagnosis of Diseased Valves.*

"The first difficulty will occur where the orifice is so much dilated that its valve, though perfectly sound, has ceased to be of sufficient size for the purpose of complete closure. There is impossibility of distinguishing such regurgitation from that induced by actual disease of the valve." Page 432.

Here appears the pre-eminence of valvular over all other explanations of the normal sounds of the heart. The sounds proceeding from the valves, as their special instruments, undergo corresponding alterations, which permit, in most instances, an accurate diagnosis, and in some a precise prognosis. I first ausculted Dr. Luzenberg the 13th of February, 1848. When we were out of his presence, Dr. Beugnot, his intimate, desiring to know my opinion, I replied, "I think your friend will die before six months—(il mourra avant six mois). Dr. L. died in Cincinnati about the middle of July, and was buried here the 28th of the same month.

The fourth of April, 1848, I examined, with two learned physicians of New Orleans, the french gentleman Dujay, and thought he could live no more than two months. He lived eight days longer, the asphyxia from dropsy being retarded by bursted legs, from which the serosity flowed in abundance.

Mrs. M., a young lady of great respectability and distinction, was afflicted with rheumatism when ten years old, and afterwards with an organic disease of the heart. She was examined by me the fourth of February, 1850. I found, as in the preceding case, a double blowing aortic murmur, with hard, thickened, immoveable valves of the aorta. I answered the questions of her husband and family, that she was, I presumed, to be cut down in about two years. She died in December last. I will not multiply instances.

On the other hand, I was consulted lately by the attending physician and the mother of a young gentleman, presenting, with an enlarged heart, a systolic apex murmur, and the first sound persisting natural at the apex. From these data I derived this threefold inference—that the valve was as thin as normal, the regurgitation one by enlargement of the orifice, and the disease very likely remediable.

To ascertain the condition of valves through the abnormal sounds, is a capital point, very hard to be attained by those auscultators who ascribe the normal to a multitude of effectual causes. The absence of the first sound at the apex of the heart, for instance, has for me mostly this very simple signification, that the mitral valve is incapable of sound. If you are desirous of knowing how many phenomena are, or may be, wanting for Prof. Walshe in the premised hypothesis, you may read, at page 107, "the occurrences which are possible sources of sound, and with which the first sound is coincident"—a perfect chaos to be cleared.

49. *Induration of the Heart.*

"General induration of the heart may be supposed to weaken the muscular, and intensify and give undue clearness to the valvular, portion of the first sound. Should any knocking sound exist at the apex, it would probably be peculiarly clear. But these signs require revision at the bedside. I give them hypothetically." Page 436.

Too hypothetically, indeed; I presume they will not be ratified at the bedside. It would be better to pass them.

50. *Adventitious Products.*

"Calcification in the coronary arteries, if carried to any extent, may induce fatal angina." Page 436.

Hypothesis; for the true cause of angina pectoris is as yet quite unknown.

"Calcification of false membrane in the pericardium may conceivably give an osteal quality to the percussion note over the heart, and impress something of a similar character on the systolic sound." Page 436.

Manifestly erroneous notions. The sounds of the heart have nothing to do with pericardial ossifications, and the osteal quality may be elicited from a bone only by immediate percussion.

"Fatty accumulation under the pericardium produces minor annoyances and some physical sounds." Page 437.

I pass over these physical signs, eight or ten in number, all from the imagination of the author. Such are too the signs he ascribes to the fatty disorganization, page 438.

51. *Friction Sound as a Cause of Murmur.*

"The diagnosis of murmur caused by mitral regurgitation and that produced by friction of blood against irregularities of the surface of the base of the ventricle, cannot, I think, be made with positiveness in the present state of knowledge—but fortunately the latter kind of mechanism is excessively rare." Page 442.

Much more rare than Prof. Walshe believes. In the supposed conditions the irregularities of the surface are not prominent enough to create a murmur.

I once heard a very faint murmur limited to the fourth left interspace near the sternum. The examination after death proved it resulted from a hole existing behind some carnæ columnæ near the mouth of the pulmonary artery. Murmur perhaps referrible to friction by some auscultators.

52. *Auricular Impulse.*

"The impulse is increased in force, and in rare instances there is auricular impulse at the second interspace; either pre-systolic, when it comes of hypertrophy of the auricle, or systolic, when it is communicated from the ventricle." Page 444.

It is hard to conceive the impulse of a contracting auricle, which evidently recedes, or tends to recede from the chest. The impulse of the heart is caused by the raising of its apex during the contraction. There is nothing similar in the play of the auricles.

53. *Mitral Constriction. Diastolic Thrill.*

"I have never observed diastolic thrill at the left apex, though it is conceivable that, if highly hypertrophous auricle lie behind the constricted orifice, the current may be rendered sufficiently strong to produce that thrill." Page 445.

The auricles, even hypertrophous, possess a very limited influence over the current, seeing the way is left free to the blood towards the capillaries of the lungs, whence it comes.

54. *Hum in the Pulmonary Vessels.*

"I have never met with a positive example of aortic *blood murmur* diastolic in time, but such murmur may be simulated in the following way—spanæmia exists with a strong systolic basic murmur; at the same time deep-seated hum is present in the pulmonary veins; the hum is covered during the systole by the strong, blowing aortic murmur, but becomes audible during the diastole, when there is no aortic murmur to interfere with it." Page 449.

Professor Walshe is very fond of suppositions. The existence of a murmur in the pulmonary arteries is evidenced by that of the pulmonary cartilage, properly insisted on by Dr. Latham, and sometimes perceptible on a very large surface. I feel inclined to consider it as a normal

one, and audible only when favorable circumstances of transmission occur. But considering the conditions of the circulation in the pulmonary veins, I think it to be constantly murmurless.

55. *Cardiac Murmurs simulated.*

"The pulmonary veins and superior cava may be the seat of spanæmic murmur, simulating especially systolic apex and diastolic basic, cardiac murmurs." Page 452.

On the pretended venous murmurs see number 35.

56. *Treatment. Blood-letting.*

"Profuse blood-letting is, under all circumstances, absolutely improper." Page 454.

Not only profuse, but even "occasional, moderate venesection" must be avoided, notwithstanding the momentary relief it affords the patient. I have repeatedly witnessed the noxious effects of blood-letting in organic diseases of the heart.

57. *Tonics.*

"Theoretically, invigorating tonics are more advisable in aortic constriction than in mitral regurgitation." Page 456.

False theory; in both diseases, if in one, the ventricles need to be invigorated, in order that a greater quantity of blood may be thrust into the artery.

58. *Issues and Setons.*

"Issues and setons to the precordial region sometimes relieve the pain and discomfort; they are otherwise valueless." Page 456.

This is surely another theoretical opinion of the author. The seton, that I have often employed, is the best means that I know of to put a stop to the process of alteration of valves, to control every amendable disease of the pericardium and heart.

59. *Iodureted Frictions.*

"At the very earliest period of chronic inflammatory changes in the valves, it is possible that iodureted frictions may promote absorbtive action." Page 456.

If the author takes into consideration the way through which the remedy, applied to the skin, may reach the valves, he will probably give the preference to its internal administration.

60. *Digitalis.*

"The action of this medicine is rarely demonstrably beneficial, sometimes seriously mischievous, always hazardous." Page 456.

Though I do not place a very great reliance on the digitalis, it is too generally used by the profession to deserve the severity of the preceding judgment.

61. *Regurgitation without Murmur.*

"Highly marked morbid regurgitation may exist without any murmur." Page 456.

On whatever experiments this position be supported, I am fully satisfied it will prove erroneous; excepting the not rare cases of overlooked murmur and those much more scarce, I suppose, of excessively slow circulation.

In post mortem examinations, I have always found the tricuspid valve insufficient to close its orifice. Hence, I have not oddly inferred it was the same during life, but that after death the action of the capillaries continuing to transmit the blood from the arterial to the venous system, the latter, and especially the right cavities of the heart, had been distended much beyond the normal rate. On this account the comparative measures given by authors are generally wrong, and they will be such as long as not taken on blooded animals.

62. *Diseases of the Aorta. Aortic Pulsation.*

"Aortic pulsation, or abdominal or epigastric pulsation, or palpitation, as it has been variously called, is a peculiar functional affection of the aorta, distinguished by more or less throbbing action of the vessel. Pulsation of the epigastrium .... is, as its title indicates, the prominent feature of the complaint." Page 468.

I have, for many years, paid special attention to the disases of the aorta, without remarking any pulsation of the vessel independent of the beatings of the heart. No observer, that I know of, has noticed such peculiar pantings, whether in vivisections or surgical operations. The throbbings of the aorta are nothing more, I suspect, than the beatings of its divisions: carotids, subclavians, brachials, femorals, and so on, whose pulsations have not yet increased the nosological ranges. Physicians have enough to do to acquaint themselves with real maladies; let them dispense with the study of fancied ones.

63. *Aortitis.*

"Acute aortitis is a rare disease, at least as far as demonstration of its existence goes. The signs of this affection are obscure, at least in the present state of knowledge." Page 472.

"It will, I think, be generally conceded, that the elements of positive diagnosis of acute aortitis are yet to be found." Page 473.

Aortitis is the disease of grieved, broken-hearted people. Madame Gonin, Quai Bourbon, 45, in Paris, hearing from the mouth of two of her children that they had failed to be burnt in the dreadful catastrophe of the Versailles Railroad, (rive gauche) experienced such terrific emotion, that she kept her bed the second day, and was exceedingly sick, during five weeks, of inflammation of the aorta and large arteries. This is the first and most striking example of acute aortitis I have observed in my practice. But the sub-acute form of the disease I have frequently met with. Two cases are at present under my care. Very few affections are of such easy diagnosis. Here, the prominent symptoms appearing after some cause of uneasiness, anxiety, etc. The patient feels general debility, unsteady, feverishness, pain with burning sensation about the epigastrium, and frequently along the spine ; the gums are red, turgid or ulcerated ; the hand pressing the epigastrium, led by the pulsations of the vessel, gives the observer undeniable proofs that the pain excited by the pressure resides only or especially in the walls of the aorta, and not in the surrounding tissues. This is the pathognomonic sign.

" It is difficult to conceive that the vessel can be influenced at any extent without affecting the respiration." Page 472.

The respiration is affected when the inflammation reaches the arteries of the lungs. There is no reason to believe that it may be so in other circumstances.

64. *Atheroma—Calcification.*

" And of physical evidences there are none, except systolic blood murmur in the course of the vessel, either limited thereto, which is rare, or audible in a less intense form at the aortic valves, also." Page 475.

The systolic blowing murmur heard in the vessel is mostly from the aortic orifice, where the current being intermittent, is much more rapid than in the aorta ; besides that, the alterated valves are frequent causes of murmurs.

[*To be concluded in next No.*]

Part Fourth.

MISCELLANEOUS MEDICAL INTELLIGENCE.

I.—PROCEEDINGS OF THE LOUISIANA STATE MEDICAL SOCIETY, AT ITS ANNUAL SESSION IN MARCH, 1852.

The Louisiana State Medical Society commenced its Annual Session in the Medical Hall of the State University, on the 8th of March, 1852. The attendance of city members was large, but owing to too great an apathy for *things medical*, few of the country parishes were represented.

Upon the President, Dr. E. H. Barton, taking the chair, the Society was duly organized, and the regular business commenced by the President reading his Annual Address, after which the Report of the Board of Administrators was read, and the Society then adjourned to meet on the 9th, at half past 12 o'clock, P. M., at which time the officers of the Society for the ensuing year were elected, viz:

Dr. J. M. W. Picton, President, who, on taking the chair, acknowledged the honor which the Society had conferred upon him in appropriate terms, and expressed his desire to further its objects by zeal in the discharge of duties incumbent upon him.

The other officers of the Society were then balloted for, with the following result:

VICE PRESIDENTS.

Doctor Logan, of St. Charles.
" McCloud, of Lafourche.
" Davidson, of Rapides.
" R. Bein, of New Orleans.
" J. Farrel, "

Corresponding Secretary—Dr. J. C. Simonds, of New Orleans.
Recording Secretary—Dr. G. T. Browning, "
Treasurer—Mr. E. C. Bolton, "

Dr. Jones then proposed a vote of thanks, which was unanimously carried, to Dr. Barton, for his efficient discharge of the duties of President, and that a copy of his address be requested for publication.

On the 10th, at the usual hour, the Society again met, pursuant to adjournment, Dr. Picton, the President, in the chair. The minutes of the preceding day having been read and approved, and the roll of members called, the Annual Report of the Ex-Treasurer, Dr. Bein, was presented to the Society, and a committee of three appointed by the President to examine and report upon the same.

The Report of the late Dr. Hort, Chairman of the committee on Midwifery and the Diseases of Women and Children, came up as the special order of the day.

The Report was read to the Society by Dr. Browning, after which it was moved that said Report be at the disposal of the Board of Administrators. We would here give a synopsis of this elaborate report, but that it is intended for publication in the next number of this Journal.

The Society met again as usual on the following day, and Mr. Bolton, Chairman of the Committee on the Adulteration of Drugs and the Sale of Nostrums, read an interesting and studied Report, which was referred to the Board of Administrators, with a recommendation to publish.*

The committee appointed to examine the accounts of the Treasurer reported, that they had "found them in every respect correct."

Dr. Hale, Chairman of the Committee on Medical Botany and Natural History, was called upon for his report, but in consequence of some error which had occurred in the published proceedings, Dr. Hale begged to decline reading his article; the Society was therefore deprived of the pleasure of hearing the address upon this important subject.

The Society again met on the 12th, the President, Dr. Picton, in the Chair.

The preliminary business having been disposed of, Dr. Browning offered the following preamble and resolutions:

Whereas, it has pleased Divine Providence to remove, by death, from a sphere of great usefulness, our friend and associate, Dr. Wm. P. Hort—be it therefore

Resolved, That the members of the Louisiana State Medical Society, as a tribute of respect to the memory of the deceased, for the high estimation in which they held his superior ability, his honorable feeling, and his numerous traits of noble character, do hereby express their deep regret at the loss of so valuable a citizen, and so able and energetic a member of this Society.

Resolved, That a copy of these resolutions be transmitted to the only daughter of the deceased.

On motion of Dr. Riddell, the above report was adopted and ordered to be spread upon the minutes.

As Chairman of the Committee on "General Therapeutics, Materia Medica," etc., Dr. Fenner then read his Report, in which some of the leading medicinal agents now in general use were referred to, especially the Oleum Jecoris, Ascelli, Chloroform, and Quinia Sulphatis.

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* This Report will be found in this number of the Journal. (*Ed.*)

The Report was, on motion of Dr. Barton, referred to the Board of Administrators.

The Report from the Committee on the "Meteorology and Hygiene of the State and its Vital Statistics," being now called for, Dr. Simonds made an oral statement to the Society of some statistical facts, requesting, at the same time, that the Society would accept, as part of his report, a pamphlet entitled "A Memorial to the Legislature of the State of Louisiana, for the Registration of Births, Marriages and Deaths."

The attention of the Society was now called by the President to the subject of qualification for membership; whereupon, Dr. Copes moved that a committee of three be appointed by the President, to report as soon as practicable, upon the fitness of nominees for membership.

The gentlemen appointed on said committee were, Doctors Copes, Simonds and Dowler.

The Society then adjourned, to resume its business on the following day; at which meeting the report of the special committee appointed on the previous day, to inquire into the necessary qualification for membership, was presented to the Society by Dr. Copes; which, being apposite, are transcribed from the minutes:

The special committee charged with the duty of reporting regulations for the future admission of members to this Society, respectfully report as follows—

Having given the subject such consideration as their limited time and other engagements have permitted, they find the prospective importance of the proposition to scrutinize the fitness of nominees or applicants for membership in this Society, in their own view greatly increased.

Indeed they are not without hope, that the Louisiana State Medical Society may thus be made to yield greater benefits both to the profession and to the community than has ever resulted from the "License Law," now repealed. As conservators of the public health, Physicians are not only bound to bear testimony, emphatic and persevering, against quackery in all its forms, but by union and a good understanding among themselves they must *strengthen* this testimony by sustaining the dignity and extending the usefulness of their profession. Among the chief means to this desirable end are such associations as ours; a thoroughly organized State Medical Society.

It will not be long, we think, before the sound and intelligent Physicians of this State, finding themselves destitute of any other definite, understood and acknowledged bond of union, will all seek the privileges of membership in this Association: nor will it be much longer before the learned in other professions, —the enlightened and liberalized portion of the community, and all the best judges of human nature, who every where give tone to public sentiment, knowing that the "License Law" has been repealed, will begin to inquire whether their Physicians have a standing in the State Medical Society. We are under the strongest obligations to preserve, elevate aud improve the character which, from the age of Hippocrates to the present time, has been awarded us

by the learned and the good, for general and extensive knowledge, great liberality and dignity of sentiment, and prompt and self-sacrificing efforts of benevolence.

To do this, we must be careful as to the extension of membership in this Society; and whilst we avoid extremes, endeavor to select a just conservative medium of qualification.

Your committee recommend the adoption of the following:

1. *Resolved*, That the Board of Administrators be constituted a "Standing Committee on Membership," to whom shall be referred for examination all nominations and applicants for membership in this Society.

2. *Resolved*, That said Standing Committee having, by due and careful scrutiny, become satisfied of the fitness or unfitness of any nominee or applicant for membership, shall report thereon to the Society at the earliest possible time, and their reports shall be always in order.

3. *Resolved*, That in arriving at a judgment as to the fitness for membership, the Standing Committee be instructed—

1st. To regard as sufficient the qualification laid down in Article III. of the Constitution, and the first bye-law.

2d. When this is wanting, then the exhibition to them by a respectable Physician of this State of a Diploma from a regularly constituted Medical School, of known character for the soundness and extent of its teachings, shall be deemed sufficient.

The above resolutions were then taken up seriatim, and adopted.

Dr. Jones moved that Delegates be appointed by the Board of Administrators to attend the National Convention, which will be held in Richmond in May next.

There being no further business for the transaction of the Society, it was adjourned to meet again on the second Monday in March, 1853.

In thus giving a summary of the proceedings of the State Medical Society, the subject may not inappropriately be suggestive of comment.

First, as to its objects, which are clearly defined in some of the resolutions offered, in order to carry out which, the profession generally in the city, as well as in the country, must take a deeper interest in the advancement of the Society, by diligent observation and careful study of practical as well as theoretical points, (in which latter it would be *desirable* at all times that something more than the *seething* brain of a fanatic were discoverable) and having drawn from study and observation well digested and useful deductions, we might have not only garnered into the archives of the Society the evidence of medical acquirement, there to lie buried, as in the tomb of the Capulets, but we might have tangible evidence, in the form of books, published by the Society, that Louisiana was a faithful handmaid of Science.

For the attainment of this desideratum, there must be concert of action, and an avoidance of supercilious egotism, no less than of conceited arrogance, in each of which the sole claim to merit is too often centred in that absorbing, yet to the world little thought of object—*personality*.

It may now, also, as it has been suggested, become more necessary than heretofore to foster this Society, since the State Legislature, at its recent session, has felt it incumbent on it to remove the feeble barrier which has existed, as some professional security, and with an *enlarged charity*, that applied to other *recipients*, might have been worthy of all praise, have elevated the followers of Hahnemann, and Thompson, and Priesnitz, as well as many others, (who, not having the prestige of a *name* to give *quasi* sanction, first to their folly, and then to make current their ignorance, their cunning and their fraud) to a position which they themselves never dreamed of!

There are instances, truly, of enlightened minds falling into temporary error in medical affairs, but with the dawning of second reason, they quickly become emancipated, and leave charlatanism to self-abasement.

The former law was certainly, to a great extent, inoperative; for making it a perfect nullity, our State Legislators are entitled at our hands to consideration; but it is that consideration which emanates from compassion for the *failings* and the *weaknesses* of others, and not from that high approbation which is awarded to those who render the State great service. As a return for services rendered, it would surely be no more than giving the *quid pro quo*, for the globulists, the steamers and the hydropathists, with many more newly inducted scions, to tender to all the members of the Legislature their gratuitous medication for two years, and as Homœopathy is now made applicable to *amputation*, all surgical cases should be treated with infinitessimal doses of —kindness; the knife being too *scathing* an instrument for use!

G. T. BROWNING, *Recording Sec'y.*

New Orleans, April 5, 1852.

II.—CALIFORNIA—HER HOSPITALS—PREVALENT DISEASES—MORTALITY, etc.

Through the kindness of a friend, we have recently received the Report of the Trustees and Physicians of the *Sacramento State Hospital*, from which we glean the subjoined interesting facts and statistics:

The Hospital was opened for the reception of patients on the 28th of May, 1851, and consequently had been in operation up to the 10th January, 1852, when this report was made out, seven months and thirteen days. During these 7 months and 13 days—

The whole number admitted was - -	592	
" " discharged - - -	415	
" " died - - -	72	
Remaining in Hospital - - - -		104
For the same time there were admitted in Insane Department		38
Discharged cured - - - -		16
Remaining in Hospital - - - -		22
Received from San Francisco - - -		20

We append some of the principal diseases for which the 592 patients were admitted, in order to indicate the influence of climate upon emigrants:

Admitted of bilious remittent fever 123; of rheumatism 49; of intermittent fever 46; of typhoid fever 33; do. mental derangement 38; do. diarrhœa 38; do. wounds of various kinds 30; do. Panama fever 23; do. erysipelas 11; and scorbutis 11.

The foregoing seem to be the prevalent diseases for which patients were admitted into the Sacramento State Hospital. The other diseases which go to complete the list, are such as are met with in our hospitals in this portion of the United States, and therefore deserve no special notice.

Of the 592 admissions 72 died, and of the following diseases: Dysentery 8; abscess 1; consumption 5; diarrhœa 14; bronchitis 4; enteritis 2; cerebritis 4; scorbutis 1; hemiphlegia 1; erysipelas 2; anasarca 1; coxalgia 2; fever congestive 2; fever bilious remittent 5; scarlatina 1; bowels, ulceration of, 1; fever typhoid 13; fever Panama 4; delirium tremens 2—making a total of 72 deaths out of 592 admissions.

Of the admissions, 342 were natives of the United States; and 250 adopted citizens, representing 20 different foreign countries.

The Report concludes in the following words—as drawn up by Doctors Bryarly and Williams. the former the Visiting, and the latter the Resident Physician, of the Hospital:

"By referring to our report of the different diseases, it is easy to observe what may be considered as the prevailing diseases in this, the northern district of California.

The largest number of any one class have been those of fever, particularly those of bilious remittent fever. This is not surprising, when it is considered that every feature of the country, and the general habits of the people, are most conducive to this disease. During the dry season, the miners are compelled to resort to the rivers and water courses for work; here they are exposed to all the miasma originating from the decomposition of the vegetable matter from the overflown lands during the wet season. This produces intermittent, or common chills and fever.

The general living of these people is decidedly bad; not only in reference to their food, but more particularly in reference to their sleeping apartments. They either sleep in the open air, exposed to the sudden changes peculiar to our climate, or they are huddled into tents and cabins, where they cannot but suffer from the effects of contaminated atmosphere. These things, connected with the fact that many of them work in the water six or eight hours each day, bring about such a state of the system, and such a habit of body, as renders it peculiarly susceptible to take on the most malignant forms of every disease with which they are attacked. It is thus that our worst fevers are produced, and these are the reasons of their frequency in our district.

Although bilious remittent fever has far doubled the number of any other fever, it is to be observed that the mortality has been much less in comparison.

From our mortality report, the greatest number of deaths have been from chronic diarrhœa. This is the most formidable disease in our whole country. We find it mostly attacking those recent in the country, and almost always following the extreme debility of the acclimating fever, Panama, typhus or ship fever, to which it seems to be the most regular sequal. The neglect of this in its acute stage, is followed by its passing into the chronic. The fact that there are so many existing causes, such as strong mental emotion, of a depressing or anxious kind, exposure to dampness and cold, indigestible food, intoxicating drinks, bad water, and general debility, that oftener the organic disease, before coming under the treatment of a physician, is so great, as to be out of the reach of human aid.

In some of the northern portions of this district, during the past summer, the erysipelas has raged as an epidemic, with great mortality; and in some few places, even now, continues its ravages.

The counties of Shasta, Nevada and El Dorado have been the worst sufferers. In many instances every inhabitant of small mining camps has been attacked, often assuming the most malignant form, and proving fatal in a very few hours.

The most apparent cause seems to be, the peculiar constitution of the atmosphere, exposure to all weathers, bad and unwholesome living, general tendency to scorbutis, which, combined with a natural predisposition, and the contaminated air of crowded and ill ventilated apartments, are all calculated to render the subject peculiarly susceptible to erysipelatous inflammation.

It will be seen, that although situated in the interior, we have not been exempt from the reception of 'Panama fever' in our wards.

From the last steamer that arrived, (the Northerner) fourteen of her passengers have been admitted here.

The appellation of 'Panama fever,' is very common at the present day; but the cases from the Northerner can be much more easily recognized under the head of 'ship fever.'"

III.—COD LIVER OIL IN SCARLATINA.

An Irish practitioner, in a letter to the Editor of the London Lancet, speaks in high terms of the external application of cod liver oil to the throat in the aginose form of scarlatina. He says: I mostly use it in the anginose form of the disease, as an external application to the throat three times daily. Of course I employ other remedies, but which, without the local application of the oil, would be of little use. His success with this remedy has been highly gratifying.

IV.—A SUBSTITUTE FOR MERCURY IN SYPHILITIC DISEASES.

M. E. Robin has read a paper before the Academy of Sciences of Paris, with the following title: "On certain new agents calculated as substitutes for mercury, when used as an anti-syphilitic remedy." In former papers, M. Robin has maintained these propositions: "Mercurial preparations do not act in a peculiar manner when administered in syphilitic diseases; they merely combine with the virus and change it into a new or inert compound. Now there are a great many substances which form analogous combinations with organized matter, which substances probably have, like mercury, anti-syphilitic virtues; and it will be found that the agents of this class, which have thus been successfully employed, belong to the antiseptic division of remedies, which act by combining with the noxious principles. In this manner we can understand whence arise the anti-syphilitic properties of arsenical gold, silver, steel, and antimonial preparations. Hence arises the likelihood of success, if attempts be made to use such organic substances as the bichromate of potash, or sesquichloride of iron, instead of mercurials."

M. Robin induced Dr. Vicenti, of Paris, to try a few experiments with the bichromate of potash to combat syphilis; the salt was employed in three cases

with much success, and of these, one was marked by very severe secondary symptoms. Fifteen grains of bichromate were divided into eighty pills, with extract of gentian. One of these was taken night and morning. They agreed pretty well with the stomach, though some opium was necessary to prevent nausea and vomiting. The patient took 240 pills in the space of about three months, and was then quite well of a very intense attack of iritis, accompanied by other syphilitic symptoms, which had almost blinded him. The patient had had an indurate chancre, and had never taken any mercury.

(*Philadelphia Examiner.*)

V.—DR. LEBERT ON THE STRUCTURE OF THE CATARACT.

Dr. Lebert stated, a short time ago, before the Surgical Society of Paris, that he had no faith in certain ammoniacal preparations which had been supposed capable of producing resolution in case of incipient cataract. He examined crystalline lenses somewhat altered in structure, and found very important changes. In hard cataract, for instance, there was an opaque, granular substance interposed between the lamellæ of the lens ; this substance is beyond the action of the absorbents, as the lamellæ themselves are horny and atrophied. In soft cataract there is seen in the crystalline cells an effusion of a milky fluid, and in this fluid crystals of cholesterine can be distinguished, the lamellæ being at the same time softened and hypertrophied. None but a surgical treatment can, in such cases, be followed by a successful result. It was shown during the discussion that those cases which were benefitted by Gondret's ammoniacal ointment, were not cases of incipient cataract, but instances of an early stage of amaurosis.—*Ibid.*

VI.—DISLOCATION OF THE FEMUR. REDUCTION BY A BLOCK BETWEEN THE THIGHS.

BY D. BRAINARD, M. D.

Sunday, February 23, 1852, I was requested to visit Michael Sweeny, near Michigan City, in Indiana, on account of dislocation of the femur, which had occurred the Friday previous.

Feb. 23. I arrived there on the evening of Monday, 23d. I found a dislocation of the right femur into the obturator foramen, with all the signs of that accident extremely well marked. Efforts at reduction had at first been made by the attending physician, without success. Subsequently the compound pulleys had been resorted to, and this not being effectual, "Jarvis' Adjustor" was employed without any better result. As these means had been used by Prof. Daniel Baker, late of the Indiana Medical College, to whose politeness I was indebted for the call to visit the case, I presumed that more efforts by such means were not advisable, and accordingly sought for others.

I had for some time been of the opinion, that a wedge between the thighs, kept close to the perinæum, and sufficiently large to fill up the space, might be made use of as a fulcrum, and the members themselves employed as levers, by which that accident could be remedied.

At first, the right femur was directed so much outward as to prevent this from being employed to advantage, and the pulleys we applied at the ankle, to make extension nearly in the line of the axis of the body. Having continued this moderately for about twenty minutes, until the members were more nearly in a parallel position, I placed a stick of wood, about four inches in diameter, wrapped about with several layers of a wadded quilt, between the thighs, and relaxing the pulleys, seized one of the legs, while Dr. Everett, who rendered efficient assistance, held the other, and by simply pressing them together, taking care to keep the knees straight, the bone went into its socket with a loud snap.

This form of dislocation is said to be the least difficult of reduction of all those of the hip, but it is probable that there are exceptional cases, where a variety of means might be desired. In such, the method used in this would be applicable, and it is not improbable that it might be as well to resort to it in the first instance. (*North Western Med. and Surg. Jour.*)

VII.—DILUTED PYROLIGNEOUS ACID AS A GARGLE.

BY JOHN EVANS, M. D.

I have for several years been using diluted pyroligneous acid as a gargle in cases of inflammation of the fauces and tonsils with better success than any other article that I have prescribed.

I put a teaspoonful of the acid obtained from the shops into a wine glass of water, and direct the patient to gargle the throat frequently with it.

In the sore throat caused by exposure, so common throughout the country, it generally relieves the soreness and stiffness felt in swallowing very promptly.

In chronic inflammation, with or without ulceration of the throat, I have found it a very valuable remedy.

In the sore throat of scarlatina, it has generally afforded a very prompt amelioration of this symptom of the disease.

In several cases of habitual tonsilitis, by using this gargle freely at the commencement of the disease, I have been able to arrest the progress of the inflammation and secure a resolution.

Its use is not unpleasant; it is safe, even if used for hours continuously, and has an additional advantage in removing the fœtor of the breath. (*Ibid.*)

VIII.—APPLICATION OF ICE IN TREATMENT OF TYPHOID FEVER.

A French Physician, M. Sandras, attached to the Hospital Beaujan, has derived excellent effects from the application of ice in the treatment of typhoid fever. He applies it in bladders to the head to calm the cephalalgia, and upon the abdomen to destroy the meteorism and to obviate ulceration in the small intestines. It is applied in small pieces, mixed with ground flaxseed, to the abdomen. These applications are renewed as soon as the ice dissolves. The relief, says M. Sandras, is most prompt; the head symptoms disappear, and the belly shrinks and ceases to be painful. It is recommended to continue these local applications for eight or ten days, if the heat and pains persist. Pounded ice placed over the epigastrium, in the febrile stage of yellow fever, will greatly reduce the heat and thirst, as we have experienced, and prevent that fluxionary movement towards the stomach which lays the foundation for black vomit.

(*Journal des Connaissances.*)

The New-Orleans Medical and Surgical Journal.

Vol. VIII.] NEW-ORLEANS, MAY 1, 1852. [No. 6.

The severe cold weather experienced here during the past winter, and the sudden changes with which our spring was introduced, have as yet had no perceptible effect upon public health. Our winter and spring have been comparatively free from our usual endemic diseases; and with the exception of a few sporadic cases of Scarlatina, Rubeola, Variola, and some Typhoid Fever, for the most part imported, and confined to our public Hospitals, New Orleans has enjoyed a degree of health, perhaps equal to any large *commercial* city in the country. The Cholera, which carried terror to so many stout hearts, has expired; the Yellow Fever—the dread of the stranger and sojourner in our midst. has long since been banished the city; eruptive and contagious diseases are few and far between, and scarcely excite the attention of the most timid—our great Charity Hospital is comparatively empty, whilst our private Institutions are almost destitute of patients. Such is and has been the sanitary condition of our city for several months past, notwithstanding the constantly crowded state of our streets, public houses, and the immense number that are daily arriving in and departing from the city.

As the best expression of public health, we continue our usual weekly statement of deaths from our last number, for the eight weeks ending April 10th, 1852—

DEATHS IN THE CITY OF NEW ORLEANS

For the 8 *weeks ending April* 10*th*, 1852.

1852	*Total.*	*Fevers.*	*Cholera.*
February 21st,	110	12	0
" 28th,	135	29	0
March 6th,	115	21	0
" 13th,	119	23	0
" 20th,	120	11	0
" 27th,	120	11	1
April 3d,	129	15	2
" 10th,	127	8	0
Total,	875	130	3

Of which 337 were under 10 years af age, and 173 colored.

By a recent act of the State Legislature, the original three municipalities, including the city of Lafayette, have been consolidated into one corporate body —the "*City of New Orleans*"—hence the omission of Lafayette at the head of the above table.

Glancing at the total deaths above for the 8 weeks ending April 10th, we find 875, against 876, for the corresponding period for the 8 previous weeks ending February 14th, 1852—being but 1 in favor of the former period. Of Fevers!

for the same time, we have a total of 130, against only 89 for the previous 8 weeks—thus showing a marked increase of Fevers—41, for the current eight weeks over our preceding figures. The deaths from Cholera for the last six-teen weeks are too insignificant to require comment at this time.

Deaths for the eight weeks ending February 14th under 10 years of age, numbered 321, against 337 for the corresponding time closing April 10th; and the colored stand, 169 against 173, as will be seen by reference to our March number and the table preceding.

It appears, then, that although our totals vary but a trifle in the respective tables, the Fevers for the last eight weeks have greatly increased, ascribable, without doubt, to a considerable increase of our immigrant population; nearly one half of whom touch our shores but to find a secure resting place beneath our soil. Fevers of a typhoid character must continue to infest our city and decimate our hospitals, until our city authorities take the matter in hand, and establish suitable accommodations in the shape of a Lazaretto, at some point below the city, where those arriving by sea, afflicted with infectious and pestiferous diseases, may be quartered, cared for and properly treated. This would relieve the Charity Hospital of an immense tax, and at the same time exclude, in a great measure, ship or typhoid fever from its wards and the city itself. We are glad to notice that his Honor, Mayor Crossman, in his recent message to our City Councils, recommended the establishment of a suitable Hospital, below the city, near the English Turn, into which immigrants afflicted with contagious or infectious diseases should be received on reaching the port of New Orleans.

LIGATION OF THE PRIMITIVE ILIAC ARTERY.

An Irishman, enjoying general good health, aged about 25 years, was admitted into the Charity Hospital some time in the month of March, 1852. On examination, a large aneurism was detected in the left femoral artery, situated in the groin, extending both below and above Poupart's ligament. The tumor was five or six inches in length, and presented the usual characteristics of an aneurism. Externally, there was no discoloration of the tissues or integuments; it was represented as quite painful to the touch, and the patient was compelled, to find relief from constant suffering, to flex his thigh upon the pelvis, and the leg upon the thigh. In this position he was comparatively easy.

About three months previously, he first discovered the tumor, which made its appearance without any known cause, and rapidly grew until it reached the size above described.

On the 27th March, Dr. A. J. Wedderburn proceeded to operate as follows:

An incision was made, commencing at the upper border of the tumor, some four or five inches above Poupart's ligament, extending, in a slight curve, to near the anterior superior spinous process of the ilium of the same side. In

dividing the integuments, muscles, etc., severe hemorrhage took place ; it was not, however, serious, and soon the operator reached the cavity and also the tumor, which was found much larger than was expected, and extended to within one or two inches of the bifurcation of the primitive iliac artery. Not anticipating this state of things, and having cut with a view to reach only the external iliac, Dr. Wedderburn, after a few moments' delay, succeeded in reaching the primitive iliac, and cast a ligature around it, and secured it. Instantly the pulsation in the tumor ceased; when the wound was brought together by a few sticking plasters, etc. An anodyne was administered and the patient transferred to his bed.

No chloroform was administered in this case, and the patient complained much during the operation.

On Monday, the 29th, and the second day after the operation, we saw the patient. His countenance indicated much constitutional irritation ; his pulse was about 120, quite quick ; his skin warm, but moist; complete loss of sensation in the whole limb, which was warm as low down as the knee, below which point the leg was cold, and dotted with bluish, livid spots, which did not disappear on pressure. In a word, the entire leg was gangrenous ; and on the 31st March we again saw the patient, and found the gangrene had extended up to the hip ; the pulse was feeble and rapid, the skin cold, and the countenance haggard.

About 2 P. M. of the same day the patient died, and on the morning of the 1st April, twenty hours after death, Dr. Wedderburn made an examination of the parts. The ligature had been applied, as already stated, on the *common* Illiac, just above the bifurcation ; the aneurismal tumor extended to within an inch and a half of the division, about which space the tissues were thickened and degenerated, and the lymphatics enlarged. Besides this, nothing else of a special nature was observed. We have already remarked that the entire leg and thigh became completely gangrenous prior to death.

Dr. Wedderburn is disposed to question the success of this operation in any case ; he doubts if a cure has ever followed this questionable operation. Without doubt, the ligation of the common iliac artery must seriously jeopardise the life of the patient; but that it has proved successful, we have the best authority for believing. The common iliac artery has been tied by the following Surgeons: W. Gibson and Valentine Mott, in this country ; the first failed, the latter succeeded ; his patient *perfectly* recovered. In Europe, by Crampton, Salamon, Liston, Guthrie, Syme, Deguise and Pease. The operation has succeeded but *four* times, as far as we are informed, viz : Mott's, Salomon's, Deguise's and Pease's. Vide Chelius' Surg., Vol. ii., p. 532.

" At present," says M. Velpeau, " this operation is no longer questionable; and if refrigerants, depletives, relaxants and digitalis should have failed, and if the aneurism should have ascended so high as to make the ligature upon the *external* iliac uncertain (as in Dr. W.'s case) or insufficient, and forbid the employment of the method of Brasdor, then the ligature upon the primitive iliac should be made trial of as a last resource."

Evidently, previous to an operation on an artery so important to the life of the patient, every means calculated to diminish the quantity and momentum of the blood, should be used, and every precaution taken to circumscribe as much as possible the aneurismal sac; but all these means having failed, and the patient the victim of excruciating suffering, the operation then becomes justifiable, in the opinion of Mr. Velpeau.

Aneurism, even of some of the largest arteries, has been known to disappear spontaneously. MM. de Renzi, Severin, Ford, Reinig, Guattani, Pomarest, Albert, Foreer, Darrach, Portal, Lower, Martin and Marjolin, give instanstances of this kind; and in some cases, even the femoral artery was the seat of aneurism.

NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.

We close with the present number the eighth volume of our Journal, but not our labors—they are scarcely less perpetual than those of the far-famed Sysiphus, and certainly, as yet, not much more profitable.

For eight years we have labored to give character and standing to the Journal; for eight years we have striven to make the work worthy the support of, and useful to, the Profession; and during part of this time, our *Sanctum* has been any thing but an Elysium, and our reward from certain quarters bitter denunciation and uncharitable insinuations. These are as idle winds, which we regard not; they neither ruffle the equanimity of our temper nor jostle us from our propriety; we forgive them—they are deceived. We have done our best; many could do much better.

The Journal never was so prosperous, at any time during its existence; we feel encouraged; we shall labor unceasingly to make it more useful—more readable, and more in conformity to the wants of the South (for we get no support from the North). If our subscribers will aid in extending the work among their neighbors and *confrères*, we shall soon reach, in our circulation, some of the oldest and best established medical journals in the United States. As the next number begins a new volume, now is the time to order the work, that the set may be complete.

Another request and we have finished. Send us papers—practical essays on medical subjects; give us histories, descriptions, and symptoms of epidemic and endemic diseases; observe closely—accurately, and you will write correctly, and thus impress your thoughts, views and facts upon your professional brethren. Without such communications, no medical journal can prosper; and whatever valuable matter may have appeared in our magazine for the last few years, has been obtained almost exclusively from its contributors scattered through the Southern country.

At the close of this number, will be found a full and copious Index to Vol. VIII., to which reference may be had.

CASE OF TWIN PREGNANCY, COMPLICATED WITH FIBROUS TUMOURS ON THE EXTERNAL WALLS OF THE UTERUS—DEATH AND POST MORTEM EXAMINATION.

Reported by D. Macgibbon, M. D., *Visiting Physician to the Charity Hospital, New Orleans.*

Catherine Davis, aged 28 years, married, and healthy looking entered the Charity Hospital on the 6th September, 1851, and came under my care. She had an evident enlargement of the abdomen, and was suffering with a discharge from the vagina, which had a bad odor. There was pain in this latter region, with some difficulty and smarting in making water; and it was to get rid of these annoyances, chiefly, that she entered the Hospital. The enlargement of the abdomen, she stated, had only recently commenced, and had increased rapidly. It gave her no annoyance whatever, save from its bulk; but as she could not account for its presence, it caused her some anxiety. She did not believe it could depend on pregnancy. Of this, she gave to understand, she felt certain. She never had any children.

As the enlargement of the abdomen proved the main feature of interest in the case, I will here give, as shortly as possible, the peculiarities it presented on her admission, and which were noted down at the time; as also some few points in her history, bearing upon the case, derived from her at the same time.

She had been married twelve months; had not lived with her husband since the beginning of the present year; had resided since then with her relations in Ireland (who advised her to leave him, in consequence of his bad conduct) up to the month of May, when she was sent out to this country, principally to be out of his way. Her appearance would indicate her to belong to a better class than we usually have entering the Hospital. She had not menstruated for the last six months; up to that time she had been regular; and it was on the cessation of the menses that the discharge, above referred to, began, and which has since continued constantly to annoy her.

Her attention, she said, had only been distinctly attracted to the fact of enlargement of the abdomen, about six weeks preceding admission; since which it had, as already stated, gone on rapidly increasing. She suffered nothing from morning sickness, and had at no time experienced any unusual movements in the abdomen. Her general health had been at all times good.

The appearance of the woman, as regards bulk around, at the date of admission, corresponded very well with that of one six months gone in pregnancy. The enlargement reached a little above the umbilicus. But instead of presenting that uniform distension which the impregnated uterus usually does, its surface had somewhat of a lobulated appearance, which is now to be more fully noticed. In the left iliac region was a protuberance, which felt about the size of a hen's egg; and in the right was another of the same kind, but smaller, a third, about the size of a walnut, was seen in the vicinity of the first. These felt hard, and gave no pain when pressed. They were evidently firmly adher-

ent to a large inelastic tumour, which occupied the uterine region, and which gave rise to the general enlargement of the abdomen. They could be so easily seen, and so readily grasped by the hand, especially that on the left side, that it was difficult for me to believe otherwise than that they were situated immediately under the parieties of the abdomen, and not within the cavity of the uterus. The distinct manner, too, in which they could be seen to glide under the distended walls of the abdomen, when the mass to which they were attached was made to move from side to side by the hand, which it could be, in a slight degree, served especially to arrest my attention, and to convey the impression of their extra uterine character

The pulsation of the abdominal aorta could be very distinctly heard on applying the ear over the abdomen, but no other sound could be heard.

Per vaginam: The passage had a granular feel. The folds, in its mucous surface, were in no way obliterated. In the region usually occupied by the gravid uterus, a large firm tumour was felt. This could not be made by the finger to ascend, and then to alight on its point; nor was there any feeling of intervening fluid about it; on the contrary, the whole felt as if firmly bound down in the pelvis. When the finger was carried along the base of this tumour, and as high up as it could reach, it came in contact with the os uteri; this felt small and firm, but was retroverted, looking towards the sacrum. The cervex uteri could not be reached, so as to assist in guiding one to the true position and condition of that organ; so that so far as digital examination went, it was not easy to say whether this was the gravid uterus, or whether the uterus was pushed away behind, high up, and unimpregnated.

On the day following admission, the speculum was used, but nothing further satisfactory was obtained by it, save that it showed the surface of the vagina to be thickly studded with enlarged folicular glands, which imparted to it a red and unhealthy appearance, and that from this surface the leucorrheal discharge above alluded to proceeded.

The areolæ around the nipples were observed to be somewhat darker in color than is usual in the unimpregnated state. These were all the symptoms noted on admission; and while some of them, no doubt, strongly favored a suspicion of pregnancy, as the absence of the catamenia, and the enlargement of the abdomen, yet, there were others, again, which did not so well harmonize with that view, as the distinctly lobulated character of the uterine tumour, which, precluded the probability of that depending upon any thing *within* the cavity of the uterus—the absence of the placental soufflet and sounds of the fœtal heart on auscultation, together with the absence of balottement on digital examination, which, with the former signs, should be expected to be present, supposing the fœtus to be six months, as counting from the cessation of the catamenia would make it,—all these difficulties, without attaching undue weight to the woman's own statement, denying pregnancy, and all evidence of quickening, made me hesitate in pronouncing her pregnant; and it is to be observed, in regard to her own statement, that here there was not the more common cause for knowingly hiding the truth, as the woman, at all events, was married, ac-

cording to her own confession. I therefore, as already mentioned, hesitated in coming to that conclusion, and felt disposed rather to regard the tumour as *extra uterine*, and so at the time expressed myself.

Anxious, however, to watch the future progress of the case, and see what time would develop, I retained her in the Hospital. She was put upon no medical treatment, except the local application of a solution of sulphate of copper; for the discharge referred to, under which it soon disappeared. During her stay in the house her general health improved. The enlargement of the abdomen went on gradually augmenting, much as it does when pregnancy is present, as the cause, and the lobulated appearance had also become more and more distinct. I took several opportunities of examining her during this period, and made notes of these observations for my own satisfaction.

Several of the medical gentlemen connected with the Hospital, and others, besides, saw her, but Dr. Cenas was the only one who made a careful examination of her case, which he did on the 7th October. On the first of October I had pressed out from both breasts a drop or two of a watery-like fluid, and although this is occasionally found in other cases besides those of pregnancy, yet it was an additional feature, which directed suspicion that way. There had also of late been heard, over the abdomen, a slight murmur, synchronous with the pulsation of the abdominal aorta, but that might be dependent on the large firm tumour overlaying it. On the whole, within the past month the signs of pregnancy had acquired more prominency, though some of these, in order to render that certain, were still absent, among them, that of the fœtal heart, which had not yet been heard. Dr. Cenas, while appreciating the complications in the case, inclined to the belief that the woman was pregnant, and the extraordinary protuberances, which had, from first to last, held their fixed relative position, and proved such a stumbling block to me, he, like the most of the others who had seen her, looked upon them as dependent on some unusual position assumed by the fœtus in utero, and not on bodies which were extra uterine, as I continued to suppose.

For some time following this she was left pretty much alone, and on the 31st October the following note, which I extract from my note-book, occurs:

"Made an examination again this morning—none since last report. The general enlargement has gone on in the interval to a visible degree. The lobulated appearance is also, if any thing, more evident. The placental soufflet is very distinctly heard over centre, and to the right side, at the latter point more distinctly, indeed, than I ever recollect to have heard it in any former case. At this latter point, also, a clicking sound, as of the fœtal heart, is heard, but so interrupted by the other, as not in itself to be quite positive. The os uteri *and cervix* can be distinctly felt, per vaginam, with the woman in the horizontal position. The uterus had settled lower in the pelvis. This was the first time that the cervix uteri had been got at by any of those who had examined her since admission, and through it the finger could now detect the uterus in a gravid state."

This, together with the preceding signs, left me no longer any reason to doubt the fact that she was pregnant. But the protuberances on the uterine tumour were still as unexplained as ever, and I looked forward to the period of

parturition, which now could not be distant, with even more interest than ever, to throw some additional light on the matter.

The woman, when told my conviction of her case, seemed disposed yet to harbor some suspicions of its accuracy, and intimated her intention of leaving; promising, however, to come and see me, or to let me know where she could be seen, so soon as she got settled in a boarding house. She was accordingly discharged, at her own request, on the 2d November. Anxious to keep an eye upon her, and having heard nothing of her for fully a fortnight after she went out, I made some enquiry, and learned where she resided, when I paid her a visit. She stated that she was now no longer in doubt about her being in the family way, as she had, since she left the Hospital, felt distinct movements in the abdomen, which prior to that she had not. She also mentioned that her health had suffered since, and intimated her intention of shortly returning, which she did on the 25th November, when she passed under the care of Dr. Cenas, who had taken charge of the obstetrical wards in the Hospital, while I, in the meantime, had been transferred to the male department in the same, and so had no further care of her.

On the 4th December she was delivered, after, as I understand, a natural labor of twelve or fourteen hours' duration, and of twins ; one of them was still born. They were both large, well formed children. The woman, however, fell into a state of collapse immediately after the delivery, and died in little more than an hour thereafter. The uterus, as I understand, had not contracted; but whether there was undue hæmorrhage or not, I could not very correctly ascertain ; though I think it could scarcely be otherwise, with the uterus in a flaccid state. The woman, however, had been ailing when she returned, and had been more or less debilitated prior to labor coming on ; and perhaps this, with the physical exertion consequent on the double birth, may have, without the loss of any extraordinary portion of blood following, been sufficient to prostrate her fatally. Be that as it may, the woman died, and gave an opportunity, by microscopic examination, of completely verifying the correctness of my diagnosis regarding the extra uterine character of the protuberances on the uterine tumour; which protuberances, had not sufficient examination after delivery been instituted, would, from the circumstance of twins having been present, be more likely than ever to be referred to some peculiar packing consequent thereon.

The uterus, which is preserved in the Anatomical Museum of the Medical College of this city, presents the following peculiarities: Its capacity is much larger than usual, probably dependent on its having been the late receptacle of large, well formed twins, and to not having contracted properly after the evacuation of these. Its walls, too, are thicker than usual. On its external surface, and more or less imbedded in its substance, there are five firm fibrous tumors ; the largest of these is on the anterior surface, and corresponds well with that felt during life in the left iliac region : it is about the size of a goose egg ; externally it has, like all the others, a leathery appearance and feel ; its interior, when cut into, presents, in some measure, a cellular structure, formed by inter-

lacement of fibrous tissue. The second largest is situated at the fundus, on the posterior surface, and could not be felt during life. It is the size of a hen's egg, and is especially hard. It is more detached than any of the others, being connected to the uterus by a broad peduncle. The third, somewhat smaller than the preceding, from its situation, will correspond with that which was felt during life in the right side; and a fourth, similar to this one, is on the posterior surface, its interior, which is cut into, presents a dense, fibrous appearance. The fifth one of these is in the vicinity of the first; it is the size of a walnut, and will very well correspond with the smallest one seen during life, and which could be made to project and to glide, knob-like, under the parieties of the abdomen, in a very marked manner.

These are all the peculiarities that require to be noted in connection with the uterus, with the exception that it may be mentioned, a beautifully distinct *corpus lutei* is seen in the right ovaria, which is laid open; there is none in the left, which is also cut into. According to the views of some physiologists, two at least of these should be seen in this case, but at present we have nothing to do with embryology. The preparation, taken in connection with its history, is interesting, alike to the pathologist and physician.

Dr. Lever, and other writers on organic diseases of the uterus, speak of several similar cases of hard fibrous tumours, associated with pregnancy, having been met with. They are not usually deemed dangerous; their chief danger, in these circumstances, is from softening down and disintegration after delivery, probably from the pressure exerted having excited inflammation in them, and from this cause several fatal results have taken place, and are noticed by writers. It is not improbable, also, that when these tumours are large, and several of them at the same time so deeply imbedded in the tissue of the uterus, as in the case above, another source of danger may be found in their preventing the proper contraction of that organ; for though, as in this case, they may not prevent the uterus from expelling the fœtus, they may, nevertheless, serve to prevent it from sufficiently contracting on itself afterwards, so as to prevent uterine hæmorrhage, and thus lead to a fatal result; and this may have been so in the case above.

Still, that fibrous tumours may exist without leading to this or any other casuality, is attested by the writer above named, who says that "many cases are recorded where such tumours have not interfered with the progress of labor, and have not been discovered until a microscopic examination was made, even though they have attained a considerable size."

I have only further to add, that the woman, who, I believe, from her whole manner, doubted honestly her being big with child, admitted, at a later period, having seen her husband more recently than she at first stated; it is evident she must have been somewhere before she could get, not one, but two of them; the lateness of quickening, which, among other things, helped to deceive her, may have been dependent on the closer packing occasioned by the living in utero.

BRITISH AMERICAN MEDICAL AND PHYSICAL JOURNAL, MONTREAL, CANADA.

We sincerely regret to announce the suspension of the publication of this valuable periodical. From a circular, issued to the subscribers and friends of the work, by the Editor, Dr. A. Hall, we learn the cause of its failure is chargeable to the want of punctuality in the receipts from the subscribers to the Journal.

The British American Journal has been conducted with marked ability, and been issued with punctuality; each number that reached us has given abundant evidence of the talent, industry, and professional zeal of the medical faculty of Canada.

We have often enriched our pages with valuable and instructive matter,copied from its teeming columns.

The extinction of this periodical for want of patronage, will reflect unfavorably upon the profession of our Northern brethren. In his retirement, we wish the worthy and very intelligent Editor that happiness and peace of mind, which are allotted alone to the virtuous and good. With unfeigned regret we are called upon to sever a connection, which has been both agreeable and profitable to us, as Editor.

ALLOPATHIC MEDICINES.

Those interested (and what Physician is not?) in the purity and genuineness of the medicines used in daily practice, are invited to the circular of Messrs Philip, Schieffelin, Haines & Co., 107 Water street, New York, whose list embraces the most important and useful articles contained in the Materia Medica. The medicines put up by this house, are acknowledged to be equal to any prepared in this country; and we therefore direct the attention of Physicians and Druggists to their catalogue of articles, embraced in the commercial department of the Journal.

ERRATA.

"*Bolton's Report on Adulterated Drugs.*"

On page 719, line 40, for "*Soda* Bark" read "*Loxa* Bark."
726, " 11, for "showing Sulphate Lime," read "showing no Sulphate Lime."
727, " 29, for "*Manual* of Pharmacy," read "*Journal* of Pharmacy."
729, " 12, for "*sublimated*" read "*saturated.*"

ABSTRACT OF A METEOROLOGICAL JOURNAL FOR 1852.

BY D. T. LILLIE & Co., at the City of New Orleans.

Latitude, 29 deg. 57 min.; Longitude, 90 deg. 07 min. West of Greenwich.

WEEKLY — 1852.	THERMOMETER.			BAROMETER.			COURSE OF THE WIND.	FORCE OF THE WIND, Ratio 1 to 10.	Number of Rainy Days.	Quantit OF RAIN — Inches.
	Max.	Min.	Range.	Max.	Min.	Range.				
Feb. 26	78.0	57.0	21 0	30.10	29.83	0.27	S.	2.90	2	1.250
March 4	85.0	61.0	24.0	30.30	30.00	0.30	SW.	2.15	4	0.410
" 11	83.0	60.0	23.0	30.20	30.05	0.15	SE.	2.30	1	0.380
" 18	82.5	40.0	42.5	30.25	29.95	0.30	E.	3.15	2	3.015
" 25	86.0	41.0	45.0	30.30	29.95	0.35	NE.	2.43	1	1.420
April 1	87.5	53.0	34.0	30.10	29.93	0.17	S.	2.50	1	0.670
" 8	84.0	54.0	30.0	30.10	29.96	0.20	E.	2.70	2	0.095
" 15	84.0	56.0	28.0	30.10	29.75	0.35	SW.	2.40	5	4.435

The Thermometer used for these observations is a self-registering one, placed in a fair exposure. Regular hours of observation: 8 A. M., 2 P. M., and 8 P. M.

CHARITY HOSPITAL,

Report for January, February and March, 1852.

By J. V. Loubere, Asst. Clerk.

	SEX.	JANUARY.	FEBRUARY.	MARCH.
Admissions - -	Males	1175	1168	939
Do. - - -	Females	343	404	323
		——1518	——1572	——1262
Discharges - -	Males	858	1052	915
Do. - - -	Females	364	371	362
		——1222	——1423	——1277
Deaths - - -	Males	115	132	113
Do. - - -	Females	28	33	29
		—— 143	—— 165	—— 142

TABLE OF DEATHS DURING THE SAME PERIOD.

	JAN.	FEB.	MARCH.
Cholera - - - - -	2	1	0
Diarrhœa - - - - -	12	13	14
Dysentery - - - - -	13	12	14
Fever Typhus - - - -	13	31	27
Do. Typhoid - - - -	17	18	5
Do. Congestive - - - -	2	1	4
Phthisis Pulmonalis - - -	32	27	25
Other Diseases - - - -	52	62	53
Total - - -	143	165	142

The whole number of patients remaining on the 1st of April, instant, was 832.

There have been 36 births in the Hospital, from the 19th of January up to the 1st of April, inst., of which number 14 have already died, and 21 have been discharged.

JUSTIN V. LOUBERE,
Ass't Clerk.