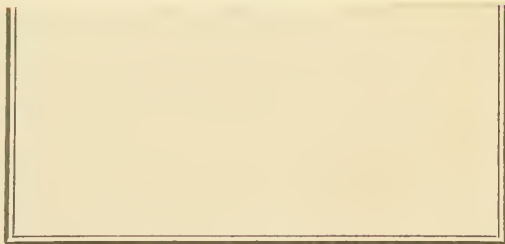
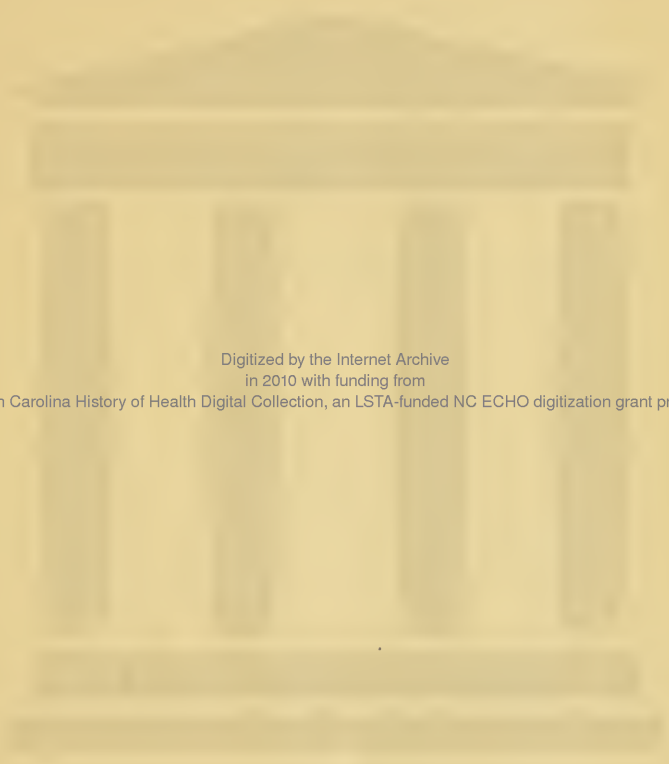


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NORTH CAROLINA MEDICAL JOURNAL.

THOMAS F. WOOD, M. D., Editor.

Number 1. Wilmington, January, 1885. Vol. 15.

ORIGINAL COMMUNICATIONS.

SUPPURATION IN THE PARS PROSTATICA URETHRÆ— CATARRH OF THE NECK OF THE BLADDER.

(Translated from the German by George G. Kinlock, M.D., of
Charleston, S. C.)

(Continued from the November Number.)

Viewed from a practical point, it is necessary to divide the "urinary tube" into an anterior and a posterior part. The anterior consists of the whole length of the "tube" as far as the *musculus compressor urethræ*, while the posterior is that portion which includes the *Pars membranacea* and the *Pars prostatica* as far as the internal sphincter, the so-called neck of the bladder.

The term "neck of the bladder" is said by many authors to be an unscientific appellation of the *Pars prostatica urethræ*, and as something not found by anatomical investigation. In reality, we do not find in an inflated and dried bladder a widening of the *Pars prostatica* comparable in appearance to the neck of a bottle, and passing immediately into the bladder, but quite the reverse, viz :

the internal sphincter closed, and in this way the *Pars prostatica urethræ* shut off from the bladder. That, in spite of this, however, the *Pars prostatica* belongs to the bladder, or *vice versa*, the *Trigonum Lieutodii* to the Prostata, shown alone by the fact that both the ridges of the *Trigonum* can be followed, anatomically, far into the Prostata, and moreover, that the muscular fibres lying next to the urethral mucous membrane in the *Pars prostatica* represent a continuation of the muscular structure of the bladder.

The term "neck," too, has an important practical meaning. The neck of the bladder, or the posterior division of the urethra, embraces that portion of the latter, which is situated between the external sphincter or the *musculus compressor urethræ* and the inner sphincter. The strength and the power of resistance of these two muscles are quite different. While the outer sphincter offers resistance, as well to the fluid secretion pressing from without onwards, as also to the fluid which endeavors to pass from within onwards, and while this resistance is overcome by the influence of the *will*, it is found, on the other hand, that the internal sphincter gives way before the slightest pressure, and therefore offers only a slight obstacle to either the passage of the urine from the bladder or back into the bladder from the posterior part of the urethra. The desire to urinate is due mostly to the fact that a large quantity of urine having collected in the bladder, the action of the inner sphincter is overcome and the urine then pressed into the neck. At the moment when the desire to micturate is greatest, the bladder and the neck become a common cavity, and the further progress of the urine is only hindered by the action of the *will* in keeping the external sphincter closed. The dissimilar action of these two sphincters is perceived when injections are thrown into the bladder. If we wish to force a fluid through the urethra into the bladder, without the aid of a catheter, and by means only of a hand syringe or an irrigator, we will find the greatest opposition at the *musculus compressor urethræ*, and in some cases it will be impossible to force the substance into the bladder, notwithstanding great force may be used, and, as a consequence of which, the fore-part of the urethra is painfully distended.

The difference between the two sphincters is more evident when there is a diseased condition of the posterior urethra itself. For instance, if a catarrhal secretion, blood, or some other fluid, collects

in large quantities in the posterior portion of the urethra, it will never succeed in getting into the fore-part of the urethra and appear as a discharge, or stain the linen, because it would have to overcome the *musculus compressor*. It chooses rather the easier task, viz : to conquer the weak internal sphincter, and then pass into the bladder. For this reason we find blood going into the bladder, when a hemorrhage occurs in the prostata, staining or coloring the urine to the same extent as it would do if the hemorrhage were from the bladder itself. We observe also, not seldom, the purulent secretion from *prostatitis* poured into the bladder, and thus setting up a disease of this organ. It is also a well-known fact that as soon as gonorrhœal inflammation, in its *abnormal* course, overstrides the boundary of the *musculus compressor*, the most serious bladder symptoms are apt to arise, such as constant desire to micturate, tenesmus, etc.

From the above facts it is seen that the posterior portion of the urethra belongs more properly to the bladder than to the urethra, and that therefore the term "neck of the bladder," also, from a practical standpoint, is well-chosen. The affections of the neck of the bladder will cause the urine in the bladder to be at one time very cloudy, at another time less so, according to the amount of secretion present. If only a small amount of secretion is collected in the posterior portion of the urethra, then the urine in the bladder is uninfluenced, and if you let the patient urinate successively into two glasses, the first half only will appear cloudy, while the second remains clear. If the secretion, however, is quite a significant one, it will flow backwards into the bladder, cloud the urine to a more or less extent, and also irritate the bladder. In this case, of course, both portions of the urine passed will appear cloudy, but unlike that of a primary cystitis, the first half of the urine will be cloudier, and will also contain a large number of compact flakes, which always come from the urethra, and therefore are not seen in the second half. As a characteristic of inflammation of the neck of the bladder there is still another fact to be mentioned, viz : that in the true form (a difference between it and anterior urethritis) one is never able to detect an outflow or discharges from the penis.

The secretion from the neck of the bladder is sometimes a very copious, at other times a very spare one. It may be a mucus or a purulent secretion. If the secretion is a very limited one, it appears

usually in the form of flakes or membranes; if it is copious, it clouds the urine proportionately. The catarrhal secretion is often commingled with spermatozoæ and with blood corpuscles. The admixture of the blood is especially often seen when very painful and violent tenesmus is present. In these cases, usually at the conclusion of the act of micturition, the inflamed and swollen mucus membrane, rich in blood, depleted, as it were, by the cramp-like contraction of the external sphincter. Therefore the blood corpuscles appear also in this case at the conclusion of micturition, and stain the linen in a characteristic manner.

The aetiological conditions of catarrh of the neck of the bladder are variable, but gonorrhœa has most often to do with its origin. It is often present in a light form as a result of onanism, and after excessive venereal indulgence it is sometimes observed. While in catarrh of the neck, which comes of gonorrhœa, a purulent secretion is produced, in the catarrh due to venereal excess we find only numerous flakes and an increased mucus secretion. Tuberculosis of the genito-urinary apparatus is another contingent which causes this form of catarrh, and is sometimes very difficult to diagnose. Lastly, all acute and chronic diseases originating primarily in the prostate, as well as also neoplasma, and inflammatory processes in the neck of the bladder due to stone, are efficient causes.

The changes which take place as a result of posterior urethral catarrh, and which can be made visible by means of the endoscope, are swelling, a puffing up and reddening of the mucous membrane, the latter bleeding on being only slightly irritated. Very often the superficial blood-vessels are widely dilated, and the mucous membrane in part appears to have been robbed of its epithelial covering; so that, by endoscopy, the mucous surface looks not unlike the granulating surface of a wound. At times changes are also to be distinguished in the *caput gallinaginis*, this appearing in some cases much hypertrophied.

The neck of the bladder is the part of the urinary apparatus from which most often secretion proceeds, which produces a desire to micturate. It is therefore evident that in this form of disease constant urination must be present as a characteristic of the same. If the catarrh is an acute one, then micturition is considerably increased, and there is present at the same time a good deal of pain; if, on the other hand, the process is a chronic one, the pain is reduced

to an unpleasant sensation at the conclusion of the act of urination, but the frequency of the act remains. Frequent urination is so characteristic a sign of disease of the posterior urethra, that we can from this alone diagnose most constantly an affection of the neck of the bladder.

If we examine the different portions of the urinary tract in their diseased conditions so as to determine their relative importance in causing a desire to urinate, he will find that in reality, these diseases of the *neck* are most often accompanied by the constant desire to urinate. The acute kidney affections exhibit this symptom when they are complicated by a catarrh of the urinary channel, but even then only at intervals. Chronic nephritis, however, and tumors of the kidney, as well as hemorrhages from this organ, are unaccompanied by this morbid sensation. The same holds good for primary pyelitis, which in part may cause a nephritis. But in pyelitis originating from gonorrhœal inflammation, which inflammation has at the same time affected the bladder and its neck, this desire will be present. In pyelitis calculosa the feeling is experienced when the concretions pass along the tract, and lacerate the parts about the neck to a greater or less degree. If no laceration takes place, then there is no great desire for micturition on the part of the patient. Pyro and hydronephrosis are unaccompanied by this morbid feeling. In primary affections of the bladder excessive micturition is seldom noticed, especially is this true when the disease is situated in the walls of the organ or in the fundus of the bladder. If the feeling does exist it is a sign that the disease has attacked the parts in the neighborhood of the neck. A good illustration is given in cystolithiasis. If a stone lies some distance within the cavity of the bladder, as is usually the case in the recumbent position, the patient does not have a strong desire to make water; but if he stands erect or walks, the stone drops down towards the neck, and the most violent and painful micturition is the result. In like manner there is no tenesmus present in inflammation of the anterior part of the urethra, but let the gonorrhœal process overstep the *musculus compressor*, and this becomes at once a painful symptom. On the other hand, we find the most troublesome and painful tenesmus, with the different forms of prostatitis, with tumors and with tuberculosis of this region. The tenesmus can, in these cases, assume such potency that the patient, night and day, has to keep the "pot" close at hand,

or be obliged, as in chronic cases, to wear some form of receptacle for the urine. Usually the pain is so great that the patient is forced to cry out, especially at the conclusion of the urinary act. It is seen from this that diseased conditions of the neck of the bladder are most often accompanied by a troublesome, and, in many cases, a very painful micturition.

Another symptom of disease of the neck of the bladder is, that at the conclusion of urination, and particularly when great pain is present, a few drops of viscid pus, or blood, or a mixture of the two, are eliminated. In purely chronic cases spermatic fluid will at times be passed, or a whitish, sand-like substance. This white sand is composed mostly of very small particles of carbonate of lime, which collect together in little masses. Examine these masses under the microscope, and we will find very often numerous pus corpuscles, which appear incrustated with the carbonate of lime.

A frequent complication of the diseased condition of this region is the reflex neuroses. They may be simply of a local nature, and limited to the urinary and the genital apparatuses, or the nervous disturbance may be of a general kind, and concern the whole nervous system. Those of a local nature are sometimes only neuroses sensibilitalis, sometimes neuroses mobilitatis, or secretory neuroses, affecting the urinary as well as the genital parts. Where the nervous system in general is affected, this is shown by a greatly increased reflex activity, or again nervous action will be lowered below the normal, and be exhibited by conditions of apathy and melancholia. Why this is the case will be understood, in a measure, when it is remembered that the prostata (neck of the bladder) is the most richly supplied with ganglia and nerves of any portion of the genito-urinary apparatus, that the *plexus hypogasticus* of the sympathetic (which by means of its *plexus vesicalis* in man supplies, besides the bladder, the vesiculæ seminales and the prostata), are in direct communication, through nerve filaments, as well with the sacral ganglion, as also with the *plexus pudendalis* of the sacræ.

Catarrh of the "neck" is at times accompanied by dangers in this portion of the urinary apparatus itself, which can be discovered sometimes with the finger through the rectum, and sometimes by examination with the sound through the urethra. We very often find in long-standing catarrhs of the "neck" following gonorrhœa, the lobes of the prostata irregularly formed, flattened or hollowed

out, the superficial surface of the same uneven, rough and hard. At times, also, circumscribed infiltrations are felt in single lobes (chronic prostatitis.) In catarrh of the "neck," caused by onanism or venereal excesses, the whole prostata appears very often atrophied, and, indeed, to such a degree, that one is scarcely able with the examining finger to make out the contour of the single lobes. In catarrh of the "neck" following from tuberculosis, the prostata is formed at times irregularly, rough and hard; at the same time one or the other vesiculi seminales is changed into a hard cord, and at times the epididymis is swollen up, forming a large, painless and hard body. There are also catarrhs of the "neck" where one is unable to detect, by examination through the rectum, changes in the paranchyma of the prostata, and this is the case particularly if the catarrh is not too old.

By examination with the sound one finds the anterior urethra, as far as the compressor, normal, the walls of the same soft, elastic and only a little sensitive; but as soon as the sound gets into the region of the *Pars membranacea* and the *Pars prostatica*, one feels a resistance, and the sound glides with difficulty, and only under increased pressure, into the bladder, while at the same time great sensitiveness is exhibited on the part of the patient. We frequently find in these cases, and particularly in the very light catarrhs, which are the result of onanism, a cramp in the *compressor urethræ*, which has been described by a few authors as "spasmodic stricture." The spasm in the *musculus compressor* is analogous to the spasmodic contraction of the sphincter ani, when catarrhal or ulcerative processes are present in that region. It is often the case, also, that this cramp exists at the same time in the intestinal muscle and in those of the urethra, when pathological changes can only be discovered in one of these organs; or cramp may be present in the intestinal muscle, when only the urethra is affected, and *vice versa*. The reason of this is that both these regions are supplied by the same nerve filaments, namely, the *hæmorrhoidalis medius* and inferior.

Since the cramp in the *compressor urethræ* by sounding will only be safely overcome by the aid of thick metallic sounds, it is evident that one should never, in such cases, use conical or small instruments, and should always exercise great care in catheterism. Slight but constant pressure with a well rounded, thick sound, will overcome the cramp, whereas a fidgetty catheterism (if this expres-

sion be allowed), carried out by means of small instruments, will only awaken the compressor to more strenuous exertions, and one may do a great deal of damage and yet not get into the bladder.

The subjective feeling of the patient in catarrh of the "neck" concentrates itself in the perineum, different from cystitis proper, where the pain is for the most part referred to the region above the symphysis of the pubes. The patient complained at one time of a drawing-like feeling in the rectum, at another of a feeling as if there was a swelling in his perineum; then again of a burning in the urethra, and sticking sensation in the glans of the penis, while pressure with the hand upon the vertex of the bladder will be borne by the patient, causing him no pain.

In affections of the "neck," by examination of the urine one may often make a false diagnosis, viz: pyelitis, if the examination of the rest of the urinary apparatus were neglected. The urine, in such a case, has for the most part an acid reaction, it contains pus, and at times also a large quantity of albumen relative to the amount of pus. By microscopical examination the triple phosphate crystals are wanting, and the small, round, inflamed and swollen epithelia of the "neck" are not easy to diagnose from changed kidney epithelia. Since, also, with affections of the neck very often neuralgic pains are present, which can be localized in the loins, the deception is even more complete. The increased quantity of albumen in affections of the "neck" may be explained by the hindrance of the escape of the urine from the urethra. This obstruction to the flow may be caused by either an inflammatory swelling of the prostata and the surrounding parts (prostatitis and periprostatitis) or by pericystitis, and in women by a parametric exudation; also by mechanical compression brought to bear upon that portion of the bladder when the ureters open; or this may happen, also, without any infiltration of this region being discovered, when violent and painful tenesmus is present, whereby, in like manner, a hindrance to the flow of urine takes place. In these cases the accompanying albuminuria is due to the partial backing up, as it were, of the urine in the ureters towards the kidneys, being analogous to those cases of chronic retention of the urine by insufficiency of the bladder, or by great narrowing of the urethra.

This albuminuria which we find in diseases of the neck of the bladder, and particularly in acute inflammatory processes, is found

at times very characteristically developed in a case of gonorrhœa which runs an abnormal course. As long as the gonorrhœa is confined to the anterior portion of the urethra, the tenesmus, as well as the albuminuria, is wanting, but as soon as the process overstrides the boundary of the compressor urethræ, these two symptoms very often appear immediately. The degree of albuminuria is in proportion to the tenesmus. If we give narcotics in such cases, and in this way get rid of the tenesmus, the albumen will disappear from the urine, or at least be diminished to a considerable degree. We find, at the same time, that during the tenesmus, in spite of the frequent acts of micturition, only a relatively small amount of urine will be produced, while, after disappearance of the same, a copious flow sets in.

The foregoing shows that there is a sympathetic albuminuria often present in diseased conditions of the neck of the bladder, together with violent tenesmus, which has nothing at all in common with pyelitis, but which will often be confounded with the latter when only the microscopical and chemical examinations of the urine are resorted to. Only when pyuria and albuminuria can be diagnosed at the same time with polyuria, and when there is no tenesmus present can we say, in doubtful cases, that we have to do with pyelitis also, or with pyelitis alone.

CORRESPONDENCE.

OPEN LETTER ON THE ENACTMENT OF A PENALTY CLAUSE IN OUR LAW REGULATING THE PRACTICE OF MEDICINE, ETC.

LEXINGTON, N. C., December 26, 1884.

THOMAS F. WOOD, M.D., Wilmington, N. C. :

My Dear Doctor :—I have read carefully over and over again your last report as Secretary of the North Carolina Board of Health, and you will allow me, as a member of that Board, even at this late day, to thank you for the very masterly manner in which you have

demonstrated the Work of Medical Progress in North Carolina, and also for indicating so clearly the urgent necessities of the hour.

It has always been to me a matter of profoundest surprise to see what a small estimate North Carolina bestows upon the health and the lives of her citizens! She has made a law prohibiting the carrying of concealed weapons, and yet she allows thousands of mountebanks to scatter broadcast all over the land the *most virulent poisons* in the form of nostrums, which are far more insidious and deadly than the pistol or the dirk.

She has erected jails and scaffolds for the murderer and other criminals, and yet she permits the most arrant and ignorant quack, who is so inclined, to murder the innocent and ignorant classes of her inhabitants at pleasure. And this wholesale slaughter of which I speak is going on silently and surely every day, and has gone on for ages past, simply because the law-makers of the land only wink at it.

Yes, sir, if the spirits of the hordes of dead North Carolinians could arise from the dead and speak to us to-day, a large proportion of them would have to confess that when they came to their latter end they did not even have the *privilege of dying secundum artem*, but were forced into old Charon's boat and over the river Styx by some unscrupulous charlatan,

"Whose pills as thick as hand-grenades flew
And where they fell as certainly they slew."

With a great many honest, respectable, but unwise persons in our State, all that is necessary to constitute a good physician is the possession of a fine horse, a pair of saddle-bags and an unlimited amount of "*cheek*" on the part of the aspirant. Brass with them means more than brains, yet, as said above, many of them are good people, excellent citizens, and should be protected by law, since they are unable, for various good reasons, to take care of themselves.

Now, under our present law any man can practice medicine in North Carolina, and large numbers of men totally ignorant of the science of medicine are actually prescribing for the helpless sick every day. Why, sir, I know a man who professes to be a graduate of one of the Baltimore schools (and I expect he is) who was sent for not long since to attend a sick child. After going through the farce of an examination, he gave the poor little thing an ordinary

emetic. This emetic failing to act as speedily as the so-called doctor desired, he made the father of the child catch some house flies, and, after mashing them up with sugar, actually forced the child to swallow them, and then very complacently remarked: "Well, I guess that'll fetch him."

Another one entertains the opinion that if he can convert every case of disease with which he meets into a case of "fits," he can cure the patient! Not a great while since he was called to see a good, substantial, but ignorant old farmer, who was suffering from general dropsy, and this is what he said of that particular case: "I *gin* the old man a *powerful dose* to turn him into fits, and just stepped out into the kitchen to *git a fork to onstop a wial*, and when I come in again the old gentleman was *deceased*."

I will mention one more, who received a letter, which I read, from Prof. Tiffany, of Baltimore, in which the Professor wrote: "You can come right along to the lectures, as preparatory study under a preceptor is not necessary." Professors of medical schools should certainly be more careful, more explicit, for this man did go on (and many others do the same) without any preparation, staid three months in Baltimore, and came back a full-fledged doctor—in his own estimation. He says he was offered a position in one of the Baltimore hospitals, and declares that he "knows as much about medicine as any man." He is as ignorant as he is conceited, yet, having a large family connection, he is doing considerable practice.

Now, then, I respectfully submit, that if our laws were sufficiently strict no such men as these could impose upon the people of North Carolina, even though aided and abetted by the professors of any medical school.

But these are by no means exceptional cases, for almost every county in the State affords a greater or less number of such pretenders, who assume all the responsibilities of the regularly educated and competent physician, with no care whatever as regards results.

While North Carolina deserves great credit for having passed a law as early as 1859 creating a Board of Medical Examiners, and while said law has already accomplished a vast deal of good by encouraging young physicians to higher attainments in medical knowledge, still the law is absolutely inadequate to meet the end desired simply because no *penalty is attached* for its infringement.

What does it amount to with these charlatans if they cannot

collect fees legally, when they know that the regular, qualified physician cannot do any better unless his debtor happens to possess more than a homestead allowance? A large number of our citizens, perhaps the larger number, do not own more than a fifteen-hundred-dollar homestead; then in this particular the educated physician and the quack both stand upon the same platform. Both are helpless before the law, and know full well that if they work for this class they have to depend alone upon the honesty of those who employ them.

But the collection of debts is by no means what concerns us most. It is this: Our law-makers are the legally-constituted guardians of the people, and it is their bounden duty to protect every citizen from the impositions of these unprincipled scoundrels, by enacting such laws as the emergency demands. Doctors should not be simply persuaded, but *compelled to give every evidence of thorough qualification* before they are entrusted with the health and lives of the people. As I said before, they make laws to protect us from the murderer and the robber, by inflicting heavy penalties upon such offenders, and yet where so many more lives are at stake, they make a law which has no penalty when broken, except that fees cannot be legally collected.

Where one life is lost in North Carolina by the murderer, a thousand are lost by men who call themselves doctors.

I have practiced medicine busily for thirty years, and not a year of that time has passed in which I have not seen valuable lives sacrificed by the ignorance of some charlatan.

I neither expect nor desire to practice very much longer, but before I do go, I very much desire to see North Carolina pass such laws as will effectually check the encroachments of these sharks, who every day *set at defiance the law* as it now exists.

I do trust that the next Legislature will do herself the honor to enact a penalty clause by amending the present law so that this imposition upon, and slaughter of, the innocents may come to a speedy end.

Since the enactment of the North Carolina law, in 1859, many of the other States have passed laws similar in many respects, but they have gone very far ahead of us, and more directly to the point, by inflicting a penalty upon all who dare to break them. California, Alabama, Kentucky, Texas, Arkansas, Georgia, Illinois, Wes

Virginia, and some others have such laws now in operation, with a penalty clause, and New York and Pennsylvania will doubtless soon follow. Must North Carolina be left as the only ground where *empiricism can flourish without let or hindrance?*

But I have said enough upon this subject—let us pass on to another. What are the prospects of the North Carolina Board of Health? What is to be hoped for and expected in its behalf from the next Legislature? I wonder if North Carolina knows that you have already spent more for her Health Board than she has done for it herself? I wonder if now, when all other States are alive upon this subject, she will still lag behind?

In view of the fact that that most terrible of scourges, the cholera, will next year most probably visit our happy land, is it too much to ask for an appropriation by which we may be enabled to stay the progress and mitigate some of the horrors of that fell destroyer? Does North Carolina expect her Board of Health to do such work as shall reflect credit upon the State and be of lasting benefit to her people, with no means to work upon? If she does, the question is, how can it be done?

Every other State has provided amply for its Board of Health; must North Carolina be in this particular the Rip-Van-Winkle of States?

I am, respectfully and fraternally yours,

R. L. PAYNE, M.D.

FLORENCE, S. C., November 16, 1884.

DR. HENRY F. CAMPBELL, Augusta, Georgia :

My Dear Doctor:—I write you for information on a matter of which I have had no experience, nor do I remember to have met with the experience of any one detailed in a similar case. It is as follows: A stout, healthy-appearing woman, of one hundred and thirty pounds weight, florid complexion, light hair and grey eyes, the mother of six children—twins once—is perfectly exhausted by the act of coition to such a degree that she is on the verge of fainting, and lies exhausted for some minutes before she is able to rise, desires to be fanned and suffers with nausea. The act is not painful,

but the idea, even, is repulsive, caused by the condition she is left in by it. At times she loses appetite, is nervous and sleepless, generally costive, despondent, and even irritable; menstruation irregular, has missed two or three months on two occasions, when that function was restored and went on as before; leucorrhœa at times, but not constant; pain in the back generally, with occipital pain and fever irregularly; frontal headache, cold extremities and a variable appetite.

She has taken treatment directed to all of these conditions in succession, but that relief we commonly find following the treatment of the individual symptoms has failed, and what I would particularly crave your views on is the troublesome prostration accompanying and following coition.

With many thanks for any views you may favor me with,

I am yours, truly,

E. MILLER, M.D.

715 Broad Street, Augusta, Ga., December 2, 1884.

E. MILLER, M.D., Florence, S. C. :

Dear Sir :—Your favor of recent date, detailing the history and peculiarities of an unusual and interesting case, came duly to hand. Only my constant occupation can account for my not giving earlier attention to your invitation to express any opinion I may arrive at.

There is an epigrammatically expressed opinion of some one of the mystic sages of our profession (possibly Aristotle himself)—sometimes quoted by modern writers. I will not attempt the Greek, but from it is evolved the English, that “the venereal orgasm is a brief epilepsy.” I am forcibly reminded of this parable by the peculiar phenomena of your case. The prostration, exhaustion, lassitude, nausea and other sequences, indicate a profound impression upon the general nervous system, originating in the functional excitement of that portion of it presiding over the sexual system. The relations between the sexual and the general nervous system are *normally* of the most intimate and responsive character, and that there should sometimes be presented a morbid exaggeration of this influence, is only surprising because it occurs so infrequently. I cannot say that my knowledge furnishes me with any case so marked as the one you detail, but I have had revelations from patients in which slighter but analagous symptoms have been related

to me as consequent upon the sexual act. I hope you will not think I am begging the question when I say that the general condition under which these phenomena occurs is one of morbidly exalted reflex excitability of the nervous centres—probably the spinal cord principally, and also, in a less degree, the brain.

In such a condition a process like the sexual act, which should principally affect and concern the nerves and centres of the sexual, but in a moderate and normal degree also the general nervous system, by excessive *polarity* of some nervous centre, is transmitted, or, more properly, the *erythim evoked by it* is transmitted or reflected with exaggerated and morbid force to the general system, affecting the pneumogastric, controlling the heart and lungs and also the stomach, and hence the palpitation, disturbed respiration, hunger for air (requiring fanning), and lastly, the nausea which sometimes follows as one of the reflex phenomena attending or following coition. In the investigation of the case on this line I now suggest two localities for the origination and reflexion of morbid nerve-force may be suspected—that is if the question arises: Is the origin of the *morbid action* central or peripheral? For abnormal states of either kind would be competent to give rise to it. Some excitable condition of the spinal marrow or brain might exaggerate the natural and normal sensations and pervert them into morbid manifestations; on the other hand, peripheral conditions, as vaginismus, irritable and inflamed cervix uteri, or inflamed or tender ovary, might, each of them, appeal so strongly to even healthy nerve centres as to evoke morbid and exaggerated results. Of course, without personal investigation, I can do no more than suggest a line of study for the case—remedial measures really and entirely depending upon the results of such a search for the cause, I forbear to suggest any general tonics. Doubtless you have already exhausted all approved agents of this kind. Her reproductive system cannot be perfectly normal, as menstruation, as you state, is sometimes irregular. A tender and displaced ovary—when impinged upon—might, like a mashed testicle, give rise to nausea, faintness and other symptoms of reflected shock or depression.

Hoping to hear that you have come to some elucidation of the case and made progress in its relief,

I am, dear sir, very truly yours,

HENRY F. CAMPBELL, M.D.

CONSTRICTION OF THE INTESTINE, OR INVAGINATION WITH PERITONITIS—POST-MORTEM EXAMINATION.

Editor North Carolina Medical Journal:

On the night of the 4th of last October I was sent for in consultation with my friend, Dr. J. E. Grimsley, to see Mr. J. P., 19 years old. Found him suffering exereciatingly in right umbilical region, below the navel, with some pain, not marked, extending over the whole abdomen; and he was vomiting freely a greenish, watery-looking fluid. His bowels were locked, his belly was slightly tympanitic, a little swelled and quite rigid, urine scanty, thirst great, tongue furred (not deeply), edges red, brown in middle, pulse 120 and compressible, temperature $102\frac{1}{2}$, diaphoresis not excessive, mind clear and countenance anxious. Patient was very restless and begging lustily for relief from pain. Now, *exactly* what was the matter it was, to be sure, difficult to tell; still I think I can, in imagination, hear a host of Solons declare the thing patent enough; yet,

“How little do they see what is,

Who frame their hasty judgment upon that which seems.”

The previous history of the case rendered the diagnosis puzzling. Dr. Grimsley said, in substance, that about three or four weeks before, and up to the time the patient was attacked with chills, he was walking about town doing pretty much what he pleased; but that his appetite was fickle, and he did not feel altogether right. September the 19th he was sufficiently well to clerk in a store, where he ate abundantly of cheese and crackers. September the 22d, 23d and 24th he had chills, and on the afternoon of the 24th Dr. Grimsley was called and discovered him with his bowels constipated, but not sore or tympanitic, tongue coated brown, some thirst, sick stomach, no appetite, urine highly colored and not much in quantity, pulse 115, temperature 102. Pulse and temperature fall in the morning, former to 95, latter to $100\frac{1}{2}$, and continued rising and falling for two or three days, when he gradually improved.

On the 30th he was discharged free from fever, and, to all appearances, convalescent.

During the afternoon of October 1st I recollect that I passed by

his home, on my way to see a patient, and the young man was sitting on the front porch manipulating with deft fingers the dulcet strings of a guitar, while he was, at the same time, vocally making the air melodious with,

“In the gloaming.”

It seems that our unfortunate young Apollo had not only drunk deeply at the sweet fountain of Beethoven, but had also imbibed the doctrines of Epicurus ; for savory food with him was a passion : so on the 2d he ate bountifully of cake, oysters, etc., and several hours thereafter he was suddenly taken worse. Dr. Grimsley was promptly summoned, and when he arrived the patient was complaining of the following symptoms : pain, not great, in the bowels, principally on the right side, anorexia, some thirst, moderate fever, no desire for food, obstipated, but they moved once copiously after taking the usual dose of calomel and rhubarb. Dr. G. did not think his condition alarming at first, but his symptoms gradually grew more grave, and, on the 4th, I was called in, and found him in the ugly situation described in the beginning of this article. Just previous to my reaching the house Dr. Grimsley had prescribed morphia and an enema of soap and warm water ; had also administered some purgative, which he immediately vomited ; and had applied rubefacients, etc. What passed from the bowels not being satisfactory, we filled them to their fullest capacity (using Davidson's syringe) with soaped warm water impregnated with salt and asafœtida (patient being partly under chloroform), which was discharged almost unchanged in color. Obstruction, in our opinion, was evident, but the character of it was the difficulty. We quickly took the position that further medication by the rectum would not only be unwarranted, but hurtful and mischievous, and that we had better pursue the plan laid down by Flint for obstinate colic: quiet the patient and apply emollients, etc., to the bowels, and allow nature, if she would or could, to remedy the evil. We therefore gave morphia, per orem and hypodermically, to produce quietude, and ice to relieve the great thirst and intensely sick stomach, at the same time mustard and other sinapisms, together with soothing poultices, were externally applied ; afterwards pounded ice was freely placed over the abdomen. No nourishment, however bland, or stimulants, or medicines, or ice, or anything, would the stomach

tolerate. We were not long in settling down to the idea of its being a case of constriction of the intestine, near the valoule bouhini (pain there was frightful), or invagination about the same point, associated with peritonitis. The case terminated fatally on the morning of the 6th.

Luckily, we were granted a post-mortem, and the character of the trouble was fully disclosed. We opened the abdomen in the usual way, two hours after death. Lymph was abundant, forming a thick coating, which extended over the the solid and hollow viscera and the parietal portion of the membrane. When the intestines crossed each other it caused them to adhere, and also agglutinated them to the abdominal walls. Large flakes of lymph (some pieces the size of two fingers) were scattered over the bowels, together with some traces of pus. The sac contained a good deal of turbid liquid, with flakes of lymph floating about in it; but no fetid gas escaped when the sac was opened.

The duodenum, a portion of the descending colon and upper part of rectum were so closely agglutinated, it was with considerable difficulty that we could disentangle them. The small and greater part of large intestines were inflamed. The ileum, nine inches above the ileo-cecal valve, was bent upon itself, and firmly tied down by strong bands of lymph, causing the gut to form a knuckle or elbow; and at that point strangulation had taken place. We tied the ileum immediately above the ileo-cecal valve, and just beyond the point of constriction, and laid it open for inspection. Three inches above the valve was one of Peyer's glands, enlarged and presenting slight traces of ulceration; two inches above was another of like character, only a little more ulcerated; two inches higher was another, forming a perfect ulcer, and two inches further upwards and immediately beyond the constriction, was another gland terribly ulcerated and perforated; the hole being large enough to admit the passage of a lady pea. As the food moved downwards from the stomach, it arrived at the point of obstruction, and could proceed no further; and, as the perforated ulcer was located just above the impediment, a portion of the contents of the intestines readily escaped into the cavity of the abdomen; therefore the fearful peritonitis was the result. The history was such an unusual one, without a necropsy, we doubt if a correct diagnosis could be made. We pronounced it a case of typhoid fever of the walking variety. I regret that we did not have the time to investigate the

liver, spleen, kidneys, etc., for we love dissections, and the subject was a beautiful one. Autopsies ought to be held oftener than they are; and if we do not obtain them, the fault is not so much "in our stars as in ourselves."

W. C. GALLOWAY, M.D.

Snow Hill, N. C., December 31, 1884.

SELECTED PAPERS.

THE PREPARATION AND THERAPEUTICS OF HYDROCHLORATE OF COCAINE.

BY L. E. SAYRE, PH.G.

Recent developments connected with this comparatively new salt have excited much interest in the medical profession. Its peculiar property—one for many years sought after, yet until recently almost unknown—has been at length found to exist in this alkaloid obtained from Erythroxyton Coca, namely, that of producing local anæsthesia. By its use the surgeon can, without pain or discomfort to the patient, perform an operation which must otherwise cause great agony. It is said, however, that, while there is produced and insensibility to suffering, the sensibility to touch, in the same part, still remains.

That such a property should be discovered in a substance so apparently innocent, seems truly worthy to be considered a triumph in the chemistry and therapy of the present day.

The formula for its preparation, as given to me by Mr. M. Eisner, which is substantially that of Niemann (see "*Amer. Jour. Phar.*," 1861, p. 123) is as follows: Displace coca leaves with dilute alcohol and a small quantity of sulphuric acid. Add calcium hydrate to the percolate, neutralize with sulphuric acid, distill off the alcohol. Dissolve the residue in water, and filter; add soda bicarbonate to the filtered liquid, and wash with ether, adding a small quantity of muriatic acid. The ethereal solution will deposit the hydrochlorate of cocaine in an amorphous mass, gradually crystallizing. Purify

by dissolving in water, precipitating with soda bicarbonate and washing with ether, and leave it to crystallize out of the ethereal solution.

Local narcotization was practiced long ago, of which a number of instances might be cited, but the scope of this article will admit of only a few.

Bouisson used a plaster of opium to the toe of a patient for some time, and afterwards succeeded in partially tearing away the nail without causing pain. He used belladonna ointments to relieve the pain of operation upon *fistula in ano*. Plans have been in vogue for smearing bougies, catheters, etc., with narcotic ointments while dilating, cauterizing or incising urethral strictures.

B. W. Richardson (1866) used the atomizer for rendering parts insensible, the most volatile liquids producing the best results.

H. J. Bigelow recommended the use of rhigolene spray. By these means the part to which the application was made was temporarily frozen, and thus the sensibility was almost entirely destroyed. Freezing mixtures of salt and ice were long formerly used for this purpose.

Von Anrep, the first one to apply cocaine to the eye, in 1880, used a solution containing $\frac{1}{2}$ milligram to the conjunctiva. He noticed it caused temporary dilatation of the pupil, but took no note of the temporary insensibility it produced.

Dr. Isaac Ott experimented, in 1876, internally, and noticed resulting pupillary dilatation.

In order to obtain reliable information concerning this new agent, the writer has interviewed some of the leading oculists of this city, and obtained from them their experience and opinions in regard to it.

Peter D. Keyser, M.D., Professor of Ophthalmology in the Medico-Chirurgical College, and one of the Surgeons to Wills Eye Hospital, stated that his experience had been with varied operations, and that he finds it to be, as a local anæsthetic, "one of the grandest things discovered, but it does not seem to pass deeply into the tissues." In cases of strabismus there was not the least pain in grasping and cutting the conjunctiva, nor until the hook was passed under the muscle and its tendonous attachment cut.

This part of the operation was very painful. In cases of dissection for soft cataract, and in removing a cretaceous capsule, it

acted charmingly, but when the iris was grasped and cut there was the usual pain. In the removal of foreign bodies upon the cornea, it comes splendidly into place. The proper way of instilling it is to run a drop over the cornea, every minute, of the 4 per cent. solution, for three or four minutes, and then go ahead with the operation, for by that time the complete anæsthetic influence is attained. If the operation is a little long, the instillation is continued every few minutes during the whole time. Its influence passes off in about ten to fifteen minutes. As a whole, it is one of the most advantageous substances that has yet come into use for the purpose intended, as it will save the trouble of etherizing in many cases, and be the cause of saving time in operations as well as relieving pain in many little cases almost too light to chloroform or etherize for. With inflamed or congested eyes, more frequent instillation and longer time are required to obtain the effect.

Hypodermic injection under conjunctiva caused its anæsthetic action deeper, and relieved pain in tenotomy in strabismus operations.

The 4 per cent. solution is preferable to the weaker ones, the latter requiring longer time in proportion to their strength.

Dr. Henry S. Schell, of Wills Eye Hospital, gives me his experience, as follows :

“1. The most favorable class of cases for the use of the drug is that where a foreign body is embedded in the cornea. These cases are very numerous, are accompanied by much pain, and are often difficult to deal with, especially in children, on account of the inability of the patient to control the movements of the eye when it is approached with a spud for the purpose of removing the offending particle. As a general rule, however, in five minutes after the instillation of four or five drops of 2 per cent. solution of cocaine into the conjunctival sac pain is gone, and the cornea is insensitve, so that the foreign body can be picked out without deliberation and accuracy. But this happy result is not invariable. In many cases several repetitions of the instillation, at intervals of three minutes, will be necessary before the requisite insensibility can be obtained, and in some instances the patients have asserted that the drug had no effect whatever.

“The best way to apply the solution is to insert the drops into the outer angle of the eye, the patient being in a recumbent position, or

with the head well thrown back, and then to retract the eyelids so that the fluid can find free access to all parts of the conjunctival sac.

“The action of the drug is accompanied by a blanching of the surface vessels, as well as dilatation of the pupil and paresis of the accommodation. The progress of the anæsthesia may be measured by occasionally touching or scraping the conjunctiva with the point of a needle.

“2. In strabismus and cataract operations, in iridectomies, etc., it will be found necessary to use the cocaine solution more freely and of greater strength. Two drops of a 5 per cent. solution may be instilled every three minutes. After from four to eight such applications the operation may be performed. It has not yet been my good fortune to see any case where the free use of the strabismus hook, or the cutting of muscle, was unattended with pain. I have been told of a case where enucleation of the eyeballs has been performed without discomfort to the patient, by the liberal use of cocaine. This is to me very surprising.

“3. In painful diseases of the cornea this drug is of much benefit. It is especially useful in phlyctenular keratitis with great photophobia. The attendant blepharospasm is completely relieved, and the child's eyes may be examined without its screaming or struggling. In the severe cases of irido-keratitis, of constitutional origin, cocaine will relieve the intense photophobia after all other measures have failed. I have not observed, however, that the drug has any curative effect upon the morbid processes.”

The following observations and conclusions are quoted in full from a communication to me under date of November 12th, from Dr. Charles A. Oliver, one of the Ophthalmic and Aural Surgeons to St. Mary's Hospital, of this city, who for some time has been making personal use of the drug, besides having access to the current literature upon the subject. He therein furnishes me with a few data of its use and value in ophthalmic practice, which he has kindly tabulated in a series of definite observations and conclusions:

“With varying quantities of three to eight drops of a 2 per cent. solution instilled into healthy eyes twice or three times, at five minute intervals, the following observations were made:

“1. Almost *ad maximum* pupillary dilatations occurred in forty-five minutes to an hour, the pupil returning to normal size in four to six hours. This length of time could not be considered as normal, as it

merely represents the individual muscular *tonus* and amount of endosmosis.

"2. During the time of dilatation, the pupillary rim of the iris assumed various irregularities in outline of the same character as may be seen in the action of Duboisia and Homatropine upon the iris.

"3. At the time of instillation no more local inconvenience or pain was complained of than during the use of the solution of the neutral salts of the other mydriatics.

"4. In some instances, in a few moments following the use of the drug, there was a complaint of a saltish taste, which quickly passed away.

"5. In no instance was there the least constitutional manifestation of the drug.

"6. In every case accommodative range was lessened, but to what extent no accurate determination had been made. This came on during the pupillary dilatation, and fully returned in several hours' time.

"7. In each case there was both local analgesia and anæsthesia. Sensation of pain was lost wherever the drug had touched, and sensibility was deadened in localized areas. These evidenced by the pinching of the conjunctiva with forceps without causing any pain; whilst in some places the grasp was not felt at all, that is, when care was taken not to exert a dragging over a large area of conjunctiva.

"Conclusions :

"First. Upon account of the evanescence of pupillary dilatation and the quick return of ciliary power, the drug will be of great value in making ophthalmoscopic examinations in cases dependent upon their use.

"Second. It will be useful in cases where it is desired to introduce instruments of holding or fixation beneath the lids. Lachrymal probes coated with ointments containing the drug may be of advantage in lessening the sensibility of the passages during the maintenance of the probe in position. In fact, it may be used where any instrument of precision or of treatment is apt to cause error, inconvenience or harm by pain or sensibility.

"Third. It may be of value in annulling the pain from applications of cauterizing agents, strong astringents, etc., although it is

to be remembered that the tissues may be rendered momentarily abnormal by the anæsthetic to such an extent as to prevent proper actions of the astringent or cauterizing material.

“Fourth. In diseases or injuries of the external eye, where nerves are exposed or irritated, it may be employed with much soothing benefit. Thus, in scratches of the corneal epithelium or of the conjunctiva, in superficial ulcerations or nerve irritations, it may be of inestimable good.

“Fifth. It may be of value in various surgical operations upon those parts of the eye which can be readily reached by the drug, such as the extraction of foreign bodies from the cornea and conjunctiva, slitting of canaliculi, extirpation of corneal or conjunctival tumors, etc.

“Sixth. It may be of service as a local hæmastatic in cases of operation where it is desired to follow the steps of the procedure without obstruction from clots and masses of blood, or as a remedial agent in arresting hæmorrhage from trauma or disease.

“Seventh. Judging from its action upon the iris and ciliary muscle, it may be of some importance in operations upon these structures in lessening pain and checking hæmorrhage.

“Eighth. By its use in ophthalmic surgery all of the petty annoyances from general anæsthesia may be done away with.

“Ninth. In view of the powerful effect of the drug upon the eye, more data are necessary before it can be *universally* employed as a local anæsthetic in eye-surgery.”—*Amer. Jour. of Pharmacy.*

CONSTITUTIONALITY OF LAWS REGULATING THE PRACTICE OF MEDICINE.

The matter of the regulation of the practice of medicine and surgery by legislative enactment is daily acquiring more importance and efficiency as the various acts which have been from time to time passed in the different States come to be tested and sustained by the courts.

The most recent case of this kind has been decided by Judge Green, of the Supreme Court of West Virginia, in regard to one

Dent, who sought to practise medicine in that State without the required license, which was refused him because the Board of Health did not consider that the college whence he had his diploma, the "American Medical Eclectic College of Cincinnati, Ohio," came under the word "reputable" as defined by said Board. The defendant having been found guilty in the lower court, and the court having overruled a motion for the arrest of judgment, the former took a bill of exceptions, setting forth that the act "was unconstitutional and therefore void so far as it interfered with the vested rights of the defendant in relation to the practice of medicine." In some half-dozen or more cases quoted by the court as occurring in different States of the Union, this was the point taken in every instance, and has always been overruled, and the constitutionality shown by the application of undisputed principles well settled by numerous decisions.

In view of the increasing importance of a knowledge of this subject to medical men, it will be interesting to explain more fully the ground on which such unconstitutionality is alleged. It is held that the sections defining the conditions essential to obtaining the license to practise, which are similar in the acts of the different Legislatures, are inconsistent with Article 10 of the amendments to the Constitution of the United States and to Section 1 of Article 14 of the same amendments, as well as sections in the bill of rights, which are also more or less common to the constitutions of all the States. Perhaps the strongest paragraph out of a number explaining these provisions is the following: "Every wanton and careless restraint of the subject, whether practised by a monarch, a nobility or a popular assembly, is, to a degree, a tyranny; nay, even laws themselves, whether made with or without our consent, if they regulate and constrain our conduct in matters of mere indifference, without a good end in view, are regulations destructive of liberty." But the courts have ruled that the laws regulating the practice of medicine are no violation of such principles. The Legislature of any State has a perfect right, under its general police power, to pass laws placing individuals under restraint in the exercise of any business, calling or profession, and has exercised it. In accordance with this laws have been made to license bakers and sellers of intoxicating drinks, and the practice of law has been thus regulated in every State, and the same principles apply to the regulation of the practice of medicine.

An amendment passed in 1818 to the Massachusetts Act of 1817 is analogous to Section 4 of the Registration Act of the State of Pennsylvania, requiring the faculties of the medical colleges in this State to pass upon the diploma of a graduate of a college in another State who desires to practise in Pennsylvania. The amendment to the Massachusetts Act provided that no person practising physic or surgery shall be entitled to the benefit of the law for the recovery of any debts or fees for his professional services, unless he shall, previously to rendering such services, have been licensed by the Medical Society or been graduated a doctor in medicine at Harvard University. This amendment, it was claimed, was unconstitutional, but not because it required a license of a physician before he could practise, but because, in violation of the State constitution, it conferred peculiar privileges upon the Medical Society or Harvard University. But the court in *Hewitt vs. Charer*, 16 Peck, 356, decided that this act was constitutional, saying: "It appears to us that the leading and sole purpose of this act was to guard the public against ignorance, negligence and carelessness in the members of one of the most useful professions." And this they treated as legitimate, as a matter of course.

In giving the opinion from which the above information is obtained, the learned Judge concluded as follows: "It seems, therefore, clear that both on reason and authority we could not do otherwise than hold that all the provisions in Section 9 and Section 15 of Chapter 93 of the Acts of 1882 are constitutional and valid, and should be enforced by all the courts." And in this the three remaining judges concurred.—*Medical News*.



MODERN PROGRESS IN MATERIA MEDICA AND THERAPEUTICS.

By E. R. SQUIBB, M.D.

(Read before the New York State Medical Association, at the First Annual Meeting, November 18, 1884.)

Twenty-five years' experience in supplying a small part of the medical profession with some of the established articles of the materia medica suggests a retrospect of what has appeared to be

the progress made in the remedies used and the use of remedies in the treatment of disease.

The very large and important modern progress in the discovery and application of new remedies, and the improved views and processes of the books and journals are not to be considered here, but only the elements of that slow and substantial progress made among that class of close observers, scattered all over the nation, who learn most and improve most on their own observations and experience—who read much, but rarely write, and are rarely seen in the medical societies, and whose progress, therefore, has to be inferred from the use of the materials they employ in the practice of their art. The number of those who are quite outside of the medical organizations, or who are simply enrolled without taking any active part, is very large indeed, and their value and influence in the profession is very great, and is generally conservative and good.

From a pretty close association with some of this class in all parts of the country, through their correspondence and a certain familiarity with their wants in the materia medica, when not prompted by the ubiquitous drummer and his wares, the following points of progress are either indicated by facts or inferred from collateral circumstances; and the points are made here, in the loose form of inference, not simply nor principally as a retrospect of the past, but as being of much more importance in the progress of the future.

That is, modern progress is taken in the sense of learning from the advancement of the near past what to work for and look for in the near future.

First. The thoughtful physician seems more and more to realize the fact that his success, as an individual, as well as the success of his profession, depends upon his real utility to the public. As the age grows more and more utilitarian, so the profession has answered and must answer to this progress. The demands of the public upon the medical profession are that disease be prevented as far as practicable; be successfully managed when it comes, and that its damages be skilfully repaired; and in proportion as these demands are rationally and successfully met, will the standing of the individual and the profession to which he belongs.

This public, though much interested in abstruse researches and ingenious speculations and theories of health and disease, is only entertained or amused by them, and the profession not only gets

little substantial credit for them, but often has them turned against it in ridicule. All this is becoming better understood and realized, and the physician is looking more and more carefully, not only for knowledge, but for the means of applying it. He makes the accurate investigation of disease, but does not rest there, but tries to control the abnormal conditions found. Much less is heard of expectancy—much less of “Young Physic,” than formerly. Active agencies carefully studied and skilfully used are much more common now, and the search after such agencies is even becoming hurtfully keen, so that there is danger of the opposite extreme from the former expectancy.

Instances might easily be given of individuals of no uncommon attainments or opportunities, gifted with neither the polished manners nor liberal morals which so often contribute to one kind of success, but fairly equipped with the known means of controlling disease, who, often in frontier populations, within five or ten years, show to the communities in which they work the utilitarian value of a doctor, and through him of his profession also. Success to his community means success to him and to his profession at large. And the success which begins in the actual results of his skill and labor in his community endures and increases just in proportion to its utilitarian character. Thermometers, urinometers, litmus paper, test-tubes and a few reagents, are always found in the orders of such physicians, and plain microscopes, and even sphygmographs, occasionally. Their materia medica proper is commonly simple, the articles not numerous, but effective, and rarely outside of the Pharmacopœia, and their orders for the newest and best advertised remedies are often conditional, always in very small quantities, and, as a general rule, not repeated.

Few will doubt the dependence of the profession for success upon its utility to the public, and very much of this utility must always depend upon therapeutics, and this, in turn, upon the materia medica. Hence, if there be a progress in materia medica and therapeutics, it is an improvement of the very foundation upon which the medical profession rests, and its importance in the future can hardly be over-estimated.

Another important reformation that appears to have been slowly and steadily going on in the near past is in the value of the word cure. The old idea of specific or particular diseases and specific

cures seems to have undergone considerable modification for the better, not only in the intelligent portion of the people, but also in the medical profession. That diseases are all so many definite entities, for each of which there is a special cure or antidote, if it could only be discovered ; and that incurable diseases are only those for which cures have not yet been discovered, but for which they may be discovered at any time, is a doctrine which common education in the sciences is steadily bringing into a newer and truer light. Many physicians successfully treat disease, if not diseases, but very few undertake cures. Neither do intelligent persons call physicians with the unmodified idea of being cured. But they rather seek for skilled advice, and submit themselves with more or less confidence to be so controlled that they may have the best chances of speedy recovery. And when well, they are not so often, in their own language—and still more rarely in that of the physician—cured, but have simply recovered. Modern progress seems to indicate that the farther both the public and the profession get away from the old meaning of this word cure the better, for when it is properly understood in the modern light of cause and effect, much complex, indiscriminate drugging will be saved, and the dealers in cures—from corn cures to cancer cures—will have their mercantile enterprises better understood. If modern therapeutics is coming to have less and less to do with cures, in the old acceptation of the word, then materia medica is surely equally progressive, for there are probably hardly any now who believe in the possibility that any drug should cure any disease, and therefore it is doubtful now whether there be much chance left, in the profession of medicine, at least, for repetitions of the episodes of Cundurango, Missisquoi Water and mud, and Chian Turpentine. But as the doctrine of cures disappears, the utility and certainty of remedial agents become better established, so that the modern progress is attained in both directions.

Another element in the progress of the near past is a gradual and steady emancipation from the trammels of arbitrary doses of medicines. Physicians are no longer satisfied now with the doses given in the books. With increasing knowledge and broader views, they now look for effects, and the time is, perhaps, not far off when the only use of stated doses of medicines will be to know what quantity to begin with. It has come to be very commonly recognized that

different persons, and even different conditions of the same person, are very differently susceptible to the action of medicines, and that within certain limits, quantities must be adjusted almost to each individual case. In three successive cases of confirmed epilepsy in adults, the number of seizures were not sensibly reduced short of 100 grains of bromide of potassium a day in one case; 160 grains in a second case, and 240 grains in the third case, and these quantities produced only moderate bromism. Had the doses of the standard books been adhered to, two out of the three cases would have been unimproved by the medicine.

There are cases wherein the ringing in the ears will be caused by 2 grains of sulphate of quinine, and there are others which require 60 grains to give this sign of saturation, and there are persons in whom different quantities are required at different times. To treat a recurring malarial fever without recognizing these facts is to fail of success, and discredit both the physician and the medicine, in a considerable number of the most difficult cases, where most credit is to be gained. Dr. William H. Van Buren, more than twenty-five years ago, emphasized this liability to be trammelled by arbitrary doses. In the treatment of consecutive syphilis he found a number of cases recovered under the use of 40 grains of iodide of potassium a day. But others were not impressed by less than 100 grains a day, while a few required 480 grains a day to give similar results. His teaching, and that of others who followed him, applying the same principle to our agents, have done much for the modern progress in this important matter of doses, for it is generally realized now among the best therapeutists that no remedy can be properly considered as having failed until it has been pushed to a physiological or a pathological effect.

There has also been a very important progress made in the knowledge obtained and applied in scrutinizing the quality of medicines, and that has resulted in the production of a better class of medicinal agents than was ever before attained. And it is of no small advantage to have learned that this close scrutiny and discrimination by individuals throughout the length and breadth of the land, is far the most effective way of checking adulteration, and the mismanagement of carelessness, ignorance and cupidity in the vending of medical supplies. Year by year more physicians realize the fact that the drummer is not their safest dependence, drum he never so wisely, and they listen to his voice and take his samples more warily, trusting rather in their

own ability to judge of the agents which are so important to them and their patients.

Every year more Pharmacopœias are sold, and more physicians confine themselves mainly within its scope, and more tests and reagents are used ; and now that the Pharmacopœia has a full set of officinal test-solutions, it may be confidently expected that still more physicians and pharmacists will learn to apply them in this important interest of effective medicinal agents. All physicians who want to know it, know now that it is not the writing of papers on adulterations, nor the resolutions of societies so much as the individual knowledge, care and watchfulness of each physician for himself, that secures to him the character of his supplies. It has always been the case that good supplies could be easily obtained by proper care and scrutiny, but it has never been so easy as it is now, in consequence of the general improvement in the quality of supplies and the wider market for selection.

Moderately good and proper qualities are as plentiful and as cheap as ever, but the physician having learned that cheap supplies is poor economy, is upon his guard if he desires to be. He has also learned that high-priced supplies are not always the best, and hence his safety only in his own testing processes, and in avoiding complex remedies and forms of medicine which it is difficult or impossible to test.

Another element of progress notable within the past few years is that physicians use fewer and more active agents, and use them more simply. The time for complex prescriptions and of using several agents at the same time, seems to be passing away, and physicians do not go from one preparation to another so easily as heretofore. The using of a few definite agents, and knowing from personal observation just what they will do, is of such manifest advantage that it would be strange indeed if there was no progress here. Physicians' orders, from being long, and embracing many doubtful and indefinite articles, and many duplicates, or articles used for similar purposes, are now short and compact in the main. ten to fifteen standard medicines at a time is about all an ordinary physician wants, and this, about twice or thrice a year, keeps up a supply of not over double that number of agents in all, for common daily use. This enables him to watch the qualities better, and keep his stock fresh and in the most efficient condition.

Much progress has also been made in using more concentrated forms of medicines. Decoctions, Infusions, Vinegars and Wines have almost gone out of use, while Tinctures and Syrups are steadily falling into disuse, though not as rapidly as they deserve. These are all replaced by the far more accurate and convenient Fluid Extracts, with their small and effective doses, which can be so easily administered in so many different ways. Thus the physician and pharmacist, instead of having to keep two or three preparations of the same drug to get stale on his shelves, has to keep only one, and this the best and most accurate one.

Much has also been gained in the precision with which medicines are measured for administration, and the measuring apparatus has been much extended and much improved in accuracy, so that it is not difficult now to get fairly accurate weights and measures at a reasonable cost.

The many and great advantages in the use of the salts of a few alkaloids have led to the extreme of seeking to extract and use the active principles of drugs, instead of the preparations of the drug, in all possible cases, and there are many excellent reasons for this if it were only practicable. Unfortunately, the so-called active principles rarely represent the drug from which they are taken, either fully or fairly, and are of such variable strength that they are less trustworthy than the drug. Beside this, many of the alkaloids and nearly all the glucosides are so loose in their molecular structure, that they split up and become partially or wholly inert without change in appearance, and under circumstances that are not known. Physicians who examine most closely into the character and processes of extraction of many, if not most, of these so-called active principles, will see that they are frequently the result of the chemistry applied for their extraction, and that they do not pre-exist in the drug, and therefore can only partially represent it.

Finally, perhaps the greatest progress of all has been in the power and definiteness of the agents used, and of judging of the manner and effect of using them. Many years ago, when among the first of these very definite and powerful agents, the American Elebore, came into use for controlling the action of the heart, it was objected that its use was merely controlling a symptom of disease without going to the root of the matter at all. The pneumonia went on all the same, and perhaps the depressing action of

the drug was simply added to the depressing action of the inflammation, and harm rather than good might rationally result. It took some time to show by actual experience that the drug could be given in controlling quantities without more depression than was needed in a sthenic disease, and that the lowering of the pulse rate by 15 to 20 per cent. meant the sending of 15 to 20 per cent. less inflammatory blood through an inflamed, congested and oppressed organ, whose obstructed functions were threatening life, and therefore that treating this pulse system was really treating the whole of the disease by controlling its prominent element. It was thus clearly recognizable that by subtracting one prominent element or symptom from the group which constitute a disease, the bond is broken, and it then tends to disintegration, just as when an atom or a group of atoms is subtracted from a molecule, it splits up and loses its identity and its reactions.

Then when bromide of potassium was successful in controlling the seizures of epilepsy it was objected that it merely controlled the expression of the diseased condition, without affecting that condition, since when the medicine was omitted, or was used in too small quantity, the seizures would recur. But in the progress made in the near past it has been abundantly shown that when the bromide is skilfully managed and continued through a long time, with great perseverance and care, for a sufficient length of time after the attacks have ceased, many patients are no longer in the condition which caused the attacks, and that thus in treating the principal symptom the condition causing it has also been treated successfully.

Again, in those agents which simply reduce temperature—take, for example, the use of salicylates in acute rheumatism—the effect is to control one symptom primarily, but it happens that through the close relationship of symptoms, two others of equal importance are also controlled, namely, the pain and swelling. It is maintained that the disease goes on and commonly runs its course; but it is admitted that it is occasionally cut short, and that it is almost always rendered comparatively free from high fever, pain and swelling—that heart damage is less frequent and less serious, and that relapses occur less frequently.

It is needless to multiply examples to show that great progress has been made in the acquisition of definite agents and in the knowledge of how to use them, and should the next ten or twenty

years prove as fertile in the resources of the medical art as is indicated by the progress of the past, the profession will occupy a much higher position in the estimation of the public than it now does.

It should not be inferred from the above that all the prominent changes in relation to the materia medica within the past few years have been improvements, or for the good of either the profession or the public, for much doubtful medication has grown into common use among large numbers of physicians who do not seem to think where the mercantile enterprise of the manufacturer is carrying them.—*Ephemeris of Materia Medica, etc.*



THE ACTION OF THE SULPHATE OF QUINIA ON THE BLOOD.

By HOBART A. HARE, M.D.



While it is generally agreed that quinia instantly stops the migration of the white blood-corpuscle on the stage of the microscope, it has been argued by many that the drug does not prevent its migration in the body.

For the purpose of coming to some definite conclusion in regard to what the action of the drug really was, I carried on four series of experiments, using twelve Cohnheim frogs in each series.

In order to provoke migration I used the point of a hot needle, which was applied and instantly withdrawn.

As all results would be negative unless the blood-vessels observed were of the same general size in every case, I never watched an arteriole over three millimetres in diameter, the average diameter of the vessels being in all four series two and a fraction millimetres.

In the first series I counted the migration from the vessels when there was no inflammation and no drug present. I found that in twelve frogs the migration in thirty minutes averaged twenty-nine.

In the third series, to which I gave ten grains of the quinia hypodermically, the migration averaged 1.4 in thirty minutes.

In the fourth series, where I caused inflammation and gave ten

grains of quinia hypodermically, the migration did not take place at all in five of the frogs, two corpuscles migrated from two of the frogs, and from the other five only were migrated in thirty minutes, so that the average was virtually none at all.

These series would prove that the corpuscles are stopped in their migratory movements by the drug, at any rate in regard to passing through the wall of the blood-vessel.

Whether the drug does this by a direct action on the corpuscle or not, is another question.

To discover in what way the drug stopped the migration—that is, whether the corpuscle itself was influenced, or whether the blood-vessel wall was acted on—I instituted the following observations :

Causing inflammation and administering the drug, I noticed that the corpuscles stopped at the irritated point and congregated, but did not pass through the wall as they did where there was no drug, but simply inflammation present ; and *this* difference existed, viz : that where inflammation was alone present the walls were dilated, and therefore thinner, but where the drug was present also the walls were contracted. This contraction could not only be seen by the eye, but was marked by the use of the eye-piece micrometer.

To cause this contraction the drug must act either on the vaso-motor system or the muscular coat of the blood-vessel wall.

In order to see if the contraction of the blood-vessels was due to centric vaso-motor stimulation, I made a section of a frog's spinal cord high up, and found the contraction was still present, and in another frog, to whom quinia was given after section was made, the contraction took place. This proves that the action is not centric. The only remaining action which it could have is on the peripheral vaso-motors or the muscular fibres in the vessel walls. According to Prof. H. C. Wood, atropia in toxic doses probably paralyzes the muscular coat. I therefore gave a frog one-sixtieth of a grain of atropia, and saw an arteriole dilate, thus proving one-sixtieth of a grain of atropia to be a toxic dose to the frog. Another frog was taken, inflammation caused, quinia given, then atropia, and the contraction caused by the quinia remained. This would seem to prove peripheral stimulation ; but this is not at all tenable, for if atropia paralyzes the muscular fibres, the stimulated peripheral endings could not cause contraction.

The only explanation seems to be that the quinia acted on

the fibres themselves to such an extent that it antagonized the atropia.

My observations in regard to the effect which section of the cord would have on vaso-motor contraction are directly opposed to those of Jerusalimsky, who asserts that the contraction is not present after section is made. Schreß found that in the cinchonized animal neither galvanization of a sensory nerve nor asphyxia produced contraction, claiming with Jerusalimsky that there was paralysis of the whole vaso-motor system, as I understand them. Heubach found *no* paralyzant action of this kind when he used galvanization of a sensory nerve. To prove, then, that quinia has no paralyzant action of this kind, I took a frog and strapped him to the frog-plate by placing a very strong and tense rubber band over the windpipe, and in order to prevent his using his skin as a means of respiration, I allowed it to become dry. On examining his mesentery, I found no paralysis present at all, and the arterioles evidently very much contracted, as if by the action of the stimulated vaso-motor combined with a direct action of the drug on the muscular coat. It therefore seems proven to me that the drug does not paralyze the vaso-motors either peripherally or centrally, and probably has no action on them at all, unless it be *perhaps* very slight stimulation, which I doubt, any contraction of the vessel being due to the action of the drug on the muscular coat. It seems to be decided that quinia does also decrease the heart-power, as nearly all observers agree in this respect—that is, in toxic doses.

I shall consider, therefore, proven—

1st. That the sulphate of quinia does not cause paralysis of the vaso-motors.

2d. That the contraction, when sulphate was administered during inflammation, was produced by a direct action on the muscular coat of the blood-vessel, and was independent of any vaso-motor action.

3d. That the drug does prevent the migration of the white blood corpuscle in the body, particularly when inflammation is present.

4th. That this stoppage of migration is due, not to any action on the corpuscle itself, but to the contraction of the muscular coat and the decreased heart-power. Because if you have a dilated vessel you must have a thin wall, and if you have a strong heart you have both the *vis a tergo* of the circulation and also the decreased resistance of the wall in so thin a state, and consequently the corpuscles migrate readily.

If you give a drug which causes both decrease in that heart-power and contractfon of that inflamed blood-vessel, you no longer have that *vis a tergo* so strong, nor the doors of migration so wide open. Briquet, A. Eulenberg and Schlobkow have all shown that large doses of quinia depress the heart and cause its stoppage in diastole. In two frogs' hearts which I immersed in a solution of quinia I also got stoppage in a very short time in diastole. It seems rather difficult to reconcile the two facts that quinia should have such a depressant action on the heart-muscle, which, though striated, is virtually involuntary, and yet seem to have a stimulative action on the non-striated muscular fibres in the blood-vessel walls. No explanation can be offered of this other than there being some depressing action on the heart's contained ganglia.

Bonour, Arvedi, Baldwin, Meher, Monneret and Magendie, state that the blood after death from toxic doses of quinia is dark, defibrinated and non-coagulable. Briquet, on the other hand, states that it is not as the others state, but just the contrary.

Taking three rabbits, I gave them three different doses respectively, as follows: to the first, one hundred and twenty grains, hypodermically; to the second, one hundred grains; and to the third, seventy-five grains.

In every case the blood clotted very rapidly and firmly in the vessel it was caught in, and there was a clot in the soft, flabby heart.

It may be well to state that the temperature of the surrounding atmosphere during the observation of the frog's mesentery was never allowed to vary more than five degrees Fahrenheit. The observations were always made at the same time of day, and the frog was thrown away after his mesentery had been exposed thirty minutes, as diapedesis was set up after that time by the abnormal exposure of the parts. The water used to keep the mesentery clean was of uniform temperature also. The rabbits were young and healthy, and were kept in a room of good size, with plenty of food, light and air.—*Med. Times.*

BIGELOW'S METHOD OF RELIEVING ASPHYXIA FROM BLOOD IN THE TRACHEA.—As related by Dr. Beach, is to quickly pass an elastic catheter through the tracheal wound, down the trachea, beyond the obstructing clot, and through forcibly inflating, thus dislodging the clot.—*N. Y. M. Journal.*

MANSON ON LIVER-ABSCESS.

By JOHN D. MALCOLM.

In the Medical Reports of the Chinese Imperial Maritime Customs for the half-year ending September 30, 1883, is an instructive paper on liver-abscess. Its author, Dr. Patrick Manson, remarking that not many years ago recovery from this disease was so rare that to tell a man he had an abscess in his liver was tantamount to telling him he must die, proceeds to show that it is quite otherwise in our day; that, since the introduction of the aspirator, the drainage-tube, and Listerism, there is no reason whatever why an abscess in the liver should not be successfully treated in exactly the same way as an abscess anywhere else—i. e., by early and free discharge of its contents. Early treatment needs early diagnosis, and the great secret of successfully diagnosing abscess of the liver is (according to Dr. Manson) to “suspect” it; for, although in a few instances the symptoms may be urgent and unmistakable, in the great majority they are highly ambiguous. Hence, when a patient is seen “who has been out of health for some weeks or months, whose range of temperature is from 100° to 102° , or a little over or under, in the evening, whose liver is perhaps only slightly, but still decidedly enlarged, and whose symptoms will not yield to remedies; if this patient have been resident for some time in a hot country, then, no matter how little urgency there may be about his general condition, liver-abscess ought to be suspected;” frequent examinations should be made, and the history and course of the disease carefully considered from this point of view. If he come to the conclusion that the patient is “suffering from hepatitis, and that this may have gone on to abscess,” nothing should tempt the surgeon to delay making a positive diagnosis; and if matter be found, evacuating the pus and securing proper drainage and an aseptic condition. A positive diagnosis is made by means of the aspirator; and to evacuate the pus, if found, the following apparatus is necessary:

1. A trocar and cannula; the cannula four inches long and three-eighths of an inch in diameter, and provided with rings to facilitate its withdrawal.

2. A steel stilette, eighteen inches long and one-eighth of an inch in diameter, with an eye at one end.

3. Eight or ten inches of stout rubber drainage-tubing, with a bore of at least one-fourth of an inch, and outside circumference considerably greater than that of the cannula.

4. A silver "cap," small enough to go through the cannula, and with a neck into which the stilette fits loosely, and on to which the drainage-tube can be firmly secured.

5. A Listerian dressing, with a silver tube passed through it, and flush with its under or skin side. This tube must be about two inches long, and its diameter must just admit the drainage-tube.

6. Six feet of rubber-tubing, with a bore fitting on to the short silver tube.

The last piece of tubing is filled with carbolic lotion, and clips are put on the ends. One end of the drainage-tube has for two or three inches large holes cut in it, and is secured to the neck of the cap. The end of the stilette without the eye is then passed through the drainage-tube into the neck of the cap, and the tube is stretched till its diameter is less than the bore of the cannula, and fixed thus by a piece of silk passed through the eye of the stilette. The apparatus, bandages, etc., are then brought to the side of the patient; and when he is anæsthetised, the presence or absence of pus is determined by means of the aspirator, which can scarcely be used too early, as (according to Manson) acupuncture has a beneficial effect on hepatitis, and may cure it. The aspirator is therefore to be freely used, and the liver punctured in various directions; and, if pus be found, a mental note is made of its position, and the needle withdrawn; an incision is then made through the skin, and the trocar and cannula are driven in the direction of the pus till the cavity is reached. The trocar is then withdrawn, and, when the pus ceases to flow, the drainage-tube and cap are introduced through the cannula on the stilette, and the cap is held gently against the far side of the abscess while the cannula is withdrawn. The tissues grasp the tube and prevent any flow of pus. The silk which keeps the tube on the stretch is then cut, and the tube expanding presses firmly on the tissues and effectually prevents all passage of pus except through its lumen. The stilette is withdrawn, and the cap remains in till the drainage-tube is changed. The drainage-tube is passed through the silver tube in the dressing, and the latter is carefully secured so as to prevent kinking of the tube. The long tube is then fixed over the drainage and silver tubes, the free end is

placed in a bottle containing some antiseptic fluid, the clips are removed, and a continuous drain secured. If all goes well, the dressings need not be changed for a week, when the tube can be easily changed, and when inflammatory adhesions will have shut off the sac of the peritoneum. When discharge becomes insignificant, the long tube is dispensed with, an ordinary Listerian dressing is applied, and the drainage-tube is gradually shortened, care being taken that the sinus heals from the bottom.


Some of the advantages claimed for this method are its bloodlessness, its applicability to very deep as well as superficial abscesses, and chiefly that it is unnecessary that adhesions should have formed between the surfaces of the peritoneum, and it can thus be used early. The most important objections are the difficulty in keeping the dressings in position and the necessity for special apparatus. These can both be overcome by a little ingenuity, though for a deep liver-abscess the specially made apparatus is "desirable." Dr. Manson gives notes of two cases, in one of which he seems to have averted the formation of abscess by exploring with the aspirator; in the other he was not allowed to operate till the abscess-cavity had a capacity, he estimates, of about 30 ounces, and from it 20 ounces flowed at once on its being opened. This case became complicated with biliary fistula, and, three months after the operation, the daily discharge consisted of about 3 ounces of muco-pus and 30 ounces of bile; and, as the patient was progressively emaciating, though otherwise well, he was on the eve of departure to America to try the effect of change of air. In connection with this case are two interesting tables, showing the daily and hourly discharge of bile in relation to the amount of urine. Dr. Manson concludes that the rate of secretion of bile is "very irregular, and has no apparent relation to the hours of eating." Of course the untoward result in this case was in nowise due to the method; on the contrary, the obstinacy or fear of the patient prevented his having its chief advantage—early evacuation of the pus. The apprehension of the principle of Dr. Manson's method is greatly facilitated by a few very clear diagrams and minute details of the means employed to secure asepsis are given. His paper should be carefully studied by all who are likely to practise surgery in hot climates, for Manson's is a great improvement on the waiting system hitherto very generally advocated.—*London Medical Record.*

EDITORIAL.

THE NORTH CAROLINA MEDICAL JOURNAL.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY, PUBLISHED IN
WILMINGTON, N. C.

THOMAS F. WOOD, M. D., Wilmington, N. C., Editor.

 *Original communications are solicited from all parts of the country, and especially from the medical profession of THE CAROLINAS. Articles requiring illustrations can be promptly supplied by previous arrangement with the Editor. Any subscriber can have a specimen number sent free of cost to a friend whose attention he desires to call to the JOURNAL, by sending the address to this office. Prompt remittances from subscribers are absolutely necessary to enable us to maintain our work with vigor and acceptability. All remittances must be made payable to THOMAS F. WOOD, M. D., P. O. Drawer 791, Wilmington, N. C.*

NC Med J. (o.s.) 15:41-43, #1, Jan 1885.

MARCELLUS WHITEHEAD, M.D.

The North Carolina profession has not been called to mourn the loss of such a valuable member for many years, if ever. For more than twenty-five years Dr. Whitehead has been the central figure in the group of our most exalted physicians. He was a leader in the State Medical Society, in the State Board of Medical Examiners, and in all the public and private duties which fell to his lot. At the time of his death he was President of the North Carolina Board of Health, a position he filled much against his will, because of the slight interest which the State took in that body.

All along down from 1852 Dr. Whitehead's work in and for the State Society and its medical and public health auxiliaries has been marked by a steadiness of purpose and a clear conception of the

future, even until the period when his declining health permitted him only to lend his presence as a visiting member at the Asheville meeting in 1878.

Dr. Whitehead was eminently a practical physician; he seemed to scorn every show of pedantry, and never could be made a servile follower of the newest fashions in medicine or surgery. Not that he did not have respect for authority, but because in medicine and surgery he was a peer of many authorities. His knowledge was of the sort that had been worked out at the bed-side, by one who had laid an ample foundation for observation.

At the bed-side his manner begot confidence. He was a keen observer of human nature, and early learned the mastery of children, women and men—at the bed-side, because he was self-possessed, gentle and cheerful—in public, because he was honest and decided. It was in public meetings of medical men that he evinced the greatest ability. His manner in debate was that of a practiced dialectician, and his commanding presence added a charm to his language.

Dr. Whitehead was warmly interested in every young man who showed any indication of talent, and he rarely mistook his man. The Medical Society of North Carolina is largely indebted to him for the discriminating judgment he showed through all his career in giving his influence to the right men. His unselfishness was truly remarkable in this respect. He persistently preferred others to himself, until his friends, impatient with his steadfast refusal to accept position, would listen to his objections no longer, so that it was only in 1873 that he attained the Presidency of the State Society.

In a life so full of good professional work it is difficult to say what was his crowning effort. But the one which he had very near at heart was the foundation of the Western Asylum for the Insane, at Morganton. To his efforts is largely due not only the establishment of this Asylum, but finally its organization. In this service to his State his every act was purely for the interest of the people, and especially for that portion of the poor unfortunate insane, towards whom his heart yearned with such tender solicitude. At last, when the time came for him to seek to fill the offices of the Asylum, his share in the work, unpleasant in the extreme, was borne with a manly determination to forget all personal affiliations, even

though it was to go by his oldest friends in order that he might secure the services of the best men.

Dr. Whitehead's services in securing the foundation of the Western Asylum should be held in grateful memory by the State, and no time should be lost in erecting in the grounds of this palatial building some enduring monument to his name.

We leave to an abler pen the duty of putting on record the life-work of this preëminent North Carolinian.

THE VIRGINIA BOARD OF MEDICAL EXAMINERS.

We are indebted to the *Atlantic Journal of Medicine* for the following information about the newly elected Board of Examiners :

For the State at Large—Dr. F. D. Cunningham, Richmond ; Dr. W. C. Dabney, of Charlottesville.

First Congressional District—Drs. W. S. Carmichael, O. B. Finney, W. W. Douglass.

Second Congressional District—Drs. T. B. Ward, L. Lankford, Jesse H. Peck.

Third Congressional District—Drs. R. Lewis, C. R. Cullen, O. A. Crenshaw.

Fourth Congressional District—Drs. Hugh Stockdell, J. H. Claiborne, W. J. Harris.

Fifth Congressional District—Drs. R. W. Martin, W. L. Robinson, T. B. Grear.

Sixth Congressional District—Drs. H. G. Latham, H. Black, O. Wiley.

Seventh Congressional District—Drs. W. P. McGuire, J. H. Neff, H. T. Nelson.

Eighth Congressional District—Drs. A. A. Harris, C. C. Conway, B. Brown.

Ninth Congressional District—Drs. S. W. Dickinson, R. E. Moore, R. D. Huffard.

Tenth Congressional District—Drs. G. D. Merriwether, Z. G. Walker, H. Patterson.

The following gentlemen were elected officers :

President—Dr. W. C. Dabney, of Charlottesville.

Vice-President—Dr. F. D. Cunningham, of Richmond.

Secretary and Treasurer—Hugh T. Nelson, Charlottesville.

CUCAIN, OR COCAIN, OR ERYTHROXYLIN HYDRO- CHLORATE.

The *British Medical Journal*, in a recent number, adopts the spelling Cucain, for the same reason as that suggested by the *Scientific American* three or four years ago, to avoid confusion by reason of the similarity of the words *Coca* and *Cacao*. We would be willing to accept the suggestion already made by Dr. Samuel R. Percy, who experimented with this drug and reported on it to the New York Academy of Medicine, November 4, 1857, and adopted the name Erythroxylin. It would avoid confusion, and at the same time comply with the custom in the scientific world, to accept the first name put in print when two are given for the same thing.

Sir R. Christison first suggested *Cuca*, as being in conformity with the native pronunciation.

ELIGIBILITY TO MEMBERSHIP IN THE NORTH CARO- LINA BOARD OF HEALTH.

We are in receipt of several communications asking what is meant by eligibility to membership in the State Medical Society. It is simply this: The person claiming this eligibility must either have been engaged in the practice of medicine prior to April, 1859, or must have received the license of the Board of Medical Examiners. It is not obligatory that the person should be actually a member of the State Society, but that he should have the legal qualifications for admission.

PRIZE ESSAY.

Dr. R. Lee Payne, of Lexington, N. C., offers a prize of a \$50 surgical case for the best essay presented to the Medical Society of North Carolina by any member of that body.

REFERENCE HAND-BOOK OF THE MEDICAL SCIENCES.

Messrs. Wm. Wood & Co., of New York, will publish soon a series of volumes on Anatomy, Embryology, Histology, Physiology, Physiological and Pathological Chemistry, Pathological Anatomy, Climatology and Medical Botany. Also volumes on the more directly practical subjects: General Pathology and Therapeutics, Surgery, Gynæcology, Neurology, Otology, Ophthalmology, Obstetrics, etc., etc.

It will be in eight splendid Imperial 8vo. volumes, thoroughly well illustrated, of about 800 pages each. Price in muslin \$6.00 a volume.

REVIEWS AND BOOK NOTICES.

THERAPEUTICS OF THE RESPIRATORY PASSAGES. By PROSSER JAMES, M.D., etc., etc. Wm. Wood & Co., 56 & 58 La Fayette Place, New York.

This is the November number, 1884, of Wood's Library, and but little can be judged of it by its title. The author says that his book is not intended as a manual for students, but it seems to be a most excellent one for physicians some time experienced in the art of therapeutics. Much of the volume, though, is quite elementary, especially that part devoted to nutrition, food, diet and aids to digestion, although it is written clearly and to the point.

The chapter on *Alcohol* is written with good judgment and just discrimination, and may be safely taken as the true estimate in which this drug of wonderful vicissitudes is now held. The author lays especial stress upon the necessity of always giving alcoholics with food. He condemns "the too common recommendation to employ whiskey or brandy" to be given with cod-liver oil; "from one to three table-spoonsful of these spirits is often recommended with a dose of the oil, a method of using alcohol which has nothing in its favor. The dose of alcohol with cod-liver oil should be small, and ether is very much better than alcohol." This latter statement is made upon the physiological ground that its administration, as shown by Bernard, causes turgescence of the pancreas,

and pancreatic juice flows more freely, and without alteration; hence cod-liver oil, given in combination with ether, is more likely to be emulsified, and to be taken up by the stimulated glands of the duodenum.

The testimony adduced in favor of the hypophosphites is not reassuring. He thinks "little benefit can be anticipated from them in bronchitis, emphysema, or pneumonic phthisis. They may be regarded as nutrients, or at any rate as substances which perhaps stimulate nutrition; when they thus act they promote digestion and increase appetite, and in such cases of course are beneficial; whenever they impair the appetite they will to that extent only be injurious."

The discussion of mercury shows how far back the pendulum of therapeutics has vibrated to a point opposite to that it attained twenty years ago. It must give some of the seniors grim satisfaction to note the admission that mercurials have a decided influence over newly-formed or ill-organized tissues, because in some way they check the growth of young cells. Would not the old way of saying that mercury causes a resolution of inflammatory product be as satisfactory? At any rate, here we are again back to a mile-stone at which the veteran antiphlogistic practitioner and the callow physiological therapist meet as friends.

We are disappointed not to find some substantial observations offered upon the therapeutic position of quebracho. Altogether, it is one of the most remarkable drugs which has been added to our list in many years, and its beneficent action in so many cases of dyspnœa from entirely different causes, makes it a subject worthy of serious study. Clinically, there is no doubt that it causes expectoration, promotes æration of the blood, and sustains the action of the heart, and even permits the administration of opium as in angina pectoris, in full doses, by reason of its antagonistic influence on that rather questionable drug.

A MANUAL OF THE MEDICAL BOTANY OF NORTH AMERICA. By LAURENCE JOHNSON, A.M., MD. New York: Wm. Wood & Co., 1884.

We believe this is the first attempt since Bigelow's (1817-1821) and Barton's (1817-1818) works on medical botany appeared, to present to the medical public a volume on American medicinal

plants. Dr. Johnson felt the need of a volume on the subject which he might put in the hands of the students to whom he lectured, and the experience acquired by him as a teacher led him to undertake the task himself. The author was well prepared for his work by his knowledge of field botany, and fortunately was also possessed of the accomplishment of an artist, and not only wrote the text, but furnished the colored illustrations (of which there are nine) and many of the wood-cuts.

The examples selected for colored illustrations are *Podophyllum peltatum*, *Liriodendron tulipifera*, *Sanguinaria Canadensis*, *Geranium maculatum*, *Viburnum prunifolium*, *Gelsemium Sempervirens*, *Cypripedium pubescens*, *Aspidium marginale*. They are in chromolithography, and are exceptionally well rendered, the black-haw and yellow jessamin being the most successful, the latter giving the first example of the fruiting plant, printed in colors, we have seen.

The first fifty-five pages are devoted to elementary botany, describing the "life-history of the plant from its germination to reproduction, explaining the technical terms commonly employed in botanical descriptions and the plan of classification in general use at the present day;" also a glossary. The description of plants begins with the phænogams, and ends with the cryptogams in the usual order. The wood-cut illustrations in a few instances are blemished by poor press work, but the drawings show the skilled hand of a master.

In therapeutics Dr. Johnson is sound. His enthusiasm as a botanist does not lead him into the error of our older writers, of having a good medicinal reputation to make for every favorite plant. He divests himself of all traditional leaning and states the facts, and so the reader who has long trusted statements of writers less skilled in a knowledge of medicinal plants, will be somewhat surprised at the very small number of them which are really important. For instance, he says of the medical properties of *Cornus Florida*: "Dogwood is a tonic, astringent, and slightly aromatic. It is believed to be the best indigenous substitute for cinchona bark, and in early days was used with considerable success in the treatment of miasmatic fevers. As a mild tonic in convalescence, in simple loss of appetite and in debility of the digestive organs, it is also said to act favorably."

We must take issue with Dr. Johnson in what he has to say about

the medical properties of *Rhamnus Purshiana*; if his condemnation of the drug is founded upon practical observation, he has been deceived in the quality of that furnished him.

We notice a very interesting item which deserves more extended observation, in reference to the harmfulness of coumarin as used by smokers in the form of the dried leaves of dog-tongue (*Liatris odoratissima*). From personal experience and observation Dr. Johnson is convinced that the deleterious effects of smoking tobacco adulterated with leaves of dog-tongue is greater than that from tobacco used in great excess. "The inhalation of a few whiffs of smoke from a cigarette made of this adulterated material, provided the inhalations are made in quick succession, produces a train of cerebral sensations of an intoxicating character as much different from any effect of tobacco alone as could be imagined; and prolonged use of such cigarettes invariably produces great derangement of the digestive organs, very little resembling the dyspepsia produced by excessive use of tobacco, together with cardiac symptoms of a distressing character." Dr. Johnson believes that the habit of smoking coumarin in this form appears to become more inveterate and more exacting than the use of tobacco alone.

If there is any virtue in a well-prepared manual as a stimulus to the study of medical botany, this one ought to have some effect on the profession.

We would like to suggest to the author the elaboration of his treatise into the complete volume it might be made, and we trust he will be induced to work on with this object in view; American students would then have a medical botany fully up to the requirements of our progressive profession.

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NC med J (os) 15: 49-51, # 1, Jan 1885.

OBITUARY.

Dr. M. WHITEHEAD

Died, at his home in Salisbury, North Carolina, January 2, 1885, Had he lived until the 27th of the month he would have attained the age of 64 years.

Dr. Whitehead was born in Nelson county, Virginia. He was one of five or six brothers, all of whom became men of distinction in their different callings. Dr. Whitehead had not in early life the

advantages of what is called a classical education ; but being of an earnest, acquisitive and receptive turn of mind, he absorbed knowledge with great ease and accuracy. He commenced the study of medicine in the office of Dr. Warner Jones, a country physician of noted skill and ability in that locality. After pursuing his studies here for a year, he went to Richmond to attend lectures, and became resident assistant in the Almshouse while yet pursuing his medical studies in the College. He graduated from the College in Richmond in 1844, and remained in the Almshouse until early in 1845. In the late spring or early summer of that year he set out on horseback to seek a location, having no definite plans as to what place he would make his home, and arrived in Salisbury early in June of that year to rest a day or two before going further South. He made up his mind, however, to stop, and here to commence the work of his life. He soon gained friends. Practice quickly followed, and his busy professional life was begun. In January, 1846, he formed a partnership in the practice with Dr. J. J. Summerell, which lasted four years and a half. In February he visited his native State, and early in the spring he returned with his young wife (née Virginia Coleman), who has shared his trials and successes all these years, has been a support and comfort to him in his onward and upward progress in his profession, and now remains to mourn the loss of a life-long kind and considerate husband.

Dr. Whitehead, from his industry and skill, early secured the confidence of the community. Never ceasing to pursue his studies, as opportunity presented, he was soon recognized as a growing man in the profession. His genial manners and sprightly conversation won for him many admirers, and his clientele increased until he had all the practice that he could do.

Thus passed his busy life—knowing little respite, until by failing health he was forced to spend the heated season of the last few years in the mountains and health resorts of our State, whence he always returned with renewed strength and energy, to buckle on again his professional armor. Industry and activity, both of mind and body, were the laws of his being. His intellect was quick, his memory retentive. He rarely forgot anything he ever learned, and had the happy faculty of calling up from his extensive reading the experience and wisdom of the best authors, whose works he kept ready at hand for daily reference and study. He loved his profession, and was well equipped at every point—full of expedients for the relief of the sick, and his therapeutic resources were ample and varied. He always studied his cases thoroughly. Toward his professional brethren he was always kind and conciliatory ; and when differing from others in his views of a case, his dissent he always expressed in words of courtesy and respect. Hence he ever lived on good terms with his brother doctors, and his counsel was sought often and generously extended. While able always to give a good reason for his opinions, he was ever ready to listen with close attention to those who held different views.

Such was Dr. Whitehead in his relations to the profession. He achieved a high standing in the fraternity wherever known, and was for years regarded as among the most accomplished doctors in the State of his adoption. He was an earnest worker for the good of the profession in North Carolina—was for many years a member of the State Medical Society, and he made it his business to attend the meetings when at all possible. He sometimes wrote papers to read at our meeting, but never suffered any of them to be published, much to the regret of his friends. He was fond of discussion, and participated freely in the debates of the Society, and was listened to with earnest and respectful attention. He was elected President of the Society, and made an excellent presiding officer. His address to the Society on leaving the chair was a well-considered paper on Pott's disease, and many of those who heard it will remember how well he delivered it. He was an earnest supporter of the NORTH CAROLINA MEDICAL JOURNAL, and though never a contributor, he was always a subscriber and lover of it. The only public trust Dr. Whitehead ever held was that of one of the commissioners to build and locate the Western North Carolina Insane Asylum. He entered on that work with great enthusiasm and energy. It was located near the town of Morganton, and there, on an eminence on the left side of the railroad going west, the beautiful architectural pile of this great Institution stands to attest the liberality of the Legislature and wisdom and taste of the commissioners. Dr. Whitehead was afterwards one of the Directors of the Asylum, and only resigned when, by infirmity, he could no longer attend the meetings of the Board, whose President he was at the time of his resignation. He loved to speak of the part he took in the building and organization of this Institution for the benefit of the insane of the State, for which he bespoke a foremost place among such charities of the South.

He has gone to his rest, but his name will long be cherished in this community as that of an able and indefatigable laborer in the practice, and by many of his old patients, still living, he will be remembered as one whose place in the family as medical adviser can never be filled. He was a kind husband and father, and his great aim was to secure for his sons the benefits of a thorough education, having often expressed regrets that his own early advantages in that regard had been less than he could have wished. His son, Dr. John Whitehead, lives to take the place of his honored father in this little city, and well and deep has he laid the foundation on which to build a splendid reputation. The good name and fame of the father could not be entrusted to better hands to be perpetuated.

Like many other distinguished physicians, Dr. Whitehead died poor in this world's goods, but it can truly be said of him that he died rich in the affections of the people among whom he labored. His funeral took place from the largest church in Salisbury on the first Sabbath morning of the New Year, and although the trees and houses were draped in ice, and the streets were as smooth as glass,

and the whole atmosphere shrouded in gloom, all who sought could not gain admittance into the building. Many lingered about the doors and vestibule, to catch a last glimpse of him whom they so much loved, and who had been their physician for nearly forty years.

Those members of the profession who knew him personally will always recall his image with affection and high appreciation, and the new generation of physicians now coming on the stage can have no better model by which to shape their conduct in their grand calling, than is afforded them by the career of Dr. Marcellus S. Whitehead.

READING NOTICES.

AS A DEODORANT and antiseptic for the sick-room and dentist's office, Listerine stands preëminent. While it is equal to any and superior to most of the agents commonly used under such circumstances, it adds an agreeable aroma instead of an offensive odor to the surroundings; and is particularly well-adapted to the lying-in room. It may be freely used in spray or lotion without stain or irritation as an agreeable and effectual detergent. It is also specially commendable in weak solution, as a mouth-wash and gargle for apthous sores or a fungus condition of the gums, and bad breath; and for certain forms of indigestion—those accompanied by disagreeable eructations—a few drops of Listerine in water swallowed is a particularly grateful and excellent remedy. Moreover, according to a series of "Experiments upon the Strength of Antiseptics," by Dr. A. T. Cabot (*Boston Medical and Surgical Journal*, November 27, 1879), Listerine compares favorably with the most reliable agents for the rapid destruction of micro-organisms.—*The Sanitarian*,⁵ Oct., 1884.

THE attention of the medical profession has of late been closely directed to the cause of the enormous proportion of infantile deaths, as recorded in the mortuary records. The general conclusion seems to be that this terrible loss of life in young children, especially at the critical period during the earlier months of dentition (at which time some artificial food is generally either added to, or entirely substituted for the natural aliment), is largely due to nutrition; in other words, that owing to the want of an artificial food calculated to supply the great demands upon the system, the infant is, in effect, starved.

Although, perhaps, diluted cow's milk offers the best substitute for that designed by Nature, yet in so few cases can this be found pure, at least in cities, that it does not contain the essential ingredients for the support and development of infantile life.

Estimated in a cursory manner, human milk contains about 190

parts of water to 110 parts solid matter; and of this solid matter caseine, fat and saccharine matter occupy the larger proportion. If milk contains these ingredients in the proportion, it is assimilated by the infant, and we have as a result healthy growth and development; but if these constituents are wanting, the child is imperfectly nourished, and easily falls a victim to the many disturbances which accompany dentition. To meet this want several artificial Milk Foods, more or less scientifically prepared, have been introduced to the public, and one of the most desirable is that known as the Anglo-Swiss Milk Food (made by the Anglo-Swiss Condensed Milk Company at Cham, Switzerland). This Food has been proved to contain all the necessary ingredients for a reliable food for infants, and having received the highest endorsements from the medical profession in Europe, and in New York and other large American cities, may, therefore, be used with perfect confidence by all having the care of young children.

NEW YORK, January 1, 1885.

MESSRS. WM. R. WARNER & Co., Philadelphia, Pa.:

Gentlemen:—The American Pharmacopea Elegans has lately experienced an interesting addition by the introduction of a new article in the shape of quickly soluble and small pills, the manufacturing of which Messrs. Wm. R. Warner & Co., Philadelphia, have made a specialty, called "Parvules (dosemetriques)". They are new because their composition is based upon the decimal system, thus differing from all the other granules now in use. The disagreeable fractions 1-3, 1-5, 1-7 gr., etc., are avoided, and as each Parvule represents a dose, every hour, it saves much time and labor to the prescribing physician. These Parvules originate from the idea to bring rare remedies or the active principles, which cannot be repeated very often in a limited time, in a certain stable form. The pills are prepared in their well-known elegant manner, and in order to give them a fine appearance are supplied with a harmless coating. As the sugar-coating dissolves very easily, in about five minutes, they are highly recommendable. Furthermore, we had an opportunity to test another preparation manufactured by this enterprising firm, i. e., "Effervescent Bromide of Potassium and Caffeine." A teaspoonful of this granulated salt proves to be an excellent remedy for the effect of mental over-exercise and nervous headache. Though we cannot caution too much against the indiscriminate use of the Bromides, as has been clearly demonstrated at a recent meeting of the Neurological Society, the injurious effect of the Bromides is mitigated and reduced almost to a minimum by the synchronic action of the Caffeine. Two teaspoonfuls may be taken, without nausea, in a little water, like an ordinary Seidlitz powder.—*Apotheker-Zeitung*.

NORTH CAROLINA MEDICAL JOURNAL.

THOMAS F. WOOD, M. D., Editor.

Number 2. Wilmington, February, 1885. Vol. 15.

ORIGINAL COMMUNICATIONS.

SUPPURATION IN THE BLADDER—CYSTITIS—CATARRH OF THE BLADDER.

Lecture by Dr. ULTZMAN, of Vienna.

(Translated by GEORGE G. KINLOCH, of Charleston, S. C.)

By *Catarrh* of the bladder we understand, in a general way, an inflammation of the mucous membrane of that organ. This inflammation has usually this peculiarity, viz: that it produces at the same time with its catarrhal secretion a ferment, which changes the urea into carbonate of ammonia. Catarrh of the bladder and ammoniacal fermentation are so generally known to exist together, that formerly the differential diagnosis between pyelitis and cystitis was decided by litmus paper. To-day we know that catarrh of the bladder can exist and be associated with an acid reaction of the urine, and that, on the other hand, we often meet with alkaline urine, which has nothing in common with inflammation of the bladder. Inflammation of the bladder may be divided into acute and chronic—further, into partial and entire, in accordance with the

fact of disease of part of the bladder (in the region of the orificium urethræ) or of the whole organ. The partial catarrh is for the most part due to the extension of an inflammatory process from the urethra; whereas the general catarrh of the bladder is caused usually by changes which affect proportionately the entire wall of the organ (eccentric hypertrophy—paresis, etc.)

By reason of the spreading of the inflammatory process towards the deeper layers of the bladder we can distinguish between a purely catarrhal inflammation, affecting only the mucous membrane, and a parenchymatous cystitis, in which the inflammation takes hold of the muscular tissue as well. Lastly, we can establish differences from the character of the secretion, as mucous, purulent and putrid, as the result of examination of the urine.

Primary catarrhal inflammation of the bladder is one of the rarest of things. From its protected position and the remoteness of its communication with the outer world, the bladder is kept in a great measure free from those baneful influences which so often produce inflammation in other mucous membranes. The urethra is a closed canal, when there is no urine flowing through it, and excludes the passage of injurious substances into the bladder. If harmful substances cannot penetrate from without, neither can such reach the viscus from without because of its intact mucous membrane. The intact mucous membrane of the bladder is very nearly *incapable* of absorption. If we inject a solution of iodide potassium ($\frac{1}{2}$ to 1 per cent.) into the bladder, we will not observe, even after an hour or two, any trace of the same in the saliva; it is also a known fact that the bladder may, by retention of urine, be extended to quite a size and hold the urine for a day or two without any of the constituents of the fluid being absorbed. Only when the bladder is inflamed, as a whole, the different layers being made porous, as it were, by the inflammatory process (parenchymatous cystitis) can foreign elements from the surrounding parts force their way into its cavity; it is true that we find, by parenchymatous changes of the bladder tissue, in its whole extent, a flocculent urine, that is, urine having the odor of feces. But with an ordinary inflammatory process of the mucous membrane alone this phenomenon is never present.

With regard to the factors which produce a catarrhal inflammation, must be mentioned, first, the influence of sudden cold, or a chilling of the parts. This is an ætiological moment brought about by the influ-

ence of unknown atmospheric and telluric phenomena, which very often, for convenience sake, will be accepted, when the real cause is not easy to find out. If we decide that a sudden chilling of the surface is the cause of an inflammation of the bladder, the decision must be arrived at by the most careful reasoning. The bladder, on account of its thorough separation from the atmospheric air, is not exposed to the harmful action of the same, as is the case with the mucous membrane of the stomach, or of the intestine, or of the respiratory apparatus. It is a known fact that catarrh of the bladder *very* seldom occurs in men whose genital apparatus has remained free from diseases peculiar to the same, and especially from gonorrhœa. It is also an established fact that children have no tendency to catarrh of the bladder, but really enjoy an immunity from the same, although just at this age the so-called "colds" in the stomach and in the intestinal and respiratory tracts are so frequent. First in youthful adults we find bladder catarrh most frequent, and then the immediate result of gonorrhœa, or as a result of the same, but becoming apparent first several years after the gonorrhœal affection. It is these latter cases which are often ætiologically assigned to taking cold, or to the drinking of some strong liquor, or to sexual excess, etc. If we examine such cases thoroughly we will usually find that formerly, maybe several years since, a gonorrhœa of long-standing had existed, perhaps with inflammation of testicles or with catarrh of the bladder as a result; we will also find that whitish shreds are passed with the urine, that the urine appears itself, at times, quite cloudy from increased mucous secretion, and that also now and then, particularly at the conclusion of the urinary act, a peculiar, uncomfortable feeling exists, even, at times a slight tenesmus.

All these patients think themselves sound and well, and do not imagine the condition present to be due to a former gonorrhœa, as usually not a trace of secretion can be discovered as coming from the urethra, and they regard the gonorrhœa as cured, because it had run its course apparently so many years since. But this is not so, for the gonorrhœa, and particularly that form which penetrates into the *pars prostatica*, seldom disappeared from this region without leaving behind some sign which tells of its former sojourn there. There always remains a degree of sensitiveness of the parts which makes a recurrence of inflammation possible, and not only possible, but probable, so that a sexual excess or the drinking of beer, etc., is amply sufficient to set up a second

inflammation or to produce a catarrh of the "neck"; and, if this spread towards the bladder, a cystitis is the result.

Another, although less frequent ætiological factor of catarrh of the bladder is scrofula and tuberculosis, with a weak constitutional condition. In such individuals the catarrh is exacerbated during the winter months of the year, and disappeared often in the summer, when the weak organism becomes a little stronger. Chronic, painless swellings of the epididymus very often accompany this form of catarrh. Also rectal fistulæ and glandular swellings, inflammatory conditions of the bones, etc.

Tuberculosis of the lung often present is not always discovered in such cases, neither are hard infiltrations always felt in the prostata and vesiculæ seminales by means of the finger in the rectum. Often the hereditary history of the patient is the only thing which will make us suspect the real condition of things, it of course being taken with his general weak condition.

That febrile diseases, and particularly those which are not confined to one portion of the body, but affect the general covering as well as the mucous membranes (exanthema) can give rise to catarrh of the bladder, is proved to us by daily clinical experience. It is known, also, that as a result of diathesis, or of growths in the bladder, or the neighboring region, and through harmful chemical or mechanical influences a catarrh may be set up and may continue a long time. Still another contingent to catarrh of the bladder is the advanced age of life. After the sixtieth year the causes are usually of a mechanical nature, and must be sought in the senile changes of the bladder and of the prostata. At one time it is an hypertrophy of the prostata, at another hypertrophy and dilatation of the bladder, or a paresis of the latter, which, through retention of urine or through any hindrance to the passage of the same, can conduce to catarrh of the bladder. Lastly, it is not to be denied that, through the operation of certain substances, such as cantharides, ethereal oils, balsams, etc., a catarrh can obtain a starting point.

From the above it will therefore be seen that a *primary* catarrh of the bladder never exists, or at least that such a catarrh is one of the rarest of diseases. It is also self-evident that the diagnosis—*Catarrh of the Bladder*—is never sufficient, but we must search out the cause of the same, and not be satisfied by attributing it to the

convenient "taking cold," or to the drinking of new *wine* or *beer*; for it is only after a careful investigation of the cause or causes that we can establish the proper treatment, whether it be a purely local one or not.

The diagnosis of catarrh of the bladder depends upon several characteristic symptoms, but the most common of them all are two, which, it is not to be denied, have considerable importance, but which can very often deceive. The physician who depends entirely upon these symptoms, without having made a thorough examination of the urine, will be often lead astray, and will make a diagnosis of catarrh of the bladder, when no such thing exists. These symptoms are—*the necessity of urinating often*, and *the alkaline reaction of the urine*. The first of these is not the attribute of cystitis alone. There are, on the contrary, many kinds of general affections, as well as also many kinds of local conditions in the neighborhood of the neck, which often cause a patient to urinate with pregnancy without there being a trace of cystitis present. Under the general affections may be mentioned the different forms of digestive disturbances which exist at the same time with some form of polyuria (Diabet. mellit., Diabet. insipidus), Hydruria, or *Spasmus detrusorum vesicæ* as a result of some affection of the central nervous system. Under local affections, and these are most frequently confounded with cystitis, is especially to be mentioned that condition following from onanism, which causes a hyperæsthesia of the neck; also venereal excesses, a gonorrhœa which the patient may have had formerly, may produce a similar feeling, and from reflex action the same disposition to urinate frequently, as in cystitis.

In all these cases a careful examination of the urine can alone enable us to exclude cystitis from our diagnosis, for the simple reason that this urine is usually quite light and clear. If the catarrhal secretion is not seen in the urine, then we cannot very well speak of a cystitis.

Still more deceptive is the *alkaline reaction of the urine*. We must, too, recognize the difference between two forms of alkaline urine. Alkalinity may be due to the presence of fixed alkalis or ammoniacal fermentation. The alkalinity due to the fixed alkalis, as, for example, in phosphaturia, is recognized, in that the lime and magnesia salts of the sediment do not combine with ammonia. We

find in such urine carbonate of lime, phosphate of lime crystals, also phosphate of magnesia as sediment, but never the large, clear crystals of the phosphate of ammonia—magnesia. We find this form of urine often as connected with central and peripheral diseases of the nervous system, and therefore also in the paresis of the bladder there often exists urine of a similar character.

In this case the urine would already have obtained its fixed alkalies before reaching the bladder, these alkalies being derived from the blood in the kidneys. In a similar way can a certain form of diet (vegetable) or a free use of alkaline mineral waters give rise, artificially, to *fixed alkalies* in the urine, which, it is self-evident, have nothing in common with cystitis. It is sufficient, usually, to put the patient upon some special diet, or give some acid internally in order to restore the acidity to the urine.

It is another thing when the alkalinity is due to the presence of carbonate of ammonia. We find in such sediment, together with the amorphous phosphate of lime, the crystalline phosphate of ammonia, magnesia, and at times the urate of ammonia. Although the discovery of ammonia combinations proves that the alkalinity is not due to fixed alkalies, still it is not always that a cystitis is present. We find quite often, for example, in acute inflammatory and febrile diseases, after the abatement of the fever, and at times during convalescence a cloudy, alkaline urine, which is due to carbonate of ammonia (*urina critica*). Ancient physicians explained this condition of the urine by saying that with this foul and cloudy urine the diseased elements were eliminated from the body, and they always welcomed this appearance as a sure sign that the patient would recover.

It will therefore be seen that an ammoniacal alkalinity is also not sufficient in order to diagnose cystitis. To make such a diagnosis it is much more important to be certain of a catarrhal secretion; for unless a secretion is present there can be no catarrh in the bladder. The different forms of cystitis are, in accordance with the condition of the secretion, the *mucous*, the *purulent* and the *putrid*. The mucous variety is the lightest. The urine of this contains neither albumen nor pus. It has its normal yellow color, and appears evenly, but slightly clouded by a little secretion. The reaction is slightly acid or neutral, according to whether ammoniacal fermentation be present or not. The specific gravity is nominal—microscopically we find in the cloud-like sediment great

numbers of mucous corpuscles and bladder epithelia, together with bacteria. Such a catarrh exists often in paresis of the bladder, in eccentric hypertrophy of the same, because of hypertrophy of the prostata, and in many similar cases where a continued and regular catheterism has to be resorted to.

The purulent catarrh is the best known of the three. The urine of the same has a wine-yellow color and an ammoniacal smell. The cloudiness which exists is more intense than in the mucous form. The specific gravity is normal, carbonate of ammonia is present in large quantities, and there is also albumen. The sediment is usually greenish yellow, tenacious and clings firmly to the vessel. Microscopically are found large numbers of pus corpuscles and bacteria, also crystals of phos. ammoniæ, magnesia and bladder epithelia. The pus corpuscles appear often greatly swollen, so that sometimes we cannot make out their contour.

The putrid catarrh is characterized by the brownish color of the urine and by its penetrating, stinking smell. The urine is strongly clouded and exhibits usually a lower specific gravity. Albumen is present in large quantities, also carbonate and sulphate of ammonia and blood-coloring matter. The sediment is thin and brine-like, and cannot be drawn out. It is made up of innumerable bacteria, triple phosphate crystals, amorphous phosphate of lime and cell detritus. The cell elements, as well as the blood and pus corpuscles and the epithelia, are no longer to be found, having been acted upon by the strong alkaline urine, and thereby broken to pieces. Only at times are plain, recognizable connective tissue shreds to be yet seen under the microscope. We find such urine connected with ulcerative growths of the bladder, tuberculosis, diphtheritis, and the like.

The ammoniacal fermentation, which is found so frequently in cystitis, takes place always in the bladder itself. The urine will be acid when discharged from the kidney, and is, only after being held in the bladder some length of time, changed into its alkaline condition. One can convince himself of this if he washes out a bladder which contains such urine with a solution of carbolic acid or with some neutral salt, as chloride of soda, salicylate of soda, sulphate of soda, and the like, and continue the washing until the outflowing liquid reacts in a neutral manner. Nor if the catheter be stopped up for ten minutes or so, and the urine which flows out after this space of time be examined, it will be found to have an acid reaction.

If the bladder, as a whole, be diseased, the patient complains of a painful feeling over the symphysis, which radiates in different directions. Pressure upon the upper portion of the bladder increases the pain, and the patient feels obliged to urinate immediately. If the bladder is only partially affected, and then in the neighborhood of the neck the pain over the symphysis by pressure is not experienced, but the bad feeling concentrates itself still more in the perineum, in the rectum and along the urethra, as was experienced to be the case when speaking of affections of the neck.

In acute catarrh there is sometimes, but seldom, an elevation of temperature (fever), with a more frequent pulse.

The pathologico-anatomical condition is variable, according to the degree of the inflammation. In acute cystitis of short duration all the tissues resume, after a short time, their normal conditions; but if the cystitis has been of long-standing, we find the mucous membrane of the bladder hypertrophied and the veins of the same dilated. In acute cystitis the mucous membrane appears only slightly swollen and red. The redness appears at one time to be only an injection of the minute blood-vessel of the mucous membrane, and at another time as minute extravasations. Usually these appearances are more outspoken around the neck and in the region of the trigonum.

At times the inflammatory process shows a croupous or diphtheritic character.

In parenchymatous cystitis we find, at times, abscesses in the bladder walls, which abscesses may be of considerable size. As a result of an inflammatory process in the muscular portion of the bladder, the organ sometimes loses its elasticity and atrophies. Lastly, morbid growths, tuberculosis, etc., may also be found in the bladder. The catarrh of the bladder is thereby differentiated from catarrh of the neck, that (1) There is usually ammoniacal fermentation present. (2) The pain complained of by the patient is referred more to the region over the symphysis; and (3) When the urine is passed in two portions each appears equally clouded.

NOTE.—It was only on this day, and after I had completed the above translation, that I noticed in the *London Lancet* a review of a translation of this same paper of Dr. Ultzman's by Dr. Pratt, of Baltimore, Md. I have not seen Dr. Pratt's translation.

GEO. G. KINLOCH.

VIENNA, December 28, 1884.

(To be continued.)

THE CAUSES AND FIRST SYMPTOMS OF MENTAL DISEASE.

A Clinical Lecture by Dr. EWALD HECKER, Director of the Provincial Insane Asylum of Plagwitz, Vienna.

(Translated with special permission of the author by F. HERBERT HACKER, M.D.)

The desire, as well as the necessity, for a division of labor, is at the present day constantly making itself felt in all departments of human knowledge. The ever-increasing growth of the different branches of science has made it impossible for a single individual to be equally versed in each branch, and you are aware, gentlemen, that the science of medicine has taken an active part in the making of specialties, the justice and necessity for which no one will deny.

There arises now the question, in how far shall the practising physician, from whom we demand, just as we do from every specialist, a certain amount of general education and training in all branches—busy himself with the single specialties? The views held on this subject differ a great deal, particularly as regards the different specialties, but everyone agrees that the ordinary physician should at least possess the requisite amount of training in any given branch to know when he can no longer with safety retain the patient in his treatment, but must transfer him to the care of a specialist. This necessity for a change of hands occurs sooner in the case of mental than of any other diseases, and if the practising physician wishes to restrict his knowledge in this branch to the lowest possible limit, he must at least endeavor, with doubled zeal, to learn to recognize the first signs of threatening and developing mental disease, and must understand the history and manner of its development in order to be able to employ the proper therapeutical measures. He must not begin his study of the case when it has already become an imperative necessity to send the restless and dangerous patient to an asylum, but he must act prophylactically, as far as lies in his power. Believe me, gentlemen, an immense amount of severe misfortune, of bitter grief, yes, without exaggeration,

ration, frequently the destruction of the happiest and best regulated family circumstances could be avoided if the practising physician only knew when the right moment for interference has arrived in such cases.

When you are employed in a family as family physician, it will never be useless trouble for you to inform yourself as to the ætiological conditions which may obtain in that family; you will treat, for example, a simple catarrh with greater care if you learn that consumption is hereditary in the family; but when I tell you now that mental diseases (in connection with other severe cerebral and nervous affections) are inherited in about one-fourth of all observed cases, you will certainly consider careful attention to the physical development of the different members of the family in which you are employed as being of the greatest importance, even when no very alarming symptoms may be at the moment present in any of them. It is in just such cases that a rational hygiene is of such immense importance and benefit, and I give you the earnest advice to keep under your constant observation the children of all such families in which one or the other of the parents, or even distant relatives, have been afflicted with mental disease or some other severe nervous or mental trouble, or in which the parents are nearly related to each other. I wish to speak to you to-day about what you have to direct your attention to in such cases, as well as in those which do not depend upon heredity, and to give you some advice as to when and in what way you have to act as medical adviser.

Let us speak at first of the hereditary predisposition to mental disease; and I will have to tell you here of a great number of symptoms which are ordinarily regarded as signs of a so-called "hereditary taint"; that is, you frequently find in persons predisposed to mental disease an asymetry of the skull or deformity of the ears, so that either the cartilage of the ear is imperfectly developed, or the lobule fastened to the cheek; you will also frequently observe differences in the mimic muscles of the face, or strabismus, or deformity, or imperfect development of the sexual organs, or finally, retardation of growth and imperfect development of the entire body. Although you sometimes find these symptoms in cases in which there is no reason to suspect a proclivity to mental disease, still you must never overlook them, especially when you observe them in connection with any psychical abnormality, however slight it may be. If you now learn

that the individuals in question have suffered at an early age from convulsions, and still show a slight degree of convulsive excitability (tic convulsif, slight chorea, etc.), if it is further told you by the patient's friends that they are remarkable for their constantly changing temperament, for their excessive excitability and striking lack of self-control, and if you further discover a certain disposition to disregard conventional forms, to perform all sorts of queer actions without regard to consequences or to what people may say, together with an excessive self-conceit, which is, however, frequently united to brilliant talents and one-sided accomplishments, you may safely say that you have to deal with a psychological diathesis which is threatening to become a fully developed psychosis. In the further course of the disease the excitability becomes more and more marked, and you have finally outbursts of anger and rage, which are no longer very far from fully developed mania. Your patient passes with the greatest ease and suddenness from the most passionate expressions of love to the most violent outbursts of hate; entirely unaccountable in his actions, his feelings and his very thoughts, he martyrs and torments his friends and relations, despite his ability to express himself logically, more than is possible for a really raving maniac. Let those unfortunate women who have such husbands tell you what they have suffered in their marriage life, and you will certainly be filled with the deepest compassion for them, and make the solemn vow to pay more attention in future to such individuals, and to withdraw them, as soon as possible, from their surroundings, and by placing them in an asylum, thus do both them and their friends the greatest possible kindness. Do not let yourself be imposed on by what the so-called good friends, i. e., the drinking companions of your patient, may tell you; they have themselves, no doubt, frequently laughed among themselves at the "cracked fellow," but now they cannot understand how he can be insane, for, as is their usual argument, they heard him talk quite "rationally" the very day before.

Gentlemen! "talking rationally," as the phrase goes, is by no means a sign of mental soundness. So many morbidly perverted views and opinions, so many perverse sentiments, yes, so many positively insane ideas and hallucinations may be concealed behind this "rational talking," that you can lay no weight at all upon this symptom. Indeed, you frequently find in our patients a morbidly increased "sharpness" in their habit of talking; namely, when these patients

find it necessary to conceal their foolish and perverse actions, or to find excuses for their senseless excesses and outbursts of passion, they frequently develop a wonderful degree of dialectic power and capacity for twisting words and facts to suit their own purposes. And it is just this increased capability for mental action which betrays to the initiated observer the presence of mental disease; for (and this is no contradiction) you will find in all this "cuteness" a certain *naïveté* and weak-mindedness which betrays the abnormality of the thinking process. Usually it is not actually insane ideas (although that of persecution is often present) which attract our attention, but simply the unusually one-sided and sometimes even childish judgments the patient forms, as also the rapidity with which his thoughts are converted into actions, although the latter may be contrary to all rules of morality and justice. The disease we have in view has, indeed, been called, with special reference to this symptom, "*moral insanity*," and contrasting with this symptom the tendency and aptness of the patients for talking "sharply," "*folie raisonnante*," as also because hallucinations are not present "*mania sine delirio*." All these names—and this is important for a correct understanding of the disease—are not intended to designate clinical forms of disease, but simply to describe certain symptoms which may be met with in the most different varieties of psychical disease.

But let us return to our patient. You will frequently find that his lack of self-control exposes him to the influence of the most dangerous passions, which not only help to develop the approaching psychosis, but which also play an important part among the later symptoms. The greater number of so-called soaked drunkards belong to the class of hereditarily predisposed individuals, and in them the symptoms of chronic alcoholism are joined with those of their mental trouble. The exaltation of self, which we observe in what is called *délire des grandeurs*, gives occasion to all sorts of useless excesses, foolish speculation, constant desire to buy and to build, and so on—and not enough that such patients ruin the ideal happiness of their families, they but too often bring about their positive material ruin.

What have you to do, gentlemen, in such cases? Of course this will depend, in a great measure, on the phase of development in which you find the disease. If you have the opportunity of observing the first threatening symptoms in childhood, endeavor,

above all things, to gain some control over the education of the child. Every mental and bodily over-exertion must be scrupulously avoided, and in the choice of a school and of the future calling in life, regard must be paid to lesser capabilities and power of endurance of his cerebrum. Spirituous drinks, coffee and tea must be forbidden, and as little irritating a diet as possible must be recommended and employed. As we do not know of, or possess any means of directly affecting the cerebral development, we must be content with the avoidance of all injurious influences and with measures calculated to strengthen the general constitution. A good and well-directed care of the cutaneous surface, by means of lukewarm and cool (never too hot!) baths is especially to be advised. Methodical cold water cures, as is the case in all psychoses, can only be sanctioned when the greatest care is used in their employment, as they too easily produce hyperexcitation and paralysis of the sympathetic system. I must also specially warn you against all weakening and derivative methods of treatment, including, of course, all saline cathartics, as they exercise too depletory an influence on the cerebral vessels. As the disease advances in its development you have, besides treating such symptoms as may call for interference, to direct your careful attention not to let the proper moment pass by for bringing the patient into an asylum, in order to protect both him and his family from the consequences of his dangerous acts. We sometimes succeed in asylums (although in general the prognosis of fully developed cases is unfavorable) under the influence of complete rest and quiet conjoined to a perfectly regular life and diet, in restoring the patient so far that he can return to his family, and sometimes even to his business. Of course, though, you must never lose sight of such a patient, but must keep him under your constant observation. This, gentlemen, is the picture of the disease which is usually, and in a certain sense specifically, termed "hereditary insanity." This form of mental disease gives us a great deal of trouble from a diagnostic point of view, as it is frequently very difficult to tell when the diathesis has become an actual disease; experience and a certain tact, which is only acquired by practice, must assist you, and here it is that I would advise you to obtain the opinion of a specialist. But I must tell you that this form of insanity is not the only one which may be developed from an hereditary basis, but that almost anyone of the known varieties

of insanity may complicate the case with its own peculiar symptoms, nor does the mental disease of the son have necessarily to be that from which his father or grandfather suffered. Severe forms in the children may be consecutive to light ones in the parents, and *vice versa*. It is in consequence of these facts that it is so difficult to make any general statement as to the prognosis of hereditary insanity, but we can emphatically contradict the prevalent opinion that such cases usually take an unfavorable course. The very fact that the brain of hereditarily predisposed individuals is so easily injured and put out of balance by slight causes makes it, on the contrary, rather more probable that a readjustment can take place than in those cases in which a violent cause, injuring and shaking in their integrity all the nervous elements, has been necessary in order to bring about the disease in a brain not predisposed to mental disease. This view is also supported by the fact based on practical observation that in so far we have to do with a case which is not *per se* incurable, the prognosis is rather bettered than otherwise by the proof of hereditary predisposition.

(To be continued.)

BACILLARY PHTHISIS OF THE LUNGS.*

By Prof. GERMAIN SEÉ, of Paris, France:

I.—INTRODUCTION—HISTORY AND TRADITION.

Four great names have distinguished and to-day sum up the history of phthisis—Laënnec, whose immortal labors sixty-five years ago clearly established the unity of the disease amid all its varied forms, and revealed its intimate nature, or, in other words, its specificity, in the midst of the entanglement of common and complex lesions which sometimes precede it, often accompany it, almost

* Being Chapter I. of Prof. See's new work on Phthisis; translated by Dr. E. P. Hurd, Newburyport, Mass.

always succeed it, and so obscure it as to render it difficult of recognition; Villemin, who, by precise, persevering experimentation, demonstrated in 1865 the virulence of phthisis, its transmissibility by inoculation; in other words, its complete reproduction in animals inoculated with the virus. The third name, which in appearance seems foreign to the special study of phthisis, is that of Pasteur. Had it not been for his marvellous discoveries of the vitality of ferments, and in particular respecting the parasitic origin of certain diseases, essentially virulent, science would not have been able to-day to make good her claim to an exact knowledge of the mode of development of the most grave and most frequent of the diseases which decimate the human race. But the great physiologist, who for more than twenty years has been contending for an idea so fruitful in results, was not in possession of the perfected means of demonstration which in these latter times have enabled us to enlarge the domain of observation and push to extreme limits the notion of micro-organisms. It is Koch, who, by reason of a new and rigorous technical method, was able in 1882 to discover and to describe the parasite, in other words, the veritable agent of tuberculosis, and in such a manner as rapidly to compel general conviction. In proving the presence of the parasite, the bacillus, in all the tissues and in certain products of secretion of tuberculous subjects, Koch may be said to have made the bacillary origin of phthisis a dogma of medicine.

§ 1.—*Bacillary phthisis in its relations to medical traditions.*

In view of the general assent which has welcomed the discovery of the tubercle bacillus, it is for the clinician to prove that practical medicine is in harmony with experimental medicine which has revealed the existence of the morbid parasites. Already diagnosis has profited largely by the discovery, and we have for our part contributed to the demonstration of doubtful phthisis by microscopic examinations of the sputum; the bacillus in the products of expectoration is the infallible and constant proof of tuberculosis in all its periods, even in its insidious beginnings, which often lead the physician astray during long methods of uncertainty. The bacillus, then, is a reliable and certain sign, but this is not all—it is besides the agent which provokes the malady and the destroyer of the

organs which it invades, and being the seal and criterion of tuberculous affections, we are justified in defining phthisis by the bacillus which produces and characterizes it.

If this be a bold innovation, it is at least the logical outcome of data now forever in the possession of science, the sum of which facts enables us now to form an adequate conception (though the outlines are dimly drawn) of maladies called infections, virulent or specific. Morbid states of specific nature had for a long time their place assigned them in nosography; as characteristics, authorities insisted upon their transmissibility and contagiousness, which of course implies (what in fact was admitted) the existence of a *contagium*, i. e., an intangible, invisible principle. In the place of a word we have to-day the offending body, the *corps du dëlit* itself, and the specificity of the disease vaguely foreseen, long disputed, rests now on a substantial basis, on proofs which may be called *living* proofs.

It will without doubt be said that we are marching toward a revolution which shall do violence to every system and department of medicine. There is really no such danger, and the revolution does not frighten the old clinician, who, far from seeing medical tradition compromised by morbigenous parasitism, finds it, on the contrary, placed on new and firmer foundations. The old doctrine of vitalism—so long discredited—which saw in disease a vital entity foreign to the invaded organism, finds itself rehabilitated to-day under a new form consecrated by science. The specific diseases, so long regarded as the special province of morbid anatomy, or of chemistry—marvellously progressive as that science is, and inclusive of so much that pertains to medicine—must now be regarded as amenable to other laws, namely, those of living beings, and our organisms must be looked upon as the theatre of a constant struggle between the life of man and the life of the parasite world—our ancient hereditary foes. In fine, the biological history of the ferments and morbid microbes, and all that constitutes *experimental vitalism*, will be integral foundation elements of the future pathology.

2.—DEFINITIONS OF TUBERCULO-BACILLARY PHTHISIS.

There are several ways of defining phthisis, but there is only one

true and useful way. It cannot be defined by its gross pathological or histological characteristics (as will be shortly shown) nor will it do to leave out the bacillary causal element by which we must be guided and by which we must be limited in the study of this disease.

§ 2.—*Anatomical Definitions.*

As Laennec has clearly shown, tuberculosis takes on divers forms, which all come from one same and sole lesion; the miliary granulation (found in phthisical lungs), the yellow or gray tubercle, which succeeds the granulation, the gray or yellow infiltrated mass, which results from fusion of the tubercles, in fine, the caseation and the softening; all of which are phases in the fatal evolution and destruction which attend certain morbid products of a discrete or confluent kind. All these lesions, with their varied aspects and phases, constitute tuberculosis. But every one of these forms, considered as peculiar to tuberculosis, has been successively contested and denied. Histology has been appealed to to decide the ever-rising difficulties attending this question.

The rigidly accurate methods of microscopical anatomy might have been expected to give the stamp of certainty to the descriptive definition of tubercle. It would, however, be easy for any one familiar with the past to show that, despite the undeniable progress accomplished by the microscope, with its perfected technics the last quarter of a century, it is still impossible to assign to tubercle such precise characteristics as shall differentiate it from other pathological products. Have we not heard one of our most eminent histologists, Prof. Cornil, affirm publicly the worthlessness of the distinctions established, and demonstrate the essential similarity between tubercle syphiloma and the morbid products of "glanders?" Such a confusion—if there were no way of escape—would almost make of scientific medicine a wreck. Tuberculosis, syphilis and glanders constitute undeniable and well defined individualities.*

* There is nothing characteristic in the tuberculous nodule but the bacillus. The same histological structure, including the giant cell, may be found in the nodules of syphilis or lupus, as well as of tuberculosis. The same local and anatomical change may follow the inhalation of particles of Limburger cheese as the inspirator of atomized phthisical sputum. For decades the pathologists, from Virchow down, their eyes full of caseous matter and giant cells, wrestled

§ 3.—*Etiological Definition.*

Clinical observation, in its turn, has been proved incompetent to clear up the difficulties attending the nature of true tubercle. But clinical medicine cannot advance a step without the aid of pathological anatomy (which has been ruled out) and etiology; there is nothing so peculiar and specific about the phenomena of tuberculosis that the mere study of symptoms can afford the criterion that is wanted; hence nothing remains but etiology or the study of causes, and to this we must henceforth look for our fundamental notions of the disease. Doubtless etiology is not that hackneyed chapter which, under the fallacious pretence of enumerating causes, mentions complacently the age, sex, stature, temperament, constitution of individuals liable to contract such a morbid affection or such an infirmity. After having announced gravely that out of a hundred tuberculous patients there are fifty-two men and forty-eight women, all having the ages of from five to seventy years, of irritable or lymphatic temperament, and most of them without temperament, you have not seriously advanced the study of causes. This enumeration of pre-tubercular or phthisical subjects is continued generally by a series not less puerile of meteorological and cosmical considerations relative to the frequency of the disease in valleys or on mountains, in warm countries, or cold countries, and everything seems said, when, to complete the chapter of antecedent causes, it is resolutely affirmed that the determining cause is an impression of cold or of heat. This is not etiology; it is simply a budget of country statistics.

The true study of the morbid cause commenced the day that the specificity of the disease under any form whatever, was recognized; whether that were regarded a poison, solid and soluble, liquid or gaseous, whether a virus or a parasite; in a word, a microbe, the disease was then constituted etiologically, that is to say, in its essence and its individuality. Whether the anatomical product may be like another anatomical product or not, is of little consequence;

with one another over the question, What is true tubercle? Finally it dawned upon them—they were confounding anatomy with etiology; they were regarding as characteristic of one morbid process a histological structure common to several; *they were confounding tubercle with tuberculosis.* As Cohnheim said years ago: "Struggle against this as we may, there is no help for it—the anatomical definition suffices no longer for the tubercle and tuberculosis."—*W. T. Belfield, in Cartwright Lectures, 1883.*—TR.

or whether the semeiology resembles that of all the other cases, there is needed to constitute the disease a factor which dominates the entire series of lesions and of symptoms. When the first term of the problem is wanting, namely, the causal factor, you are obliged to limit yourself to a determination of the state of structure, or even to the interpretation of the functional troubles, which may constitute the whole morbid affection.

In tuberculosis the etiological element is henceforth rigorously defined—it is the bacillary parasite; this it is which produces the tuberculous lesion, and consequently the functional trouble which follows; it is against this that the prophylactic treatment of the patient and all curative measures should be directed.

TRUE ETIOLOGICAL DEFINITION OF BACILLARY PHTHISIS.

Phthisis is, then, bacillary; there is no other kind. It is, therefore (to sum up), a virulent disease, due to a micro-organism, special, specific, always inoculable in animals, transmissible from the sick man to the well man by way of direct contagion—far oftener propagated by way of heredity—very frequently localized in a single organ, and susceptible of cure without compromising the rest of the organism.

The bacillus, as long as it lives, and as long as it invades the economy, as long as it undergoes multiplication, constitutes the danger, for it will continue its ravages.

§ 4.—*Plan of Study.*

Part 1.—*Biological study of micro-organisms.*

If it is the bacillus which causes the disease, we shall have, first of all, to inquire what are microphytes in general, and what are their vital properties? The biological study of these organisms will constitute the first part of our work.

Part 2.—*Biological study of the bacilli.*

When we shall have possessed these general notions we shall inquire into the distinctive characteristics, the vital conditions, the morbigenous action, and the origin of the bacilli; the second part will comprehend the biological study of the bacillus tuberculosis.

Part 3.—*Anatomical study of bacillary lesions.*

The third part will be devoted to the anatomical history of the

bacillary lesions, that is to say, of tubercle—of its forms, of its evolution in the organs, especially in the lungs.

Part 4.—*Causalities.*

Under this generic name I mean the causality, intentional or experimental, clinical causality, whether efficient or predisposing.

Part 5.—*Clinical study of phthisis.*

The minute analysis of signs and means of diagnosis of the different forms of phthisis will be the subject of the fifth part.

Part 6.—*Prophylaxis.*

Part 7.—*Therapeutics.*

SELECTED PAPERS.

DR. SQUIBB ON HYDROCHLORATE OF COCAINE.

Ac Med J (65.) 15: 72-78, # 2, Feb 1885.

Since the writer's last note on this subject the original paper of Dr. Carl Koller, of Vienna, the discoverer of the anæsthetic effects of cocaine salts, has been published. It is a very important paper, and a translation of it may be found in the *London Lancet* for December 6, 1884, page 990. The paper was read at the meeting of the Vienna Royal Imperial Society of Physicians on October 17th, 1884. Its English title is "On the Use of Cocaine for Producing Anæsthesia on the Eye," "Translated and Revised by J. N. Bloom, B.A., M.D." This paper sets at rest several important points which should be noted. Dr. Koller says his first announcement of his discovery was to the Convention of German Oculists which met at Heidelberg on the 15th and 16th of September.

He says it is a well-known fact since 1862, when it was announced by Prof. Schroff, that cocaine anæsthetized the mucous membrane of the tongue. And that it was also known that, when taken internally, it narrows the peripheral arteries, and farther, that the pupil was dilated both by its local application and its internal use. Dr. von Anrep, in 1880, published researches upon cocaine, at the end of which it was hinted that the local anæsthetic action of cocaine

might in the future become of considerable importance. But it was not until his, Dr. Koller's, investigations and experiments, first on animals and then on man, that its practical applicability to general use as a local anæsthetic was known, and of this he was the discoverer, and he was led to the discovery by the known effects upon the tongue. He states that in his experiments he used the "muriate of cocaine" in aqueous solution, and that when a few drops of this was put into an animal's eye, the first effect was that of a weak irritant. To this statement he has a foot-note to the effect that "A solution of cocaine in water, up to 5 p. c., can be made without the addition of an acid. The solution is always cloudy. The addition of an acid is to be avoided, as even a very small quantity of an acid causes a very strong burning sensation. When filtered the solution becomes as clear as distilled water." This note was either too loosely written or badly translated. The alkaloid cocaine is scarcely at all soluble in water. Authorities say 1 part in 704 of water, and this is probably correct. The author meant to say that the "muriate of cocaine," as he calls it in the text of his paper, meaning the hydrochlorate, was soluble to the strength of 5 p. c., but always gave a cloudy solution which was cleared by the addition of an acid, but that the addition of an acid was objectionable. In this statement he is in error, as any well made muriate, or hydrochlorate of cocaine, is perfectly soluble in less than its weight of water, and makes a clear solution which is neutral, and not acid.

From experiments on animals he found that the anæsthesia was very superficial, and only complete for the cornea and conjunctiva. From these he proceeded to experiments upon himself and a few colleagues, and finally, upon patients. The sequence of the symptoms he gives as follows: "When a few drops of a two per cent. solution are introduced into the conjunctival sac, or, better still, if they are allowed to run over the cornea—together with an increased secretion of tears, a slight burning sensation is felt, which disappears after an interval of from thirty seconds to a minute, to give way to an obscure feeling of dryness. To the observer an eye thus treated has a peculiar rigid expression, very like that which I noticed as remarkable on the animals upon which I experimented. This expression arises from a decided widening of the palpebral fissure, the explanation of which I shall give later. If now the

head of a pin is brought in contact with the cornea, we note the absence not only of the pain usually associated, but we absolutely do not feel the contact, and all reflexes are absent. The same holds good for the conjunctiva, which loses its sensibility to heat and cold. Without any inconvenient sensation, or the slightest reflex movement on the part of the patient thus treated, we can grasp the conjunctiva of the bulb with a toothed forceps, or we can pit the cornea by pressure. In this connection the only thing to be observed is that the appearance of objects becomes indistinct, which naturally is caused by the changed curvature of the cornea. This complete anaesthesia lasts from seven to ten minutes, to give way to the normal condition after a considerable period of sub-normal sensibility." He then goes on to describe the mydriatic effects, and finally, to its therapeutic and surgical application, uses and effects. He finds that its use in diseases of the eye has no influence, beneficial or otherwise, on the course of disease, but simply relieves the pain temporarily, or during the repetition of the application; but the pain, intolerance of light, etc., seem to have been lessened, not abolished.

The agent, however, was too dear for continued trials in these cases, and all the trials seem to have been made with a 2 p. c. solution, and that solution made from a salt which does not seem to have been very good, although he suspected no deficiency in quality.

In the surgical applications, however, he used a 5 p. c. solution, and commencing half an hour before the operation, instilled two drops every five minutes, the patient lying on his back without a pillow; and even by this method the deeper tissues of the eye were not insensible, though the iris was cut without pain.

In reviewing these statements of Dr. Koller, it will be observed that they are moderate in tone and character, and not enthusiastic, and that they have been in the main fully confirmed by many observers.

It has been said that the smarting or burning from the first instillation was more severe and more prolonged than it should be from his history; but it must be remembered that so bitter and powerful a salt could not but be primarily irritant, and that a 4 p. c. solution, as now commonly used, must be twice as irritating as one of 2 p. c. It seems rational and probable that a single drop of

4 p. c. solution at first would reduce this smarting to a minimum, and admit of the larger dose of two drops to be used in the dryer stage, when it would be less diluted by tears, and when less of it would be washed away.

From the accounts of operators here, it would seem that two drops of a 5 p. c. solution every five minutes, for half an hour, is wasteful, both of the agent and of time, unless the agent was defective in quality. Five drops of a 4 p. c. solution in two instillations, ten minutes apart, seems to be a sufficient quantity, and fifteen to twenty minutes a sufficient time. Some operators give the history of a much more copious use of the solution, and this suggests the probability of great waste. The greater or less lachrymation in different cases has doubtless an important bearing both upon the quantity required and the time, by the greater or less dilution and washing away of the agent.

In applying the solution to other mucous membranes than those of the eye, a camel's hair pencil has generally been used, but under the very best management, and upon surfaces made as dry as possible, the pencil leaves but a very small quantity upon the surface, and it is not to be expected that complete anæsthesia is easily attainable in this way, however frequent the applications, and a profuse use of the agent does no good, since it immediately runs off the surface. Neither is it of any use to apply it to surfaces coated with secretions, no matter how thin the coating, if they are of the glairy kind, since efficient contact with the surfaces is then impossible, and the waste is as complete as an application to the skin covered by epidermis. So, on its application to painful ulcers, burns, etc., care must always be taken to obtain contact of the solution by having the surfaces perfectly clean. A blistered surface, if covered with the natural exudation, is almost or quite beyond the reach of the solution in proportion as the exudation is thin enough in consistence to mix with the solution when applied. The model condition for effective use in the mucous membrane of the eye, and upon any surface in that clean condition it will be as certainly effective. In applying to it denuded surfaces and to mucous membranes which will admit it, the best method is to have some light covering of the desired shape and size, that will hold the solution. A thin filtering paper will be moistened over an area of fully a square inch by a single drop, or half a minim of the solution, and under favorable circumstances that will superficially benumb an

equal area of mucous membrane. Any one can convince himself of this fact by placing such a piece of paper on his tongue, if the organ be rinsed off clean before the paper is laid on. Such a paper, when touched occasionally with a camel's hair pencil charged with solution, will have its efficiency strengthened, and upon the tongue, for example, any effect possible to the agent is obtainable in that way. But paper is not a convenient tissue for such application. Fine, thin cotton or linen fabric is much better, and nothing can be better than well-worn fine handkerchief material. This is sufficiently absorbent to hold the dose, and thin enough to avoid waste and to be closely applicable to irregular surfaces. When touched in situ, for resupply, the brush should be applied to the upper edge of the tissue, so as to run down through it before draining off, and the smallest possible quantity should be applied at a time if waste by running off be avoided. Much solution is wasted by the use of camel's hair pencils many sizes too large. Indeed, it is hardly possible to get a brush too small to convey this solution economically, unless large surfaces are to be coated. In the use of a brush for applying the solution it should never be dipped into the vial of solution, because it carries back secretions and excretions which rapidly spoil the remaining solution, and it is thus wasted. The proper way is to drop out the quantity to be used on the bottom of a tumbler or wine-glass, and dip the brush in this until it is all used, never putting any back into the vial. In this way any desired quantity may be used and none be spoiled or wasted. If any one will try the effect of a single drop of 4 p. c. solution put directly upon his tongue without rinsing, and then, half an hour later, rinse the tongue clean and apply the same quantity upon a piece of thin bibulous paper half an inch in diameter, he will be convinced that any failures are due to faulty application, and may see that one drop well applied may be as effective as the nature of the agent will admit of, and quite as effective as ten drops badly applied. From reading the published accounts of the application of the solution, it seems highly probable that more of it is wasted than is really utilized, and if this waste could be stopped without increasing the number of failures, the price of the chemical would soon come down.

Little has been written upon the mode of action of cocaine salts as local anæsthetics; or rather, the writer has seen no attempt to explain how coca in substance should be a nervous stimulant, and yet its alkaloid be a most powerful nervous sedative. The two effects cannot

possibly be antagonistic, for that is irrational, neither can the effects be due to quantity. Some other rational explanation will doubtless be reached, and the writer offers the hypothesis that the local effect may be measurably a mechanical one, and thus be independent of the effects when it is taken internally. Any agent that would contract the supply of vessels of the terminal bulbs of the sensitive nerves, and press out the blood from them, would to the same extent lessen the sensibility of the part, and if the capillaries were emptied entirely by such contraction, sensation would be abolished as completely as the galvanic current is abolished when the liquid is drawn off from the plates. The application of cold abolishes sensation in this way, and is a local anæsthetic of the same character as cocaine salts, and the benumbing is of the same kind in its observable degrees. Heat also has a similar action when just short of that degree which coagulates the albumen of the bulbs and the circulating fluids. Carbolic acid is also a very effective local anæsthetic by something of the same kind of action, of contracting the capillary vessels, and thus diminishing the supply of the excitant fluid necessary to the function of sensation. But all these agents, when their action is carried to the degree of complete anæsthesia, are proportionately destructive of tissue, and either kill the parts or cause destructive inflammation. All cause blanching of the tissues by pressing out the coloring liquid—namely, the red blood; and tissues, when thoroughly benumbed by cold or heat or carbolic acid, are found comparatively bloodless when incised. An injury to a very cold hand or foot is not painful, neither does it bleed much, but, as it is warmed, the bleeding and pain come on together. It has been noticed by several observers that red mucous membranes, when anæsthetized by salts of cocaine, are white, and when cut into very superficially—that is, when the cut is not deeper than the anæsthesia—there is but little bleeding. This, if true, is precisely the condition in anæsthesia by cold, and the condition in both cases may be due to the same cause, namely, contraction of capillaries, whereby the circulation is diminished or practically suspended. Then, if the effect of cold in producing anæsthesia is a mechanical effect, the similar effect of cocaine, if produced in a similar way, is probably also mechanical. This, in a profound sense, is of course no explanation at all, since it does not touch the reason why cocaine should, or does contract the capillary vessels, and thus deprive the

function of sensation of its exciting cause and necessary condition, but yet such explanation goes far enough to show how the same agent may rationally be a nervous stimulant when given internally, and yet be a powerful nervous sedative when locally applied. Indeed, the explanation given of the mode of action is supported by the observations of the early investigators of the physiological effects when internally administered, since they showed that one prominent effect was to contract the peripheral arteries.

If the explanation be true, there is no difficulty in comprehending why the local anæsthesia is a condition of degrees, and can hardly be complete in tissues supplied with vessels of considerable size, and that the anæsthesia of tissues below the surface must depend for degrees upon the rate and amount of absorption of the agent, since it cannot be conveyed from the surface to the deeper parts by vessels which are closed or contracted by it so as to abolish or reduce their carrying capacity.

The explanation also serves to show why it is without effect when applied to the skin, since the epidermis there prevents mechanical contact with the capillaries. But if the skin was well soaked with water, so as to soften the epidermis and bring it into a condition similar to that of the epithelium, then the agent should at least have some effect. Or, in combination with, or solution in, some such liquid as oleic acid, which can get through the epidermis, or be absorbed, it should be somewhat effective.—*An Ephemeris of Materia Medica, Pharmacy, Therapeutics, etc.*

NEW REMEDIES—EUPHORBIA PILULIFERA.

A good remedy for asthma will always find a welcome. Quebracho seems to have had its day, though still deservedly held in estimation. The new candidate for favor, which promises speedy and sure relief for the dyspnœa of spasmodic asthma, of chronic bronchitis and emphysema; which will better than stramonium and the iodides right the hobbling machinery of hæmatisation, is euphorbia pilulifera. Extraordinary testimony, chiefly from foreign sources,

comes to us respecting the efficacy of this herb as a respiratory stimulant. Certain Australian physicians, Drs. Matheson and Shephard, also Carr-Boyd, have reported wonderful success with this remedy in asthma and all affections of the air-passages attended with difficult breathing. We are told that this plant is not merely indigenous in Queensland, but is abundant also in the tropical regions of Asia and Africa, and in South America. One case is reported in which the patient had been a victim of asthma complicating bronchitis for eight or nine years, to such an extent that he found himself unable for many nights in succession to sleep, except in a sitting posture. The administration of euphorbia pilulifera was followed by immediate and permanent relief.

This case would seem, from the communications of these physicians to be typical of multitudes of cases within their experience where individuals, long sufferers, have derived lasting relief from the free use of a simple decoction of the pill-bearing spurge.

This decoction, according to the directions of the *Pacific Medical and Surgical Journal*, is made by simply steeping one ounce of the fresh weed—or one-half ounce of the dried plant—in two quarts of water, and reducing it by simmering to one quart. Of this decoction the dose is a wineglassful. This plant, according to Dr. Boyd, is as common in Australia as the pig-weed is in this country, and is largely resorted to by the natives in pulmonary complaints. Other testimony of a similar kind comes from Jamaica; notably that of Dr. Bancroft. During the past year Dr. Tison, a practitioner of Paris, has published several interesting papers on the euphorbia, in which he details his own favorable experience of the antiasthmatic properties of this spurge, and quite lately has appeared the instructive *thèse* of Dr. Marsset, late of the Hôpital Clermont-Ferrand, in which he reports twelve cases, nine of which came under his own observation, where the most signal benefit was obtained in organic or spasmodic dyspnœa by the free use, after the evening meal, of the infusion or aqueous extract of euphorbia pilulifera. He strongly recommends the dried plant, infused in the manner above described—dose, three or four wineglassesful—or the aqueous extract in the dose of one or two grains a day.

Some of these patients who were so remarkably relieved of all their breathing troubles—and one gentleman (Case IV.) who had been unable for several months to work, or even to lie down, was

cured in a few days' time by euphorbia—were patients in the care of Dr. Dujardin Beaumetz, of the Hôpital Cochin, and their cases seem to have been reported with fidelity and much pains.

Dr. Marsset relates with great minuteness the numerous physiological experiments which, while a student in the laboratory of the Hôpital Cochin, he performed on animals to ascertain the toxic effects and mode of action of the euphorbia. He used, for the purpose of experimentation, the aqueous extract of the dried herb, well diluted in water, and either poured it down the throats of his animals (frogs, Guinea pigs, hares), or injected it under the skin of the back. He found the medicament inert in small, and quite toxic in large doses, the symptoms of fatal intoxication being marked distress and agitation, acceleration, then showing, of the heart's action, and especially of the respiratory movements; finally collapse. The necropsy, revealing some congestion of the lungs and bronchi, a well-pronounced injection of the gastric mucous membrane where the poison was administered by the mouth, and distention of the gall-bladder and bile-ducts. The symptoms and post-mortem appearances, he affirms, resemble those where death takes place from section of the pneumogastriacs, and the drug is believed to act by modifying the vagus centre in the medulla oblongata. The toxic action is somewhat irritant to the mucous membranes; it seems to be chiefly eliminated by the liver.

As for the active principle of the euphorbia, it would appear to be a gum resin, soluble in water or dilute spirit; no alkaloid has yet been discovered.

It has not yet been determined what remedial principle this particular euphorbia (the pill-bearing spurge) has which the other euphorbias have not, or whether the same antiasthmatic properties may not be possessed by other members of this large botanical family—a family which comprehends more than twenty-five hundred species, all characterized by their acrid, milky juice (in which the toxic principle resides) and their singularly anomalous inflorescence.

If this new remedy should really prove to be what the foreign testimonials above referred to seem to justify us in expecting, it will be a most valuable addition to our materia medica.—*Boston Medical and Surgical Journal*.

NOTES ON TREATMENT OF EPILEPSY.

By CHARLES K. MILLS, M.D.

Professor of Diseases of the Mind and Nervous System in the
Philadelphia Polyclinic and College for Graduates in
Medicine, etc.

Read before the Philadelphia Neurological Society.

His remarks applied chiefly to the medicinal treatment of epilepsy proper—grand mal, and petit mal. He did not intend to refer to the treatment of convulsive seizures due to tumors, meningitis, spinal disease, etc.

As to the curability of epilepsy, some apparent authentic cases of apparent or real cure in his own practice, private and hospital. In all of these the attacks remained away for from more than one to three years. Gowers mentions a number of cures, at least, cases in which seizures had not recurred for as much as four, five, six or seven years. Several of these cases were children. Three of the seven cases alluded to by Dr. Mills were children. All observations as to the cure of epilepsy were necessarily imperfect. After a number of years the attacks recur again. Although, however, the absolute curability of epilepsy might be doubtful, certainly great benefit from treatment is to be derived in most cases. It is a wrong to such patients not to treat them.

He had used the following remedies, singly, three or four times daily, in a series of cases, during the last ten years: Bromide of potassium, gr. x to 3 j; bromide of sodium, grs. x to 3 j; bromide of ammonium, grs. x to 3 ss; monobromide of camphor, grs. iij to vj; hydrobromic acid, f 3 ss to f 3 ss; iodide of potassium, grs. v. to 3 ss; biborate of sodium, grs. xv to xx; chloral hydrate, grs. x to xv; oxide of zinc and valerianate of zinc, grs. iij to x; nitrate of silver, gr. $\frac{1}{4}$ to gr. $\frac{1}{2}$; tincture of belladonna, ℥x to xv, or extract of belladonna, gr. $\frac{1}{4}$ to $\frac{1}{2}$; extract of cannabis indica, gr. $\frac{1}{8}$ to gr. $\frac{1}{4}$; fluid extract of cocculus indicus, ℥j to iij, or tincture of cocculus indicus, ℥v to x; nitrate of potassium, grs. v to viij. Other remedies which he had only used in combination with some

of the above drugs, were as follows: Conium juice, f ʒj, or fluid extract, ℥iij to x; digitalis, ℥v to x; sulphate of strychnia, gr. 1-40 to 1-30; Fowler's solution of arsenic, ℥ij to v; fluid extract of ergot (Squibbs), grs. iij to vj; iron, cod-liver oil and quinine.

The bromides were certainly the best remedies, and the bromide of potassium, in his opinion, stood at the head of the list. The bromide of sodium came next best to the bromide of potassium. He thought the bromides affected the nerve centres directly. The mixed bromides were better, usually, than any one of them used singly.

The bromides could be advantageously combined with other drugs. The combination which he had found, on the whole, the best for long-continued use, was bromide of potassium, grs. xv; bromide of sodium, grs. xv; solution of the arsenite of potassium (Fowler's solution), ℥ij; conium juice, f ʒss, or the fluid extract of conium, ℥iij to v. This was generally made up with syrup of orange and some bitter infusion. Another good combination, mentioned also by Gowers, was the bromide of potassium and tincture of digitalis. It was only especially valuable in cases complicated with weak heart or mitral disease. Monobromide of camphor had no advantage over the bromides. Hydrobromic acid was efficient in very large doses, but so much water had to be given with it that the amount to be swallowed was appalling to the patient. It sometimes irritated the stomach. Borax was not of established value, but helped a few cases temporarily. He found the iodide of potassium, unless especially indicated, had little value when used alone in the treatment of epilepsy. Chloral hydrate is not of much value when given alone, but with the bromides, in cases uncomplicated with cardiac disease, sometimes makes a useful combination. Trousseau's belladonna treatment had been used without noteworthy success. Cannabis indica was not to be depended upon. He had tried cocculus indicus in six cases at the Philadelphia Hospital. None improved, and four were made worse by its use, one of the four becoming insane while taking the drug. At the request of Drs. Reichert and Hinsdale, he had used the nitrite of potassium in seven cases. Of these, only one seemed to be benefited, and some were made worse by its use. When the bromides had to be stopped, the zinc salts or the nitrate of silver were the best substitutes; but they could only be relied on for a short time.

The way to treat epilepsy, in his opinion, was to simply have a plan of treatment, and carry it out over a series of months or years. He would for instance, first put a patient upon a single bromide, say fifteen grains three times a day, to be increased until a decrease in the number and severity of the paroxysms was produced. He kept him upon this perhaps for a month. He then used the mixed bromides, or some combination of bromides with other drugs, preferably the bromides, arsenic and conium prescription. He watched the condition of the patient, and, if necessary, put him on cod-liver oil, quinine or iron. With reference to Litrates, bromates, etc., he said that there was probably some chemical or chemico-physiological reason for inefficiency. The *ites* and *ates* would probably *never* give as good result as the *ides*. Dr. Mills believed with Dr. Pepper (*Medical and Surgical Reporter*, January 12th, 1884), that close attention should be paid to every point in the daily life of an epileptic—to diet, rest and hygiene; but he did not, with his present experience, believe that a genuine case of thoroughly developed epilepsy could be cured, or even greatly benefited, without drugs. Harm, however, might be done by over use of drugs.

Among the surgical and external means of treatment he had successfully used, were excision of cicatrix, removal of neuroma, actual cautery, and blistering to the neck or head. He said he did not use counter-irritation to the scalp, but was a strong believer in the actual cautery, used after Brown-Séquard's method, to the nape of the neck.—*The Polyclinic*.

VARIOLA AND VARICELLA.

It is only the practitioner whose experience is limited, who makes light of the difficulty of making a differential diagnosis of small-pox, in the early stages of the disease. This difficulty is frequently so great, especially when the patient bears marks of successful vaccination, as to require time to overcome it. A professional gentleman of this city professes to be able to distinguish between the two diseases, even while the eruption is in the papular stage, by his sense of smell. Doubtless this sense exists in a degree of extreme acuteness in some men, as we know for a certainty it does in some animals, but for the

practitioner of the average nose this method of making a differential diagnosis can never be of value. This inability to promptly decide between the existence of a trifling affection and a grave disease, is not calculated to elevate the profession in popular esteem. Any point, therefore, which will assist in removing this opprobrium medicorum, will be warmly welcomed. We have one given us by Dr. C. Bareggi (Centralblatt für Klinische Medicin). He withdraws the fluid contents of variolous papules and pustules, and having made dry preparations of them in the usual way, stains them with methylene blue. Under the microscope they exhibit large numbers of the cocci described by Klebs as characteristic of variola. The author could discover none of these cocci in pus withdrawn from any other source, thus establishing the non-identity of variola and varicella.—*The Medical Age*.

A SUCCESSFUL CASE OF LAPARO-ELYTROTOMY, WITH REMARKS ON THE OPERATION.

By ALEX. J. C. SKENE, M.D., of Brooklyn, N. Y.

Professor of Diseases of Women, Long Island College Hospital.

Mrs. Margaret McMeekan, aged twenty-one years, a native of Glasgow, the subject of rickets when a child, was taken in labor with her first child at 4. a. m. October 4, 1884. The escape of the amniotic fluid was the first incident that indicated the approach of labor. She was seen by Dr. L. S. Pilcher at 8 a. m.; on examination the Doctor found a vertex presentation of a fully developed child, while the antero-posterior diameter of the superior strait was estimated by him at less than two inches. He sent for me to meet him in consultation, and to come prepared to operate if we deemed it imperative. When I arrived, a little before noon, dilatation of the os had become well advanced, it indeed seemed, on vaginal examination, to be complete; the uterine contractions were regular and moderate, and the general condition of the patient was excellent.

As it was clearly evident that the delivery of a living child through the natural passages was an impossibility, and as we both further believed the mother's chances would be better if subjected laparo-elytrotomy than if craniotomy were to be attempted, we advised the abdominal section. This was readily consented to, and with the assistance of Drs. L. S. Pilcher, G. R. Butler and L. C. McPhail, I at once operated.

The usual incision was made in the left groin, and nothing unusual was encountered until I divided the internal epigastric artery. This was at once secured by a Péan forceps and gave no further trouble. After reaching the wall of the vagina, a small incision was made, and this was enlarged by tearing it. In so making the incision, it extended a little beyond the junction of the vaginal and vesical walls, and in consequence a minute opening was made into the bladder.

Some little time was now lost in effecting complete dilatation of the uterus; for, although to the examining finger the dilatation had seemed complete before commencing the operation, it was not found to be so when the artificial vaginal opening had been made. A living male child, fully developed, weighing seven pounds, was then delivered by version and extraction through the wound in the groin. The placenta was delivered by contraction of the uterus aided by external manipulations. The operation-wound in the groin was closed by carbolized silk sutures, a soft rubber drainage tube being carried from the inner angle of the incision downward through the vagina and out below at the ostium vaginae. Nothing was done to the bladder-tear, but a self-retaining catheter was inserted in the bladder.

The after-history of the case presented no untoward feature. The temperature remained most of the time between 99° and 100° F., rising above 100° only once, and that during the second day on account of blocking up of the drain, except on the fourth day, when the irritation caused by distension of the breasts by a copious milk secretion caused an elevation of temperature to 100.25° for a day. Union by first intention occurred along the entire operation-wound. The drainage tube was removed on the ninth day, and the sinus made by the drain closed at once.

On the twenty-first day after the operation (October 25) the catheter was removed from the bladder, and the patient was allowed

to sit up. A degree of vesical irritability remained after the removal of the catheter, necessitating micturition at first every two hours. Two weeks later the period during which she could retain her water amounted to three hours, and at the date of this report (November 24) it still remains at about that degree. Her general condition is excellent. She has not nursed her child, but it has grown well and thriven on artificial food.

This makes, I believe, the ninth case of laparo-elytrotomy on record, and the fourth one in which I have operated.

Of these four, three have been successful, both mothers and children being saved. With each succeeding case I become more and more convinced of the great superiority of this operation over the Cæsarian section, for this class of cases. It is both easier and safer to do.

Certain points in regard to the operation, I think, are worth speaking of.

It is quite important to have sufficient dilatation of the cervix before beginning the operation. To dilate after the cervix is exposed through the wound is easy, but it takes time, which one begrudges during the operation. I refer to this, because complete dilatation of the cervix by the natural means seldom takes place in these deformed pelves, and artificial dilatation is difficult. The uterus lying high up in the abdomen, because of the contracted antero-posterior diameter of the superior strait, makes it impossible for the membranes to freely distend the cervix, except laterally, and hence the membranes rupture early. There is also the same mechanical difficulty in the way of the presenting part of the child completing the dilatation. I believe that owing to these obstacles dilatation is seldom completed without artificial aid. At least it has been so in my four cases. It is well then to dilate the cervix, if need be, before beginning the operation, if after reasonable waiting it does not take place in the natural way. It is often difficult to estimate just how much dilatation has taken place, as it was in this case, where we thought complete dilatation had occurred before we began to operate. It is therefore well to keep in mind that one is apt to get too little dilatation by the natural means.

In regard to the anatomy of the region involved in the operation, my recent observations confirm the views that I have entertained from the first, namely, that the only safe guide to the surgeon in his

dissection is a thorough familiarity with the appearance of the various organs and tissues, which enables him to recognize the structures as he meets them. Dissertations on the regional anatomy, taken from dissections made upon normal subjects, with the relations of parts as indicated by measurements, are not to be depended on. But, while placing little reliance on these paper anatomists, I esteem very highly the anatomical observations in regard to this operation contained in the papers of Dr. B. F. Westbrook, of Brooklyn, and Prof. Polk, of New York.

In the subjects requiring this operation, however, the parts are in such a distorted condition that the surgeon will always have to depend mainly on his ability to recognize individual tissues, wherever they may be located.

Danger from hæmorrhage has been anticipated in laparo-elytrotomy, and yet practically this fear has not been justified. So far I have not had any trouble from hæmorrhage, either primary or secondary. In dividing the abdominal wall, the only vessel of importance in the way is the external epigastric artery, which must necessarily be divided. No further care of that has been required than compression for a short time by a Péan-forceps.

The internal epigastric artery I have usually found lying upon the peritoneum and easily separated from the tissues to be divided, so that it could be drawn aside with the peritoneum out of harm's way. But in this case it was separated from the peritoneum far enough to allow me, unsuspectingly, to pass my grooved director under the artery and above the peritoneum, and so divide the former. However, the artery was easily caught up in a forceps which we left hanging to it, until the child was delivered; when the forceps was removed there was no further disposition to bleed, and no further notice was taken of this vessel.

This shows that there is no great danger from hæmorrhage, and I have not had to ligate a single vessel in any of my four cases. I do not think the loss of blood has been more than in a normal labor, certainly none of my patients have suffered unduly from it.

Much care is necessary in order to save the bladder, in fact, wounding the bladder is the only accident that has happened to me in the operation.

I stated in the report of my second case that there was no reason in the nature of the operation for wounding the bladder. I still

hold to this opinion, and think that with due care this accident can always be avoided. In this case the bladder, as usual, was displaced laterally, so that it extended up to the ileosacral junction, and its wall lay above and nearly filled in the place where the vagina had to be opened. The vaginal wall was unusually short, so that it was difficult to bring it high up into the wound, where I could reach it from above. This brought the vagina and the bladder too close together, and in opening the former I inadvertently made a small wound in the latter. A mere slip of the scissors on my part did the mischief; it was not due to any fault in the mechanism of the operation.

I should have guarded against this accident, and proved the claim that the bladder can always be avoided by care, but my mistake has the compensating advantage of showing how trifling the accident is, for the bladder healed without any sutures being needed.


In conclusion, I can only express the hope that this operation will soon become more generally resorted to, especially in those countries where there are so many more unfortunate mothers the subjects of similar deformity.—*Annals of Surgery*.

EDITORIAL.

THE NORTH CAROLINA MEDICAL JOURNAL

A MONTHLY JOURNAL OF MEDICINE AND SURGERY, PUBLISHED IN
WILMINGTON, N. C.

THOMAS F. WOOD, M. D., Wilmington, N. C., Editor.

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WILMINGTON CITY HOSPITAL—A PUBLIC EXAMPLE WORTHY OF IMITATION.

N.C. Med. J. (os) 15: 89-91, # 2, Feb. 1885

Three years ago the only hospital provisions for the sick poor in this city and county were at the county poor house, located two miles from town. The means then at the command of the County Commissioners were very poor and unsatisfactory, and the distance of the poor house from town made it well nigh impossible, for the sum paid the attending physician, to get such service as the importance of the charity demanded. These facts for a long time stared the authorities in the face, but a remembrance of the reckless expenditures made from 1868 to 18—, deterred them from attempting again, without carefully weighing the cost, to undertake what they were convinced was a public necessity. The time came at last, and in 1881 a law was enacted by the Legislature empowering the city and county, jointly, to establish a hospital.

The Board of Managers entered upon their work with a wise economy. They purchased an entire square, formerly used as a lager beer garden, having on it several small wooden buildings and a larger dwelling. The grounds were laid out attractively, with well-set shrubbery and ornamental and fruit trees, and ample room for vegetable gardens, and the contour of the ground was well adapted to drainage. The location was remote enough from the heart of the city to prevent convalescents from loitering about the streets and falling into temptation.

Very few alterations of the old buildings were made in the outset, but the difficult task of separating whites and blacks, and males and females, was accomplished only by the personal attention of the surgeon in charge, who, at a sacrifice to his own interests, took up his residence in the hospital.

The affairs of the hospital were conducted with so much economy, that last year the Managers were enabled to add a wing to the central executive building. This addition consists of two wards, one for the males and one for the females. It is a single story building, with abundant lighting and ventilation in the roof. There is also under the same roof a dispensary, operating room, bath rooms and water closets, and there are ample piazzas on the east and west sides, on to which the large windows of the wards open. With this simple and inexpensive addition, the accommodation for patients and their comfort was greatly increased.

We learn from the report of Dr. W. W. Lane, the resident Superintendent and Surgeon, the following items: For the year 1884 the admissions were as follows:

Charity Patients—White males 52, white females 27; colored males 63, colored females 27—making a total of 169.

Of Pay Patients—White males 9, white females 2, colored males 1—making a grand total of 181 patients.

Dr. Lane points out the growing needs of this admirable charity, among which he mentions the indispensable necessity of a dead house. We do not see how such a reasonable demand can be longer unheeded, both for the sake of the sick and the proper pathological studies of the surgeon.

We note a most singular annoyance complained of by Dr. Lane. He says: "Our principal annoyance at the hospital arises from the superstition and ignorance of the colored population. If any

case of an extraordinary character, either of accident or otherwise, is admitted, they hang around the grounds, slip into the gates or get over the fences night and day, so anxious are they to see and find out what is going on." This may seem odd enough to some of our readers, but with such a large population of vagabond negroes, it is not surprising that they should be a nuisance to a hospital when their superstitious feelings are aroused.

From our personal knowledge of this hospital we can say that it has been most economically managed, and the Managers are fortunate in finding a physician and surgeon of skill and experience willing, for the small compensation allowed, to devote all of his time to it. It is very largely due to this fact that the work has steadily grown in value to the community, and we trust that the present officer may be spared a sufficient number of years to carry out all the improvements he has designed.

The history of this hospital may be an example to other of our large towns where heretofore the establishment of a hospital has been considered impracticable. It shows how, with small beginnings and pains-taking economy, an efficient hospital service can be established.

In those cities where the accumulation of wealth has made possible large benefactions for hospitals (as in the case of the German Hospital of Philadelphia, a wealthy citizen presented that establishment with a new wing to the building at a cost of \$600,000), our efforts will appear puny and ineffectual; but as the new South has to work out the large problems of charity with exceedingly small means, we cannot afford to despise the days of small beginnings. Cheap pavilion hospitals are within the means of any town of five thousand inhabitants, and with the cheap material at hand in most parts of the South, they can economically apply a match to the buildings every five or six years, and begin again with new and aseptic structures.

We commend the example of Wilmington (and of Raleigh, too, for there they have an excellent hospital, maintained entirely by the voluntary contributions of benevolent people) to other towns in the State. The movement must come from the medical profession, as it did in this county, and a determined effort will accomplish the end. Either the benevolent Church societies or the public authorities will undertake it. We will be pleased to hear that our suggestions have been adopted by Newbern, Goldsborough, Charlotte, Greensborough, Asheville, Fayetteville, Salisbury, Salem—Winston, and other towns in the State.

PRIVILEGED COMMUNICATIONS OF PHYSICIANS.

Dr. Wiseman, Senator from Rowan and Davie, introduced a bill into the Senate to protect physicians from disclosing the secrets which they may obtain from their patients, when lawfully communicated.

Similar laws exist in several States, and are founded in justice. It has occurred to most physicians of experience that they have in their professional intercourse come in possession of private affairs of their patients which would be very dishonorable to disclose, while the information itself would not incriminate, but was decidedly wrong to divulge, even upon demand of a court of justice. A correspondent in the *News and Observer*, who, we believe, was the brother of Senator Wiseman, related a case of gross injustice done to a physician by setting him up as a witness in a magistrate's court for the sole purpose of extorting from him testimony with which to delight the prurient ears of a drunken magistrate and a debased audience. The witness was questioned first by the magistrate, and not satisfied with what he elicited, any one in the audience was called upon to ask him such questions as they desired. The witness contended with the magistrate that he had no legal right to give such a liberty to persons who were not parties to the suit. It finally transpired, though, that the witness had nothing to tell to satisfy their filthy desires, and the court adjourned with evident dissatisfaction at the result. In this case the parties who brought it before this magistrate passed by the nearest one to obtain the services of this drunken officer of the law, and the trial, as we remember, was held on Sunday.

The bill proposed makes it "unlawful for physicians and surgeons to disclose information lawfully, communicated to them by their patients." This is just and proper for the protection of doctor and patient. Simply to enact that a doctor *shall not be compelled* to disclose information, as above, would leave it to his discretion to reveal, or not, the secrets of his patients, whereas no such liberty should be permitted, always provided that the information should not be criminal.

In the case of a consultation to procure criminal abortion, for instance, or in a case when the attending physician was cognizant by actual inspection of a living child in utero, and the birth thereafter denied, with criminal intent, by the mother; or any consultation of a

physician with his patient "which was held for the purpose of devising a crime or evading its consequences," would necessarily not be privileged communications.

We believe the committee charged with considering this bill make it incumbent upon the judge to say when to compel disclosures from physicians, "if in his opinion it is necessary to the proper administration of justice." We trust that the bill, in some good legal form, will pass.

THE PRIZE FOR ESSAY.

We were in error in the January JOURNAL in saying that the \$50 prize for an essay was offered by Dr. R. Lee Payne. It was by his motion that the prize was offered by the State Medical Society. The error occurred in the Transactions, and we followed it—hence this explanation.

REVIEWS AND BOOK NOTICES.

A SYSTEM OF PRACTICAL MEDICINE. By American Authors. Edited by WM. PEPPER, M.D., LL.D., etc., assisted by LOUIS STARR, M.D. Vol. I. Pathology and General Diseases. Philadelphia: Lea Brothers & Co. 1885. 8vo. Sheep. Pp. 1,094.

Every physician in this country must have felt the necessity for some work on the practice of medicine upon the general plan of Reynolds' System, i. e., a work made up of contributions from writers especially versed in certain subjects, and under the editorial management of an experienced teacher and writer, and setting forth practice as actually pursued by the best physicians in America. This work was designed to meet this necessity. Let us see now how well the task has been performed. The chapters introductory to special diseases treat of the General Morbid Processes—*inflammation*; *thrombosis and embolism*; *effusions*; *degenerations*; *tuber-*

culosis ; morbid growths. These from the pen of R. H. Fitz, M.D., of Boston. By Henry Hartshorne, M.D., general etiology, medical diagnosis and prognosis, and by Dr. J. S. Billings, a chapter on hygiene. One-fifth of the volume is devoted to these fundamental studies.

Of the contribution on Morbid Processes, by Dr. Fitz, we are struck by the clearness with which he presents the whole picture of modern pathology. The array in a foot note of exclusively German authors to whom he gives credit for "full and free use" in the preparation of his subject, is not at all distinguishable in the manner of the author. There is none of that German flavor, if we may so employ the word, which pervades the many text-books by authors who have been to school to the German pathologists. One can easily appreciate what we so often hear in private conversation about German pathological writing, that to be of practical service it must filter through the brain of an English or an American writer, especially that of the latter.

We may safely say that we have here the best statement of modern pathology as it stands at this writing, than has so far been presented to American readers. The part which animal and vegetable parasites play in causing inflammation is temperately and rationally stated, and we believe that we may accept his statement that Koch's recent discovery of the bacillus of tuberculosis "definitely removes the tubercular process from the group of dyscrasic or constitutional affections to that of the infective diseases." The constant presence of minute organisms in relapsing fevers, leprosy, malaria, typhoid fever, diphtheria, erysipelas, and numerous other affections associated with, if not characterized by, inflammatory conditions, renders extremely probable the closest pathological relation between such diseases and a microscopic organism." All through the discussion of disease processes the author has taken the most advanced ground, and although to some of us who have not yet become quite used to the newer pathology, not having learned yet to admit the new parasitic factors into our system, one cannot fail to see that as new arguments are evolved from the fresher material of the younger pathologists, they are all the more acceptable because they bring with them new ground for hope in the most hopeless of all maladies—tuberculosis. For instance, Dr. Fitz says :

"The actual inheritance of tuberculosis is very unlikely, although

this disease is frequently found in successive generations of a single family. The various members of the family are rather to be regarded as furnishing a suitable soil for the growth of the tubercular bacillus, and their exposure to its seed is favored by the existence of tuberculosis in one or more members of the household. The scrofulous condition is still to be regarded as hereditary as well as acquired, and the scrofulous remain as the class to be especially protected from the reception and effects of the bacilli of tuberculosis."

The section on Morbid Growths is a most excellent lesson in modern pathology, founded, like the rest of the chapter, on morbid processes, in the German school of which Virchow is the acknowledged head.

General etiology, medical diagnosis and prognosis is from the pen of Dr. Henry Hartshorne, of Philadelphia. Under the head of etiology he reviews the beginnings of the germ theory, going back to the days of Linnæus and bringing it down to the latest advances. The illustrations are drawn largely from Dr. Sternberg's microscope, so carrying out the spirit of the volume in producing, as far as possible, American work.

The principles of prognosis here described carry us back to the days of the wise and scholarly Copeland.

The introduction of the principles of hygiene into a work on the practice of medicine is, we believe, an American innovation. In Ziemssen's Cyclopædia, so uselessly inflated in this country, there were two volumes on public health. Dr. Billings, the well-known teacher in this department, and the author of this article, says that the purpose of his paper is to indicate some of the ways in which hygiene, both private and public, is connected with the duties of the general practitioner, and to give some information as to modern methods of investigation and work in preventive medicine. The subject he discusses under three heads: 1. Causes of disease, means of discovery, and prevention. 2. Personal hygiene in its relations to the practice of medicine. 3. Public hygiene in its relations to physicians.

We have here what most general practitioners need, the fundamental doctrines of hygienics, illustrated by practical ideas, clearly set forth.

The second part of the volume treats of General Diseases. It is

this part that will be most frequently consulted, and in which most readers will take the greatest interest. The articles on Simple continued Typhoid and Typhus fevers, are written by Dr. James H. Hutchinson, of Philadelphia. Dr. Hutchinson's style is that of a profoundly skilled clinician, writing from the fulness of a ripe experience, and at the same time paying due deference to the writings of others, and with the latter he shows a broad familiarity. We believe that it would be safe to determine the practical value of a book on practice by its article on typhoid fever, and we have no doubt that the editor would gladly accede to this test as applied to this volume.

As we go through this volume, examining article by article, we find quite uniform merit running through them all, and we feel no hesitation in saying that this is the very work on practice for the general practitioner, and we believe that it will maintain its supremacy for many years to come, making it a good investment for those who have limited means for library purposes.

A TEXT-BOOK OF HYGIENE: A Comprehensive Treatise on the Principles and Practice of Preventive Medicine from an American Standpoint. By GEORGE H. ROHÉ, M.D., etc., etc. Baltimore: Thomas Evans. 1885.

To give within the space of 325 8vo. pages a text-book on hygiene suitable for the student, practitioner and sanitary officer, is an arduous undertaking. When we consider that hygiene (i. e., the science and art of hygienics, including all the topics relating to the public and private sanitary condition) is in a formative condition, and that the range of studies under this head covers an immense territory, and that the subjects treated are so various that one must be a learned physician to know the theory of half of them, and a skilled mechanic to understand the possibilities of appliances, and a practical chemist to discern the basis of the detection of impurities, and a skilled microscopist to avoid stumbling into the labyrinth of crude knowledge which has been accumulating since the germ theory has been in the ascendant, and that if he is either one or the other in any sense profoundly, and not an epitome of all, and more besides, he is not fit to undertake the functions of a hygienist, what must be the pabulum upon which such a functionary must be nourished! To undertake to write a book on hygiene

at this stage of our knowledge, it must either be an encyclopædia or an elementary volume. The book before us comes under the latter head.

The headings of the chapters suggest the range of topics: Air, Water, Food, Soil, Removal of Sewage, Construction of Habitations, Construction of Hospitals, Schools, Industrial Hygiene, Military and Camp Hygiene, Marine Hygiene, Prison Hygiene, Exercise and Training, Baths and Bathing, Clothing, Disposal of the Dead, The Germ Theory of Diseases, Contagion and Infection, History of Epidemic Diseases, Antiseptics and Disinfectants, Quarantine, Vital Statistics.

As succeeding editions are called for, as doubtless they will be, the author will be able to revise and elaborate his subject, so as to make the volume a complete manual for non-medical health officers, and as a class-book for medical students. Dr. Rohé is professor of hygiene in the College of Physicians and Surgeons, Baltimore, and if his classes get what he has so well given in this book, in the form of lectures, they will doubtless enter upon their duties better grounded in this neglected branch than scores of their predecessors. We bespeak a large sale for the book, and trust that every Superintendent of Health in North Carolina will procure it.

FIFTH ANNUAL REPORT OF THE STATE BOARD OF HEALTH, LUNACY AND CHARITY, OF MASSACHUSETTS. Supplement Containing the Report and Papers on Public Health. Boston. 1884.

We welcome the resumption of the excellent reports of the Massachusetts Board of Health. No library of a sanitary officer can complete without the volumes heretofore issued, and the present one is equal to the best. The article on "*Tubular Wells and Wells in General, as a Source of Water Supply for Domestic Purposes*," by J. C. Hoadley, C. E., is a practical presentation of this all-important topic. He shows that driven wells are subject to the same conditions, as to the flow of underground water, depression of water-level by pumping, and other causes, as true of open wells, and consequently such wells are subject to the same laws with reference to water pollution.

Prof. Edward S. Wood's paper on "Arsenic as a Domestic Poison," is a continuation and extension of the study of the wall-papers which contain arsenic, demonstrates that the arsenical colors

as now employed are not limited to green, but may be found of every hue. Thirty-six specimens of wall-paper accompany the report, and vary from subdued brown and blues, to the brightest crimson. We hope that we may have the pleasure of recording, at no distant day, the separation of the Board of Health of Massachusetts from its present uncongenial connection, that the new boards of health of the country may get the advantage of the untrammelled work of such a distinguished body of men.

MODERN MEDICAL THERAPEUTICS: A Compendium of Recent Formulæ and Specific Therapeutical Directions, from the Practice of Eminent Contemporary Physicians, American and Foreign. By GEORGE H. NAPHY, A.M., M.D. Edited by JOSEPH F. EDWARDS, M.D., and D. G. BRINTON, M.D. Eighth Edition, Enlarged and Revised. Philadelphia: D. G. Brinton, 115 South Seventh St. 1885. Pp. 629.

It is not necessary to explain why this volume has so long been popular with such a large number of readers. It has reached its eighth edition, and will continue to be in demand as long as the editor, who is also publisher, shows the same zeal and industry in selecting from current literature the best and most popular directions for treatment.

As we turn over the pages we see a great many new additions, showing the very latest fashion in treatment down to the recent introduction of muriate of cocain, but not inclusive of it. The prescriptions are numerous enough to allow a great latitude in choice of them, and a curious company of pigmies and giants in the therapeutical world stand as sponsors to them.

We notice that the name of Dr. George Harley appears as *Harley* on p. 399, but there are remarkably few typographical errors.

WOMEN, PLUMBERS AND DOCTORS; OR HOUSEHOLD SANITATION. By MRS. H. M. PLUNKETT. "Showing that, if women and plumbers do their whole sanitary duty, there will be comparatively little occasion for the services of the doctors." Illustrated. New York: D. Appleton & Co. 1885.

We would be pleased to know that this little volume had a large circulation among the housekeepers of our land. It has many a

useful lesson they ought to know for the welfare of our homes. We are not quite prepared to enjoy the optimistic opinion which the authoress sets forth on her title page, but she has done a good service in presenting substantial principles in so attractive a manner.

Mrs. Plunkett makes the statement, which we know to be true as regards our section, that all over the South and West large quantities of naphtha and benzine are sold under such names as Rose Oil, Liquid Gas, Black Diamond Safety Gas, Paroline, Sunlight-non-Explosive Oil, etc., "but the most insidious evil is the sale of secret and patented recipes and powers which glib-tongued agents claim, and gullible persons believe, are a complete protection from the danger of explosions."

A MANUAL OF ORGANIC MATERIA MEDICA. Being a Guide to Materia Medica of the Vegetable and Animal Kingdoms, for the Use of Students, Pharmacists and Physicians. By JOHN M. MAISCH, Phar.D. Second Edition. Philadelphia: Lea Brothers & Co. 1885.

Since our first notice of this book it has greatly grown in favor, and it was out of print for fifteen months. As at present revised, the author has admitted the most important drugs indigenous to North America, and also a list of remedies classified according to their zoölogical or botanical derivation. The illustrations are carefully drawn and engraved, and the mechanical execution of the book is admirable. We do not know of any such manual for students in the language.

FOURTH ANNUAL REPORT OF THE STATE BOARD OF HEALTH OF NEW YORK. Albany. 1884. Pp. 442.

This volume is the collection of many valuable reports on Prevalent Diseases, Vital Statistics, Statistical Nomenclature of the Causes of Death, School Hygiene, Swamp and Drainage Investigations, Lung Plague in Cattle, Stench Nuisances, Adulteration of Food and Drugs, Law to Regulate Standard of Illuminating Oil, and the Sanitary Work of New York Quarantine. This Board has been in operation only a few years, but has done very efficient service, wisely using the means appropriated by the State. As Southern States are largely interested in the sanitary condition of

New York, it is a great satisfaction to note how energetic and thorough the New York Board has proven itself.

PROPOSED PLAN FOR A SEWERAGE SYSTEM AND FOR THE DISPOSAL OF THE SEWERAGE OF THE CITY OF PROVIDENCE.

This is a very handsome volume, in paper covers, issued by the city of Providence, and prepared by Samuel M. Gray, City Engineer. It is copiously illustrated by handsome engravings, and is a substantial contribution to the science of sanitary engineering. We commend its perusal by all corporations contemplating the establishment of a sewerage system.

ELEMENTS OF PRACTICAL MEDICINE. By ALFRED H. CARTER, M.D., London. Third Edition. New York. D. Appleton & Co., 1, 3 & 5., Bond St. 1885.

This is a student's manual of 447 pages, which has met with success in Great Britain, and will be well received in this country as "a general introduction to the study of medicine." It does not dwell at length upon the physical signs, as the author says they can only be learned at the bedside. Thirty pages are devoted to a "Therapeutic Index"—that is, a compilation of formulæ, alphabetically arranged by diseases, beginning with *Acne*.

PYURIA ; OR PUS IN THE URINE, AND ITS TREATMENT, etc. By Dr. ROBERT ULTZMANN. Translated, by permission, by Dr. WALTER B. PLATT, F.R.C.S. New York : D. Appleton & Co. 1884.

Our readers are already somewhat familiar with this volume from the translations made in the JOURNAL by Dr. George G. Kinloch, of Charleston.

ONE HUNDRED YEARS OF PUBLISHING.

This is a very interesting narrative of the publishing business which was begun in 1785 by Mathew Carey, and is now (1885) in existence under the name of Lea Brothers & Co. It is not only a readable account of the firms, in succession, which have furnished the medical profession in this country with the larger part of their reading matter, but is at the same time a historical view of the publishing business in the new republic. It sounds like a romance now to read of posting off a stage coach load of Waverly Novels, when they were just issued, from Philadelphia to New York ; but

this was Mathew Carey's enterprise, and very remarkable it was for those days. The products of the press of this house have progressively improved, so that, in a volume before us, one of their recent issues, *Pepper's System of Medicine*, we find it a positive pleasure to peruse its pages, so beautiful is the typography.

CURRENT LITERATURE.

TUMOR REMOVED FROM THE BRAIN—SCIENTIFIC DIAGNOSIS—THE FUTURE FOR CEREBRAL SURGERY.

When Professor Ferrier went down to the West Riding Asylum, near Wakefield, at Easter, 1874, the writer accompanied him, and was a witness and a voucher for the earliest of those experiments on the brain which have since made Ferrier's name world-famous. After seeing a good deal of his work, the writer expressed himself to the effect that before ten years were gone and past some surgeon would remove a tumor of the brain under the direction of some physician. The diagnosis would be so precise that the surgeon could be told the exact spot for his trephine. That forecast has been verified. Dr. A. Hughes Bennett (son of the famous John Hughes Bennett, Professor of the Institutes of Medicine in the University of Edinburgh) recently diagnosticated the position of a tumor in a man's brain, and under his instructions Mr. Rickman Godlee, Assistant Surgeon to University College Hospital—a man of rare promise—cut through the skull and removed the tumor, with immediate relief to the symptoms. The case got into the journals, and thereupon a storm began to blow. Such a proceeding was so direct an outcome of knowledge founded upon experiments on animals—not only the diagnosis, but the line of after-treatment even which rendered such an operation defensible—that, of course, the anti-vivisectors must be stirred up. These cantankerous mortals having taken up the position that nothing had been learned from experimentation upon animals, that nothing worth the having had come out of the cruelty to animals, and had been so blatant about

their opinions—now an opportunity having come for taunting them, it must be made the most of. Putting up a red bag to a bull excites that animal; and a letter in the *Times* giving an account of the case, and the operation roused them into action like a swarm of hornets. Letter followed letter until the public must pretty well comprehend the merits of the case by this time. Unfortunately, as it happened, the man died of an after-consequence of his surgical wound (meningitis), and so the anti-vivisectionists have a leg left to stand upon. Still the operation was a success and a path-breaking experiment which must lead to a new departure in the treatment of encephalic disease. Not unlikely the trephine and the aspirator will come into play ere long in serous effusions, and even in apoplexy, when blood is being poured out and compressing the contents of the skull.

One outcome of all this contention is to bring Professor Ferrier and his work prominently before the public, doubtless to his professional advantage. Unfortunately, however, the professor happens to be a man cast in a sensitive mould, and the attentions of his enemies are very unpalatable to him. Most men would thank their stars for such an opportunity of coming before the public, and look upon the assaults of these enemies as blessings in disguise; but not so in this case. It was no doubt highly unpleasant to read at breakfast that three barristers have applied for a warrant for you at Bow Street, as Professor Ferrier did some time ago when the anti-vivisection party thought they had caught him at a disadvantage; but there is a silver lining to the cloud, or a golden lining, rather, perhaps!

Another outcome is, of course, the spread of a knowledge of the nervous system and its diseases, now so rapidly advancing with mighty strides. Perhaps some account of the case may be welcome to your readers. The patient was a healthy young man who, four years ago, was hit on the head by a piece of timber, but not so severely as to lay him up. Occasional headaches came on after this, and then occasional twitchings of the tongue and left side of the face. Then the "fit" ran from thence down the left arm and leg, without loss of consciousness. At intervals he had more complete convulsive seizures. Twitchings of the face and arm occurred daily, but never together. Loss of power in the left arm followed, and, later still, weakness in the left leg. The general health

was good, but pain over the vertex was frequent and violent—that excruciating pain which Dr. Moxon (in his article on headache, which occurred in the *Lancet* a few years ago) has described as occurring with organic disease of the brain. Tenderness on deep pressure was found in the upper parietal region, a little to the right of the middle line. Cerebral vomiting was also present. The congeries of symptoms told of cerebral mischief, probably a tumor. Further indications pointed to its locality, viz: the right side of the head and near the motor centres in the neighborhood of the upper third of the fissures of Rolando.

Dr. Bennett argued that it must be of limited size, as the head-centres were alone severely injured, irritation only being exhibited in the leg, face and eyelid. It was a careful diagnosis, which every unprejudiced mind will admit could not have been made, or even approached, without the knowledge derived from the early experiments of Fritsch and Hitzig, and the more complete and elaborate work of Ferrier. The only aid that could be given to the patient was the removal of the growth, which was clearly near the cortex. Mr. Goodlee removed a triangular piece of the skull, slit up the dura mater, and exposed the surface of the brain. Nothing abnormal was to be seen. Still, so confident were all in the accuracy of the diagnosis that an incision was made into the brain, when a hard glioma was felt, which was about the size of a walnut. It was removed without difficulty. The hemorrhage was arrested by the galvano-cautery, and the edges of the scalp brought together by sutures. The result was magical. The vomiting ceased, the lancinating pains in the head vanished, the convulsions disappeared, and the patient felt well and expressed the greatest gratitude for the relief so afforded to him. For twenty days this went on, the only cause for anxiety lying in the wound, which was not satisfactory. Then, unfortunately, symptoms of acute meningitis set in, to which the patient ultimately succumbed. The progress of the case, however, was such as to demonstrate the effects of the removal of a tumor of the brain as regards relief to the symptoms it set up. The untoward result was one of the accidents which attach to the serious operation of trephining, and had no special reference to the malady for which the operation was performed.

The scene of this operation will some day be put on canvas, and the operation itself will become historical. The practical outcome

of vivisection was completely satisfactory as illustrating what we owe to careful experimentation. And if Professor Ferrier's experiments still need any justification, that is now forthcoming. The experiments performed by Professor Gerald Yeo teach us that, with antiseptic precautions, injuries to the brain can be inflicted with practical impunity. It is impossible to criticise the surgical after-treatment of the case until it has been laid before the profession in its entirety ; but it is not absolutely out of the question that there may yet be some details in skull-wounds, which further familiarity therewith may teach us, entailing dangers that are unavoidable. It is a great pity, under the circumstances, that the man died ; but he lived long enough to establish the value of the operation.

Beyond its direct value to the profession, this case is a triumphant vindication of the value of careful experimentation upon the lower animals, and of the accuracy of those observations which have made Ferrier so well known. Without these for a map of the brain, it would be impossible to interpret the complex symptoms furnished by clinical observations. Without them, indeed, these last, however carefully collected and laboriously sifted and arranged, would have remained a mass of fragments which no genius probably could ever have cast into form. But by the light thrown on the brain and the functions of each part of it by experiments performed upon the brains of animals (which are clearly built upon the same plan as that of man) it is now possible to construct a correct diagnosis of what is going on in the brain beneath the bony skull. If Dr. Bennett could have made the coverings of the brain transparent—nay, more, could he have peered into, and seen through, the cortical substance of the brain itself—he could not have ascertained more than he did, or been more accurate in his diagnosis than he actually was. Twenty years ago such a diagnosis was out of the question—indeed, no one would have attempted it ; and now no one is taken by surprise, and all take the case in a matter-of-fact way. We are already so familiar with the localization of function in the brain that, instead of any surprise, indeed, we receive the announcement of the novel procedure as something that we have been looking for, with the gratification, however, of having our anticipations realized for us and our faith corroborated. Fritsch and Hitzig, and still more my countryman, Ferrier, have not only mapped out the brain, but they have done much for suffering humanity.—*Dr. Fothergill's Letter in Philadelphia Medical Times.*

THE TREATMENT OF INTESTINAL STRANGULATION AND CHRONIC INTESTINAL OBSTRUCTION.

Hitherto it has been the custom to place cases of strangulation of the bowel amongst those of obstruction, and, indeed, to consider them as only one of its forms. Mr. Thomas Bryant (*British Medical Journal*, November 22, 1884) is, however, of the opinion that this arrangement is a grievous error; since in strangulation of the intestine, obstruction is only one of the symptoms, but not the cause of danger or of death; whereas, in cases of intestinal obstruction, the obstruction is the prominent and dangerous feature and from it, or it chiefly, the consecutive changes are brought about. In proof of this view he adds the fact that when acute strangulated hernia is relieved by operation or taxis, the symptoms, however severe they may have been, at once disappear, though possibly there may be no action of the bowels for two or three weeks subsequently, the want of action not giving rise to any special symptoms; thus proving that in this, as in all acute cases, the symptoms are due to arrest of circulation of venous blood through the strangulated bowel, and not to the obstruction to the passage of intestinal contents. It was from a faulty appreciation of this fact that the older physicians gave purgatives in internal intestinal obstruction, as well as in strangulated hernia after its reduction, while it is evident that there is nothing less than the removal of the strangulating causes from which the slightest good is to be anticipated. And, as in strangulated external hernia, so in internal strangulation, from whatever cause, the same principles of treatment are applicable: operate as soon as possible to prevent the death of the bowel.

Mr. Bryant lays down the following as rules of practice:

1. Laparotomy should be undertaken as soon as the diagnosis of acute intestinal strangulation is made. There should be no delay allowed for the formation of a special diagnosis of its cause. It should likewise be proposed in all cases of acute intussusception, and of chronic, which have failed within three, or at the most four days, to be relieved by other treatment.

2. In all operations of laparotomy, it is to the cæcum that the surgeon should at first advance, since it is from it he will obtain his

best guide. If this be distended, he will at once know that the cause of obstruction is below; if it be found collapsed, or not tense, the obstruction must be above. Adhesions or bands, are, moreover, more frequently near to, or associated with, the cæcum than with any other part of the intestinal tract. It is also in the right iliac fossa that the collapsed small intestine, in cases of acute strangulation, is usually to be found; and with this as a starting point, the surgeon will have less difficulty in tracing up the intestine to the seat of strangulation, than if he begins at a distended coil, when it will be a matter of chance whether he travels away from or toward the special object of his search—the seat of obstruction.

3. In a laparotomy, when the strangulated coil of bowel is gangrenous, it should be brought out of the wound and the gangrenous knuckles resected. The proximal and distal ends of the resected bowel should then be stitched to the edges of the wound, and an artificial anus established.

4. Nélaton's operation of enterotomy should be undertaken in all cases of intestinal strangulation when laparotomy is rejected or seems inapplicable, as well as in cases of intussusception in which the invaginated bowel cannot readily be released. It should be performed in the right groin, or rather, right iliac fossa.

5. If laparotomy succeed, the cause which called for it is removed, and the normal action of the bowel is restored. If resorted to early and as a rule of practice, it is probable that it will be more successful than the treatment by opium, inflation or purgatives, which has hitherto been in vogue.—*Therapeutic Gazette*.

DR. H. C. WOOD ON THE PHYSIOLOGICAL AND THERAPEUTIC EFFECTS OF HYOSCINE.

In a paper in the *Therapeutic Gazette*, January, detailing a number of experiments and observations upon the physiological and therapeutic action of hyoscine, one of the two alkaloids of hyoscyamus—the crystallizable, and therefore presumably the purest one—the following results were attained. The hydrobromate (sometimes hidriodate) of hyoscine (Merck) was employed:

“ Upon the frog hyoscine acts as a motor spinal depressant, killing by arresting respiration probably through a centric influence; when

recovery occurs there is no stage of tetanus following the palsy; any influence the alkaloid may exert upon the circulation is of a depressive character, but it is so light as to be of no importance." "Upon mammals hyoscine acts chiefly as a spinal depressant; it is a centric respiratory depressant, causing death by asphyxia; it has very little effect upon the circulation, what influence it exerts being in the normal animal set aside by the asphyxia it produces; it does not paralyze the pneumogastriacs; in enormous doses it paralyzes the vaso-motor system; on the heart itself its influence is very feebly depressant." "The relations between its actions upon the lower animals and upon man are in obedience to the law which I formulated some years since, that as a nerve centre is more and more differentiated it becomes more and more susceptible to the action of drugs. Thus we find the cerebral symptoms produced by the alkaloid in the dog are much more decided than those caused in the mouse, whilst in man the cerebral effect predominates over the spinal. It is plain, however, that in man hyoscine acts as a very feeble sedative on the circulation, a more decided sedative to the spinal and respiratory nerve centres, and a dominant hypnotic upon the brain." "The experiments so far indicate also freedom from disturbance of the secretions and unpleasant after effects. The calmative influence of conium in certain cases of mania is well known, but such action appears to be indirect and due to the motor depressant influence of the drug. From hyoscine we have reason to expect both a direct and an indirect beneficial action." Dr. Wood then details the history of five cases of violent mental disease which he has treated with the agent in question with results corresponding to those detailed above. The clinical results which he has so far had with it in cases other than maniacal are very meagre, but so far as they go are correspondent with physiological results, which indicate little value for the relief of pain, but much for the removal of spasm.—*Maryland Medical Journal*.

THE MURIATE OF ERYTHROXYLON (COCAIN) relieves the turgescence of the venous sinuses incident to an ordinary cold. The relief lasts for from twelve to twenty-four hours. The remedy is used in the form of a spray. Bosworth calls attention to its value in this regard, and a considerable observation enables us to confirm his statements.—*Detroit Lancet*.

JACOBI ON BACTERIOLOGY.

There was lately a time, or rather, we still live in that time, when a single series of discoveries lays claim to having changed the aspect of pathology at one stroke, and solved all problems. You know I speak of bacteriology. In America, also, all of those who cannot judge of the question by their own investigations—that is, the practitioners, either general or special, have readily accepted the new gospel with but few exceptions. The new theories that infectious and zymotic diseases have each their own bacillus, are so pleasant, and promised to be so fruitful, that it required some courage critically to resist the flood. On the other hand, those amongst us who have a right by their own researches and special knowledge to be heard, have hesitated to accept the results of microscopical, actual or alleged, discoveries as the sole explanation of everything infectious and zymotic. Amongst them I shall only name Wood, and Formad and Sternberg. Into the merits of the case, and the weighing of reasons I cannot go this evening, but it has appeared to me that it would be well to direct the attention of the Academy to that subject as one greatly deserving of its attention.

To me, while I readily acknowledge a valuable increase of pathological knowledge, and the fact that the spreading of some disease, at least, slow, and gradual, and regular, seems to prove the multiplication of cases of disease by the regular multiplying of its causes, it has always appeared that purely bacteric etiology has too often begged the question, and that the answer to the question, whether organic or chemical poisons are the main causes of infectious diseases, has, by no means, been satisfactorily given. In the course of the last dozen years, organic chemistry has made as rapid strides as has microscopy. Cadaveric poisons, ptomaines, have been discovered in great numbers. Most of them are very destructive. Sudden deaths of zymotic and infectious diseases resemble much those produced by these poisons. That the stings of insects, or the poison engendered in putrid corpses lead to speedy destruction has always been known. Its symptoms are exactly like those produced by many known poisons. Forensic medicine has a great many instances already, in which it could be proven that the poison extracted from the body of the dead was not a vegetable agent, introduced during life, but the cadaveric poison. Count Gibbone Selmi proved that what was claimed to be that vegetable poison, was cadaveric. In

another case he saved the life of a suspected person by proving that it was not morphine, but a ptomaine which was found in the body. Besides the poisons named, there are strychnine, colchicine, atropine, coniine, woorara, nicotine, veratrine, hyoscyamine, narceine, the symptoms and chemical reaction of which are the same, or almost so, as the cadaveric poisons. Lecithine is found in putrid fish; a very dangerous chemical poison has been extracted from putrefying Indian corn and rye. Thus it is that many cases of poisoning with cheese, meat, fish, sausage, jelly and yeast, many of them resembling acute infectious fevers, may find, and indeed have found, this ready explanation.

Brieger found quite a number of different varieties of cadaveric poisons—neuridine, neurine, muscarine, æthylendiamine, gadinine, and others. Many of these destroy life in a short time, and with the symptoms of acute infectious diseases. These poisons are found, in many instances, in the fresh dead body, not in that one which has undergone complete putrefaction. The results of putrefaction will, after a while, change entirely and become rather wholesome than injurious. Many years ago Salkowski examined a vessel full of ascitic fluid, which he knew to be in utter putrefaction when he last inspected it. Not only was there no putrefaction any more, but, on the contrary, chemical decomposition had formed phenol. Thus putrefaction had worked its own destruction and antidote. The inference, then, is that a poison, even in the course of the same disease, may not always be found.*

Ptomaines are often met with in the presence of bacteria. Is it the latter which produce them? Do they so decompose the albumen of the tissue that a ptomaine must or can develop? Or is it their own vital change which produces it? Most modern writers—

* Would it be so impossible to judge that the bacterium is an accompaniment of a chemical poison and may be present, or absent, according to the changed condition of the poison? Such changes take place all the time in putrefying material, as Salkowski has shown, and others after him. They probably take place in the living body also, during infectious fevers. In the incubation they develop, they are most poisonous and vehement during the height of the process, they gradually change into less dangerous combinations, into an indifferent state, and finally a real disinfectant material. Thus it may be seen that the floating poison may become even beneficial. It is for that reason that patients who have outlived a serious attack of typhoid fever, are endowed with better nutrition and more vigor afterward than they ever enjoyed before.

not chemists—believe it. But if the cause of decomposition of the living or dead be not bacteria, but a chemical poison, after all, is it necessary to assume that the poison cannot form except through and with the presence of bacteria? And is the bacterium the only poison? or the only source of the poison?

If deadly poison, such as we know to destroy life suddenly, or almost suddenly, and of such virulence as is reported in what was formerly believed to be legendary only, but which may be historical, will almost invariably originate in the dead body, is it so impossible that it may develop in the still living under certain circumstances? Have we not had enough yet of the monthly instalments of new bacilli which are the invariably correct and positive sources of a disease, and replaced by the next man who comes along? Have we not yet enough of the statements that, as for instance, several bacilli are claimed each to be the only cause of diphtheria, by several observers, that there may be several distinct bacilli, every one of which can produce the same scourge? Is it not just as safe still to presume that, when several forms of bacilli are believed to be such sole causes, that the real cause is in neither?

Exactly so, neither in one nor in the other, notwithstanding it all appeared settled. For our journals are replete with the latest authentic bacterium of diphtheria. This time it is neither Klebs nor Eberth, but Loeffler. Reports, discussions, and even editorials, carry his name over the world. The very nature of diphtheria is said to be revealed again, as several times before; still the discoverer admits that there are cases without the bacterium.

The matter is becoming ludicrous. I begin to fear something like the rebellion against piano-playing in a large European city. Is not music a godly art, and the piano a blessing to the musician? But the playing of fifty thousand beginners in a large city is a nuisance. When bacterio-microscopy in the hands of beginners becomes noisy like piano-playing—noisy in books, pamphlets and journals—a gentle protest is permissible. That protest is not meant for the masters who know how to wait and to mature. I do not speak against Robert Koch and his peers, who all of them are more modest than their followers. When the kings build the cartmen are kept busy—and boisterous.

A dozen years ago the coccus of whooping-cough was said to be discovered. There was no doubt about it. There was whooping-

cough, there was a coccus, what was plainer and more conclusive? To cure whooping-cough nothing is required but to kill the coccus. Quinine will kill a coccus, quinine cures whooping-cough. Since that time there is no more whooping-cough in existence; or, if a case would be malevolent enough to turn up, it could not last longer than until a few whiffs of quinine can reach it. That is ludicrous, is it not? But it was preached like gospel, and it was believed. Many more such have turned up, and will turn up for coming years to smile at.

There is a peculiar feature in this bacteriomania. Its principal impetus it received in Germany at a time when great changes had taken place in its political and financial affairs. All at once there was an Empire, of which historians so much spoke, youth so much dreamed, romancers so much fabulated. All at once, at the same time and a decade before, an unusual industriousness, commerce, enterprise and unwonted wealth, and still more expectations than wealth; all at once an influx of five thousand millions of francs, not earned by honest work, but conquered by war, which could not turn the poor heads and unstable the solid foundations of regular development. From that time dates the lack of safety and steadiness in German financial circles. They have even invented a name for that period of swindling, "gründerthum." Speculation was rife—fortunes were made in a day from nothing but self-assertion and daring, and lost as quickly.

The moral and intellectual atmosphere created by these tendencies is never breathed by one class of people only. If self-assertion can make a fortune in finance, why not in science? If a reputation may perhaps be made by a stroke of chance, why not try that chance? Speculation was rife. Any young man can look through a microscope, perhaps he will draw the prize in the lottery of alleged science. Looking would be all right, if he would not write. Medical life would be easier if there were less journal articles containing the latest infallible discoveries. Thus it has come to pass that German medicine has a two-fold aspect now-a-days. The days of her superiority are not over yet, her greatest men still live, and the toiling thinkers are at work, but the number of speculators is immense. A great many of the articles printed in the journals of the last ten years have been prematurely published, the number of preliminary notices announcing discoveries under way is very large.

The great embryo cannot wait. He is afraid of having his celebrity snatched away from him by the next-door microscopist.

Thus it is that we often find a difficulty in keeping our eye on the great lights, whose rays are always welcome. If learned and thoughtful specialism has its justification anywhere, its field is the solution of the mooted questions alluded to. Thus far I claim, however, that in regard to bacteriology, the main questions are before the medical world still. I firmly hope the Academy will prove the centre of critical researches by which the problem, whether bacteric or chemical poison, still a mystery, will be carried nearer its solution.—*Medical News*.

CAN TUBERCULOSIS BE TRANSMITTED BY VACCINATION ?

In a recent number of the *Centralblatt für Allgemeine Gesundheitspflege* Dr. Joseph Ackner gives an account of some experiments made by him with a view to determine whether, in a person suffering from tuberculosis and successfully vaccinated, the specific bacillus of tubercle is to be found in the lymph of the vaccine vesicle, so that there might be danger of transmitting tubercle if such lymph were used for vaccination. His conclusions are that in ordinary cases of consumption the vaccine lymph is entirely free from the tubercle bacillus, and that we have no reason to suppose that either scrofula or tubercle are propagated by vaccination.

It is not wise to use vaccine lymph taken from a scrofulous or unhealthy child, not so much because there is danger of transmitting scrofula, as because such lymph is unreliable and gives imperfect results which cannot be relied on as protection against small-pox.—*The Sanitary Engineer, January 29*.

CORRESPONDENCE.

THOMAS F. WOOD, M.D., *Editor N. C. Medical Journal:*

Dear Sir:—My attention has to-day been called to “An Open Letter,” etc., published in the NORTH CAROLINA MEDICAL JOURNAL, January, 1885, page 9, written from Lexington, N. C., dated December 26, 1884, signed R. L. Payne, M.D. On page 11 in the article is the following :

“I will mention one more, who received a letter, which I read, from Prof. Tiffany, of Baltimore, in which the Professor wrote: ‘You can come right along to the lectures, as preparatory study under a preceptor is not necessary.’ Professors of medical schools should certainly be more careful, more explicit, for this man did go on (and many others do the same) without any preparation, staid three months in Baltimore, and came back a full-fledged doctor—in his own estimation. He says he was offered a position in one of the Baltimore hospitals, and declares that he ‘knows as much about medicine as any man.’ He is as ignorant as he is conceited, yet, having a large family connection, he is doing considerable practice.

“Now, then, I respectfully submit, that if our laws were sufficiently strict no such men as these could impose upon the people of North Carolina, even though aided and abetted by the professors of any medical school.”

In the above Prof. Tiffany, of Baltimore, is charged with having aided and abetted an ignorant and conceited man to impose upon the people of North Carolina. I believe that I am the only Prof. Tiffany in Baltimore, and am connected with a medical school, therefore the above quotations from the letter over the signature R. L. Payne, M.D., refer to me, and I am charged with a grave misdemeanor and dishonorable action, not only as a physician, but as a citizen. The gravamen of the charge is contained in the letter quoted in the first lines of the article above. In view of the attack made upon me I *demand* of R. L. Payne, M.D., that he publish in the next number of the NORTH CAROLINA MEDICAL JOURNAL the letter upon which he founds so gross a charge, as well as the name of the man said by him (R. L. Payne, M.D.,) to have received it—for he has made use of my name—that the truth or falsity of the same may be made apparent.

The first sentence quoted by R. L. Payne, M.D., as being in my letter is a phrase that I do not remember to have ever penned—"You can come right along to the lectures." I therefore *demand* that the original (not a copy) be sent to the editor of the NORTH CAROLINA MEDICAL JOURNAL for publication.

When R. L. Payne, M.D., has given authority for his attack I will reply specifically to such statements and insinuations as refer to me—statements and insinuations which, I regret to say, do not appear to be justified by fact.

Very truly,

L. McLANE TIFFANY, M.D.

137 Park Avenue, Baltimore, Md., February 4, 1885.

SPRAY IN OVARIOTOMY.

Editor North Carolina Medical Journal:

Mr. Editor:—The following is an extract from a recent work by Dr. Emmet (Emmet's Principle and Practice of Gynæatology, page 715): "In this country I do not know of any prominent operator who now employs the carbolic acid spray." This statement implies that the writer is not persuaded of the value of spray in ovariectomy. My own experience has led me to an opposite opinion. Indeed, I should not like to do a laparotomy for any purpose without antiseptic spray. I have been led to this conclusion by the results of one hundred and eighty-three cases of removal of cystic ovaries, of which I have lost only one—but more especially by the result of the last one hundred of these cases, only ten of which were fatal, while thirty-eight were consecutively successful. I feel that to omit the antiseptic spray would be to deprive the patient of one of the ready and efficient elements of success.

As I can hardly hope for much better results than those I have cited, and being quite content to let "well enough alone," I shall hesitate before disturbing my present plan of operation by giving up a detail to which I attach much importance.

I am, very respectfully,

Your obedient servant,

JOHN HOMANS.

161 Beacon St., Boston, February 17, 1885.

OBITUARY.

DR. EDWIN SAMUEL GAILLARD.

Dr. Edwin Samuel Gaillard died February 2, 1885, at his residence, at Ocean Beach, N. J. Dr. Gaillard was born near Charleston, S. C., January 16, 1827. He was graduated from the University of South Carolina, at Columbia, in December, 1845, and from the South Carolina Medical College, at Charleston, with first honors, in March, 1854. In June of the same year he moved to Florida, and took charge at once of a large practice, being made a member of the State Medical Society. Three years later he removed to New York, and after a few months' residence there he went abroad and remained for a year.

In 1861 Dr. Gaillard joined the Confederate Army at Richmond, and he followed the fortunes of the South until the war closed. He lost his right arm in the battle of Seven Pines, while serving on the staff of Gen. Gustavus W. Smith. At the close of the war Dr. Gaillard practiced his profession in Richmond for three years, afterwards moving to Louisville, Ky. In 1861 Dr. Gaillard received the Fiske Fund prize, and in 1865 the prize of the Georgia Medical Association. A year later he founded the *Richmond Medical Journal*, which he moved to Louisville in 1868, publishing it under the title of the *Richmond and Louisville Medical Journal*. In 1874 he established the *American Medical Weekly*. He received from the North Carolina College the degrees of A.M. and LL.D. Dr. Gaillard was a member of the various Louisville medical societies, was a correspondent of the Gynecological Society of Boston, the Louisville Obstetrical Society, an honorary member of the South Carolina Medical Association, and an honorary and corresponding member of the College of Physicians and Surgery of Arkansas. Dr. Gaillard was elected President of the Richmond Academy of Medicine in 1867, President of the Medical-Chirurgical Society in 1868, and President of the American Mutual Benefit Association of Physicians in 1875. He was made Dean of the Louisville Medical College at its organization, and was also Dean of the Kentucky School of Medicine.

Dr. Gaillard was twice married—first to a daughter of the Rev. Edward Thomas, of Charleston, who died leaving no children, and afterward, in 1865, to a daughter of Prof. C. B. Gibson, of the Medical College of Virginia.

Dr. Gaillard had the versatile gifts of a good medical editor. His reading was broad, his memory good, his command of language excellent. Too often he dipped his pen in gall, but this was largely due to his physical infirmities. Notwithstanding all the obstacles he had to encounter, up to his death there were few medical editors his peers. His influence in medical journalism was, upon the whole, of the greatest importance to Southern medical literature in the stimulus he exerted upon the profession of this section. We are informed that the journal of which he was last editor—*Gaillard's Medical Journal*—will be continued.

LEGISLATIVE SUCCESS FOR THE BOARD OF EXAMINERS AND BOARD OF HEALTH.

The amendment to the present law regarding the licensing of physicians passed the Senate by a large majority, and it is confidently believed will pass the House. It provides for a penalty of not less than \$25 nor more than \$50, and imprisonment for each offense, at the discretion of the court, for all persons practising medicine after the passage of the act, without a license from the Board of Examiners.

The House passed an appropriation clause of \$2,000 per annum for expenses of the Board of Health, and \$2,000 contingent fund, to be at the disposal of the Governor in case of an epidemic outbreak.

The composition of the County Boards of Health was so far modified, that in those counties where there are no licensed physicians to the number of five, that graduates from a reputable medical college might serve. The Committee having the matter in charge thought this compromise the best that could be obtained, and acceded to it. We hope to announce in our next that the two bills have been ratified by both houses.

P. S.—Since the above was put up in type we have received a telegram from Dr. R. F. Lewis, Senator from Robeson, saying that the license law, as above amended, passed both houses, and is now the law. The “complexion and attitude” of this Legislature was not mistaken by the Committee of the Medical Society. All honor to our friends who grasped the subject as only educated gentlemen could.

READING NOTICE.

Dr. J. W. Hamer, of Hooversville, Pennsylvania, says: “Papine as an anodyne is both pleasant and very effective. It is quicker in action than either laudanum or morphia internally.

NORTH CAROLINA MEDICAL JOURNAL.

THOMAS F. WOOD, M. D., Editor.

Number 3. Wilmington, March, 1885. Vol. 15.

SELECTED PAPERS.

CLINICAL LECTURE ON PENT UP SECRETIONS.

Delivered before the pupils of the Medical Department of the
Yorkshire College, December 3, 1884.

By C. G. WHEELHOUSE, F.R.C.S., Consulting Surgeon to the General
Infirmiry, Leeds.

GENTLEMEN :—It has seemed well to the combined authorities of the Yorkshire College and of the General Infirmiry—within whose walls it has been my privilege to work for the past twenty years—that I, together with my colleagues, Dr. Clifford Allbutt and Mr. Teale, should offer you, from time to time, in the form of clinical lectures, some portion of the experience we have gathered during those many years.

To me, gentlemen, it will be a pleasure to do this ; and if, by so doing, I can add to the store you are preparing to carry from those venerable institutions out into the world, I shall deem no labor such lectures may cost me to have been labor in vain.

And to those of my fellow-practitioners who honor me with their presence, I would add that, as far as I am concerned, these lectures

are not intended for their instruction so much as to recall pleasant recollections of professional intercourse—as opportunities to remind us of many interesting bygone consultations, and to bring to our memories, for a few moments, such lessons as those consultations may have afforded us, for our guidance in future-emergencies. If, therefore, to them, what I have to say, should, now and then, seem trite and unnecessary, I ask them to pardon the apparent presumption, and to remember that it is to younger ears that I am primarily speaking.

In the fulfilment of the ordinary physiological process of the healthy body, and that its ordinary functions may be carried on smoothly and with regularity, certain definite laws have been established, and certain compensatory actions have been provided.

Thus, if it has been ordained that “Man shall live by the sweat of his brow,” so it has been provided, also, that honest labor shall provoke repose, and that, in sleep, the wear and tear of labor shall be effaced; and, as with the whole, so with the parts of our organization, “from labor to refreshment, and from refreshment to labor,” is the order of their action, and, upon the regularity of the succession of healthy work and healthy repose depends the healthy performance of the function of each and every part.

So beautifully balanced is our organization, that though to the incurious and unobservant eye it may seem only to possess the attributes of a wonderful and exquisite piece of mechanism, to him who, with reverence for Nature, seeks to penetrate further into its hidden mysteries the science of physiology shows that it is something greatly more.

Never, it is seen, is the action of the whole body, or of any of its parts, the same for many seconds together. A condition of constant change—of change which seems inscrutable—is forever unfolding itself before the eye of the physiologist, constituting, in reality, the life of the body. At this moment, for instance, when you and I, acting and reacting upon one another, are in a state of mental activity, the life and condition of our brains and nervous systems are one thing, and presently, when we have fallen into repose, they will be wholly another.

After one moment this “system” and its “centres” are flooded with an active stream of highly vitalized arterial blood; at another, that stream has well-nigh ceased; and as it is with the “nervous,”

so it is, also, with every other so-called "system" in the body: with the digestive organs during the ingestion of food; with those of absorption and assimilation during its inhibition and appropriation; with the muscular system in its varying conditions of activity and repose; and so with every other.

And, gentlemen, evanescent as these physiological conditions are, it scarcely needs that I should remind you that each one is accompanied by equally varying physical conditions; that, only so long as the perfect power inherent in each part to control and regulate these conditions exists, can the body, or any part of it, be spoken of as "in health."

Health consists of the even poise of the beam in every instance; and the moment the "poise" varies, even by ever so little, then come distress, disordered function, and impeded healthy action. Let the brain be overwrought, let the due proportion between labor and repose be unduly shortened, and you know how soon and how certain the health will suffer.

Those of you who are given to the use of too much midnight oil, and to take too little rest, will appreciate what I mean, and will recognize, in the sense of weariness and inability to continue good work at its best for long together, how true the assertion is; and, as wise men, to whom the well-being and bodily comfort of your fellow-creatures is, in the future, to be entrusted, you will lay every change perceived in the working of your own frames carefully to heart, that you may understand them when called upon to observe and treat them in others.

Among the various changes in the physical condition of parts and organs is the condition of what are called their "secretions" and their "excretions;" and upon the capability, or otherwise, of individual parts to deal with these, will depend many of the problems which will come before you in after life.

As it is the province of the healthy nervous system to generate, to store, to regulate, healthy nervous force, so it is the province of the healthy pleura or pericardium to provide for the free and healthy movements of the lung and of the heart; and just as this is effected in the one case, so it is in all the others; in activity, flooded with healthy pabulum; in repose, dealing with the restoration of equilibrium, or with ejection. And herein lies the difference between the secretions and the excretions. By the one, we mean certain

conditions and materials necessary to the healthy action of the part—constantly recurring, and as constantly passing away again ; by the other, the final separation and ejection of materials whose future utility is destroyed, and whose retention in the body would be fatal.

Thus the pleura, the pericardium, the synovial membranes, are forever producing, removing, and reproducing just as much “secretion” as suffices to secure the smooth action of the lung, the heart, the joints, but never, so far as we know, destroying the material out of which their secretions are elaborated.

The kidney, on the other hand, the lungs, the skin, the intestinal glands, are forever engaged in separating that which, if retained, would tend as certainly to the destruction of the body as would so much poison introduced from without.

Over certain of the processes and proceeds of excretion we have often, fortunately, greater control than we have over those of secretion ; and should any tendency arise towards failure of their ejection, or to their accumulation in the body, our power to deal with them is, in the main, much more prompt and satisfactory.

But the usual current of health does not always run thus smoothly and without friction ; secretions and excretions alike may become “pent up” in the body, and, alike, may become the cause of danger, of distress, and of death, unless their evacuation can be secured.

Just as the brain may become over-excited or dulled, as the kidney may be over-active in the secretion of urine or the reverse, or the liver may pour out sometimes too much, and at others too little bile, so the evenness of the working of all organs of secretion may at times be interfered with ; and, either as the result of perverted physiological action, or of organic disease, may prove too active, or the reverse, and their secretions may be either too scanty or superabundant.

If superabundant, seeing that, in the main, they are poured into closed sacs, naturally distension first, then over-distension of the sacs is the immediate result ; and, unless the balance can in some way be restored, certain and definite consequences must follow.

Sometimes, nay, often, I dare say, such restoration is within the reach of medicine ; and very generally, even though it be beyond the aid of medicine, surgery is able to intervene, and, by a timely withdrawal of the imprisoned secretion, may be able to restore the

balance ; but sometimes medicine and surgery alike are powerless, and both are compelled to lay down their arms.

It may be, it sometimes is, that the consequences are neither important nor serious ; thus, in the case of an over-active tunica vaginalis, beyond the discomfort arising out of the weight and size of the resulting hydrocele, no other evil consequence need be greatly feared.

In some, as in the case of the pleura, it may be that the contained viscus, though essentially vital to life, may permit a certain amount of crowding ; and, if not unduly pressed, or for too long a time, may, when the pressure is removed, be restored uninjured to its pristine condition, and no permanent harm may have been done.

Thus, may simple effusions of serum into the pleura doubtless occur, are reabsorbed without causing more than temporary inconvenience, and leave no evident traces of their existence behind them ; and, provided relief be obtained through the help afforded either by the physician or the surgeon, the spongy lung, uninjured in texture, will resume its normal position and functions almost as if nothing had happened, and no trace of the effusion may remain.

Let me give you a typical case. As I was driving one day past a house at some little distance from Leeds, a medical friend called me somewhat urgently into a house, to ask my opinion of a case of which he was in charge. A young gentleman of otherwise splendid health and physique, had, a few days previously, from some cause or other, been attacked with acute pleurisy, and seemed now almost at the point of suffocation. Physical examination showed the left side of the chest motionless—dull from base to apex, vocal resonance and fremitus entirely absent, with loud tubular breathing near the spine. The diagnosis was, of course, simple enough—acute pleuritic effusion, and, considering the rapidity with which it had come on, almost certainly serous. Fortunately, I had a Robert's trocar in my bag ; and with this I was able to relieve the patient without delay, and the case was one in which delay might have caused very serious consequences. I tarped at once, and drew off six pints of clear fluid, and had the satisfaction to find the chest fully resonant, and the breath-sounds normal, even before I left the house ; but, though I left the patient wholly relieved for the time, I felt bound to express my fear that, probably, the effusion would be repeated ; and that, instead of simple serum, we might, perhaps,

on the next occasion, have to deal with pus, and have an empyema on our hands.

Fortunately, this proved to be a needless one, for the patient made an uninterrupted recovery, and has remained ever since quite well and strong.

But, gentlemen, pent up secretions are not always thus happily disposed of. They may bring life into imminent jeopardy, and that in various ways. In some, the course of the mischief produced may be lingering and slow, and may allow ample time for thought and consideration.

Take, for instance, the case of a distended joint; a joint distended, it may be, only by its natural secretion in excess, or which, originally so distended, has passed on into suppuration, and which, by the severity of the constitutional mischief it is causing, threatens life. You see this case well-nigh every week, you see it almost every Wednesday morning submitted to "consultation," and you see how we, your teachers, have time and opportunity to consider, to weigh and to argue, all the "pros and cons" of the case, before we finally determine what we consider to be the best line of treatment to adopt: whether to wait upon nature, to aspirate, to evacuate by direct incision, to excise, or to amputate; and the patient suffers in no way while we do so. But contrast this with a case which once happened to me and to my colleague, Dr. Allbutt.

In the dead of the night I received an urgent message from Dr. Allbutt, requesting me to come to the infirmary to his assistance in a very urgent case. I found him sitting by the bed of a dying patient; I say dying, for so certain was his death considered, that his bed was screened from the observation of the other inmates of the ward, that they might not see him die. A hasty explanation told me of a case of acute rheumatic fever, which had resisted every kind of treatment, and was now closing, apparently, in acute pericardial effusion. Medicine, said the doctor, has done what it can. Is it in the power of surgery to do more? Remembering the teaching and experience of Trousseau, we thought it not impossible. A hasty glance at the bed showed me a patient, livid, cold, covered with a clammy perspiration, pulseless, eyes glazing, hair soaked with sweat, and death plainly stamped upon pinched and withered features.

I slowly but steadily thrust a small trocar and cannula along the upper margin of the fourth left rib, upwards and to the right, until I

found it communicating to my hand the feeble beating of the smothering heart; withdrawing it for half an inch, I then altogether withdrew the trocar, and, leaving the cannula, had the satisfaction to see, flowing from it *per saltum*, a clear stream of fluid, and to feel the heart grow stronger and stronger as it recovered from its load. Eventually that patient also recovered; and though the operation was done in the old infirmary, he is still alive and well.

Here was a pent up secretion, which, save for the aid I was able to afford the patient, would, in a very few moments, have placed him beyond all help.

Dr. Allbutt reminded me that Trousseau, after withdrawing the fluid, had always washed out the pericardium with a weakly iodised solution; but here my natural caution came into play; and, having succeeded so far, I declined to adopt a measure which seemed fraught with danger almost as great as the only mischief, and I have never regretted that I held my hand.

Now, let me give you the outline of another case which once occurred in my practice, and which, while it interested me greatly at that time, gave me also very serious anxiety. It is a typical instance of an excretion simply mechanically "pent up," and which yet ran far towards bringing about a fatal issue.

A young lady, a member of a family of wealth and of important position, living in a mansion surrounded by its own park, and free, therefore, from the contamination of surrounding nuisances, situate in one of the healthiest and most open parts of Yorkshire, and supplied with water whose source was unexceptionable, was, nevertheless, the subject of what was supposed to be well marked and protracted blood-poisoning; constantly recurring sore-throat attacks, sometimes almost approaching diphtheria in virulence; pallor, anæmia, loss of weight and strength, occasional attacks of diarrhœa, sometimes of profuse sweating—a mixture, in fact, of irritative fever with hectic. So serious did her condition become, that her life was manifestly in danger, and yet no bodily organic disease could be anywhere detected to account for these very pronounced symptoms. The most careful examination of the chest failed to detect any mischief there; there was neither pain, nor cough, nor expectoration, nor any physical evidence of any condition which could account for them; and, so far as could be made out, all other important functions were declared to be properly, though feebly, performed.

In these days, gentlemen, of sanitary activity, the drainage of the house was not overlooked; for, as was not unnatural, drain-poisoning was suspected; and, at great expense, the whole system of the drainage and sanitary arrangements of the house was carefully, but unsuccessfully, examined.

No fault of any magnitude—none, certainly, which could bear so directly on any one member only of the family, could be detected, as to give any clue to the cause of the illness, and every one was baffled. Removal from home, sea air, mountain air, and every conceivable form of change was tried in turn, and failed, and hope was well-nigh extinguished.

I need not say that, in a case of such interest and such importance, every function was most thoroughly questioned, and none more carefully so than the menstrual. But, one day, it happened that something occurred which led her usual medical attendant—a hard-headed, shrewd man—to inquire with somewhat more of circumspection than he had ever done before into this particular function. He was assured that the young lady was regularly unwell, and all that he could ascertain was that the “periods” were unusually prolonged, though the discharge was only scanty.

Examination of a diaper showed him a small amount of deeply discolored and “fœtid” discharge, and this determined him, at all risks, to propose a vaginal examination. Before this was consented to, a second opinion was demanded; and I, on hearing the attendant’s account of the case, feeling strongly with him that these were conditions which must be fathomed, seconded his request, and consent was happily given.

Gentlemen, it took very few seconds, then, to solve this hitherto great mystery. The patient having been anæsthetised with ether, we found a hymen, not indeed perfect, but so nearly so, that a tiny aperture was all that existed to permit the exit of the natural excretion.

Month after month the discharge had appeared, and so had satisfied the minds of both patient and attendants, and yet, month after month, a large residuum had been retained. This, by admixture with air, had become a fertile source of decomposition, and, by reabsorption, had kept the system in a condition of chronic drain-poisoning indeed.

On freely dividing the hymen, the vagina was found dilated into a distended sac. Its walls were granular and over-vascular, converted, indeed, into a large absorbing surface, which had been only too apt an

agent of reabsorption. A free outlet was made, and a few months sufficed not only for arrest of the mischief, but for cure, complete and perfect, of all the evil consequences.

Then, gentlemen, there is another form in which "pent up" uterine secretion may meet you from time to time, and cause you the gravest and most serious anxiety, which I must not pass over without a word of comment, threatened septicæmia following labor. There are few of us who cannot call to mind cases in which, after labors apparently the most prosperous, in which on the third or fourth day, or sometimes even later, for I can call to mind one in which it happened on the fourteenth, a rigor, followed by the severest constitutional irritation, has not suddenly cast a cloud of anxiety over all our hope of well-doing.

Many such have happened to me during the course of my life, I doubt not, have happened also to many who are honoring me with their presence to-day. Let me advise you that such cases treated simply on general principles will almost infallibly go on to a fatal termination, but which, if properly comprehended and rightly treated, may still be conducted to a favorable issue. A small amount of imprisoned uterine discharge, a few shreds of, imprisoned and decomposing membranes, or a tiny lobule of retained, imprisoned and decomposing placenta—nay, even a little gas generated by some unhealthy condition of the interior of the uterus, may be causing all the danger. These, if not set at liberty or got rid of, may suffice to bring about a fatal issue. Under such circumstances, let me advise you, with your own hand—and, need I say, with the utmost gentleness and care—to wash out the cavity, not of the vagina only, but of the uterus itself, with an antiseptic wash.

The mere dilatation of an os, closed it may be by spasm, or even by simple swelling, may permit of the escape of such, and may suffice to rescue your patient from otherwise imminent danger. I need not say that it should be your care to do this with your own hand, not trusting to the intervention of the nurse.

Skilled knowledge is required to meet the emergency, or harm, rather than good may be the result. Air may be thrown into the uterine cavity instead of being let out, the uterus may be distended, and the contents of the syringe may be forced through the unclosed Fallopian tubes into the peritoneum, or into open uterine sinuses, and instant death may thus be caused. But with gentleness, and

care and knowledge combined, these evils may be avoided, and then all may again go well with your patient.

Now, gentlemen, I would point to this melancholy spectacle.* I have had it brought from the museum of the school to show you. This was a dispensary-patient of mine, who reached the age of 12 before death released her from one of the most terrible conditions of pent up secretion I have ever seen. The aid of the physician and of the surgeon alike, in this case, proved unequal to give the faintest relief, and death, when it came in the end, came as the only solution of many and increasing difficulties.

I have not introduced the case, however, only to tell you this, but rather to tell you that, carrying the remembrance of it with me, I have been induced, and I have seen others induced, in an earlier stage of this condition of hydrocephalus, to intervene and endeavor, by the introduction of minute capillary drains (Southey's) to command the secretion, but only with disastrous effect. Convulsions, coma, and speedy death, have, so far as I have seen, been the only results of such interference; and I, at any rate, have invariably regretted it. In a form of disease somewhat allied, however, to this, I think modern surgery is holding out a helping hand.

I have seen my colleagues, Mr. Atkinson and Mr. Robson, each effect a distinct cure of the hitherto uncontrollable condition of spina bifida.

In Mr. Atkinson's case the cure was effected by strangulation with the elastic ligature; in Mr. Robson's, by a more distinctly surgical proceeding. Taking from the surface of the tumor an ellipse of skin, the sides of the inner membranes of the sac were brought into apposition by fine sutures, and the superfluous portions were cut away; then, between these and the skin, a piece of recent rabbit's periosteum was inserted in the hope that it would develop bony growth. This it failed to do, but it lived, and added firmness and strength to the cushion which eventually covered in the opening in the vertebral column, and the child recovered.

But so far, gentlemen, notwithstanding this unhappy instance, we may flatter ourselves that, so long as we have only to deal with secretions healthy in character, though abnormal in amount, we have, in the majority of instances, means, both medical and surgical,

* A cast of an extreme case of chronic hydrocephalus.

to enable us to deal with them ; but, unfortunately, they often come before us in another and much more dangerous form.

Sometimes from the beginning, at others as a sequel of effusions originally more simple in character, we may, in every one of the regions I have mentioned, and in many others, have not simply serous and healthy secretions pent up, but diseased and unhealthy ones.

Serum may be superseded by pus ; simplicity may be changed for putridity, and the constitutional disturbance produced by their presence may be changed from one of simple excitement to one of violent and virulent febrile disorder.

You see so many cases of empyema treated in this institution, and treated almost invariably by free posterior incision ; you see so many suppurating joints freely incised, large abscesses opened, and all alike cleansed, drained and antiseptically dressed, that to dwell upon them would be to waste your time ; but there is a class of cases to which I wish to direct your attention, and in which these conditions are exhibited, as being not only of great importance in themselves, but as opening up a field of surgery almost new.

A few years ago I was consulted in a great emergency, by a medical practitioner of eminence in this county, in a case of supposed empyema ; indeed, I was summoned for the express purpose of removing the contents of an empyema ; but, when I had examined the chest, I was very doubtful whether any empyema existed at all, and I ventured to express my doubt.

I was met with the assertion that it was unquestionably so, and that the patient was even then coughing up daily large quantities of very fœtid pus. I introduced an aspirator-needle into what should have been the pleural cavity, without finding any pus, and I repeated the puncture in several places, always with the same negative result. Again, therefore, the chest was very carefully examined, and, at one point, in the middle lobe of the right lung, we fancied we could distinctly define a large splashy cavity. One of my exploratory punctures had been provokingly near this spot, but had evidently just missed it. I now reintroduced the needle, and guided by the idea I had formed to what I supposed to be the diseased spot, pressed on my needle until, to my great satisfaction, I plunged manifestly into the middle of it, and withdrew from it thirty-six ounces of dreadfully offensive pus, to the delight of both patient and attendant.

But to me there was more than mere gratification in this result ; there was an altogether new experience. I had no doubt whatever that I had tapped and emptied an abscess seated in the very middle of the lung. I had never heard of an abscess so placed and so treated before.

For a time the patient did extremely well ; no evil seemed to come from the operation, and the relief afforded was beyond expression.

Once afterwards I emptied the cavity in the same way ; and again with the same gratifying result ; and, though the patient eventually died, the case opened up to me an entirely new field of possibilities. Here was a poor sufferer who had been engaged for many weeks in the ceaseless occupation, necessary by night as well as by day, to the utter destruction of everything that could be called rest, of coughing up the fœtid contents of an abscess. Why should not such an operation as the one I had performed be frequently resorted to ?

In the Address of Surgery which I had the honor to deliver before the members of the British Medical Association, in 1878, at the annual meeting at Bath, I propounded this question ; and, for, I believe, the first time, directed professional attention to the subject. Since that time I have heard of a few cases in which the same practice has been adopted, and I can personally point to two in which it has been followed by success. In lectures such as these I can only, in the main, draw upon my experience for cases illustrative of any opinions I may advance. I cannot show you the actual cases themselves, as your systematic surgical teachers are able to do, but I doubt not that, at some period during your pupilage, you will see this question discussed ; and it may even be that, in years to come, you may live to see the practice received and acted on as a recognized method of treatment.

Let me give you in detail one of my own cases, the notes of which are before me. I was requested by a surgeon in this town to see a patient with him, about whose recovery he expressed himself as hopeless, as he considered her far advanced in phthisis, and beyond the reach of any save very temporary relief. Cough, emaciation, profuse fœtid expectoration, overwhelming perspiration whenever she slept even for a few moments, were her chief symptoms ;

but the characteristic feature of her case was the fœtid expectoration which she was ceaselessly engaged in coughing up. Day and night it neither was mitigated nor abated, and even death was spoken of as a longed-for release.

In this case, too, I found a great splashy cavity at the back of the left lung ; and, on placing the ear over it, the voice was transmitted directly into it as if through a trumpet. There was ground for imagining that this was an abscess which had burst into the pleura, and that I had a compound empyema to deal with. I opened and drained as if for empyema, and with perfect success, for not only was the suffering of the patient relieved, but after a time she left the Infirmary, apparently recovered, and came many times afterwards to report herself as fairly well.

The other case I desire to quote is one recorded by my colleague, Mr. Teale, in the *Lancet* of July 5th last. In this case, as in the last, the patient, supposed to be suffering from pleuritic effusion, was found to be, in reality, the subject of abscess in the lung, which, after much consultation between many medical men, was antiseptically incised and drained, and from which the patient eventually recovered.

The following is Mr. Teale's published description of the case :

On March 1st I was requested to visit Mr. B., aged 54, in consultation with Mr. Ireland, of Tadcaster. The patient had been ill for three months, and had been seen occasionally by the late Dr. Shann, of York, Dr. Clifford Allbutt, of Leeds, and Dr. Myrtle, of Harrogate. The earlier history of the case had been most obscure, commencing in December, 1880, with a cold, shivering, loss of flesh, vomiting and retching, and pain in the hepatic region, but there was no cough nor any symptom of lung disease. Dr. Allbutt, in the middle of February, found hepatic dullness increasing upwards, as if there were fluid in the lower part of the thorax ; and a week later (February 28th), Dr. Myrtle saw the patient ; and, finding dullness occupying the lower half of the right lung, came to the conclusion that fluid was present, and advised early tapping.

On March 1st, after examining the chest, I came to the same conclusion as the other medical men ; namely, that there was fluid in the pleural cavity.

The right side of the chest having been punctured, low down, with the small trocar of Bartleet's aspirator, a few drops of clear,

straw-colored fluid escaped; and, even after the addition of the suction of the aspirator, only two drachms of fluid were obtained. Being still confident that fluid was present, I made a fresh puncture higher up, when very offensive, thin, greenish pus appeared, but only in drops. By applying the aspirator, more pus was obtained; and, after careful and continuous aspiration, about a pint of pus was slowly withdrawn. My view at the time was that there were two separate collections of fluid in the pleural cavity, shut off by adhesion from one another.

In consequence of the unexpected character of the case, two days later a consultation was held with Dr. Allbutt, Dr. Myrtle and Mr. Ireland; and it was decided that, as soon as the temporary relief given by the tapping had passed by, the thorax should be opened and drained.

On the 16th the patient had become more hectic, and expectorated for two days most offensive pus, and was, altogether, extremely ill.

Operation.—An exploring trocar was introduced at a point a little below and in front of the angle of the scapula (ninth intercostal space), and a syringeful of fœtid pus was withdrawn. The patient having been cautiously put under ether by Mr. Hartley, I made, with the assistance of Mr. Ireland, an incision at the site of the puncture, and opened the pleural cavity. No pus appeared—only a small quantity of serum. The finger, introduced into the pleural sac, discovered the lung, but no large space. The adjacent pleural surfaces were rough, and numerous adhesions were broken down easily by the finger passing in all directions. The lung felt dense and boggy, not crepitant and elastic. On reintroducing the trocar, and puncturing the lung, pus appeared. The puncture was enlarged so as to admit the finger, and two pints of most fœtid pus escaped, rendering the room almost unbearable. A large drainage-tube, about six inches long, having been introduced, the cavity was syringed out with a weak solution of carbolic acid, and the chest was encased in carbolized tow, etc.

Before Christmas—that is, within a year of the commencement of his illness, and within nine months of the incision into the lung—the patient had resumed his active work.

Since writing the above, I have read with infinite pleasure the address of Sir Spencer Wells, delivered at the opening of the Midland Medical Society at Birmingham on November 5th last; and I

cannot refrain from quoting one passage in it, at least, which bears directly on this subject, and which runs as follows :

“If I were reviewing modern surgery in general, and not limiting myself to the influence upon it of the revival of ovariectomy, I should speak hopefully of pulmonary surgery, of the draining of cavities in the lungs, of incising gangrenous lung, of resection of portions of ribs to contain contraction and closure of the pleural cavity ; and of excision of parts of the lungs, or of an entire lung ; even of the surgical treatment of purulent pericarditis. But these are subjects to which I can barely allude as proofs that we do not yet know how far we may go with rational surgery, or what may be in store hereafter for surgical enterprise.”

Thus I have described to you cases in which secretions “pent up” in connection with the most important organs of the body, in the pericardium, in the pleura, in the lung, in the cavity of the uterus, have been successfully relieved by surgical interference, and, to add similar histories in connection with brain, liver, kidney and other important organs would be only too easy, but I will not waste your time by mere repetition. If I had notes of it I should have been pleased to have mentioned the other, in which, in consultation with Mr. Scattergood, I withdrew a large quantity of pus by the aspirator from the mediastinum of the chest ; but as I have them not, I will refrain. I wish to draw a practical lesson from such cases, and to place you in the possession of knowledge which shall be of real practical service to you in your after life.

When I was your age such things as these were unheard of and undreamed of ; now they are on substantial ground, and to you, I doubt not, it will be given, if life be spared to you, to carry them still further, and to achieve still greater triumphs. When I was your age he would have been a bold man who would have ventured, unless in presence of destructive disease, to make a direct and free incision into the knee-joint, whereas now we do so—shall I say with impunity?—well, almost with impunity, and certainly without much fear ; but I have known death follow the simple removal of a loose cartilage from the knee-joint, and I have known many limbs amputated through the thigh for injury to the knee-joint, which we should never think of condemning now, and all this is the result of one only of the many great discoveries of our age.

Have you noted how often, in speaking of the foregoing lung

cases, I have spoken of the "fœtid" discharges and of "fœtid" pus?

Have you noticed that "fœtor" was the distinguishing characteristic of the menstrual discharge in the first case, and has it struck you that in all the admission of air to the pent-up fluid was direct?

To us, in former days, here lay the great secret; we were well aware of that; and hence the carefully precise instructions that were given, to admonish us to keep out the air from all our wounds, our explorations, our burns and scalds, and so forth; subcutaneous incisions; valvular openings, tunnelling into abscesses—anything, everything, to keep out the air!

In all this, the first faint glimmerings of the dawn of better things may now be perceived; and, taken in combination with the fact that, having steadily fought the battle of the various dressings for wounds; the old and filthy poultices and cerates, under the influence of which I, when a dresser, have seen hundreds of maggots collect in twenty-four hours in an amputation-wound; the carefully neat, elaborate, painful and baneful dressing by tight plaster; the much-vaunted "water-dressings," and "dry-dressings," and "healing under scabs," we found men, like Spencer Wells, seeking to protect wounds, alike from the decomposition of the exudations on the one hand, and of the air on the other, by covering them with "pads of calcined oyster-shells and oil of tar," with thick layers of cotton-wool, and so on, you may be sure that we were running with a fine scent, and were pretty certain to "find" in the end!

It was, indeed, often noted that air, if closely filtered, might pass into the cellular tissue of the body without doing more than simply temporary harm, as in the case of fractured ribs with penetration of the lung, in which air so filtered by passing through the air-cells, though actually distending the areolar tissue to the point of disfiguring the body beyond recognition, was nevertheless speedily reabsorbed, if not evacuated, and did no real harm.

But to none of us, until Sir Joseph Lister arose, and drew aside the curtain from our ignorance, and showed us how the air we breathe, and which penetrates into the most hidden and secret recesses of our bodies, is laden with microscopic life and with germs, ready, the moment they alight upon a cultivable soil, to spring into life, and run riot in our wounds, our "pent up" secretions, was the revelation made that, to "sterilize" that air, was the only way in

which septic mischief could be prevented, and surgery be rendered harmless.

Towards this now attainable end, we of the nineteenth century have only advanced a certain distance on the way ; but, to some of you, it may be given to see the full fruition of our hope, and may you, gentlemen, bear your share in the good work.—*British Medical Journal*.

ORIGINAL COMMUNICATIONS.

MICROPHYTIC BIOLOGY.*

By Prof. GERMAIN SEÉ, Paris, France.

I.

In this paper I shall treat of microphytic life in general. I shall consider the functions of the micro-organisms, and then I shall describe the morphology of the principal microphytes ; I shall then consider the conditions of their existence.

I shall finally speak of the biology of the pathogenic or specific microbes.

PART FIRST—BIOLOGY OF THE MICRO-ORGANISMS IN GENERAL.

The biological study of the microbes of tubercle cannot be undertaken or understood without a previous notion of the parasite kingdom in general.

1. *Their Functions*.—In the circumambient medium the observer finds at the extreme limit of the visual range, reinforced by all the resources of optics, certain organisms, in quantity immeasurable, which, by their prodigious activity and their multiplication *ad infinitum*, play an immense role in the economy of nature and in the existence of man. They effect the destruction of inanimate organic substances by means of putrefaction ; they provoke the most varied

* Translated by Dr. E. P. Hurd, Newburyport, Massachusetts.

fermentations, and thus serve as indispensable auxiliaries to the digestion of our food. Other parasites invade the lowest, as well as the highest animals, and man himself. Living at the expense of their host, they take from him the elements of nutrition and the oxygen of the blood globules, and thus give rise to degenerations, lesions, special diseases, too often, to death. In all ways they play a destructive part, often for the good of nature, almost always for the evil of humanity.

2. *Their Diffusion.*—They are found everywhere in the exterior world, in the dust of the atmosphere, in the soil, in the water, especially in organic substances and in liquids exposed to the air. These same low organisms are with us in our habitations and in our aliments; they accompany us and continually revisit us; always and everywhere they may become detrimental to us.

3. *Their Contexture and Nature.*—All are formed by a single cell, comprising generally a cellular membrane, always a certain amount of protoplasm, never nuclei. This plasma is colorless and deprived of chlorophyl, and this is what distinguishes them from the algæ (Van Tieghen), their membrane is of protien nature (micro-protien of Nenki). In certain ferments it is formed of cellulose. It is this extreme simplicity of their structure which constitutes the difficulty of classing them in the different kingdoms of nature; the greatest part, as Cohn has shown, belong to the vegetable kingdom; their affinities are with certain plant-forms, which have a texture of the most elementary kind, a mode of propagation the most simple, but with a prodigious power of reproduction, namely, the microphytes. There are few that can be likened to animal organisms, and fewer still that remain without classification, but all are living, all are of the most varied forms, and metamorphose themselves in the strongest manner.

4. *Their Generation.*—Whatever may be their form or their dimensions; whether they present themselves with definite characteristics or in the state of germs or spores, it is known to-day that they do not spring into being spontaneously and form themselves out of non-living matter. If they never reproduce themselves after the manner of the higher organisms, their mode of multiplication is nevertheless not doubtful; all the tentatives made to develop these corpuseles in all sorts of nutritious liquids, have failed; all experimentations undertaken to prove their spontaneous generation since

the multiplied and always concordant researches of Pasteur, are, and ought to be, considered as vitiated by error.

5. *Their Vitality Proved by their Movements.*—What, moreover, proves the vitality of the microbes is that the far greater part are susceptible of movements which are spontaneous and have nothing in common with the amœboid movements of the white globules of the blood. They may be seen, in fact, to become agitated all at once, to move especially by their extremities, backwards or forwards, to turn about and change their position, even to execute a sort of creeping motion. These movements have been attributed to certain special organs—to cilia—but Van Tieghen considered these cilia as simple, passive prolongations of the cellular membrane, the movements being due to the contraction of the protoplasmic body of the cell.

It has always been noted that these movements are energized under certain conditions. According to Engelmann it is especially oxygen and light which produce or augment them; on the contrary, when you agitate constantly the preparation, the movements diminish or cease.

§ 6.—MORPHOLOGY OF THE PRINCIPAL MICROPHYTES.

1. *Enumeration of the Forms and Species.*—The species which interest us the most are four in number: 1. Micro-cocci. The micro-cocci constitute a first species, forming simply round, globular, ellipsoidal cells, which are not connected together, and whose dimensions do not often exceed five-tenths of a millimeter. 2. Bacteria. Bacteria consist of elongated cylindroid cells, which are connected by little agglomerations so as to form short, thick, club-like forms. 3. Bacilli. The bacilli constitute simply a morphological variety of bacteria, although from a functional point of view differing notably; they are also composed of elongated and united cells, which form rods a little longer and thinner than the bacteria. It is to the bacilli that the parasite of phthisis belongs. 4. Spirilla leptothrix. This species comprehends corpuscles in the form of their filaments, whether simple, like leptothrix, or contorted, in spirals, as are the spirilla.

2. *Constancy of these Species.*—Hitherto, and especially since the labors of Cohn, it has been admitted that the above are true,

definite species, having characteristics and an autonomy of their own, never undergoing transformation into other bacteria forms. This view has nevertheless found numerous opponents, among whom are Nægeli and Buchner, who maintain that the hay fungus may become the bacterium of charbon, and that, moreover, both may take on the forms of micro cocci or of filaments.

3. *Modifications of the Forms.*—What is certain is, that even in the state of complete development, bacteria and bacilli may present certain modifications of form, ordinarily suffering degeneration, undergo divers inflections, present divers articulations and dimensions, but without ever losing the physiological properties which characterize them. Thus bacilli, under the influence of certain vital conditions, undergo fragmentation; the upper half preserves its normal state, while the lower half breaks up into very short joints furnished with a resisting membrane; this peculiarity ought not to escape the observer who is looking for the bacillus.

This process takes place also whenever the bacillus finds itself in contact with certain irritating substances which are incompatible with the conditions of the parasite's existence, as, for instance, tincture of iodine. When the cells again find themselves in a normal nutritive liquid, they take on anew and rapidly the specific form, from which they came; when, on the contrary, the unfavorable conditions persist, the entire colony ends by transforming itself into micro-cocci, which finally may lose their facility of development.

§ 7.—REPRODUCTION, MULTIPLICATION BY DIVISION OR BY SPORES.

1. *Division, Fissiparity.*—All the parasites, especially the bacteria and bacilli reproduce and multiply by two processes—first and generally, by division, second and more rarely, by development of corpuscles called spores.

The division or fragmentation takes place in this way; the cell becomes constricted at the point of division, and the constriction increases, while the body of the cell augments in volume till it separates into two parts, which rapidly attain the primitive dimension of the mother cell.

The number of these cells may multiply to infinity, and certain parasites develop prodigiously by fission. Place a little fresh meat

in distilled water in contact with the air, and you will see in a few hours the micro-cocci and bacteria which come from the surrounding atmosphere multiply to such an extent as to render the water turbid, and this turbidity is not in any sense due to substances derived from the meat and depositing themselves from solution in the liquid; the cloudiness arises from the colonies of parasites which arrive from without and completely saturate the liquid.

2. *Modifiers of the Reproductive Power.*—This power of multiplication augments or diminishes in and by certain conditions which are the same as those which preside over the nutrition of the parasites. Thus the pullulation is infinitely less active under the influence of light, and free oxygen, of very high temperatures, or of certain chemical liquids, such as the disinfectants, which, in a state of concentration, annihilate the vitality of the micro-organisms; when, however these chemical or physical conditions are no longer operative, the multiplication recommences, and is constantly accompanied with disintegration and destruction of the organized matters, as well as of the saline substances which are contained in the nutritive liquids.

3. *Spores.*—The parasites possess still another more powerful means of generation, namely, by corpuscles which are produced by an endogenous process in the cells; these are the enduring spores which are observed especially in the reproduction of bacteria and bacilli.

These spores, which are recognized by their refractive power and by their very characteristic double contour, are of round or slightly oval form, generally smaller than the cells which produce them, more resisting to agents destructive of the cells, more rebellious to the temperature which may mount up to 110° C., or sink as low as 110° C., without effecting their vitality; more refractory to boiling, which must be prolonged in order to kill them. At a certain temperature, in damp places, in nutritive solutions they easily transform themselves into young cells; in freeing themselves from their cellular envelope, they end in taking on the form of the bacillary cell; it is under this form that the bacilli live in the air; their generative power is to-day established beyond doubt.

4. *Degeneration and Transformation into Zoogleia.*—It often happens that one finds in culture liquids entire colonies of microbes agglutinated by a thick gelatinous stratum, and to this aggregate has been given the name of zoogleia. Whether this gelatinous mass is developed by the agglomeration of microbic cells in a state of repose, or by

reason of the transformation of their membranes into a gelatinous substance, it is certain that the zooglia-forms sometimes correspond to one and the same parasite species, and sometimes constitute a heterogeneous formation derived from an assemblage of different species, forming a sort of sample pattern of the microbe world. When composed of a single species, the mass may disaggregate itself into its constituent elements.

Sometimes a whole family of microbes transforms itself into a mucous protoplasm; is this the end of the tube's existence?

What is certain is that you will find a muco-gelatinous mass in all old cultures. We shall see later what part it has to play in the development of the tubercle bacillus.

§ 8.—CONDITIONS OF THE EXISTENCE OF THE MICROPHYTES.

The conditions of existence of the microphytes demand a rigorously correct analysis, opening as they do to the physician new ideas concerning the therapeutic indications and new horizons in the domain of hygiene and prophylaxis. This is a chapter of preventive medicine still unwritten. We have now to inquire, in fact, what are the nutritive organic and mineral elements of the microbes, what are the gases, what are the physical conditions of temperature or of light which favor or prevent the life of the parasites?

1. *Nutrition by Organic and Mineral Compounds.*—Differing from the algæ by the absence of chlorophyl, which ministers directly to the constitution of the cells of the latter, the microphytes draw their materials of formation and nutrition from organic substances, whether protein or carbon compounds. The ternary compounds are, so to speak, all utilized, whether they be acid or alkaline, provided that they be soluble in water. Among these furnishers of carbon we may enumerate the sugars, glycerine, amyl, the vegetable acids and benzoates.

Nitrogen is derived principally from the albuminates, on condition that they have been transformed into peptones, under the influence of a special ferment. The ammoniacal salts do not so easily supply nitrogen. They may, however, with sugar, suffice for the life of the ferments. The principal minerals are not less necessary to the nutrition of the microbes; sulphur is indispensable, and phosphorus is no less so; then the alkaline bases, potassa, lime and magnesia, are useful. Hence the best culture liquids contain peptone and sugar, with a bi-phosphate of potassium or sulphate of magnesia, leucine and

sugar. The extract of meat contains already in its substance a certain number of potassic salts. The divers kinds of nutriment exercise, moreover, a certain influence on the vitality and the properties of the microbes; the bacteria of charbon may, in certain culture broths according to Buchner, lose their virulence.

2. *Concerning the Life of Micro-organisms, with or without Air.*— Pasteur, Schultzenberger, Traube and Grefeld began their researches by formally declaring that the microbes grow only by assimilating a great deal of oxygen and eliminating carbonic acid; but Pasteur, after numerous experiments and observations, came to the conclusion that if there is in the liquids of fermentation an obstacle to the access of air, the alcoholic fermentation is made more active, whereas, if oxygen be freely supplied, but a limited amount of sugar is destroyed. In other fermentations and in putrefaction the same phenomenon is observed, and the fermentive process attains its maximum only in the case of complete absence of oxygen. Still the growth and multiplication of the cells, as well as their *vegetative functions*, may continue in the presence of free oxygen, but it is the peculiar vital functions and properties which characterize them that cease; this is the distinguishing quality of the organisms which must be designated under the name of anærobian,* in opposition to those much more rare species which can neither exist nor perform their functions without atmospheric air, and which merit the name of ærobian.

This division, nevertheless, is not altogether free from objection, or rather, it does not imply an absolute distinction. In fact, the vegetative life and growth are not, in the anærobians, arrested by oxygen, which, with difficulty and only exceptionally, accomplishes the destruction of these parasites. It seems, then, as a fact gained to science, and as a general law, that the most diverse vegetal cells have the power of forming products of fermentation, and among others carbonic acid and alcohol, without oxygen taking the least part. But just here we have to note a controversy respecting this very subject (from every point of view so interesting) between Gunnig and Nenki. The first maintains that the microbes have need of an abundant supply of oxygen to sustain their life; that this gas was not wanting in the liquids of culture, and if it happens to be wanting, they derive it, as Pasteur teaches, from the oxygen principles of their untried liquid medium. They

* "Formation in life without air."—*Pasteur*.

decompose the organic substances in which they vegetate, setting free oxygen, and live at the expense of the former. It is for this reason that the nutrient liquids of the microbes give rise to azotised products of oxidation (nitric acid or ammonia), or even to certain products of reduction which are disengaged under the form of ammonia or hydrogen.

To this Nenki and Lakowitz reply that fermentation may take place even in an atmosphere of pure hydrogen. In another series of experiments they deprived of oxygen a flask fitted with a gelatinous solution which had been thoroughly sterilized (that is, rid of all its microbes); so well did they free the contents of the flask of oxygen, that the absorption bands of oxyhæmoglobin disappeared under the spectroscope, nevertheless fermentation and putrefaction were shown to take place in this flask.* Nenki concludes from this that if oxidizing processes are compatible with the presence of the anærobes they are never complete, that they are arrested at the first stages, and that along with carbonic acid only reduction products are formed which are independent of the influence of oxygen. Life without air, then, is the rule in micro-biology.

3. *Influence of Temperature on the Life and Properties of Microbes.*—Elevation of temperature acts favorably on the microphytes, as it does on all other plants; cold retards vital manifestations. It may be said, in general, that the heat of the human body is very nearly that which the most promotes the development of the lower organisms.

Extreme Limits of Temperature.—The growth and multiplication of the microphytes continue notably till the temperature has attained a determinate maximum, and are at once arrested when this is overpassed. This maximum varies with each microphyte, and may, moreover, rise or fall according to the quality of the nutritive liquid, according to the presence or absence of free oxygen. When the temperature continues to rise farther and farther above the maximum, the vital processes are enfeebled, and are finally arrested, especially in a moist medium; by hyperthermy a cadaveric rigidity is produced. But even in this state, under the influence of new

*This experiment is contradicted by the careful and thoroughly reliable observations of Tyndall and Pasteur. These experimenters have always noted absence of all fermentative or putrefactive change in their sterilized flasks, and this is, as everybody knows, the secret of preserving canned meats and fruits.—Tr.

conditions, the vital functions may reappear. Thus the bacterium of charbon, after having undergone suspension of its vitality, regains its vital and infectious properties in a slightly alkaline medium of extract of meat, and after an hour and a half of rigidity.* There exists also a very low degree of temperature which the bacteria cannot support; yet this refrigeration may be carried very far with impunity in the case of certain microphytes, and if Frisch has seen species survive a cold of -110° C. in general they die or cease to multiply between $+5^{\circ}$ and -18° C.; with some this is the case at $+30^{\circ}$, and notably the tubercle bacillus.

Influence of Temperatures on the Functions of the Microbes.—

Observers have remarked that certain temperatures compatible with the life of the microphytes, may nevertheless, by their variations, influence their vital properties. For instance, the bacterium of charbon, cultivated at 25° C., preserves all its virulent action which, however, at 36° C., diminishes sensibly, and continues to diminish with each successive generation.†

4. *Action of Temperature on the Spores.*—The action of high or low temperature on the spores is still more marked, but on their formation it is different. Thus the formation of the spores is singularly influenced by the degree of temperature of the nutritive liquid; the bacterium of charbon, cultivated at 35° , forms its spores in twenty hours; at 18° it requires about three days; at 15° the production of spores does not take place.‡

On their Reproductive Power.—Likewise the reproductive power of the spores demands a temperature of 35° to 37° C.; below this point they do no longer engender bacteria.

Resistance of the Spores to the most Extreme Temperatures.—But what the physician should not forget is the enormous resistance of the spores to the most extreme temperatures.

While bacteria and bacilli cannot in general vegetate above 90° C. or below 30° , their spores resist a heat of 110° C., and often even a prolonged boiling of many hours' duration.§ In the dry state they support a still more elevated temperature. Exposed to the most intense cold, the pores are even more refractory; Miguel has seen them resist a marked refrigeration of 60° below zero; Pictel has known them to survive a temperature of -110° C. It

* Buchner.

† Buchner.

‡ Koch.

§ Buchner.

is from this extreme resistance of the spores—bacillary and bacteridian—that arises the great difficulty of purifying the air and ridding it of morbigenous germs.

5. *Action of the Light on the Microphytes and their Spores.*—It has been claimed that in consequence of the absence of chlorophyl the microphytes are not influenced by the action of light. But if it be true that the light does not decompose for them carbonic acid and set free oxygen, as it does for the algæ, it none the less affects their vital actions, and especially the ciliary movements, for in the darkness the latter undergo arrest at the end of a time proportioned to the intensity of the previous illumination. This is an important fact, carefully observed by Engleman.

Resumé.—Hence the vital conditions of the microphytes are determined ; their kind of nutrition, their mode of respiration, their relations to temperature, light and movement are known ; to their hygiene we are obliged to oppose our own.

(To be continued.)

CURRENT LITERATURE.

THE BROMIDES.

SIMON (Dr.) JULES. “Les Bromures.”—*Conférences thérapeutiques et cliniques sur les Maladies des Enfants*, Vol. II.

Among the new remedies which this century has produced there is not one which has been more widely used than bromide of potassium. Discovered by Balard in 1826, it was not utilized to any extent in medicine till towards 1856, when it was tried as an anti-syphilitic by Ricord and Pache. [Dr. Garrod made some extensive trials of the drug in 1854 in specific skin affections.—Tr.] Soon after its efficacy in epilepsy and other nervous diseases was established by Locock, Brown-Séquard, Gubler and others. These

observations led to a more extended use of the drug, as is evidenced by the fact that in the Central Pharmacy of the Paris Hospitals, in 1855, three kilogrammes only were called for, while in 1870 this amount had risen to 389 kilogrammes, and in 1875 to 730 kilogrammes.

The author, in considering the uses of the bromides in diseases of children, says he has but little experience in the uses of the ammonium and sodium salts, the latter especially, as it is a deliquescent and unstable chemical compound. He, however, speaks well of the polybromic solution of Yvon, which contains twenty grammes of potas. bromide, to 300 grammes of syrup, of which a tablespoonful contains one gramme of the mixed salts.

The physiological effects of bromide of potassium are in the first instance exercised on the mucous membrane of the alimentary tract ; it diminishes the sensibility of the pharynx, excites the mucous membrane of the stomach, increasing the appetite ; in larger doses, especially in infants, it is apt to give rise to gastric irritation and diarrhœa. In older children the habitual use of the bromides, as in epilepsy, is apt to cause constipation. After absorption it depresses the action of the heart and slows the pulse, and is useful in some forms of heart disease, but it is apt to increase the dropsy if present. At times it appears to give rise to bleeding at the nose. It appears to cause a contraction of the arterioles of the nervous centres an skin, and blunts the sensibility of the mucous membranes of the urethra and bladder. The urine is increased. The continued use of the bromides is apt to cause various cutaneous eruptions, as acne, erythemas, and boils. Some children are so sensitive to the action of bromides in this way that it is almost impossible to give them the smallest doses.

The uses of the bromides in infancy and childhood are various. In the convulsions of infancy, after attempting to combat the exciting cause, as evacuating the bowels, three to six grains are given daily in two doses to infants under two years of age. The best time is with meals, so as to lessen the chance of irritating the stomach, and the medicine should be omitted after four or five days.

In epilepsy in children of four or five years fifteen grains daily in three doses may be given at first, augmenting the amount if no effect is produced, and continuing the medicine for fifteen to thirty days after the cessation of the attacks. The epileptics who resist

bromides are sometimes amenable to atropine, or these drugs may be given alternately.

Children of eight to ten years, who are growing rapidly, and whose brains are easily fatigued by study, frequently suffer from headaches, which come on daily, and probably suggest to the friends the onset of tubercular meningitis. This condition may be combated with bromides in association with other means to restore the general health.

Bromides are also useful in some forms of functional heart disease, to which boys of fourteen to fifteen years of age, who are given to violent exercise, are subject. They perhaps suffer from palpitations, a feeling of constriction over the cardiac region and dyspnoea. These symptoms are sometimes accompanied by a transitory hypertrophy, without any signs of valvular disease.

In some cutaneous eruptions dependent upon irritation of the nervous system, as pemphigus and prurigo, bromides may be usefully employed.

HENRY ASHBY.

KINNIER (D. F.). "Remarks on Otorrhœa in Children."—*American Journal of Obstetrics*, November, 1884.

Dr. Kinnier takes as an illustrative case a strumous child aged six years, who had been deaf for two years, and had struck the left side of his head three months before coming under observation. Shortly after this accident otorrhœa on the left side set in, which subsided in five minutes' time, but recommenced subsequently, and the child was brought to the hospital. After being under treatment for six weeks without improvement, a swelling over the mastoid inflammation, which were treated in the same way, and during the last attack a polypus was discovered in the meatus, which was removed. The case resulted in perforation of the membrana tympania with complete deafness.

The author seems to prefer treating otorrhœa by the insufflation of dry powders twice daily, and specially mentions boracic acid. He very properly condemns the practice of stuffing the meatus with some astringent powder and closely packing it in with cotton wool. If treatment by lotions is employed, the author recommends several, such as :

Acid Carbol.	gr. iv.	Acid Carbol.	gr. iv.
Zinc Sulph.	gr. iv.	Sodæ Bicarb.	gr. xij.
Aq.	oz. i.	Sodæ Bibor.	gr. xij.
	miscæ.	Glycerin	dr. ss.
		Aq.	oz. i. miscæ.

He also mentions the benefit derived in these cases from the use of the Politzer bag.

When symptoms of mastoid inflammation occur, he recommends that, after the application of leeches, the affected region be painted by a strong solution of nitrate of silver, or by some preparation of iodine, to be followed by warm applications. The object of the treatment is to cut short, if possible, an impending periostitis.

Dr. Kinnier does not allude to incision of the membrane, the performance of which, at an early stage often prevents disastrous consequences, especially when the ear mischief sets in during the course of the exanthemata. In the treatment of suppuration of the mastoid cells he also omits to mention that it is occasionally necessary to trephine the mastoid process before relief is afforded. The avoidance of poultices to the external ear is not insisted on, although these applications are condemned by Hinton and others as promoting perforation and stimulating the growth of granulations. Another practical point which might have been mentioned is the great advantage of having all ear lotions slightly warmed before using.

A. M. EDGE.

WOLF (Dr. AUGUST). "The Prophylaxis and the Treatment of Thrush and Intertrigo in Infants."—*Archiv für Gynækologie*, XXIV. 3.

Intertrigo and thrush have almost completely disappeared for the last twelve years in the Leipzig Lying-in Institution, through special precautions, consisting mainly in the observance of the most scrupulous cleanliness. The percentage has been reduced to 0.8 per cent. for thrush and 0.9 per cent. for intertrigo.

Digrammatic tables are given indicating the cause of both diseases. From these it would appear that summer had not, as has hitherto been considered, a predisposing influence upon the devel-

opment of thrush. The most marked increase in the number of cases coincided always with the periodical changes in the staff of nurses, and is easily explained by laxity on the part of the retiring nurses and ignorance on the part of those who came to fill their places.

It is well known that atrophy and weakness of children predispose to thrush. Accordingly a double measure of attention is required in the care of premature and weakly children.

The opinion of Valleix, that intertrigo of the anus is a symptom inseparable from the development of thrush, is quite negatived by Wolff's observations. Only four times did thrush and intertrigo occur together, and only twice was there a combination of thrush, intestinal catarrh and intertrigo. The first set of cases is explained by the operation of the factor, viz: want of due cleanliness; and it is easy to see in the second set of cases how the frequent fluid motions favor the occurrence of intertrigo.

The mode of feeding and the kind of food are also important factors. Children at the breast are less prone to thrush than those brought up on cow's milk, and these again less so than those brought up on the various sorts of artificial food. The causes of this are two-fold—the quantity of sugar in these foods, and the deficient vitality of the children brought up on them.

As regards fatality, intertrigo is a painful but not deadly complaint; thrush is more dangerous by limiting nutrition, and that generally in children of low vital power.

Quite recently in Epstein of Prague has asserted that in consequence of too frequent cleansing of the mouth of infants, the delicate epithelium of the mouth is injured, and a nidus thus made for the development of the fungus of thrush. Epstein accordingly disapproves of washing out the mouth at all. Sufficient clinical experience of this negative mode of treatment has not yet been obtained.

The method pursued in Leipzig is this: Several times a day the infant's mouth is carefully wiped out with a soft linen rag dipped in pure cold water. Should the thrush actually break out, the same treatment is persevered with, only more frequently. If the case becomes severe, the mouth is painted with a solution of five parts of borax to twenty-five parts of honey. Honey has been objected to theoretically from its easy decomposition, but clinical results do

not bear out the objection ; besides, the children like it, and it gets well distributed over the mouth.

Intertrigo is guarded against by washing the soiled parts with pure cold water after every motion. If the intertrigo is once established, the parts are still carefully washed with pure cold water and a piece of plain dry wadding inserted between the opposing surfaces. No medicated ointments or powders are used in any case.

These are the simple means by which the occurrence of these diseases in the Lying-in Institution has been reduced to a minimum. The nurses receive a thorough training, and on leaving the institute disseminate the information among the public.

JOHN SCOTT in *Medical Chronicle*.

PHENOL CAMPHOR.


Dr. Theodore Schaeffer, of Beecher, Illinois, in the *Boston Medical and Surgical Journal*, January 8, calls attention to a new compound of camphor and phenol (carbolic acid). It is obtained by heating crystalized carbolic acid until it melts, and then gradually adding camphor ; a clear liquid is obtained, which is characteristic on account of its permanency. Equal parts of carbolic acid and camphor are used. It has the fragrant odor of camphor, and can be employed in toothache, and in skin diseases of cryptogamic origin. It is soluble in alcohol, chloroform, ether and ethereal oils, and mixes well with paraffin, cosmoline, and many oils. It is a good antiseptic, and is a good local anæsthetic for in-growing toe nails. [A similar, if not identical, preparation is noticed in Wood's Therapeutics, citation of authority dating as far back as 1877.—ED.]

EDITORIAL.

THE NORTH CAROLINA MEDICAL JOURNAL

A MONTHLY JOURNAL OF MEDICINE AND SURGERY, PUBLISHED IN
WILMINGTON, N. C.

THOMAS F. WOOD, M. D., Wilmington, N. C., Editor.

 *Original communications are solicited from all parts of the country, and especially from the medical profession of THE CAROLINAS. Articles requiring illustrations can be promptly supplied by previous arrangement with the Editor. Any subscriber can have a specimen number sent free of cost to a friend whose attention he desires to call to the JOURNAL, by sending the address to this office. Prompt remittances from subscribers are absolutely necessary to enable us to maintain our work with vigor and acceptability. All remittances must be made payable to THOMAS F. WOOD, M. D., P. O. Drawer 791, Wilmington, N. C.*

THE MEDICAL PROFESSION OF NORTH CAROLINA LEGALLY RECOGNIZED—THE PENALTY FOR PRAC- TISING WITHOUT A LICENSE—THE NEW NORTH CAROLINA BOARD OF HEALTH.

It is a proud day for the medical profession of North Carolina. The efforts of all these long years have received the sanction of law, by the Legislature, and the profession has begun a new career of usefulness. Now we can see, as we never saw before, how greatly our cause depends upon the "line upon line" presentation of the subject. Committees had been appointed to wait on the Legislature at nearly every meeting of the Medical Society since its formation, but with the exception of the success achieved in 1858-'59, when the first license law passed, nothing worthy of the name had been done for us by the State. It is true that a skeleton

law framing a State Board of Health was grudgingly enacted in 1876, "thrown to the Medical Society as a bone thrown to a hungry dog," as one of our leading members truthfully remarked, but it was plainly evident that the State intended the law should die by inanition. In the light of present affairs it is amusing to remember with what amiability the Society awarded to one of its members exemption from dues for his life-time, and to another exemption for four years, for their success in getting this same worthless law enacted.

Things have changed since those days, and after weary years of nursing and teaching, in face of opposition without and timidity within, our Society, we have the satisfaction of recording that the auxiliary bodies of our Society, the State Board of Medical Examiners, and the North Carolina Board of Health, are at last safely grounded in the laws of the State.

It will be seen by examining the license law, the full text of which is given on another page, that the old law was amended as follows: The clause declaring that *it shall not be a misdemeanor to practice medicine without a license* was repealed. Further on a section was amended so as to read that on and after the date of ratification (February 23) that any person who shall practice medicine, or surgery, or any of the branches thereof, for fee or reward, without the license of the Board of Examiners, shall be deemed guilty of a misdemeanor, and subject the offender to fine and imprisonment, at the discretion of the court. The law does not apply to women pursuing the avocation of midwives, nor does it apply to regularly licensed physicians practising on our border lines, or licensed physicians called into this State from another State. Very properly the new law has no retrospective application, and of course does not alter the status of those physicians now in practice. It must be remembered, though, that all of those physicians who came into practice since 1859, and have not been licensed, are still debarred from the collection of their claims by legal process.

As gratifying as our success has been, so far, it will not become us now to sit idly by and expect the new law to take care of itself. The State Medical Society would do well to appoint a committee in each Congressional, or Judicial, district, to assist in its prosecution. Cases will arise pretty soon, and if it is left to average grand juries to present offenders, we need not look for its vigorous enforcement.

The Society could well enough aid in the expenses of legal action in certain necessary cases.

The work of the Board of Examiners will be largely increased, and we presume that the new board, which holds its first session in Durlam, in May, will begin its work on the day preceding the meeting of the Society, and allow themselves ample time.

The North Carolina Board of Health will organize under the amended law, at a meeting to be held in Raleigh on the 20th of March. At this meeting a new member will be elected, a President elected to succeed the lamented Whitehead, and the Governor will send in his appointments to fill vacancies, three in number. At the Durham meeting of the State Medical Society there will be an election to fill the then expired terms of two members.

It will be seen by these statements that there will be quite a change in the composition of the Board of Health, and we trust that it will be greatly for the better.

We are specially gratified to state that in addition to the amount appropriated for the maintenance of the Board, and for printing, the Legislature has appropriated \$2,000 to be used only in case of the invasion of the State by cholera or other pestilential diseases. As small as this sum is, if rightly and promptly applied, it will serve to allay panic, and, we trust, limit or suppress the first cases of pestilence. Because North Carolina has for fifty years escaped cholera (we were indebted to Cornwallis and Sherman for the introduction of small-pox), there is no reason now, with the multiplication of highways of travel, that we may not have a visitation like our daughter Tennessee had a few years ago.

Our thanks are due to the seven doctors in the Senate, and to Dr. McNeill in the House, for the broad views they were able to inculcate in the Legislature, thus making success possible. Other friends we had in both Houses, of course, and their names will be held in grateful remembrance by the profession. At last the North Carolina profession has made distinct progress; it now rests with the individual members of the profession to see that it still pushes forward.



Dr. James F. Reeves, of West Virginia, has resigned the Secretaryship of the West Virginia Board of Health on account of ill-health.

COUNTY BOARDS OF HEALTH.

Circulars will be sent out at an early day asking for the assistance of the County Superintendents of Health for information as to the present condition of the Boards in their county. We trust that every one who sees this article will write at once to the Secretary of the State Board at Wilmington, giving him all the information as to the present and future prospects of their County Board. The recent laws make it possible now to have an active, working Board in each county, and all the energy that the State Board can command, will be enlisted in the labor of reorganization.

Copies of the amended law will be issued in a few days, and County Boards will be supplied with the number of copies they desire.

Let us all work earnestly. The State's concession to us makes it highly incumbent on the entire profession of the State to aid in building up the State Board of Health. After the success the Medical Society of North Carolina has had in building up the puny license law to its full stature, we may well be confident of our power to make this a vigorous success.

NUTMEG IN LARGE QUANTITIES IS POISONOUS.—It seems to be a forgotten fact that nutmeg is poisonous, although it is so stated in the National and United States Dispensatories. Dr. Palmer, of Monticello, Florida, sends an item to the *American Journal of Pharmacy* of a lady who had violent poisonous symptoms from eating one and a half nutmegs—about 135 grains, whereas the dose is from 5 to 20 grains.

ASPIRATION OF SMALL-POX PUSTULES.—Dr. J. M. Jackson, of Columbus, Kentucky, reports (*Mississippi Valley Medical Monthly*) that he is satisfied that the duration of a case of small-pox is lessened by five or six days by the aspiration of the pustules with a hypodermic syringe. By this means the absorption of pus is prevented, and secondary fever mitigated. It seems to us this is well worthy of extended trial.

REVIEWS AND BOOK NOTICES.

TYPHOID FEVER AND LOW WATER IN WELLS.

We are indebted to Dr. Henry B. Baker, the able Secretary of the Michigan Board of Health, for a copy of his paper on "The Relation of the Depth of Water in Wells to the Causation of Typhoid Fever." Like all of the public-health writing of Dr. Baker, it is founded upon pains-taking observation, and gains at once an attentive reading. Dr. Baker has been in practice for a long time with the diagrammatic methods of presenting hygienic problems, and the utility of his methods are more and more apparent, and, by the way, his skill in employing them greatly improved.

He shows by a table of the records of cases of typhoid fever that the greatest number occurred in August, September, October, November and December, and also that beginning with July, 1881, the sickness reported from typhoid fever was about 50 per cent. greater than the average for corresponding months in the five years (1878-1882), and it continued at this high rate until April, 1882.

In a second diagram he summarizes the evidence from the regular correspondents of the Michigan Board of Health, and shows that in quite a number of localities observers have made records which show either a coincidence between the low water in wells and sickness from typhoid fever, or that the fever occurred in months succeeding the low water. Another closely related physical condition, it would seem, may have an influence in the causation of typhoid fever, namely, the temperature of water in wells, and the condition of the fluids of privies, but it is difficult to see how they can have *great* influence. It appears from the tabulated evidence that there is a relation between low water in wells and the prevalence of typhoid fever; that this relation is found to hold by seasons of the year—those months in which the water is lowest (or the months immediately following), being the months in which typhoid fever is most prevalent; and the unusual year 1881-'82 when typhoid fever was more prevalent than ever known before (in Michigan) was also unusual because of the exceeding low water in wells.

Considering it established that to the low water in wells is due the prevalence of typhoid fever, he propounds the following:

1. Is there a quantitative relation? That is to say: Is the amount

of sickness from typhoid fever proportional to the amount of water in wells?

2. Does the drinking water cause the typhoid fever?
3. What constituent of the water causes the typhoid fever?
4. How can typhoid fever be prevented?
5. What need is there for the prevention of typhoid fever in Michigan?

We give in conclusion quite lengthy extracts from this paper for the benefit of those of our readers who are giving renewed attention to the study of public health questions:

“HOW IS TYPHOID FEVER INDUCED BY LOW WATER IN WELLS?”

“The evidence of the causation of typhoid fever by low water in wells will not be accepted by some persons, because they do not understand, at first sight, how the disease can be thus caused. Several persons to whom I have presented some of this evidence have replied that they could understand how dilution of a *poison* would lessen its effects; but that if typhoid fever is caused by a specific organism, they failed to see how the low water in wells could cause the disease. A study of the relations of privies to wells, and the statement of certain facts may aid such persons to an understanding of how it is possible to explain such mode of causation.

“Herewith I submit a diagram showing a privy and a well under two circumstances; in one case the water in the well is low, and in the other case it is high. It would seem that when the level of the water is the same in the well as in the privy, there would not be likely to be a mingling of the water from the privy with that in the well, unless the distance between them was small. But whenever and wherever the water in the well is below the bottom of the privy not far distant, there will be a strong tendency of the fluids cast in the privy to pass downward toward the water in the well; or, if not directly to the well, to the ground-water not far distant, which will pass into the well to replace that which is drawn. The quantities of solid and liquid filth deposited in privies probably do not vary much from month to month, except that because of diarrhœa in the hot months of July and August, more fluid fecal matter probably enters them. The supposed causation of the regularly recurring increase of typhoid fever in the autumn, by discharges from persons suffering from diarrhœa gaining access to the drinking water, is referred to in another part of this

paper. That is only one way of rendering the water foul, or, as we might say, nutritive to bacteria; and it is quite in keeping with the other evidence referred to in this paper, as to outbreaks of typhoid fever after the use of water contaminated by decomposing animal and vegetable matter. The explanation of all these lines of evidence would seem to be that either the ordinary bacteria of decomposition cause typhoid fever, or that the specific cause of the disease is quite generally distributed, *and is capable of self-multiplication outside of the body*, whenever it falls into fluids sufficiently nutritive. But even if the cause of the autumnal increase of typhoid fever is the diarrhœa which precedes it, and which is itself caused directly or indirectly by the high temperature—even then, it would seem that under present circumstances the quantities of water in wells controls the rise and fall of typhoid fever; because the relation which the curve representing diarrhœa bears to the curve representing the fever is not closer than is that borne by the curve representing water in wells; and it is probable that it is only by passing into the drinking water that the discharges help to cause typhoid fever.

“In the early autumn, also, there is more than the usual likelihood of a *specific cause* being introduced into certain wells, because then surface supplies of drinking water, wash water, etc., are diminished to such an extent that unusually large drafts are made on the wells. This increased use of well water would lead to the drainage of an unusually large territory around the wells, with a consequently increased danger of contamination from privies infected by typhoid excreta.

“I think we may now safely assume that there is a greater dilution of the dejections from typhoid fever patients, and of human excreta generally, when the water in wells is high than when it is low, except when the low water is caused by a frozen ground which locks up the excreta on the surface of the earth. It cannot yet be positively asserted that the specific cause of typhoid fever is reproduced outside of the body in nutritive solutions at the temperature of water in wells; yet this may be found to be possible, or, if not in wells, in the higher temperature of privy pits, from which they may pass into the well either at once in the form of mature bacilli, or after a time in the less perishable form of spores; and if typhoid fever is caused by the ordinary bacteria of decomposition, as many seem to believe, then we must consider that lessening the quantity of water in wells would

probably (except as just mentioned) lessen the dilution of the fluid derived from privies, and consequently increase the proportion of bacteria thus introduced into a given quantity of well water; and not only this, but the proportion of albuminoid matter suitable for the rapid reproduction of bacteria would then be increased; and, bearing in mind how rapidly the reproduction of bacteria occurs under such circumstances, we can well understand how in such a "culture fluid" there would soon be something of very much greater import than simply what would result from a lack of dilution of a fluid containing some organism or poison not capable of self-multiplication. Then, again, the ordinary bacteria are known to be frequently in much greater abundance on the surface than elsewhere in a liquid, because of their requirement of air; therefore a much greater proportion of bacteria would be likely to be drawn up by a pump reaching to the bottom of a well, when the top of the water falls to near the opening into the pump.

"Many years since Chauveau performed a series of careful experiments with vaccine virus diluted with constantly increasing quantities of water, when he found that the proportion of successful vaccinations was correspondingly decreased. Under these circumstances it appeared that whenever there was a lodgement of the virus the development of the case proceeded regularly to the close; but with large quantities of water the proportion of such cases of successful vaccination was very small. I suppose that no one now doubts that vaccinia is caused by specific particles which are reproduced within the body (it is now many years since vaccinia was shown to be due to a "particulate" cause, and those same experiments by Chauveau had much to do with establishing that fact; however, Dr. Bourdon-Sanderson's experiments verified those made by Chauveau, and have been considered sufficient to establish this point). The two points just alluded to (the lessened chance of vaccination with diluted virus, and the fact that vaccinia is a specific disease) may serve to remind those who have not held these facts in mind, that *dilution of a fluid containing the specific cause of a disease lessens the chances of communicating that disease* when the fluid is brought in contact with the body.

"An objection has been offered that the variations in the amounts of water in wells, as shown by the diagrams, were too slight to account for so great differences in the prevalence of typhoid fever as

are shown to occur in Michigan in the months of June and October. The reply is that the variations shown in the diagrams are mostly averages of several wells, and that in one of the wells included in the average for the year 1881, the amount of the variation was from twenty feet of water in the month of June, to no water whatever in the month of September. Besides this, the wells measured are not the wells the water of which actually caused the typhoid fever in Michigan, but they are only examples of how the water rose and fell, on the average ; it is probable that many wells (besides one of those observed) were nearly dry at some period during or following the extreme drouth of 1881.

“An instructive inference from the evidence which I present is either that the cause of typhoid fever does not long remain in the well water in an active form, or that the dilution is so great as to reduce very greatly the chances of its producing the disease. As the water lowers in summer the typhoid fever cause is apparently quick to act ; and as soon as the autumnal rains filter into the wells, its action quickly disappears, although it must be admitted that at no time of the year is the State entirely free from typhoid fever ; and it is quite possible that the rapid subsidence of typhoid fever after the autumn rains is simply because of the extreme dilution of its cause in the wells.

“HOW CAN TYPHOID FEVER BE PREVENTED ?

“If the evidence which I have presented is conclusive, the reply to the above question may be stated in four words, namely : *Stop drinking contaminated water.* This might not prevent *all* the typhoid fever ; but it would appear that by far the greater proportion of it in Michigan may reasonably be expected to be thus preventable. How to prevent the contamination of the various water supplies, cannot be so briefly stated ; but if people care enough about it to take the necessary trouble to do this, sanitarians can tell them how. So far as it relates to typhoid fever, it *may* be that all that is necessary is to destroy and keep out of the water all discharges from persons suffering from typhoid fever ; but the difficulty of recognizing the disease early enough in its course is so great, that in order to do this it will be necessary to keep all human excreta, and perhaps the excreta of some animals, out of the water supply. Most people think they do this now, or probably we would

not have a thousand deaths a year in one State from this cause ; but I think we have reason to believe that their confidence in the purity of the water they drink is misplaced, and that consequently many of them sicken and die. The numerous instances where typhoid fever has apparently been caused by drinking water contaminated by decomposing *vegetable* matter, indicate that, even if the cause of the disease is specific, until such time as that the specific cause shall be so restricted as not to find access to water supplies, it is important to preserve the water from contamination by vegetable as well as by animal matter."

LECTURES ON DISEASES OF THE NERVOUS SYSTEM, ESPECIALLY IN WOMEN. By S. WEIR MITCHELL, M.D. Second Edition, Revised and Enlarged. With Five Plates. Philadelphia: Lea Brothers & Co. 1885.

This valuable volume has for a long time been out of print, but the author has in the meantime revised and enlarged it. For those of our readers who are not familiar with it, we ask their special attention to its merits. It is a small octavo of 280 pages, clearly and beautifully printed, with the slightest number of typographical errors. It is not a regular treatise on nervous diseases, but discusses those exceedingly difficult cases among women, in an entertaining and highly instructive manner, the illustrative cases being drawn from the author's case-book.

The following captions of some of the chapters shows that the author has undertaken those very difficult forms of nervous diseases which puzzle and perplex us daily: The Paralyzes of Hysteria; Hysterical Mortor Ataxia—Hysterical Paresis; Mimicry of Disease; Unusual Forms of Spasmodic Affections in Women; Tremor; Chronic Spasms; Chorea of Childhood; Habit of Chorea; Disorders of Sleep in Nervous or Hysterical Persons; Vaso-Motor and Respiratory Disorders in the Nervous or Hysterical; Hysterical Aphonia; Hysterical Joints; Hysteria and Organic Disease of the Spine; Gastro-Intestinal Disorders of Hysteria; The Rectum and Defecation in Hysteria; The Treatment of Obstinate Cases of Nervous Exhaustion and Hysteria by Seclusion, Rest, Massage, Electricity and Full Feeding.

Not a chapter can be read without engaging the undivided interest of the reader, although some chapters will prove of vastly

more importance to one reader than another. The chapter on The Disorders of Sleep and on Chorea brings out new facts in abundance, and these are all logically arrayed in a style and form that has not been attained by writers on similar topics.

The author's study of the relative frequency of chorea among the whites and blacks coincides with our observation on the same subject, viz: that chorea is rare among pure negroes. Since Dr. Mitchell sent out circulars of enquiry, several years ago, we have diligently inquired into cases of chorea among negroes, but only one case has been discovered in as many as ten years.

Dr. Mitchell in this little book has gone deeply into the mysteries of hysteria and lighted up many a dark corner, which to the general practitioner will prove a practical benefit. His treatment is distinguished by the most sparing resort to drugs, but by a careful attention to every method of diagnosis, as a means to a rational method of treatment; and still the author frankly admits, "We now know nothing of what constitutes the physical basis of the disorder we call hysteria." This is not the book for the doctor seeking for prescriptions "good for" nervous disorders—there is not a prescription to be found in it—but it will be greatly prized by those who will take time to read and inwardly digest it, and to all such we commend it.

HUMAN OSTEOLOGY. Comprising a Description of the Bones, with Delineations of the Attachments of the Muscles, the General and Microscopic Structure of Bone and its Development. By LUTHER HOLDEN, ex-President of the Royal College of Surgeons, Assisted by JAMES SHUTER, F.R.C.S., etc. With numerous illustrations. Sixth Edition. New York: William Wood & Co., 56 & 58 La Fayette Place. 1885.

This is a well-known volume. It has stood the test of time, and has reached its sixth edition in England. There are numerous illustrations, apparently lithographed, but probably only "processed," but giving many good drawings of the bony frame. The points of attachment of muscles are indicated upon the proper regions in the figures, after the plan of Gray's anatomy.

Mr. Holden knows how to make the dry bones talk. This comparative anatomy of the lower animals, which he contrasts as he goes along, is highly interesting, and his statements of the archi-

tectural design of the different bones is very instructive. The discussion of the mechanism of the bones and their uses is, after all, the most satisfactory way to impress their anatomy on the mind of the student. We trust now that the Messrs. Wood will give us Holden's Anatomy of the Soft Parts during the year, and so add greatly to the value of their now almost indispensable Library of Standard Medical Authors.

MANUAL OF NERVOUS DISEASES AND AN INTRODUCTION TO MEDICAL ELECTRICITY- By A. B. ARNOLD, M.D., Professor of Diseases of the Nervous System, College of Physicians and Surgeons, Baltimore. With Illustrations. New York: J. H. Vail & Co. 1885. Pp. 170.

Professor Arnold has given us here a text-book for students, on diseases of the nervous system, as he was convinced in his experience as a teacher that "the standard works on this subject are little suited to the wants of the beginner, who is not prepared to profit by the study of elaborate treatises."

The anatomy and physiology of the nervous system is given in twenty pages, and illustrated with four plates. The other illustrations are Ziemssen's motor points in the chapter on Medical Electricity. The author has carried out the design of his work satisfactorily, and we believe it will be read by students to the exclusion of other text-books.

THE MEDICAL CHRONICLE.

This is a new medical journal, published monthly in Manchester, England, under the editorship of James Niven, M.A., M.B., and W. J. Sinclair, M.A., M.D. We have received the first four numbers, and welcome it to our exchange list as a valuable acquisition. It is octavo in size, beautifully printed, and edited upon the same principles and with the same ability as was exhibited in the New York *Medical Journal* before it became a weekly. Those of our readers who desire a monthly English journal, with well digested and practical original articles, and the cream of foreign journals in abstract, could not do better than subscribe. Price per number 1s. 6d. Address *Medical Chronicle*, Manchester Chambers, Market street, Manchester.

INSANITY CONSIDERED IN ITS MEDICO-LEGAL RELATIONS. By T. R. BUCKHAM, A.M., M.D. Philadelphia: J. B. Lippincott & Co. 1883. Price \$2.00.

When are we to see the end of book-making on the subject of insanity! Good books come out, satisfy the readers of them for a short time, and then we are ready for the next new volume. Restlessness may not be any more marked on the subject of insanity than in other departments, but surely it is a subject that needs frequent revision.

This volume will well repay a careful perusal. The chief object the author had in view in the preparation of it was to point out the pernicious uncertainty of verdicts in insanity trials, with the hope that by arousing attention to the magnitude of the evil, at least, some of the more objectionable features of our medical jurisprudence may be removed; to faithfully call attention to the more prominent causes of that uncertainty; "to hold, as 'twere, a mirror up to nature; to show virtue her own feature, scorn her own image;" and with the most friendly feelings for both his own and the legal profession, to criticise severely, and to censure when necessary, not the individuals, but the system which has made insanity trials a reproach to courts, lawyers and the medical profession. With this declaration in his preface the author faithfully set himself to his task.

The legal tests or criteria of insanity as expressed by learned judges are given, upon which he makes the following resumé:

In the foregoing comparatively few utterances of the courts, what phase or degree of responsibility has not been authoritatively affirmed and authoritatively denied? An insane person cannot be tried for crime; insanity must be absolute; partial insanity sufficient; the insane must be punished as a warning to others; punishing an insane person extremely cruel and inhuman, and no warning to others; must know right from wrong *at the time, and that the act charged was wrong*; insanity must be proved beyond a doubt; a preponderance of proof of insanity sufficient; if any reasonable doubt of insanity exists, acquit; the onus of proof of insanity on the defence; the onus of proof on the State; medical opinions and theories in insanity cases are vicious; medical experts know all that is known on the subject; judges and lawyers profoundly ignorant of insanity; expert testimony of high value; expert testimony

worse than valueless ; and last, but not least, *there are no legal tests of insanity.*" For all these contrariant opinions he gives full verbatim quotations in the appendix.

The author thinks that by the aid of the "*physical media*" theory which he has introduced and fully established, by abolishing legal tests of insanity, so-called, and by securing efficient, trustworthy expert testimony in every trial, he believes that the disgraceful, haphazard trials of the past and present will give place in the future to trials as orderly, and in which verdicts will be regarded as certain and trustworthy, as those in any other class of cases before the courts. The author lays considerable stress upon the fact "that there is not an Alienist in the United States who believes that insanity is a disease of the mind," and that by reason of their education and special opportunities for the study of their specialty they ought to be considered as speaking *ex cathedra* on the question. He believes this attitude of the beliefs of the superintendents of the insane to be the proof par excellence of the "physical media theory."

One hundred pages are devoted to the discussion of "Who are Experts?" General medical practitioners are not experts in insanity, and non-experts ought not to be allowed to give evidence as experts, and that the results are pernicious when so allowed. Unfortunately, though, for the assumption of the superior excellence of expert testimony, recent trials do not impress thinking people with the idea that any standard has been attained by the experts above referred to, which might lead to a tolerably just determination of insanity. The truth is, some superintendents of insane asylums may be experts and others not, and we do not see how a practical solution of expert testimony is to be arrived at by relegating it to this very learned and humane branch of the medical profession.

This little volume is admirably indexed, and, indeed, it is so far superior to many excellent works we have had under review, in this particular, that it deserves the highest condemnation.

THE DIAGNOSIS AND TREATMENT OF CHRONIC NASAL CATARRH.

Three Clinical Lectures by GEORGE MOREWOOD LEFFERTS, A.M., M.D. Lambert & Co., St. Louis. 1884. Price \$1.00.

This is a practical volume of small dimensions by a specialist of

wide reputation. The lecture form has been retained, which makes the style more readable and attractive. We presume that these lectures were delivered before the advent of muriate of cocaine, but the author finds "listerine" a valuable ingredient of many of his nasal sprays, and in this practice we are enabled by personal experience to agree with him.

COCAINE AND ITS USE IN OPHTHALMIC AND GENERAL SURGERY. By H. KNAPP, M.D. With Supplementary Contributions by Drs. F. H. Bosworth, R. J. Hall, E. L. Keyes, H. Knapp and William M. Polk. New York: G. P. Putnam & Sons. 1885.

This is a thin volume of 87 pages, reprinted from the *Archives of Ophthalmology*, with additions, and is a collection of the best observations on the therapeutics of hydrochlorate of cocaine to date.



THE MEDICAL SOCIETY OF NORTH CAROLINA will hold its next annual meeting in Durham on Tuesday, Monday and Thursday, the 19th, 20th and 21st of May. The Board of Medical Examiners will convene at the same place on Monday, the 18th, and remain in session until all candidates are examined.

The North Carolina Board of Health will hold a general session and conjoint session on the 20th May, Wednesday. An election to supply the places of two members of the Board whose service has expired will take place on the 20th May.

For further information address the Secretaries of the different bodies, as follows:

Dr. W. C. Murphy, Secretary, Medical Society North Carolina, South Washington.

Dr. W. J. H. Bellamy, Secretary Board of Examiners, Wilmington.

Dr. Thomas F. Wood, Secretary Board of Health, Wilmington.
See also this and subsequent issues of the JOURNAL.

PROGRESS OF MEDICINE.

MARTIN'S METHOD OF TREATMENT OF SYNOVITIS, ESPECIALLY OF THE KNEE-JOINT.—During the past thirty-one years over four hundred cases of synovitis of the knee and its sequelæ, of every form and degree of severity, in every variety of diathesis and complication, however chronic or acute, have been treated by the use of the pure rubber or “Martin” bandage—applied to the limb from the foot to above the knee. The joint is previously strapped from three inches above to a corresponding point below the patella, with non-irritating rubber plaster. This strapping is not applied for the ordinary reasons, but to obviate, or at least mitigate, a troublesome chafing of the skin in the popliteal space, from walking exercise while the bandage is on the limb. One such strapping will remain *in situ* for four or five weeks, and in a very large proportion of cases has not to be repeated. The plaster, however, must be perfectly non-irritating. The bandage should be applied as tightly as the patient can wear it with comfort. There is no danger of the circulation by following this rule, as no dangerous constriction of the limb could be endured without pain and discomfort. The bandage thus applied should be worn in general for from four to six weeks, according to the severity of the case, day and night; and, after that, during the day only, or while in the upright position, for from four to eight weeks longer. Many patients prefer to wear them a good deal longer, to prevent any possible return of trouble, but this is in general not at all necessary.

When the bandages are thus applied, great comfort and support are at once experienced, and with these much increased capacity to use the joint. Very soon it becomes evident that absorption of effused fluid, and of the interstitial deposits in the tissues of the synovial sac, and of the other tissues about the joint, is going on; and, in a space of time too short to be credible to those who have not accurately pursued the practice, and carefully and repeatedly observed the fact, the enlarged and weakened articulation is restored to the normal size, and, if not immediately to its original strength, to a far greater capacity for use, and eventually to a perfect restoration in all respects.

In cases where the amount of fluid effusion within the sac is small, or where the thickening of the sac is the principal element

of the case, these results may be always looked for with certainty and rapidity. Sometimes, however, when the amount of fluid effusion is very large, the use of the bandage *alone* (although of the greatest value as a palliative, by strengthening the joint, and permitting painless use of the limb) will produce *complete* absorption of the fluid very slowly, if at all. The existence of these exceptionally obstinate cases induced my father, some twelve years ago, to add to the use of the bandage a preceding thorough aspiration of the sac, all the other points of treatment being exactly as before described. This was done at first only in exceptionally obstinate cases, in which the effusion within the synovial sac was large, but the operation was gradually found to be entirely free from danger, and latterly aspiration has been practised in all cases in which, being chronic, the synovial effusion is of any considerable amount, and even in the most acute cases in which rapid effusion produces great distention and consequent pain. The results of my father's experience are summed up in the following statements :

1. In the last twelve years over two hundred cases of synovitis of the knee, and its sequelæ, have been treated by aspiration with a single strapping of the joint, and subsequent use of the bandage.

2. In these cases the knee-joint has been punctured over four hundred times.

3. In all these cases, with the exception of a very few, and these only in the early stages of treatment, the patient was not only permitted, but obliged to take a daily and considerable amount of walking exercise.

4. In not a single instance has there been failure of absolute and entire cure, requiring, in one case, seventeen weeks, but in no other more than eleven weeks.

5. Although no antiseptic measure, beyond perfect cleanliness of the aspirating needle, was employed, in not one instance has any ill symptom followed the operation. When the needle is withdrawn, the puncture is at once covered severely with adhesive plaster.

Sir Benjamin Brodie long ago declared most emphatically, that when the synovial sac is distended with fluid, it can be punctured, and the effusion drawn off with perfect safety. He does not by any means regard this as a help in treatment, however, as he says the fluid will accumulate again, and in a few hours the joint will be as much distended as before. The originality and value of my

father's method of treatment lies in successfully demonstrating the fact that thorough aspiration of the knee-joint, followed by proper use of the rubber bandage, gives us a complete and satisfactory method of cure even in the worst cases of synovitis. By the firm and equable pressure of the rubber bandage, the re-accumulation of fluid is checked. If there is any return of the fluid at all, it is in very much diminished quantity, and a second, or perhaps in severe cases a third, aspiration of the joint is all that is ever required. One great advantage of it is to explode the idea that perfect rest of the joint is the only way to hope for a cure. The patient is emphatically *not* to be confined to bed, or, worse still, to a fixed splint. When the joint is strengthened by a properly applied rubber bandage, exercise is a very great and important adjunct in the treatment. This very day I have visited a lady who passed last summer in Switzerland. While there she was attacked with acute synovitis of the left knee, with a large amount of effusion into the sac. She was kept in bed, with the limb placed on a fixed splint and continually poulticed. After sweltering through the hot weather with the limb swathed in many thicknesses of cotton wadding, at the expiration of two months the splint was removed, and—she has come home with a joint almost immovable! I am sure that had this case been treated by prompt aspiration of the sac, and the proper use of the rubber bandage, a perfect and rapid cure would have resulted without a week's confinement of the patient to her bed.—*Medical Record.*

RAPID FORMATION AND EXPULSION OF GALL STONES.—*Editor Medical World:*—Mrs. F. G., a lady of sedentary habits and addicted to the use of highly seasoned foods, was taken in August, 1883, with an excruciating pain extending from the right nipple to the umbilicus and vomiting. This continued at intervals for ten days, being relieved only by hypodermics of morphia and the hot bath. During this time the vomiting was excessive; the fluid ejected consisted mainly of bile. On the tenth day she vomited seven concretions which were regarded by Dr. George W. Davis, of Kansas City, and myself, as biliary calculi. In a few hours a large mass of feces was expelled, in which there were great numbers of these concretions. These, and those vomited, vary in size from a pea to a walnut. The colic, nausea and vomiting persisted for five

weeks to, together with daily rectal evacuations of a large number of calculi—so many, that to count them was impossible. The pain gradually decreased, but the calculi made a regular weekly appearance. Again in April, 1884, she had a severe attack. Lighter attacks have occurred weekly ever since, plenty of the stones being expelled, but with scarcely any pains, owing, doubtless, to the dilatation of the duct.

On November 18, 1884, I was called in the evening and found her suffering from a slight attack. Before morning she vomited over a hundred (actual count). These were pearly white, differing from the previous ones, which were yellow and brown. These varied in size from a split pea to a large wa'nut, exhibited facets, rectangular in shape, etc. Subsequently, as usual, innumerable quantities passed the bowels. December 19, 1884, a mild attack began at midnight. At 6 a. m. she vomited one hundred and fifty concretions, varying in color from a pure white to a dirty brown. Seventy-five of them are now in my possession. These weigh six drachms.

There are some peculiarities in the case. Premonitory symptoms, such as headache, nausea, constipation, dyspnœa and palpitation occurred for two days previous to the attack. Another peculiarity is the excessive vomiting of about two hundred good-sized, well-formed stones. I can find but little mention of this in the literature I have examined. Frerichs writes: "In *rare* cases calculi passes from the duodenum up into the stomach, and are vomited. The vomited matter contains single or occasionally several, even as many as twenty concretions. This vomiting was preceded by unusually severe colicky pains." In this case the first ones vomited came up after a protracted period of retching. The second and third times they came up easily and promptly after the beginning of mild attacks. Recovery always followed in an hour or two. Morgagni, Fr. Hoffman and Portal have reported cases of this kind.

Another peculiarity is the rapidity of their formation. The vomited matters always contained a thick, tenacious, slimy mucous. As to treatment, she had no prophylactic until within a month. One is at a loss to know what to use, so contradictory are the authorities, and so prolific the number of remedies recommended. Between Durande, with his turpentine and ether; Buckler, with his hydrated succinate of perchloride of iron; Frerichs and other

German writers, with their carlsbad waters ; the French, with their vichy ; Bartholow, with the phosphate of soda ; others, with the artificial carlsbad salt, etc., it is a blind choice for the inexperienced. She is now taking three drachms a day of the soda phosphate. The value of the mineral waters seem to depend upon this alkaline—sulphur properties. This lady has drank for a number of years of the Alburgh “A” Spring, which has a not inconsiderable reputation for these properties, but it seems to be of no value in this trouble.

FRED. L. LADUE, M.D.

Alburgh Springs, Vt.

—*Medical World.*

THE HEART IN HYSTERICAL CASES.—Sometimes the tumultuous action of the hysterical heart is the most distressing and most upsetting of all the many symptoms of this disorder, so very fertile in symptoms. We all know how unpleasant and appalling even is the sense of sudden and great irregular palpitation, and in the nervous and hysteric this impression loses nothing of its terror. You will meet such women—women whose hearts seem to become wildly irregular on the least provocation, or on none. Digestion in these women causes it, and here I cannot too earnestly insist that digestion, like most other functional acts, may give rise to symptoms which are not of necessity proofs that the function in question is imperfect or diseased. Ordinarily, if we have palpitation of a healthy heart during digestion, that means often enough that our patient is dyspeptic, but not so in nervous or hysterical women. Digestion naturally quickens the pulse, and in these people the normal quickening passes into palpitation. That I am correct as to this is shown in the same women more rarely by the varied disturbances which follow the most perfect performance of other normal functional acts as simple as micturition or defecation. I have seen patients in whom bowel movement always produced irregular heart action, and I have now a lady under my care who has, soon after passing water, slight chilliness, twitching of the face, and extreme palpitation of the heart. Yet, the act of urination is, in this case, painless, and, in fact, absolutely natural. You may regard all of this as of trifling moment, but I have seen cases like these treated with many drugs, and in a case similar to the last one I have known a surgeon resort to dilatation of the urethra. Bear

in mind, therefore, that *sometimes in nervous people the activity of a normal function is competent to cause distress in other organs, or to awaken unusual symptoms.* The virulence and singularity of the pulse signs in true hysteria are beyond expression strange.—*Dr. Weir Mitchell on Diseases of the Nervous System.*

CHLORATE OF POTASH IN THE TREATMENT OF BURNS.—In the *British Medical Journal*, October 11, Dr. J. Walton Browne uses chlorate of potash with success in burns. In superficial burns he punctures the blisters, applies a bread-and-milk poultice over the injured surface every fourth hour until the cuticle has become detached. He then commences the application of a solution of the chlorate 5 grains to the ounce of water. Pieces of lint wet in this solution are applied four times a day. The lint is covered with gutta-percha tissue, and the dressings retained by a bandage. To prevent the lint from sticking some glycerine is added, in the proportion of two ounces to the pint of water. In very deep burns he advises poultices until the slough separates, and uses a solution of the chlorate of the same strength, except that in cases in which the granulations become weak, flabby, or too exuberant, he doubles the strength of the solution.

HYPODERMATIC EMPLOYMENT OF QUINIA AND UREA HYDROCHLORIDE.—Mr. E. V. Zæler, of Tarborough, calls my attention to the omission of the above named chemical from the list of agents to be used hypodermically, in my article on “Hæmorrhagic Malarial Fever,” in the December JOURNAL. I have never employed it, but he says that in Bellevue Hospital, in a trial of 100 cases, there was not a single resulting abscess. “The percentage of quinine is 50 per cent. greater than in the sulphate, is soluble in its own weight of water, and hence can be encompassed in the smallest possible bulk or concentration, important factors, he justly remarks in the hypodermic use of quinine, owing to the quantity of drug required to secure, in many instances, its beneficial results.” What would be the equivalent of 15 grains quinine sulphate, can easily be secured in 20 minims; while in the oleate, for instance, about 60 minims would be needed. Quinine and Urea Hydrochloride possesses all the good features of hypodermic quinine preparations, and nothing objectionable. See *New Remedies*, page 334, 1878; page 368, 1881, and succeeding numbers.

CORRESPONDENCE.

LEXINGTON, N. C., March 4, 1885.

Dr. THOS. F. WOOD, *Editor North Carolina Medical Journal*:

DEAR SIR:—The letter to which I referred in my "Open Letter" was from Dr. Tiffany, of Baltimore, to one Mr. John A. Myers, of this county.

I never saw the letter but one time, when it was handed to me without solicitation by the man to whom it was addressed, and then, I freely admit, I was not so much impressed by it as to wish to preserve it as a souvenir.

It has been eighteen months or more since I read the letter, and when I wrote my "Open Letter" I quoted entirely from memory, but most assuredly I quoted what I believed to be "the truth, the whole truth, and nothing but the truth," and I think the quotation was correct, "*verbatim et literatim*;" however, of this I am not absolutely confident, but I am certain that the quotation conveys what was to my mind the meaning and intent of said letter.

If I have been guilty of any error it has been an error of the head and not of the heart, for certainly I have no desire to be unjust to any man or untruthful in any particular.

And now Dr. Tiffany very courteously *demand*s that I publish his letter to Myers. Upon my honor I wish I could comply with this demand, but I cannot do so because I have not been able to procure it, but in lieu of it allow me to present the following copies of papers in my hands upon the subject. Knowing that I could not procure the letter directly from Myers, I wrote to a friend of mine who was living near him at the time the letter was received to procure it if possible, and if not, to write me his recollection of its contents, and this is a copy of his reply:

"GREENSBORO, N. C., February 16, 1885.

"DEAR SIR:—I have written to Mr. Myers twice, and expect the 'letter' to come in every mail. I don't see why he does not write to me about it. If he does not write by the middle of the week I will write the substance of the 'letter' out in full to the best of my recollection.

"Respectfully,

R. H. BIESECKER."

I then wrote to Mr. Biesecker: "I want the letter which all of you

saw, written, I think, in June or July, 1883, and if you cannot procure it give me your recollection of its contents." This is the answer:

"GREENSBORO, N. C., February 25, 1885.

"DEAR SIR:—I will give you the contents of Prof. Tiffany's letter that he (Prof. Tiffany) wrote to John A. Myers, according to the best of my memory, or the main idea of it, as follows: 'It is not necessary to have a preparatory course; I advise you to come on; you do not need to hold back for preparation.' It has been so long since I have read the letter that I hardly remember the substance of it, but the above is the principal substance of it, or the leading idea in it. I wrote to Myers to bring the letter to court, I would like to read it. I wrote to-night for the third time. He wrote to me that he would send me Tiffany's letters if he could find them. I remain your friend,
"R. H. BIESECKER."

The next is a certificate from Dr. Smith:

"I hereby certify that about eighteen months ago I saw a letter addressed to a young man of my acquaintance from the Dean of the University of Maryland, Medical Department, in which the Dean advised him that preparatory study under a preceptor was unnecessary, and he could come right along to the lectures.

"B. F. SMITH, M.D.

"Yadkin College, February 16, 1885."

Now, this certificate certainly refers to the letter which Myers received from Dr. Tiffany.

The following is a certificate from my son:

"I certify that about eighteen months ago Mr. John A. Myers came to my office, and, announcing his intention of studying medicine, asked my advice as to the best course to pursue. I strongly insisted that he should study at least twelve months under a preceptor before going to a medical college, whereupon he showed me a letter signed by L. McLane Tiffany, and addressed to himself, in which Dr. Tiffany certainly wrote 'preparatory study is not necessary before coming to the lectures.' This was certainly the sense, if not the language, of the letter.

"R. L. PAYNE, Jr., M.D.

"Lexington, N. C., February 28, 1885."

In using the terms "aided and abetted" in my "Open Letter," I really had no reference to Dr. Tiffany individually (although it may appear so from the connection), but to the professors of those inferior medical schools in general, or any school whatever, who care more for the student's money than they do for his qualifications, and I am sorry that Dr. Tiffany should for a moment suppose I meant any reflections upon himself.

And moreover, allow me to disclaim having had any intention of reflecting upon the character of Dr. Tiffany for honor and integrity,

either as a citizen or as a physician, by anything written in said letters, and if he has seen fit to put any such construction upon the language used, permit me to assure him of his error, and to apologize for the maladroitness of my expressions.

But he will pardon me for saying that I do think his letter to Myers was negligent, and not sufficiently explicit, in that it was calculated to lead him to suppose that preparation was of little consequence in the acquirement of a medical education; in truth, that the thing was easily accomplished, and I do think that from a source so high as that of the Dean of the University of Maryland, no uncertain sounds should ever come upon the subject of medical education!

Opinions given *ex cathedra* should always be so plain that "the way-faring men, though fools, shall not err therein." When he was informed that preparatory study was not necessary; he should have been assured at the same time that it was not necessary, provided he attended a sufficient number of courses of lectures, and applied himself with sufficient assiduity. I do think, too, that this omission of duty has reflected injuriously upon the man himself, the community in which he lives, and upon the regular medical profession of North Carolina, for had he been impressed with the importance of *thorough preparation*, as he would have been impressed, had he had a preceptor of the right stamp before attending lectures, he would not now consider himself prepared to practice our "Divine Art," after attending only a part of a course of lectures, and having had no preparation beforehand which amounted to anything at all.

And now, in closing this explanation and apology, let me assure you that when I wrote that "Open Letter" my object was not to contend with Dr. Tiffany, or any other person, place or thing, but to promote, to the best of my poor ability, the *interests of North Carolina*, and if I have offended or wounded anyone, it has been unintentional, and I am truly sorry for it.

I am sorry, alas, for the insinuations contained in Dr. Tiffany's letter; but I do not believe there is a single gentleman of my acquaintance, either friend or foe, who will think me a liar, and I care but little what the low-down and vicious among my enemies may be induced to believe or say!

I am, as ever, yours truly,

R. L. PAYNE, M.D.

SPECIAL MEETING OF THE NORTH CAROLINA BOARD OF HEALTH.

The State Board of Health met in the Yarborough House, in Raleigh, on the 20th instant, with the following members present : Prof. W. G. Simmons, of Wake Forest, and Drs. J. W. Jones, Tarborough; R. L. Payne, Lexington; S. S. Satchwell, Rocky Point, and Thomas F. Wood, Wilmington.

The recent act relating to the Board of Health was read, after which an election was held to fill the vacancy caused by the death of Dr. M. Whitehead and Dr. Richard H. Lewis, of Raleigh, was elected. Dr. J. W. Jones, of Tarborough, was unanimously elected President of the Board.

The following Standing Committees were appointed :

Epidemics—Drs. Wood and Jones.

Water Supply and Drainage—Dr. Wood and Mr. Winslow.

Hygienics of Public Schools—Drs. Satchwell and Lyle.

Illuminating Oils—Prof. Simmons.

Climatology—Dr. Jones.

Adulteration of Food and Medicines—Drs. Payne and McDonald.

Vital Statistics—Drs. Lewis and Wood.

Sanitary Inspection—Drs. Jones and Payne.

COÖPERATION WITH THE NATIONAL BOARD OF HEALTH.

The following resolution, introduced by Dr. Satchwell, was adopted :

Resolved, That this Board has learned with pleasure that the National Board of Health has been provided with the proper means to restore it to its former condition of usefulness ; and at the same time that we express our gratification, we desire also to assure the National Board of Health of our entire confidence in their organization, and that we are prepared to coöperate with them in all the purposes of our mutual work.

RESOLUTION IN RELATION TO COUNTY BOARDS.

Resolved, That in view of the recent amendments enacted to promote the efficiency of the North Carolina Board of Health, we respectfully appeal to our medical brethren of the counties that have no auxiliary County Boards to proceed to organize at once, and elect their County Superintendents ; and we recommend to

County Boards that have held no biennial meeting the present year, to meet as early as practical and elect their respective officers and Superintendents to serve until the next regular biennial election, and report to the Secretary.

Copies of the law as amended will be forwarded to each county as soon as practicable.

At 10 o'clock on Saturday morning the Board, by invitation, had a conference at the Capitol with the Governor, who issued commissions to the following gentlemen :

Prof. W. G. Simmons, Wake Forest ; Arthur Winslow, C. E., Raleigh, and Dr. Samuel H. Lyle, Franklin, Macon county.

The management of the exigent fund of \$2,000, placed at the disposal of the Governor by the Legislature, was discussed. The Governor assured the Board of his interest in the entire work of the Board, and especially as to the preparation for the invasion of the State by an epidemic. As the law does not make any provision for preventive measures, it was determined by the Governor that he would look to the Board to devise the plan for the isolation and restriction of pestilential diseases. This the Board was willing to undertake, and an understanding was entered into that all preliminary preparations should at once be made. The Secretary of the Board will issue a circular, at an early day, calling upon County Superintendents of Health to send by telegram, or by the quickest method at command, the news of the appearance of the first case of pestilential disease. Cholera is specifically mentioned in the law, but it also includes other pestilential diseases, such as small-pox and yellow fever. It is highly important, therefore, that the Governor, or the Secretary of the Board of Health, should be promptly notified, in order that means shall be at once applied, should assistance be required.

The Board reassembled at the Yarborough House at noon to have a consultation with the new members.

Dr. Richard H. Lewis and Mr. Arthur Winslow were present.

The details of the management of the work for the ensuing year were discussed until the hour of adjournment.

Adjourned to meet on the 20th day of May, 1885, at Durham.

THOMAS F. WOOD, M.D., Secretary.

AN ACT RELATING TO THE BOARD OF HEALTH.

The General Assembly of North Carolina do enact:

(Recently enacted amendments are printed in italics.)

Section 1. That the Medical Society of North Carolina shall choose from the members, by ballot, six members, and the Governor shall appoint three other persons (one of whom shall be a civil engineer), and these shall constitute the "North Carolina Board of Health."

Sec. 2. That the "North Carolina Board of Health" shall take cognizance of the health interests of the citizens of the State; shall make sanitary investigations and inquiries in respect to the people, employing experts when necessary; shall investigate the causes of diseases dangerous to the public health, especially epidemics; the sources of mortality; the effects of locations, employments and conditions upon the public health. They shall gather such information upon all these matters, for distribution among the people, with the especial purpose of informing them about preventable diseases. They shall be the medical advisers of the State, and are herein specially provided for, and shall advise the government in regard to the location, sanitary construction and management of all public institutions, upon application of the proper authorities, and shall direct the attention of the State to such sanitary matters as in their judgment affect the industry, prosperity, health and lives of the citizens of the State. The Secretary of the Board shall make biennially to the General Assembly, through the Governor, a report of their work.

Sec. 3. The members of the Board of Health as elected by the State Medical Society, shall be chosen to serve, two for six years, two for four years and two for two years. Those appointed by the Governor shall serve for two years. In case of death or resignation, the Board shall elect new members to fill the unexpired terms.

Sec. 4. The State Board shall have a President and Secretary, who shall be Treasurer, to be elected from members comprising the Board. The President shall serve two years, and the Secretary and Treasurer six years. The Secretary and Treasurer shall receive such yearly compensation for his services as shall be fixed upon by the Board, but the other members of the Board shall receive no

pay, except that, while on actual duty at meetings of the Board, or on duty during the time special investigations are being pursued, each member shall receive four dollars a day and necessary traveling expenses. These sums shall be paid by the Treasurer on duly authenticated requisitions signed and approved by the President of the Board.

Sec. 5. There shall be an auxiliary Board of Health in each county in the State. *These Boards shall be composed of the physicians who shall have complied with the laws of the State in regard to the practice of medicine and surgery, or have a diploma from a regular medical college, the mayor of county town, chairman of the Board of County Commissioners, and the city surveyor, where there is such an officer, otherwise the county surveyor.* From this number one physician shall be chosen by ballot to serve two years, with the title of Superintendent of Health. His duty shall be to gather vital statistics upon a plan designated by the State Board of Health. He shall make the medico-legal post-mortem examinations for coroner's inquests and attend to prisoners in jail, poor house, house of correction, and make examination of lunatics for commitment. He shall be the Sanitary Inspector of the jail and poor house of his county, making monthly reports to the Board of County Commissioners. His reports shall be made regularly, as advised by the State Board through their Secretary, and he shall receive and carry out, as far as practicable, such work as may be directed by the State Board of Health: *Provided that if it is impracticable to get a county Superintendent for any cause, then any one whose duty it is to provide such service, may employ any member of the County Board of Health to do anything required by this section.*

Sec. 6. The salary of the County Superintendent of Health shall be paid out of the county treasury upon requisition and the proper vouchers, as follows: *The salary of Superintendent of Health, or any other member of the Board who is required to do the services assigned him, shall be such sum as the County Commissioners shall deem just and proper for his services as physician to the public charitable and penal institutions of the county.*

Sec. 7. The biennial meeting for the election of officers shall, after the meeting of organization be, for the County Boards, on the first Monday in January, and of the State Board of Health on the second day of the annual meeting of the Medical Society of North Carolina.

Sec. 8. Monthly returns of vital statistics upon a plan to be made by the County Superintendent of Health, and a failure to report by the tenth of the month, for the preceding month, shall subject the delinquent to a fine of one dollar for each day of delinquency, *and this amount shall be deducted from the salary of the Superintendent by the Board of County Commissioners on authenticated statement of such delinquency by the Secretary of the State Board of Health.*

Sec. 9. Inland quarantine shall be under the control of the County Superintendent of Health, who, acting by the advice of the local Board, shall see that disease dangerous to the public health, viz: small-pox, scarlet fever, yellow fever and cholera, shall be properly quarantined or isolated, at the expense of the city, or town or county in which they occur. Any person violating the rules promulgated on this subject shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be fined or imprisoned, at the discretion of the court. In case the offender be stricken with disease for which he is quarantinable, he will be subject to the penalty on recovery, unless, in the opinion of the Superintendent, it should be omitted. Quarantine of ports shall not be interfered with, but the officers of the local and State Boards shall render all the aid in their power to quarantine officers in the discharge of their duties, upon the request of the latter.

Sec. 10. Whenever and wherever a nuisance upon premises shall exist, which, in the opinion of the County Superintendent of Health, is dangerous to the public health, it shall be his duty to notify, in writing, the parties occupying the premises (or the owner, if the premises are not occupied) of its existence, its character and the means of abating it. Upon this notification the parties shall proceed to abate the nuisance, but failing to do this, shall be adjudged guilty of a misdemeanor, and shall pay a fine of one dollar a day, dating from twenty-four hours after the notification has been served. The amounts collected to be turned over to the County Treasurer, provided, however, that if the party notified shall make oath or affirmation before a magistrate of his or her inability to carry out the directions of the Superintendent, it shall be done at the expense of the town, city or county in which the offender lives. In the latter case the limit of the expense chargeable to the city, town or county, shall not be more than one hundred dollars in any case: *Provided, further, that nothing in this section shall be construed*

to give the Superintendent the power to destroy or injure property, without a due process of law as now exists for the abatement of nuisances.

Sec. 11. Vaccination: On the appearance of a case of small-pox in any neighborhood, all due diligence shall be used by the Superintendent of Health that warning shall be given, and all persons not able to pay shall be vaccinated free of charge by him, and the County Superintendent shall vaccinate every person admitted into a public institution (jail, poor house, public school) as soon as practicable, unless he is satisfied, upon examination, that the person is already successfully vaccinated. *The money for vaccine to be furnished by the County Commissioners.*

Sec. 12. Bulletins of the outbreak of disease, dangerous to the public health, shall be issued by the State Board, whenever necessary, and such advice freely disseminated to prevent and check the invasion of disease into any part of the State. It shall also be the duty of the Board to enquire into any outbreak of disease, by personal visits or by any method the Board shall direct. The compensation of members on such duty shall be four dollars a day and all necessary travelling expenses.

Sec. 13. Special meetings of the State Board of Health may be called by the President through the Secretary. The regular annual meetings shall be held at the same time and place of the State Medical Society, at which time the Secretary shall submit his annual report.

Sec. 14. Analyses for purposes connected with the hygienic duties of the Superintendent of Health shall be made by the chemist of the Agricultural Station upon requisition signed and approved by the Secretary of the State Board of Health. Such analyses will include soil, drinking water, articles of food, etc., to be packed for transmission by direction of the chemist of the Agricultural Station.

Sec. 15. For carrying out the provisions of this act *two thousand dollars, or so much thereof as may be necessary, are hereby annually appropriated, to be paid on requisition signed by the Treasurer and President of the State Board of Health, and the printing and stationery necessary for the Board, to be furnished upon requisition upon the public printer, which shall not exceed two hundred and fifty dollars annually.* A yearly statement shall be made to the State Treasurer of all moneys received and expended in pursuance of this act.

Sec. 16. *A contingent fund of two thousand dollars is hereby appropriated, subject to the Governor's warrant, countersigned and recorded by the Auditor of State, to be expended in pursuance of the provisions of this act, when rendered necessary by a visitation of cholera or any other pestilential disease.*

Sec. 17. All previous acts conflicting with this act are hereby repealed upon the passage of this act.

Sec. 18. This act is in force from and after its ratification.

Ratified the 9th day of March, A. D., 1885.

STATE OF NORTH CAROLINA,
OFFICE OF SECRETARY OF STATE,
RALEIGH, 20th March, 1885. }

I, William L. Saunders, Secretary of State of the State of North Carolina, do hereby certify the foregoing (eight sheets) to be a true copy from the records of this office.

W. L. SAUNDERS, Secretary of State.

W. P. BATCHELOR, Clerk.

AN ACT RELATING TO THE PRACTICE OF MEDICINE IN THIS STATE.

The General Assembly of North Carolina do enact:

Section 1. That section three thousand one hundred and twenty-two of the Code be amended by striking out the words "*Provided* no person who shall practice in violation of this chapter shall be guilty of a misdemeanor."

Sec. 2. That section three thousand one hundred and thirty-two of the Code be amended by adding at the end of said section the following: And any person who shall begin the practice of medicine or surgery in this State for fee or reward, after the passage of this act, without first having obtained license from said Board of Examiners, shall not only not be entitled to sue for or recover before any court any medical bill for services rendered in the practice of medicine or surgery, or any of the branches thereof, but shall also be guilty of a misdemeanor, and upon conviction thereof shall be fined not less than twenty-five dollars nor more than one hundred dollars, or imprisoned, at the discretion of the court, for each and every offence: *Provided*, that this act shall not be construed to apply to women who pursue the avocation of a midwife: *And*

provided further, that this act shall not apply to regularly licensed physicians or surgeons resident in a neighboring State.

Sec. 3. That this act shall be in force from and after its ratification.

In the General Assembly read three times, and ratified this, the 23d day of February, A. D., 1885.

AN ACT TO AMEND SECTION 3,132 OF THE CODE.

The General Assembly of North Carolina do enact:

Section 1. That section three thousand one hundred and thirty-two of the Code be amended by adding after the last word of said section the words, "*Provided* that this section shall not apply to physicians who have a diploma from a regular medical college prior to January the 1st, 1880."

Sec. 2. That this act shall be in force from and after its ratification.

Ratified the 7th day of March, A. D., 1885.

STATE OF NORTH CAROLINA,
OFFICE OF SECRETARY OF STATE,
RALEIGH, 19th March, 1885. }

I, William L. Saunders, Secretary of State of the State of North Carolina, do hereby certify the foregoing (one sheet) to be a true copy from the records of this office.

W. L. SAUNDERS, Secretary of State.

W. P. BATCHELOR, Clerk.

TESTIMONIAL OF THE COUNTY MEDICAL ASSOCIATION.

At a called meeting of the Cumberland County Medical Association, held on the 28th of February, 1885, a committee was appointed to prepare appropriate resolutions expressive of the deep grief which has overwhelmed our Association in the loss it has sustained by the death of our late venerable companion, Dr. B. W. Robinson.

The following was submitted and unanimously adopted:

The occasion which has assembled us to-day is one of the most

melancholy in the annals of our Association, and while we see in it the hand of Him who "doeth all things well," we are also conscious that as time rolls on its troubled stream into the peaceful waters of eternity, it occasionally happens to bear as its burden some being more valued, more useful and more beloved than those whom every-day life presents to our view, whose loss leaves a void in the community which cannot be easily filled up—casts a gloom over those prospects which were brightened by his labors, takes from a fond and devoted people the object of their admiration, their respect and their love, and leaves behind but the memory of his virtues and his usefulness.

Too well and truly have we experienced this in the demise of Dr. Robinson—an event not entirely unlooked for, yet sudden. Death indeed came "as a thief in the night," and left for us all the echo of admonition—watch!—an event bringing sorrow and sadness to all who knew him in private as well as professional life, and making desolate the hearts of so many devoted friends—in him had centered their confidence for a life-time, and on whom so many had depended for relief and comfort.

No eulogy to which we could give utterance could add to the elevation of this truly good man and eminent physician, nor could the expression of our deepest sympathy do more than commingle in that one universal sorrow so deeply felt for such a bereavement, for his eulogy is in the deep grief of his friends. His epitaph is written on the enduring affection of his patients, their prayers are the incense around his tomb, their hearts the libation over his ashes.

To the grief-stricken family we extend our sincere sympathy in their bereavement, and assure them that it is with no ordinary feelings of sorrow that this Association thus publicly recognizes the loss from among its members of our venerable and genial companion; and that our Association has been deprived of one of its brightest ornaments.

The Secretary will place upon the minutes of the Association the above tribute to our deceased brother and co-laborer, and send a copy to the family of the deceased, to the NORTH CAROLINA MEDICAL JOURNAL, and to the town papers, with a request for its publication.—*Hayetteville Observer*, 5th March.

NORTH CAROLINA MEDICAL JOURNAL.

THOMAS F. WOOD, M. D., Editor.

Number 4. Wilmington, April, 1885. Vol. 15.

ORIGINAL COMMUNICATIONS.

MICROPHYTIC BIOLOGY.

By Prof. GERMAIN SEÉ, Paris, France.

(Continued from the March number.)

6. *Functions of the Microphytes.*—The microphytes exercise the most diverse functions. Some determine the various acts of digestion, fermentations and putrefaction; these are the common, well known microphytes (infusoria of Ehrenberg), recognized as plants half a century ago by Cagniard de Latour, and by Thenard, proved to be the agents of fermentation by Schwann, Schultze, Chevreul, Pasteur and Van Tieghem, who has even had the singular good fortune to find bacilli in the roots of coniferæ of the tertiary period. The other microphytes which interest medicine quite differently, are those which give rise to the greater part of infectious diseases; the microphyte of charbon is the type. In 1852 Davaine discovered in the blood of animals suffering from splenic fever minute organisms having the form of roots, which he considered as the specific microbes of charbon, and he furnished experimental proofs for this

belief; these were largely confirmed twelve years later by the memorable processes of microphyte culture devised by Pasteur. Since the year 1866 the microbes have been the subject of innumerable works, each writer desiring to have his own microbe and make good his claim, but the true glory is for him who has succeeded in bringing the morbid microbe within the domain of practical medicine. Lister caught the spirit of Pasteur, invested methods of antiseptic dressing, saved the lives of subjects of surgical operations and of the wounded, put surgery under everlasting obligations to him. It is now for medicine to pursue the same productive path.

IV.—BIOLOGY OF THE PATHOGENIC OR SPECIFIC MICROBES.

§ 9.—*Definite Morbigenous Properties.*

You will find divers parasites in the organisms of man and of animals, even in the normal state. The mouth and the digestive tube always contain them. The blood and the urine do not contain them, except in certain morbid conditions, principally in the infectious diseases.

These infectious or specific diseases, absolutely distinct from vegetal or animal intoxications, which, whether in the acute or chronic state, are always proportional to the dose of the poison present, on the contrary, immutable types, which differ among themselves as differ the microphyte species from which they are derived. The microbes have properties which are constant and unvarying; they are not susceptible of transformation, the one into the other, in such a way as to produce a new pathogenic species. It has been said that the pathogenetic tribes may lose their deleterious character and be metamorphosed into common (benign) fermentiferous parasites; these, however, do not occupy the bodies of man or animals but in certain exceptional circumstances, nor yet do they produce in these cases any parasitic infectious disease.

§ 10.—*Conditions of Existence of the Morbiferous Microphytes.*

1. *Difficulties of Existence.*—In general the conditions of existence of the specific microphytes are not favorable for their life and multiplication. Therefore they are relatively rare, if we compare them with parasites in general, so extraordinarily diffused throughout nature. If, in fact, the pathogenic fungi had multiplied like

the fermentiferous parasites, the world of the higher life would long ago have disappeared by reason of infectious diseases; the universe would have been for the microbes, which would have devoured even the last vestiges of organized bodies, and this food supply being once used up, the earth would have been despoiled of animals and of plants—it would have been bare as a rock. Happily the pathogenic species are especially destined to encounter difficulties of existence, and do not show themselves, do not manifest their properties except in certain determinate media suitable for producing the microbial diseases.

2. *Influence of Oxygen, Ærophobia.*—All the morbid microbes may live, and do live, without air. They multiply when you suppress or restrain the access of oxygen. Conversely their duration is short in free air; they even lose, under the influence of the atmosphere, their morbigenous character; they are, so to speak, aerophobic.

In conditions analogous to ærobia the vulgar (benign) parasites, may, it has been said, become morbigenous; when they have vegetated a certain time, away from the air, they become adapted to this mode of life, and they may take on pathogenetic characteristics. This, however, is questionable.

3. *Influence of Heat.*—A certain temperature is necessary to the specific microbes for their multiplication. Below and above a determined limit they lose their power of reproduction. Either then they die, or, as has been affirmed, they develop into spores, in which case a special and exact adjustment of air is necessary to permit these spores to undergo development.

4. *Influence of Movement.*—Movements, shocks, violently impressed on culture liquids, arrest the vitality of the microphytes. A certain degree of rest is necessary for the exercise of their functions.

§ 11.—*Multiplication of the Microphytes, in Earth, in Water, in Habitations.*

It is easy to understand the conditions of germination of the microphytes. Cadavers in putrefaction, in the soil or on its surface, favor the development of the ordinary microphytes under such circumstances. The specific parasites do not undergo development,

unless the inanimate bodies contain microbes of the same species ; in this case the multiplication of the morbigenous microphytes may go on to such extent that the fermentiferous microphytes are quite deprived of their means of sustenance.

The soil itself does not favor the formation of morbigenous microbes unless the cadaveric débris be of gelatinous nature.

Potable and other waters may be altered by drainage from lands impregnated with such putrefying animal detritus, or with the organic remains of some dried-up subterranean stream [sewers and cess-pools in the vicinity of wells undoubtedly have their part in the dissemination through drinking-water of morbigic microbes.] It is moreover known, since the meritorious researches of Schlosing, that subsoil oxidations take place with the aid of living ferments ; that, for instance, the ammonia which results from decompositions transforms itself under this influence into nitrous acid ; that the nitrification of the soil is, so to speak, under *animated* management, and that, lastly, a soil impregnated with moisture and little ærated, is not susceptible of nitrification.* Even habitations constitute foci for the spread of microbes ; they are, according to Emmerich, true laboratories of microbes of all kinds. These find always in the subsoil débris sufficient nutriment ; besides in the bed-chambers particles of organic dust which have penetrated with the air by the various openings, attach themselves to the carpets, the sized curtains and other drapery.

§ 12.—*Morphology of the Specific Microbes.*

The specific microphytes differ essentially from the fermentiferous species by their pathogenic properties ; Pasteur's culture methods leave no doubt in this regard. It is not the same with the morphological forms which the various species take on. The morbigiferous agents, as well as the vulgar kinds, assume the form of micrococci, bacteria, bacilli, spirilla ; if the bacteria and bacilli predominate in pathogeny it is none the less true that they are not always of medical order (pathological) ; micrococci are oftener benign than malignant. Is it not, however, possible that in the infectious diseases decisive and distinct characteristics may be found pertaining to their respective microbes which shall enable us by microscopic in-

* Boussingault.

spection to recognize the two classes of microphytes? To this question of specificity of forms we may in most cases give an affirmative answer. By the aid of processes of staining invented by Weigert and perfected by Klebs, Koch, etc., we may assign to the morbid bacteria, and especially to the bacilli, certain attributes *sui generis* which enable us anywhere to detect them. The confirmation of the micrococci, their groupings, their envelop, even, often allow us to recognize their precise nature; moreover, the micrococci stain readily, by a solution of hæmatoxylin, while the bacteria are with difficulty impregnated with this coloring matter. Some bacilli retain with tenacity divers tints of aniline, while other bacilli easily abandon these colors, and so are decolorized by acids, or, after subjection to a second staining liquid, quit the first tint to take on the second. These peculiarities can only be due to the permeability of the envelop to certain artificial dyes.

This characteristic constitutes the best reply to the objections which have been raised against the doctrine of virulent germs which, according to some mycologists, are nothing but vulgar bacteria, developed in a diseased organism.

Spores.—The morbid spores do not differ from common spores by their morphology or by any known phenomenal signs, and as for their specific properties, they are difficult of demonstration.

V.—THE MICROPHYTIC DISEASES.

1. *Comparative Medicine.*—It was comparative medicine that first profited by the discoveries of Pasteur. The diseases of animals have been illuminated by the light of a new day since the labors of Davaine, Pasteur, Bonley, Toussaint, Jollyet, Detmers and Thuillier, who have recognized and shown the parasitic nature of anthrax, fowl-cholera, pebrine, swine plague and sheep pox. These useful scientific acquisitions have not failed to arouse the zeal of practical physiologists to such an extent that in ten years human pathology and medicine have undergone a revolution by reason of the research and experimental study in this one department of infectious diseases.

2. *Surgical and Puerperal Diseases.*—Among the diseases which have been the subject of investigation there are certain whose microphytic character is found demonstrated in the most peremptory

manner by the results of treatment. Such are surgical septicæmias which get well under, or are prevented by, antiseptics while we are searching for the specific microbes. Such is puerperal fever, which, according to Doleris, is due etiologically to many microbes, and is efficaciously treated by anti-parasitic remedies, phenic acid or corrosive sublimate; the parasitic theory is still a matter of dispute, but the triumph of the antiseptic medication is a fact, as is shown by the magnificent results which Tarnier has obtained in the MATERNITY which was formerly the opprobrium of the obstetrical art, so insalubrious were the conditions to which lying-in women were exposed, and so great was the mortality.

3. *Medical Diseases.*—Clinical medicine has not been able, thus far, to pride itself in its anti-parasitic therapeutics. The discovery of the precise parasites of medical diseases is quite too recent an event to have furnished matter for regular experimentation. It is then obligatory on us to keep distinctly in mind the parasitic nature of these maladies, and the conditions of their development and propagation. To attain this end a simple enumeration of parasitic diseases is not enough, and simply pointing out the particular microbe of each is not enough; in the interest of practical medicine we should take account of *all their specific characteristics.*

§ 13.—*Classification of Parasitic Diseases.*

By this I mean taking into consideration the origin of the disease, its mode of development, its power of transmission; by the aid of principles thus acquired we shall once more succeed in harmonizing the new data of science with the medical traditions of the past. I am of opinion, then, that we ought to distinguish five classes of parasitic diseases.

Class 1—Miasmatic Diseases, Malaria.—We have to do, first of all, with diseases which are simply of miasmatic origin and not transmissible from man to man; malaria and the paludal fevers alone constitute this first group, which is perfectly distinct from all the other specific diseases. They develop under the influence of miasms emanating from a marshy soil or ground rich in organic matters like the Campagna Romana. In these countries the air and the earth contain bacilli which in culture liquids take the form of elongated curved filaments, which undergo segmentation. Klebs and Tomassi Crudelli affirm that these microphytes may be inocu-

lated in pores and produced symptoms resembling malarial disease. This is very doubtful. Certain it is that malaria is neither transmissible nor contagious nor inoculable; it is miasmatic

Class 2—Microphytic Diseases that are Inoculable and at the same time Transmissible by the Atmosphere.—1. *Tuberculosis.*—Among the inoculable parasitic diseases it seems strange to mention first in the category tuberculosis, of which the virulence and contagiousness have been so lately contested. In the present state of science we know that it is due to a special microphyte, a bacillus easily distinguishable from other benign parasites, not only by its power of indefinite multiplication and by its inoculability, but also by its technical characteristics; the vital properties, as well as the morphology of the tubercle bacillus, discovered by Koch, do not admit of or justify any confusion. It is found in all the tissues, but more particularly in the products of expectoration, and perhaps also in the air that surrounds the sputa.

2. *Variola.*—Variola, which is equally transmissible by the air and by inoculation, has, according to Klebs, quadrigeminal micrococci, which accumulate especially in the small areolar cavities of the rete Malpighi, giving rise to the characteristic pustules. The active particles of vaccine are solid capsules, well indicated by Chauveau, and which are known to-day to be constituted by microbes.

3. *Diphtheria.*—Diphtheria, a disease of such fatal virulence, presents, according to Talamon, a special mycelium under the form of tubes with irregular contours, as if broken here and there, and not accurately joined again; also conidia spores, which he has succeeded in cultivating and with which he has successfully inoculated pigeons and young cats.

4. *Recurrent Fever.*—This disease, which is unknown in France, is due to a spirilla which is perfectly well defined, and which is found in the blood only at the time of the attack; the inoculability according to Obermeyer, is doubtful.

5. *Erysipelas.*—Erysipelas, in its infectious forms, comprehends etiologically certain micrococci, joined or in pairs whose special location is the trunks of lymphatic vessels and the lymph spaces of the derm. These do not exist in the blood, and their reproduction by inoculation has not been proved by Feltheisen.

6. *Infectious Pneumonia.*—The infectious character of pneumo-

nia, or the greater part of pneumonias, is no longer a matter of doubt. (See our researches, as published in the *Union Medicale* for 1883.) The infectious nature of this disease is due to certain micrococci, furnished with capsules, according to Friedlarler; to certain ellipsoidal micrococci, according to Talman, which of themselves may determine fibrinous pneumonia.

7. *Typhoid Fever*.—Rarely transmitted by contagion from one individual to another, typhoid fever is communicated twice out of every three times by the intermediation of fæcal matters, especially when these contain the evacuations of typhoid patients.* Drinking water and milk serve also as vehicles to the typhoid virus; this consists, according to Eberth, of certain bacilli, found by him eighteen times out of forty in the glands of the abdomen, and besides in the larynx and lungs where the virus seems to take the bacteria form, discovered also in the urine by Bonchard and in the typhoid roseola by Hanot.

Class 3.—Microphytic Diseases Communicated only by Inoculation.—8. *Canine Rabies*.—Rabies is to-day the subject of study; Pasteur has already obtained results of considerable value.

9. *Syphilis*.—Syphilis, so easily inoculable in man, is due, according to Aufrecht, to certain *diplococci*, which are readily and brilliantly stained by fuchsine. Klebs has cultivated them, but no one has succeeded in reproducing the disease in animals.

10. *Gonorrhœa*.—Neisser has described a special micrococcus which is found in the pus of urethral discharges, and of blenorrhagic ophthalmia; the culture product, according to Bokai, has been inoculated with success.

11. *Glanders*.—This is a virulent disease of the gravest kind. The virus is due to a bacillus resembling that of tuberculosis, but distinguishable from the latter by the results of the staining process.

Class 4.—Bacterial Diseases not Inoculable.—12. *Lepra*.—This disease is due to a bacillus similar to the tubercle bacillus, but not inoculable.

13. *Ulcerous Endocarditis*.—Here the bacteria form veritable colonies in the blood, in the heart, in the urine; no attempts have yet been made to cultivate them.

*Jacconal.

14. *Rheumatism*.—Klebs affirms the parasitic nature of rheumatism.

Class 5.—Contagious Diseases whose Parasite is Doubtful or Ill-defined.—15. *Measles and Scarlet Fever*.—The microbes which are supposed to give origin to these diseases, are not yet known.

16. *Whooping Cough*.—Pertussis, which, by its contagiousness and its location in the lungs, has such affinity with measles, is characterized by mycelia and spores, which, according to Tochaur, present a special type. No attempt has yet been made to inoculate this fungus.

17. *Dysentery*.—The micrococci and bacteria which Radjewski has found in the faecal matters of dysenteric patients have nothing about them which is special; the same microbes are found in the normal state.

18. *Cholera*.—The researches in Egypt of the two French and German commissions have not yet resulted in the exact knowledge of the parasites of cholera whose contagiousness is beyond all reasonable doubt; Koch, however, indicates as peculiar to cholera and as causal, certain comma bacteria which he has not been able as yet to cultivate.

HOSPITAL NOTES.

WILMINGTON CITY HOSPITAL, W. W. LANE, M.D., Surgeon in Charge.

CASE I.—OVIOTOMY.

Mrs. F. B.; married; 27 years of age; native of Fayetteville, North Carolina; mother of three children, youngest 2 years old. Admitted November 1, 1884, in a wretchedly weak and feeble condition from malarial fever, with engorgement of liver and spleen in addition to abdominal tumor.

As soon as her general health was sufficiently improved by appropriate treatment, she was placed upon the table and subjected to a very careful examination by Dr. Love and myself. We were agreed in the opinion that we had here an ovarian cyst of the

multiple character, with abdominal ascites. The sound indicating, as far as we could judge, no uterine connections.

A week or ten days after this, on January 10, she was again critically examined with the aid of Drs. Wood and Love, at which time an aspirating needle was passed into the tumor and a small quantity of honey-like, straw-colored fluid, with difficulty obtained on account of its viscosity.

Our first diagnosis seemed now to be confirmed, and was further established by a microscopical inspection of the fluid kindly made for me by my friend Dr. G. G. Thomas, of this city.

On the 17th of January the operation was performed in strict accordance with the antiseptic methods as advised by the best authorities, in the presence and with the aid and assistance of quite a number of the medical gentlemen of this city.

The tumor was found to be a large multilocular cyst, about the size of one's head, the right side filled with a tenacious straw-colored fluid, the abdominal cavity being also filled with a large quantity of ropy, greenish material, with a large number of yellowish-white fatty masses of the size of a bean floating therein.

Its anterior surface was covered by a vascular apron formed by the expansion of the right broad ligament, the adhesions of which I could easily detach with my fingers.

The tissues of the omentum, mesentery and intestines looked unusually dark and congested; there was some hemorrhage from the vessels of the former and quite a mass of it was tied.

The pedicle was short and broad, it was transfixed and ligated with a double silk ligature and returned to the pelvic cavity. The peritoneum was carefully and thoroughly washed out with carbolized water, containing salt.

The abdominal wound was five inches in length; it was closed with silver wire and a glass drainage tube inserted in the lower angle; this was sustained by wide adhesive straps extending well around the sides of the body, and the whole covered with corded bats of oakum and cotton batting, supported by a flannel band. The patient came out well from the chloroform narcosis, and suffered very little from nausea. The weather being very cold, below the freezing point for several days, the room was kept well ventilated by a good wood fire.

On the second day the temperature reached 103° , pulse, 130, respiration 20, but fell next day to 19.

On the sixth day there was considerable tympanitis, with elevation of temperature and pulse rate. The peritoneal cavity was well irrigated by syphon through drainage tube, with salted carbolized water. Symptoms relieved.

Seventh day, bowels relieved by enema, at her urgent request.

Tenth day, very much improved—wants to get up, stitches and straps removed, the latter renewed, and wound healing nicely.

Doing well until the sixteenth day, when she has an attack of malarial fever, with bilious vomiting and temperature of $103\frac{1}{2}$; condition quite alarming for some hours, but symptoms yielded to full doses of quinine. From this period she entered upon her convalescence, and is now restored to her usual health. The menstrual flow, which has been suspended since the birth of her last child, has returned.

The thickened character of the serous fluid in the peritoneal cavity in this case appeared to be unusual, as effusions from this membrane generally do not possess this consistency.

The patient, during her preparatory treatment, and also before her admission, as she informs me, has suffered at times with severe abdominal pains, which, taken in connection with the congested appearance of the internal parts before alluded to, we may perhaps reasonably infer that this syrupy character was induced by chronic peritonitis.

An old vaginal prolapse of long standing was also cured in this patient, aided, no doubt, by her forced lengthy recumbency, as well as by the benefit derived from the operation.

CASE II.—SKIN GRAFTING.

C. B., colored, aged 17 years, admitted on account of extensive ulcer occupying the whole anterior tibial surface from near its middle almost to the bend of the ankle. There was an exostosis of the bone underlying the sore, causing quite a remarkable enlargement and elevation of the parts.

On the calf there was another ulcer the size of a dollar, while on either side the leg was studded with small unhealthy circular sores in various stages of development and cicatrization. The tibia, although so much hypertrophied, appeared to be sound and healthy.

The girl states that she received a scratch from a briar on the skin, in the country, when about fourteen years old. There seemed to be no syphilitic taint, either hereditary or acquired, as far as I could learn, but rather a scrofulous diathesis. Under a variety of treatment and numberless applications, she continued to grow worse, and finally applied for relief at the Hospital.

During the progress of the treatment pursued here of suspension in the wire gauze splint, absolute rest, with gentle pressure with oakum pads and the roller bandage, the ulcer having been brought into a healthy granulating state by iodoform and the blood renovated by internal use of syrup of iodide of iron, this wide gap nature was endeavoring slowly to bridge over with a new dermal layer; but before the neoplastic matter could be completely organized into a new epidermic film around the edges, it would undermine, break down and cause great delay and disappointment in the healing process, as if the powers of nature were striving to their utmost to repair the mischief, but were unequal to the task of covering this large, bony tumor, with new integument.

It was under these circumstances that in this case I resorted to the transplanting of skin grafts, and was enabled thereby to make a final and successful cure, the grafts soon taking on all the characteristics of sound, true skin, retaining their natural pigmentation in their progressive growth, until the whole diseased surface was entirely and completely covered.

When the surface to be covered is large, as it was in this case, a constant succession of fresh grafts are required, as the new cicatrization does not extend beyond one-third to half an inch around the graft as a centre. The contact of the epidermic cells with the granulations at the edge of the ulcer repress the latter and greatly influence the cicatrizing process.

I have many times tried scraping off epidermic scales from clean, sound skin, and scattering them freely on healthy granulating sores, but have never succeeded in a single instance in getting them to take hold.

One of the great advantages to be derived from skin grafting outside of the mere facility afforded in the more rapid healing of the ulceration is the security it affords from the danger of relapse from subsequent accidents, the grafts furnishing a covering equal to the at ural integument, whereas the granular cicatrization is at best only

a substitute, liable to give way from slight causes and returning to its former state.

CASE III.

M. C., white, aged 27, admitted December 19, with large ulcer over the left tibia, a little below its middle, with a dark, leathery slough lying on its bottom. This was dead periosteum, clinging to necrosed bone beneath.

The neighboring portion of the tibia was considerably enlarged and the limb swollen. Just below the knee, over the tubercle, was a very large periosteal swelling, apparently pursuing the same destructive course.

She had a syphilitic history, having had a chancre a few years ago, with secondary manifestations, for which she had received treatment.

Her health being much broken, and blood in an impoverished state, she was put upon the iodide of potassium, with iron and bark. Under this course she improved rapidly, with a subsidence of the periosteal tumor.

The dead bone showed no disposition to loosen and come away; on the contrary, it was firmly attached to the healthy part underneath, and throwing off that profuse and offensive characteristic so peculiar to necrosed bone. The integument below the ulcer was inflamed and painful, extending along the tibia towards the external malleolus.

As there was no evidence of any detachment of the sequestrum of itself, I thought it best to remove it, and for this purpose the patient was anæsthetized and the limb exsanguinated by means of Esmarck's apparatus. The integument was lifted up from the anterior surface of the tibia and the granulations trimmed away, when it was seen that the blackened and dead portion extended no further than the edges of the ulcer.

No line of demarcation was found between the dead and living parts, and the only way of distinguishing the two was that the latter bled under the chiselling and the former did not.

The chisel and mallet was freely but carefully used until a free oozing showed the entire removal of the necrosed part. There was no more indication of a separation between the living and dead bone in the deeper portion than there was at the surface.

Granulation of the bone and soft parts are progressing well, with no further necrosis.

The wound was dusted with iodoform, dressed with lint, smeared with vaseline, over which was placed an oakum pad, drawn gently together with adhesive straps, a roller bandage applied from instep to knee, and the limb suspended in a wire gauze splint.

The patient is still under treatment, but rapidly getting well, with general health vastly improved.

It is difficult to explain why this failure to effect separation of the dead from living bone in such cases should occur, but I have noticed this indisposition quite often in persons suffering from syphilitic cachexia, generally of the long bones. Whether this condition is peculiar to syphilis or not I do not know.

CASE IV.

Mary L., white, aged 24 years, domestic at the Catholic Convent, was an inmate of the hospital the past summer, suffering from chronic cervical endometritis and secondary syphilis, of which she was apparently cured, certainly of the former, and discharged in October. She was told to keep up her medicine after her return home, or her disease would likely break out again; this she neglected to do. On the 19th of December she was readmitted with a foul syphilitic ulcer on lower part of tibia, with severe osteo-periostitis, and a fluctuating painful swelling a little higher up on the leg. Her suffering was so acute that it was found necessary to give her quinine and morphia for the first two or three nights. The open sore was sprinkled with iodoform, the inside of the leg having rubbed into it every night a portion of mercurial ointment the size of the end of a finger, and full doses of the iodide of potash, given three times a day. Under this combined treatment of the iodide and mercury the osteocopic pains subsided in a wonderfully short time, the periosteal swelling diminished and the eruption on the skin began to disappear.

Mercury, I think, in these cases of transition from the secondary to the tertiary stages of syphilis, is not only our best method of curing this disease, but also the surest guarantee against a relapse.

Either externally or internally used in small doses, it acts as a tonic by increasing the red corpuscles of the blood.

Daily experience demonstrates clearly that the iodides may cause the disappearance of tertiary symptoms, but they do not alone cure syphilis. To combat these forms of the disease successfully we must give a combination of the two remedies.

I think it is much the best practice to avoid using the bistoury in these soft periosteal nodes, for with the above recommended course of treatment, with absolute rest in bed, they are soon reduced without the danger of causing an open sore.

This case came under observation probably just in time to prevent the accidents that occurred in case number three, i. e., sloughing of the periosteum and necrosis of the bone.

The patient was discharged cured February 11, and at present is in good health.

SELECTED PAPERS.

NARRATIVE OF AN INSTANCE OF CURE OF LUPUS ERYTHEMATOSUS.

By JONATHAN HUTCHINSON, F.R.S., Emeritus Professor of Surgery
to the London Hospital.

All who know the disease will, I am sure, admit that cases of recovery from lupus erythematosis are, unfortunately, rare. As an instance of completed cure, the case which I am about to relate becomes, I think, of much interest.

I first saw Mr. J. P. B. on March 4th, 1881. He came to me on account of patches of erythema-lupus on each side of his nose, about its middle. There was a third on its ridge, near the tip, but the three did not coalesce, and thus the bat's-wing was not complete. Their arrangement was, however, quite symmetrical. Mr. B. was a tall man, rather spare, but in fairly good health. His age was 45

He had never suffered from actual chilblains, but had a feeble circulation and dusky ears. A maternal aunt had died of phtthisis. He had himself once consulted the late Dr. Baly, in the belief that his chest was delicate, but had been told that he ailed nothing but "dyspepsia and weak heart." His skin had always been very irritable, and he was liable to little spots on the hands, etc., which itched intolerably, and which he used to scratch until they became sore. Such was his state when the erythema-patches showed themselves on his nose. I may add that he was living the life of a country gentleman in a cold district. The patches had been present about a year when he came to me. I prescribed for him arsenic internally, and a weak lotion of tar and lead to bathe the patches.

Between 1881 and April, 1883, I saw nothing of Mr. B. At the latter date his surgeon, Mr. Williams, of Norwich, wrote me that he was worse. It was now decided to insist on the use of arsenic.

In February, 1885, Mr. B. called to show himself, and to tell me that his lupus was quite well. It was absolutely so. White, thin, inconspicuous scars took the place of the former patches, and there was neither thickening nor erythema at their edges. The scars on the sides of the nose were each as large as a shilling, that on its middle not so big. On the scalp, which was nearly bald, there were several other scars as big as the end of one's thumb, which were the remains of other patches which had developed since his visit to me. As regards his cure, Mr. B. said that it was unquestionably due to arsenic. He said that, in consequence of my having remarked that I trusted most to external treatment, he did not, on the first occasion, continue the arsenic, having a prejudice against it, but used the tar and lead wash assiduously. The patches increased, and new ones on his scalp formed. Two years later, in 1883, Mr. Williams insisted on his taking the arsenic, and increased the dose. It was continued for fifteen months regularly, caused a sharp attack of shingles, and made the eyes red and irritable, but, in the end, quite cured the lupus. I inquired carefully as to whether any local remedy had been employed simultaneously, which might have been the real agent in the cure, but it did not appear that such was the case. As regards the patches made on the scalp, it is true that Mr. B. thought that a hair-wash, "which made the scalp smart," had done them good; so much had he been impressed with this belief, that he applied the wash to his nose also, but this had been done

only on a few occasions, and had not, he thought, helped the cure. It must also be remembered that he was taking arsenic all the time that the wash was being credited with the cure of the scalp-patches.

Comments.—I have prescribed arsenic for many other cases of lupus erythematosus, but, having never realized any definite result, I have not urged it with much faith. It may easily be the fact that it has seldom been sufficiently pushed. It will be seen that, in this case, we have proof, in the occurrence of arsenical shingles and of red eyes, of the full physiological influence of the drug. I have, in a certain minority of cases, cured, or partially cured, the disease by the use of external applications, but have never thought that internal medication had any definite effect. This case would certainly suggest a more free use of our great remedy. I fear, however, that we shall find that it is by no means generally successful, and that Mr. B.'s case is, after all, a fortunate exception to the rule. I have certainly seen many cases in which other surgeons had, before the patient came to me, pushed arsenic very freely, and sometimes apparently rather with injury than with benefit. The clinical fact that lupus erythematosus differs from all other forms of lupus in its tendency to develop symmetrically in isolated and independent patches, seems to show an alliance with psoriasis. At any rate, it indicates a constitutional, rather than a local origin, and, as such, implies the probable need of internal remedies.—*British Medical Journal.*



THE TREATMENT OF RINGWORM OF THE SCALP.

The following is a simple and very effectual method of treating ringworm of the scalp :

The child affected is made to sit down on a chair before a washing-basin half filled with warm water ; a folded towel is first of all tied round the child's forehead, in such a way that no fluid poured on the head can trickle down into the eyes.

It is best to cut the hair short all round the affected part. If there be many spots of ringworm, the whole head may be closely

cropped. Have ready a two-ounce bottle of common spirit of turpentine, an ounce bottle of tincture of iodine, a camel-hair brush, and a 10 per cent. cake of carbolic acid soap.

While the child bends forward over the basin, the spirit of turpentine is freely poured over one or more spots at a time, the fore-finger being used to rub the turpentine well into the scalp. Almost immediately the dirt and greasy scabs disappear, and the short broken hairs are seen to stand up like bristles. Generally, in about three minutes' time, the child cries out, "Oh, it nips!" then we know that the turpentine has penetrated deeply. Immediately the piece of carbolic acid soap is well rubbed into the parts which have been acted on by the temperature, and warm water is freely applied to make this soap into a lather, by which means the head is well washed, and soon appears to be beautifully cleaned. The smarting, such as it is, quickly disappears after the application of the soap. The head is then well dried with a towel. Common tincture of iodine, in two or three coats, is now painted well over the affected parts, and allowed to dry. As soon as the hair is dry, some carbolic oil (1 in 20) is rubbed all through the hair to catch such spores as may be there.

This treatment, applied every morning, or morning and night in very bad cases, generally cures the worst cases in the course of a week. During the last five years I have used no other mode of treatment. The explanation of its success is as follows: Common spirit of turpentine is a powerful germicide; but it is a still more powerful solvent of the sebaceous or greasy matter of the scalp, and it rapidly penetrates into all the epithelial structures of the scalp, the affected hairs included, and clears the way for the application of a still more powerful germicide, namely, tincture of iodine.

It is an interesting chemical fact that spirit of turpentine, or, more correctly, oil of turpentine, is a powerful solvent of iodine. This solution of iodine in turpentine is a most powerful germicide, and quickly destroys the fungus of ringworm. If tincture of iodine be applied to the spots which have been treated, as above, first with the spirit of turpentine, and then washed with carbolic acid soap and water, it finds its way down into the epithelial tissues, and into the hair-follicles, following the course which the spirit of turpentine has taken. It is of no use to apply watery solutions of

germicides, until the greasy or sebaceous matter of the scalp has been first removed.

In some severe cases I have applied a solution of iodine in turpentine, ten grains to the ounce, instead of the tincture of iodine, after the head has been washed and cleaned ; but in most cases the application of tincture of iodine, after the part has been acted on by the spirit of turpentine as above described, is quite sufficient to destroy the disease.

Ringworm on other parts of the body may be treated with spirit of turpentine and tincture of iodine in exactly the same way. One great advantage of this treatment is that it may be applied to the head of the youngest child, and causes little or no distress at any time.

JAMES FOULIS, M.D., Edinburgh.

—*British Medical Journal.*

THE TREATMENT OF ILEUS.

Although laparotomy has come to be recognized as one of the justifiable measures in the treatment of intestinal obstruction, it is a resource which, on account of its radical character, will probably always be the last adopted. It is gratifying, therefore, to be able to add one more remedy to those already existing, which may, without any risk of harming the patient, possibly avert the necessity for so formidable an operation. Such a resource has been recently brought forward by Kussmaul and Cahn, in the *Berliner klin. Wochenschrift*, Nos. 42 and 43, 1884, and still more recently by D. C. Hasenclever, in a paper read before the Berlin Medical Society, and published in the same journal, No. 5, 1885. It consists in washing out the stomach. Hasenclever reports six cases, in all of which marked relief was afforded, and although only two recovered, the autopsies in the remainder revealed other serious lesions which necessarily rendered any treatment futile. Cahn reports three cases from Kussmaul's clinic, of which two recovered.

Still more recently, Dr. J. T. Whittaker read a paper on this subject before the Cincinnati Academy of Medicine, an abstract of

which, together with the discussion which followed, is published in the current issue of this Journal (*News*). Two cases are referred to by Dr. Whittaker as occurring in his own practice, one by Dr. J. L. Cleveland, and another by Dr. William Judkins. The cases of Whittaker and Cleveland, although relieved, died, but that of Judkins recovered. It would seem also from Dr. Whittaker's paper that the primary suggestion of this treatment came, not from Germany, but from Cincinnati, and from Dr. Cleveland.

As soon as the diagnosis of obstruction is made the stomach should be washed out once or even twice a day. In this way often large quantities of fecal matter, mucus and gas, are removed, while the singultus and stercoraceous vomiting cease, and the patient experiences marked relief. Spontaneous fecal evacuations also sometimes follow. The irrigation is practised until the patient is completely relieved, or the procedure is shown to be useless. The washing is continued until the fluid comes away clear.

The rationale of this treatment cannot be definitely stated, but from the standpoint of relief to vomiting, its use is as much indicated as that of opium and ice, which, while they often relieve this symptom, nevertheless fail to remove the cause. Whether the vomiting be explained as the result of a reversed peristalsis, or be regarded as simply mechanical, the opium merely obtunds the excitability of the nervous system, and thus averts, for a time, the reflex act of vomiting, while the intestinal contents continue to accumulate. By the irrigation one element of the trouble is at least removed—the distention of the stomach and upper part of the intestine, because, as was shown by Oser, in the *Wiener Med. Blätter*, 1884, No. 41, the operation not only cleans out the stomach, but the small intestine as well; and this, too, as effectually, where there is insufficiency of the pylorus, as in acute and chronic intestinal obstruction.

As to the curative action of this treatment, where there is no insuperable obstacle against the reëstablishment of the natural evacuations, Kussmaul suggests the following explanation: 1. By removing the large accumulation of fluid in the intestine more space in the abdomen is provided, and the enormous distention of certain parts at the expense of others is avoided. 2. The peristaltic movements of the intestine, above the point of obstruction, previously violent and irregular, become more quiet and regular. 3. It is only

possible to remove a remediable obstruction, such as a bend or an invagination. Hasenelever suggests that the great distention of the stomach and intestine, in addition to the presence of unusually irritating contents, may produce strong irritation of the splanchnic fibres, and a consequent inhibition of peristalsis, with paralysis of the bowel. It frequently happens in ileus, that, succeeding a period of violent, painful peristaltic motion, there follows a long period of absolute rest, in which the activity of the intestine appears to be paralyzed, and one can easily understand that after the removal of any irritating matters the inhibition grows less, so that the forces regulating peristalsis again acquire the ascendancy, and produce fecal evacuations.—*Medical News*.

SOMETHING ABOUT ASAFÆTIDA AND HYSTERIA.

Some drug-millers buy the drug and sell the powder, and sell it so cheaply that these supply a large part of the entire demand. But supposing the best practice to prevail, and see what that is. The wholesale druggist sends a case of asafætida to the mill to be powdered. The miller sees that his men pick out the stones that would break his mill, and possibly all the sticks and rubbish that come under prominent notice, and then the remainder goes into the special drying-room for this drug. Here it is melted and dried on steam trays until a large portion of the active part, namely, the oil, is driven off, and much of the remainder of it is oxidized by the air into resin. When a small portion taken out and cooled is brittle enough to grind, the whole is cooled and powdered—and it must be so dried that it will not run or cake much in hot weather.

After such a process it is not wonderful that the powder, and the preparations made from it, are not so disagreeable as to exclude them from the stores of the pharmacists, even of fashionable neighborhoods. Nor is it more wonderful that the powder and the preparations made from it are practically worthless; and the ultimate sequence of this condition of things is that asafætida has fallen into disuse, because it yields no definite results in use.

But there is another obstruction to the use of even bad asafætida.

It still smells badly enough to be disagreeable to the sensual and fastidious classes of a high civilization, wherein hysteria is very prevalent in many forms, and the physician who should insist on treating his hysterical patients with either the Mixture or Tincture of either good or bad asafætida, would simply be discharged, and in all probability a homœopath would succeed him. The officinal Mixture of good asafætida, or the Tincture diluted with water—probably comes as near to being a cure for a large proportion of cases of hysteria as any known remedy is to any known disorder, not only because it is a true stimulant anti-spasmodic of a high degree of efficacy—but also because from the nature of many cases of hysteria the patients or subjects would have less and less frequent attacks, if in each attack a fluidrachm of Tincture of Asafætida in a wine-glassful of water had to be taken every ten minutes until the attack was over. Powdered asafætida in coated pills will not relieve hysteria either by physical or moral effect—nor will this powder in any form be of much use in flatulency. But pills made by the pharmacist or physician from well selected asafætida, as described and directed by the Pharmacopœia, are very efficient in the treatment of some forms of dyspepsia, and will relieve many cases of flatulence and flatulent colic very promptly.—*An Ephemeris of Materia Medica, etc., April.*

REVIEWS AND BOOK NOTICES.

A GUIDE TO THE DISEASES OF CHILDREN. By JAMES FREDERICK GOODHART, M.D., F.R.C.P. Revised and Edited by LOUIS STARR, M.D. With Formulæ. Philadelphia: P. Blakiston & Co., 1012, Walnut St., 1885.

This volume was prepared as a manual for medical students, and the task has been well performed. The plan of the book is simple, first introducing the student into the difficult art of examining a sick infant—an art, by the way, which no book can teach a doctor without he has some natural tact. Dentition, diet in health and disease, and the indigestions, quite naturally lead off, and are fol-

lowed by chapters on diarrhœa, diseases of the mouth, including congenital deformities. The chapter on worms is very short, but full of practical matter, especially that part of it by the editor's pen.

The author adopts the definition of rōtheln, by Dr. Squire : It is "a specific eruptive fever, the rash appearing during the first day of the illness, beginning on the face in rose-red spots, extending next day to the body and limbs, subsiding with the fever on the third day, and not preceded by catarrh nor followed by desquamation."

The practitioner naturally turns to the chapters on diphtheria in every new book on diseases of children. The good sense with which the subject is treated is often the test of the desirableness of the volume as an addition to one's library. We will give a quotation from our author on tracheotomy in diphtheria : "Early operation has been defended chiefly upon the ground that the operation is not a serious one. It is *primâ facie* unreasonable to contend otherwise, if it be true, as many think, that even the membrane on the fauces should not be disturbed for fear of provoking fresh inflammation and formation of membrane ; and, as a matter of fact, the operation of tracheotomy, when performed upon the diphtheritic child, is frequently followed by diffuse inflammation of the cellular tissue of the neck—the edges gape, and a large sloughy wound is formed, which becomes dry and fetid, and not unfrequently covered with membrane. But further, it is supposed that the mucous membrane of the trachea itself suffers no injury from the introduction of the tube ? The richness of the glandular and blood supply and the sensitiveness of the mucous membrane to changes of temperature, make such a thing highly improbable, whilst it would be easy to show, in the clearest manner, by the evidence of the post-mortem room, that the operation itself, and the presence of a tube afterwards, are, in one way and another, fraught with danger. It is, in fact, my belief that the broncho-pneumonia, the purulent bronchitis, the excessive tracheitis, so often seen in fatal cases of diphtheria, are chargeable quite as much to the operation as to the original disease. The state of the trachea in fatal cases is not calculated to impress one favorably with the harmlessness of tracheotomy ; but let that pass, for it may be well said that these are the hopeless cases, *quâ* diphtheria. But even in

others that do well the amount of mucus and mucopurulent discharge ejected from the tube, and the slowness with which this ceases, are sufficient to show that the mucous membrane of the trachea must in any case undergo grave alterations. For these reasons, amongst others, early tracheotomy in diphtheria must be advocated, not from its harmlessness, but upon other grounds. But hitherto these other grounds have been little appealed to in practice. The operation has been performed; if happily the membrane failed to spread—well, but no thanks treatment; the operation relieved a symptom and temporized while the disease spent itself. If death resulted it was only to be expected of the disease; the operation has taken no share of the responsibility. But if, on the other hand, we resort to an operation not immediately necessary, in the hope that by so doing some local means may be adopted which will help to combat the formation of membrane, the operation has another basis upon which it may stand of a less assailable nature. Upon this ground alone—that of the more thorough application of local remedies to the larynx—does an early operation admit of advocacy. Possibly on this ground the operation will yet justify itself and the additional risk which it necessitates be more than counterbalanced. It cannot be said that this is so at present; and, although I would urge perseverance in local measures, I still think that the operation of opening the windpipe should be deferred to the latest possible limit." Pp. 233-234. The editor, Dr. Starr, adds: "Tracheotomy should not be too long delayed. It should be performed as soon as there are urgent symptoms, and every preparation should be made beforehand, that no valuable time may be lost during [doing?] it. The symptoms demanding operation are increasing dyspnoea, supra-sternal depression, well-marked retraction of the scrobiculus cordis, and lividity about the face and finger-tips."

The author believes that our successes of tracheotomy in diphtheria will not exceed that attained by Trousseau—one in five—but if even this be accepted as the best results, it might be added that the operation would still be a desirable one upon the ground that it saves the little patient from the agony of suffocation, and insures a tranquil death.

Tracheotomy without a tube, we notice, is becoming a common practice, and especially in young children is it desirable, as in most

of the cases a proper tube would not be at hand, and because by means of a bulb pipette shreds of membranes and strings of mucus can be readily and frequently removed.

It is seldom that we can say as much for an American editor of an English book, but Dr. Starr has enhanced the value of this one greatly by judicious intercalation of paragraphs of importance; he has, in fact, made it accord with the best American practice. We would only make one criticism, and that is, that there is very little said about malarial fever, and that very indifferently. With this exception we commend the book most heartily.

ON THE WASTING DISEASES OF INFANTS AND CHILDREN. By EUSTACE SMITH, M.D., London. Fourth Edition. New York: Wm. Wood & Co., 56 & 58 La Fayette Place, 1885. Pp. 278.

It may not be apparent by the title what the scope of this volume is. To those who have neglected to read it heretofore, we will say that they have missed one of the best books on the diseases of children.

In the introduction is considered the interpretation of the signs of disease in children. The simple atrophy from insufficient nourishment, chronic diarrhœa, chronic vomiting, rickets, inherited syphilis, mucous disease, worms, chronic pulmonary phthisis, caseation of lymphatic glands, and a final chapter on the diet of children in health and disease, are the headings of the topics discussed. It was this volume which gained for the author so wide a reputation in this country several years ago, and the lapse of time has steadily sustained the stand then attained. This valuable work is the April number of Wood's Library, and will be welcomed by the subscribers to the series as one of the best additions to their libraries.

KIRKES' HAND-BOOK OF PHYSIOLOGY. By W. MORRANT BAKER, F.R.C.S., and VINCENT DORMER HARRIS, M.D. Eleventh Edition. With nearly 500 Illustrations. Vols. 1 & 2. New York: Wm. Wood & Co., 56 & 58 La Fayette Place, 1885.

This is one of the standard works on physiology, which has been used as a text-book for many years in this country and in England. Very much new matter has been added, and especially of illustrations, making it a very desirable work for study and reference. The two volumes are the February and March numbers of Wood's

Library of Standard Medical Authors, which has now become a necessity of the profession, giving indispensable volumes at the low rate of \$1.25 each.

MICRO-CHEMISTRY OF POISONS. Including their Physiological, Pathological and Legal Relations; with an Appendix on the Detection and Microscopic Discrimination of Blood: Adapted to the use of the Medical Jurist, Physician and General Chemist. By THEODORE G. WORMLEY, M.D., Ph.D., LL.D. With 96 Illustrations upon Steel. Second Edition. Philadelphia: J. B. Lippincott & Co., 1885. [For sale by P. Heinsberger, 109 Market Street, Wilmington, N. C. Price \$7.50.]

This is a superb volume in every way. The title page, although full, does not give an idea of the admirable manner it is prepared. The microscopic properties of poisons is the main element of the treatise, still it is by no means limited to this department: the whole science of toxicology, including chemical nature, physiological effects, symptoms following introduction of poison, fatal quantity and antidotes, receive a full and careful description.

In this, the second edition, the text has been thoroughly revised and enlarged by the introduction of illustrative cases, largely American, and by new tests and methods of recovery of poisons from organic mixtures.

The most important additions are upon the subject of gelsemium poisoning and the microscopic discrimination of blood. Gelsemine, it will be remembered, was first obtained in the pure state by Prof. Wormley in 1870, and he has contributed largely to our knowledge of the subject chemically, and its toxic properties. Dr. Wormley has to admit that no chemical antidote for the poison is yet known. In several instances, he says, the application of electricity has been found very beneficial, and one remarkable case of recovery in which morphine was employed, is given.

The appendix on the composition, detection and discrimination of blood is highly instructive, and will serve to differentiate the blood-corpuscles of man and the lower animals. The prevailing red corpuscles of six different bloods is shown in a steel plate, viz: human, dog, mouse, ox, sheep and goat blood, under an amplification of 1100 diameters, the actual measurement of the corpuscles expressed in fractions of an inch is marked in each. A chromo-

lithograph of blood-spectra further illustrates the appendix. The illustrations in this volume, in addition to the remarkably clear wood-cuts, consist of sixteen steel-plate engravings by the author's wife. They are exquisitely delicate, and add greatly to the value of the volume as a scientific guide in medico-legal and other chemical studies.

The behavior of certain alkaloids with reagents is given in a table to facilitate comparisons.

The mechanical execution of this volume is very attractive, and comports entirely with the excellence of the treatise. American medicine and toxicology is greatly enriched by this work, and it must long remain a standard in the great scientific world.

THE ELEMENTS OF PHYSIOLOGICAL AND PATHOLOGICAL CHEMISTRY.

A Handbook for Medical Students and Practitioners, Containing a General Account of Nutrition, Food and Digestion, and the Chemistry of the Tissues, Organs, Secretions and Excretions of the Body in Health and Disease. Together with a Method for Preparing or Separating their Chief Constituents, as also for their Examination in Detail, and an Outline Syllabus of a Practical Course of Instruction for Students. By T. CRANSTOUN CHARLES, M.D., F.C.S., etc. Illustrated with 38 Engravings on Wood and 1 Chromo-Lithograph. H. C. Lea's Son & Co., 1884. Price \$3.50.

The sub-title of this book explains the scope of its contents, and it ought to attract many readers from that class of medical men who complain so much that the chemical course they received at college was meagre and unsatisfying. This branch of medicine, though, is seldom attractive to physicians who did not receive full elementary chemical instruction preliminary to the study of medicine. There is no excuse, however, for neglect of this subject, when one can get for so small a price such a satisfactory work.

Dr. Charles was a pupil of Hoppe-Seyler, and the German teaching and opinion are naturally predominant, there being very few references to English or American authorities. The volume is practical and well adapted to the needs of the student; and as an aid to the busy physician in the examination of animal substances we highly commend it.

SELECT PLANTS READILY ELIGIBLE FOR INDUSTRIAL CULTURE IN EXTRA-TROPICAL COUNTRIES. By BARON FERD. VON MUELLER. American Edition. Detroit, Michigan: George S. Davis. Pp. 450.

The title page in part explains the object of this volume. It was originally issued by the Victorian Acclimatization Society, with a view of promoting the introduction and diffusion of the very many kinds of plants which may be extensively reared in the forests, fields or pastures of temperate geographic latitudes. In many respects this volume resembles the "*Origin of Cultivated Plants*," by Alphonse de Candolle, recently translated and published by Appleton, as both give very interesting accounts of the uses of plants, as well as the history of their origin and their spread into lands remote from their discovery.

A PRACTICAL TREATISE ON PALATABLE PRESCRIBING. By B. W. PALMER, A.M., M.D. Detroit: George S. Davis, 1884.

This is a handy little book, in which may be found a collection of prescriptions from some of the best known doctors of the world. It is so arranged that a desired prescription can be found under special heads, such as "Diseases of the Nervous System," and so on. The design of the author is to present palatable medicines, as far as consistent with therapeutical efficacy, and in this he has succeeded.

INDEX MEDICUS,

We are glad to announce, will be undertaken by Mr. George S. Davis, of Detroit. The superior typography of the Journal will be maintained, and, with the superior energy possessed by the new publishers, we confidently expect that *Index Medicus* will be a permanent institution. The first issue will contain the material of the January, February and March number, and after this monthly issues will continue as heretofore.

"THE PHYSICIAN HIMSELF"


Has reached its fourth edition. Few books have had equal success, the reason of which can be ascertained by reading it. We have expressed our opinion of it before, and believe that it will have a still larger sale.

EDITORIAL.

THE NORTH CAROLINA MEDICAL JOURNAL.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY, PUBLISHED IN
WILMINGTON, N. C.

THOMAS F. WOOD, M. D., Wilmington, N. C., Editor.

 *Original communications are solicited from all parts of the country, and especially from the medical profession of THE CAROLINAS. Articles requiring illustrations can be promptly supplied by previous arrangement with the Editor. Any subscriber can have a specimen number sent free of cost to a friend whose attention he desires to call to the JOURNAL, by sending the address to this office. Prompt remittances from subscribers are absolutely necessary to enable us to maintain our work with vigor and acceptability. All remittances must be made payable to THOMAS F. WOOD, M. D., P. O. Drawer 791, Wilmington, N. C.*

THE APPROACHING MEETING OF THE STATE MEDICAL SOCIETY UNDER THE AMENDED LAWS.

There has been no occasion since the organization of the State Medical Society of such importance as the meeting soon to be held under the newly amended laws. The Society was incorporated in 1859, and given powers which were so negative in their bearing that they were only made operative by the discretion and wisdom of the Legislature. Now we stand in a new relation. The auxiliary bodies proceeding from this Society are vested with powers of a positive character, particularly that of the Board of Examiners, which determines the status of the profession of the entire State. Therefore, while we congratulate ourselves that we have attained to a position in the State commensurate with the dignity and responsibility of our profession, we have at the same time assumed an

important office for the whole people, for the proper performance of which we may be sure they will hold us to a strict account.

On the part of the Board of Health the responsibility is also great. While that body has not the executive power of the Board of Examiners, it is entrusted with large health interests of the people—interests, unfortunately, entirely out of proportion to the means provided for their accomplishment—but dependent upon the individual aid of the members of the profession. In view of our past experience this is a slender basis upon which to found a reasonable expectation of meeting the responsibility, but we know that there is a largely increased interest manifested already.

By the time this issue will have reached our subscribers they will be familiar with the new law, and they will come to the Durham meeting prepared to say what aid they expect to render in furtherance of its provisions.

In reviewing the law in our last issue we had not seen the amendment published at page 179 in the March JOURNAL. This amendment defines that no penalties shall apply to graduates of a *regular medical college* prior to January 1st, 1880. It only remains now to determine what colleges are to be adjudged "regular."

There is one other item we wish to mention: In the amendment of the Board of Health law, Section 5, page 175, March JOURNAL, there is a clerical error, which is due to the carelessness of one of the many clerks through whom the bill passed. The clause referred to now reads: "*These Boards shall be composed of the physicians who shall have complied with the laws of the State in regard to the practice of medicine and surgery, or have a diploma from a regular medical college.*" The amendment read originally: "In those counties where there are not as many as five licensed physicians," this sentence preceding the above italicized clause.

The Durham meeting will be a large one, and the Board of Examiners will meet early enough to examine the large number of candidates to be present.



Evaporation of suspected urine on a bright piece of tin, and heating the residue sufficiently, will develop the odor of burnt sugar if it be present. Hint from Dr. Groom, of Ia., in the *Medical Record*.

THE SOCIAL FEATURES OF THE MEETINGS OF THE STATE MEDICAL SOCIETY.

We trust that the Durham Committee of arrangements will see to it that the time of the Society is not wasted in the round of social entertainments, which have marred the last two meetings. Let us not be guilty of the folly of cutting short our meetings to suit a schedule for banquets or anything else. If it can be arranged to enjoy hospitalities after business, that is well enough, but we must show a better scientific outcome before we can be satisfied to surrender our most important hours of meeting to entertainments. We know that there are a large number of members of our way of thinking about this matter, and it is well that the local committee should understand it in time.

THE PROGRAMME for the Durham meeting must be arranged so as to give the morning of the second day—the 20th of May it happens to be—for the business of the State Board of Health. The law requires that elections for members of the Board shall take place on the second day of the meeting. See Section 7, page 175, *March Journal*.

SHAKSPEARE'S PHYSICIAN.—In the churchyard at Fredericksburg, Va., is a tombstone on which may be deciphered these words :

“Here lies the body of

EDWARD HELDON,

Practitioner in Physics and Chirurgery. Born in Bedfordshire, England, in the year of our Lord 1542. Was cotemporary with, and one of the pall-bearers of William Shakspeare, of the Avon. After a brief illness his spirit ascended in the year of our Lord 1618—aged 76.”—*Medical Record*.

A CLINICAL TEST OF LEAD POISONING.—A young man was presented before the Académie Royale de Médecine de Belgique, with plumbism, whose skin when painted with monosulphide of sodium or sulphide of ammonium, gave “well-marked lead reâction (black stain). The editor of the *Philadelphia Medical Times*, says that this is not new, but is in accordance with the observation of Pereira.

CURRENT LITERATURE.

SOME VALUABLE SYMPTOMS OF DISEASES AMONG CHILDREN.

The diagnosis of many diseases of childhood being manifestly more difficult than that of affections of the more advanced phases of life, all suggestions tending to enrich their symptomatology have a just claim to our consideration. Dr. Politzer, of Vienna, the well-known authority on diseases of children, has published in the *Jahrbücher für Kinderheilkunde* an essay on the "Value of certain Symptoms of Infantile Affections" which has created a just and widespread interest. He epitomizes his conclusions in the following terms :

1. A strongly nasal or guttural sound audible when the child cries, is indicative of retro-pharyngeal abscess. The posterior wall of the pharynx should invariably be examined with the index finger, when in many cases the presence of an elastic tumor will confirm the diagnosis.

2. A noisy and slow expiration, lasting ten or fifteen times as long as normally, points, in absence of any other disease, to chorea major. This symptom, which is very characteristic, presents itself for several consecutive weeks, always at the same hour, repeating itself every seven or ten seconds. This prolonged and blowing expiration may be for months the only appreciable symptom of the affection, and disappears rapidly under the influence of large doses of quinine, but can reappear and be gradually followed by other symptoms of chorea major.

3. An inspiration which is constantly of a sighing nature, indicates the approach of cardiac marasmus and of paralysis of the heart. This symptom presents itself previous to the appearance of cyanosis, pallor of the face, and the feeble, thread-like pulse indicating the gradual failure of the circulation. This sighing respiration, in opposition to the choked respiration of croup, of pneumonia and of œdema of the glottis, is not characterized by a strong contraction of the diaphragm, nor by abdominal breathing, but by a soft and continuous sigh. Whatever may be the cause which determines the cardiac paralysis, which is often caused by drugs (heart-poisons), such as

quinine, salicylic acid, pilocarpine and digitalis, this respiratory symptom deserves great attention and occasional therapeutic treatment. The same symptom, Politzer adds, he noted in fatty degeneration of the heart in three cases.

4. A very marked diaphragmatic respiration, attended by loud and sharp whistling, denotes bronchial asthma. A similar symptom occurs sometimes in croup (where it is generally accompanied by a forced and choked respiration), and in capillary bronchitis. Other signs, however, such as loud râles without a nasal sound, the rapid development of pulmonary emphysema, the sudden appearance and disappearance of dyspnœa, and chiefly the notable remission of dyspnœa and whistling respiration during profound sleep, will aid in establishing the diagnosis.

5. The existence of a pause between the end of the expiration and the beginning of the following inspiration renders the existence of a very marked laryngeal catarrh or of croup very probable. In croup inspiration and expiration follow each other generally very closely, whilst in laryngeal catarrh we can often observe a pause between the two respiratory acts, by the repose of the diaphragm and larynx,

6. This noisy expiration with a long pause, existing since birth (stridulous respiration), which is occasionally interrupted by a spasm of ten or fifteen minutes, but which otherwise exists uniformly day and night, in sleeping and waking, is of no consequence and usually ceases spontaneously within eight months. Politzer thinks we have to deal here with a modification of innervation within physiological limits, analogous to the irregular cardiac contractions occurring during the first year of life.

Equally valuable are Politzer's conclusions regarding the symptomatology of nervous affections:

1. A notable somnolence manifesting itself without fever, and, so to speak, without any trouble, points, if lasting several days, to meningitis of the brain. The vomiting, the fixed cephalalgia, and finally the slow and irregular pulse, do not have so great a diagnostic value as the somnolence, as they may occur in several transitory and even extra-cranial troubles.

2. The anterior fontanelle notably raised beyond its normal level, but resisting and non-compressible, points to an exudation into the cranial cavity, or an increase of the cranial contents, such as in purulent meningitis of the convexity, cerebro-spinal meningitis, acute or

chronic hydrocephalus, large tumors, acute cerebral œdema and intermeningeal apoplexy. If it be an increase in vascularity, an active hyperæmia, the anterior fontanelle would remain soft and compressible. If the fontanelle be gradually raised, prominent like a corner and resisting, but without a trace of pulsation, we can be reasonably sure of having to deal with a profuse intermeningeal hæmorrhage, i. e., an apoplexy. An anterior fontanelle greatly depressed, with a concomitant depression of the eyes, indicates anæmia, resulting either from a profuse loss of the liquids of the body or from general marasmus.

3. A very slow movement of eyes and eyelids, the former remaining fixed for a long time, is a symptom of approaching basilar meningitis.

Of equal interest and value are Politzer's diagnostic suggestions respecting certain peculiar cries uttered by children in various ailments :

1. A sharp, intense cry uttered during sleep, every half-hour or hour, with a simultaneous expression of extreme anguish in the face, denotes simply nightmare, which can readily be prevented by a four-grain dose of quinine administered an hour or two before bed-time.

2. A periodical cry which often lasts five or ten minutes and is repeated frequently during the day and occasionally at night, leads to the suspicion of vesical spasm, provided colic and dyspepsia can be excluded. An emulsion of lycopodium, with or without the addition of belladonna, will give prompt relief.

3. A cry uttered during defæcation, associated with a dread of this action and even refusal to perform it, ought to prompt a search for anal fistula. Surgical interference and an ointment of zinc and belladonna will usually lead to a speedy cure.

4. An intense, almost continual cry, bespeaking great pain, denotes otitis, if the child moves its head restlessly on the cushion and puts its hands often to its head.

5. A cry uttered almost incessantly for days or weeks, and which grows more intense on moving the limbs, and is associated with a continuous fever and profuse perspiration, is an indication of acute general rachitis.

In conclusion, our author enumerates some other peculiar symp-

toms of several affections, which might serve as useful guides in determining their diagnosis :

1. The special physiognomy of children suffering from congenital syphilis consists in a depression of the bridge of the nose, a greyish discoloration of the skin, absence or scarcity of the eye-lashes, a yellowish border of the eye-lids, and, finally, the well-known mucous patches on the lower lip.

2. A notable feebleness and marked immobility of the limbs, which do not refer to an apparently slight or passing affection, will, after a certain length of time, assure the diagnosis of infantile spinal paralysis. Whenever the premonitory symptoms, such as fever, dyspnœa, convulsions—symptoms which, especially in nursing-children, require at all times special attention—make their appearance, the condition of motility and sensibility will be a sufficient warning of the coming danger.

3. After certain affections, such as cerebro-spinal meningitis, we ought to assure ourselves that no diminution of the visual powers, which often results from a circumscribed meningitis on the floor of the fourth ventricle, has taken place.

4. A depression of the intellectual activity in little children subsequent to the grave infectious fevers, such as typhus and typhoid, and meningitis, constitutes often the beginning of acquired idiocy: strychnine exercises an advantageous influence in these cases. The habit of keeping the hands constantly before the eyes, and of looking at them without a motive and in an automatic fashion, raises the suspicion of congenital idiocy.

5. A cranial ossification delayed beyond the physiological limits denotes rachitis.

6. A stiff and troublesome carriage in walking, sitting or bending ; a painful expression in the face when attempting to lift anything in playing, denote the initiation of Pott's disease. A laboring respiration and incessant stomacic and abdominal pain usually precede this affection for five or six weeks.

7. Persistent vomiting occurring at the ingestion of all victuals for several weeks, in children whose cranial bones are completely ossified, but whose head has an abnormally large circumference, denotes that chronic hydrocephalus has been superseded by acute hydrocephalus.—*Therapeutic Gazette.*

TREATMENT OF RHEUMATISM WITH OIL OF GAULTHERIA.

In spite of the fact that salicylic acid and the salts may be regarded almost as specifics in the treatment of rheumatic affections, they nevertheless fail in a certain number of cases of producing any decided curative effects, while their use is likewise also frequently attended by many inconvenient symptoms. The title of an article by Dr. H. H. Seelye (*New York Medical Journal*, November 3 and 10, 1884), of "A New Specific for Rheumatism," might naturally, therefore, be expected to attract a great deal of attention. We find that Dr. Seelye has been using the oil of gaultheria for the last eighteen months in the treatment of various types of rheumatism in the wards of the Bellevue Hospital in New York, and he states that the results which followed us have been so surprising that it now is his main reliance in the treatment of all rheumatoidal affections.

This drug has also been given in a large number of cases of acute articular rheumatism in the Jena hospital, and it there also proved to be possessed of nearly as great and as prompt curative powers as salicylic acid, though having with the latter the objection of causing ringing in the ears. Prof. Rossbach, who makes this statement (*Deutsche Med. Zeit.*, December 24, 1884), could not understand how the drug was given by American practitioners as a stomachic, as it appeared to derange the digestive apparatus and destroy the appetite.

Prof. Senator also states (*Berliner Klin. Woch.*, January 5, 1885) that he has employed this oil in a number of cases of rheumatism and finds that it is *almost* as effective as salicylic acid, though it is by no means free from the disagreeable features of the latter.

The patients, according to Dr. Seelye, almost invariably experience great relief; and, in nearly all cases, in twenty-four hours the pain and swelling have left all the joints, except perhaps one articulation, and there would only remain a slight stiffness in the previously inflamed parts. It appears, however, that the oil of gaultheria so administered produces ringing in the ears and dizziness, with headache and a sensation of fullness in the head. If the drug is

persisted in after the occurrence of these symptoms, the evil effects become still more marked; the patient would then experience a loathing of the drug; nausea and vomiting would set in, and dizziness, tinnitus aurium and headache would increase; the muscles of the hands, limbs and face would become tremulous, skin flushed, and the whole body bathed in a profuse perspiration; at length the patient would become delirious, the symptoms in some instances closely resembling those of delirium tremens. It must be acknowledged, however, that these severe symptoms are stated to be exceptional; in a large majority of cases only a little ringing in the ears would be complained of, and this would soon cease upon the diminution of the dose or complete withdrawal of the drug.

The similarity between these symptoms and those produced by salicylic acid is most striking; particularly when we read that Dr. Seelye states that these extreme symptoms above alluded to almost invariably occur in patients who had been drinkers, while it is well known that salicylic acid also acts in a very unfavorable manner upon drinkers, violent delirium being the early symptoms of its influence. Further, we have other grounds for believing that there can be little doubt that these effects are to be attributed to the salicylic acid which is contained in the oil. In 1875 Prof. Proctor first proved that the acidity of the oil was due to the presence of this acid, and M. Cahours has confirmed this statement, showing that one-tenth of the oil consists of a peculiar hydro-carbon, which he called gaultheroline, the remaining nine-tenths being composed of methyl-salicylic acid, an acid which forms crystalline salts, which, when subjected to heat, are resolved into salicylic acid and wood spirit. The presence of salicylic acid in the oil is further shown by the fact that it develops a red color with ferric salts. It would then seem clear that the oil of gaultheria owes its value in the treatment of rheumatism to the ninety per cent. of salicylic acid which it has been found to contain; the question, however, arises, is there any advantage in giving salicylic acid in the form found in oil of gaultheria over its use as a salicylate?

Dr. Seelye attempts to answer this in the affirmative by publishing a table, in which he contrasts the results of the treatment of rheumatism by the oil of gaultheria and salicylic acid, though he does not seem to be aware that the curative effects must in both cases be attributed to the same agent, and the only question can be

as to the convenience of administration. This point has been very slightly touched upon, though from what we can gather from Dr. Seelye's paper, its advantages are as great, if not greater, than those of the salicylic acid as ordinarily given, and the curative results in his comparative table are so nearly identical as not to need attention. Prof. Senator, however, who appreciates the fact that in giving this oil we are only salicylic acid, points out one advantage in giving this otherwise superfluous drug, namely, that in the few cases where patients refuse to take salicylic acid, oil of gaultheria may be substituted and the patients thus receive salicylic acid without knowing it.

There is one point, however, in Dr. Seelye's paper which should be noticed ; that is, that in the treatment with oil of gaultheria six deaths occurred, and all of these patients "had unmistakable symptoms of acute alcoholism, which symptoms there is no reason to believe were induced by the oil of wintergreen." The error in the latter portion of this sentence is too serious to be overlooked. Dr. Seelye has himself already called attention to the fact that the symptoms produced by the use of this oil in drinkers simulates delirium tremens, and, as is well known, salicylic acid is most dangerous to drinkers. No one would therefore think of continuing the use of salicylic acid in drunkards, and the belief that in oil of gaultheria we have a "new specific for rheumatism," should not lull us into a false security in similar cases.

Finally, Dr. Seelye's statements as to the sedative effects of local applications of oil of gaultheria to inflamed joints is evidently to be explained by a cutaneous absorption of the salicylic acid contained in this oil, since similar applications, made by Dr. Randolph and Mr. Dixon with solutions of salicylic acid, produced the same effect, absorption of the acid being proved by its detection in the urine.—*Therapeutic Gazette*.

ELIMINATION OF STRYCHNIA.—Dr. Peter von Rautenfeld has recently re-examined the questions as to what becomes of strychnia after it has entered the body. He says the alkaloid is eliminated unchanged, and may be recovered in the crystalline form. The *Therapeutic Gazette* believes that a portion of the strychnia is oxidized in the system.

THE USE OF JAMAICA DOGWOOD IN NEURALGIA FOLLOWED BY UTERINE HÆMORRHAGE.

In the *Southern Practitioner* for February, 1885, Dr. C. P. McNab reports having been called to attend a woman, aged 32, about one month after the birth of a child, who complained greatly of severe supra-orbital neuralgia. The process of involution of the uterus had well advanced, and the lochia had entirely disappeared. The pain was relieved by the hypodermic use of morphia, and thirty drops of the fluid extract of Jamaica Dogwood were directed to be taken every hour, should the pain recur, until relief was obtained. As her neuralgia returned in the same evening, the remedy was used as prescribed for four hours, with the effect of relieving the pain altogether. A slight hæmorrhage from the uterus made its appearance, which was attributed at first to the regular catamenial flow, the patient being unusually plethoric, and having menstruated regularly while nursing her last child. She was directed to continue the use of the remedy should the pain return. The next day, severe pain returning in the right orbit, the remedy was again administered and thirty minims repeated in an hour. The pain was then again, for the second time, relieved, but the hæmorrhage was increased to an alarming extent. Fluid extract of ergot was then administered, and controlled the hæmorrhage. Subsequently the Jamaica dogwood and the fluid extract of ergot were combined, and were administered subsequent to this as before for the relief of neuralgia, in each instance successfully and with no further trouble as regards the production of hæmorrhage. Dr. McNab points out that, although this remedy is most successful in curing neuralgia of the fifth pair of nerves, it must be administered with caution in all cases where uterine hæmorrhage exists, or where from surrounding circumstances it might be anticipated.—*Therapeutic Gazette*.

WITCH HAZEL IN HÆMATAMESIS.—The fluid extract of this plant is uniformly reliable in cases of hæmatamesis from chronic ulcer of the stomach. It is best given in doses of the fluid extract (15 drops) four or five times a day in flax-seed tea.

MEMBRANOUS CROUP; DIPHTHERITIC CROUP; TRUE CROUP.

The April number of *The American Journal of the Medical Sciences* contains an elaborate clinical study of true croup from the pen of Dr. J. Lewis Smith, of New York. He fully considers the etiology, anatomical characters, diagnosis, prognosis and treatment. Whatever the cause, the anatomical characters, the clinical history and the required treatment are so nearly identical that attempts to differentiate the disease when produced by other agencies than diphtheria from that due to diphtheria, have proved futile and unsatisfactory in localities where diphtheria occurs, except in a few instances, as, for example, when croup has been manifestly caused by swallowing or inhaling some irritating agent.

Dr. Smith holds that inflammation of the laryngeal and tracheal surface, whatever its cause, whenever it reaches a certain grade of severity, may be attended by the exudation of fibrin and the formation of a pseudo-membrane, but such a result more frequently occurs in the inflammation caused by diphtheria than in that produced by other agencies. In diphtheria a moderate laryngo-tracheitis is attended by the pseudo-membranous formation. Dr. Smith's experience leads him to believe that not more than one in eight cases of croup has recovered by medicinal treatment which began in the first week of diphtheria, and in which the symptoms were so pronounced as to indicate more or less laryngeal stenosis. The exudation in the first week of diphtheria, or in its active period, occurs so rapidly, and in such large quantity, that no one of the medicinal agents or modes of treatment, which physicians commonly prescribe, is sufficiently prompt in its action to prevent the formation of the pseudo-membrane to an extent that soon endangers life.

Croup occurring in the second or third week of diphtheria, since it is attended by less abundant and less rapid exudation than when it occurs during the acute stage, can be more successfully treated under the persevering use of solvent inhalations, and a larger proportion than one in eight, perhaps one in three, recovers by the early and continuous or almost continuous use of inhalations.

Still the mortality is so large, and the suffering so great in croup,

at whatever stage of diphtheria it occurs, that we cannot rely on the slow action of medicines or inhalations, and surgical treatment is in most instances required to diminish the suffering and afford the best chances for saving life.

Under the head of medicinal treatment he strongly recommends trypsin as a solvent of false membrane. Of calomel he says: "The experience of many physicians justifies the belief that mercury, and especially calomel employed within certain limits in the commencement of a pseudo-membranous inflammation, does exert some controlling action on this disease. That it did much harm formerly when physicians prescribed it as freely as we now pre-employ potassium chlorate, to the extent, in many instances, of increasing the cachexia and causing mercurialism, should not deter from its judicious use. In the ordinary form of diphtheria he would not advise the use of calomel, or would limit its employment to one or two doses of six to ten grains in the commencement of the disease in robust cases. But in croup, since the danger is not from the cachexia or blood-poisoning so much as from the laryngeal stenosis, which is apt to develop rapidly, that medicine is indicated, and should be prescribed, which most strongly retards the exudative process, and aids in liquefying and removing the pseudo-membrane; provided that it produce no deleterious effect which renders its use inadmissible. Hence it is proper to prescribe calomel in larger doses and for a longer time in the treatment of croup, than in other forms of membranous inflammation, if it fulfill the indication, as it seems to in a measure. In his own practice, however, calomel is not prescribed after the first or second day, since Dr. Smith prefers the use of other remedial measures, which are efficient, and are less likely to produce injurious effects. The subject of surgical treatment is also fully discussed, and Dr. Smith holds that we can claim for tracheotomy judiciously performed, and at a sufficiently early stage, the cure of one in every three patients in the average.

ONE DROP OF COCAINE HYDROCHLORATE, 4 per cent. solution, applied on a bit of cotton and put in the ear, will quickly arrest severe earache. The influence lasts from three to six hours.

DR. WEBER ON HYGEINIC AND CLIMATIC TREATMENT OF PHTHISIS.

Strengthening of the Skin.—Weakness of the skin is one of the prominent features, as well in the tendency to phthisis, as in the developed disease, and ought always to be taken into consideration, and remedied, if possible. A slight change of external temperature, or exposure to a slight draught, a change of clothing, is apt to produce chill, which, by reflex action, is thrown on the lungs; it is also a frequent source of bronchitis and catarrh of the lungs, and also of digestive derangements and a great obstacle to recovery in phthisis. Constant exposure to the open air and exercise are the best tonics for the skin, and often suffice by themselves; but, in many cases, these must be combined or preceded by the judicious use of hydrotherapeutics. The skin has never been altogether neglected in England, either by medical men or by the public; while, on the Continent, the neglect was incredible, and is still so in many localities; hence systematic hydrotherapeutics have had their origin on the Continent; and in the treatment of phthisis, too, Brehmer was the first to introduce them with special modifications—namely, powerful cold douches to the chest, of very short duration. Unger, Spengler, Dettweiler, and others, have continued and modified this system. Jaccoud, Sée, and other French physicians, are powerful advocates for hydrotherapeutics. Much benefit is, no doubt, obtained by well adopted procedures; but they require most careful management by the physician. Even the ordinary treatment of the skin, in itself, ought to be guided by the physician, who will not only examine the state of the skin, but also the condition of the heart and circulation in all its bearings; the degree of reactive power must be cautiously appreciated and gradually raised. In great weakness, dry-rubbing by an attendant, of one part of the body after another, is all that can be done; then rubbing of the chest with a moist towel, and dry-rubbing afterwards; later on, a very rapid sponging with tepid, and again later with cold water, followed by a short return into bed, and a light warm breakfast. It requires already a considerable degree of reactive force to bear with advantage, on rising in the morning, the sponging of the whole body by cool or cold water, followed by brisk friction, as

daily practised by the majority of us in health, and forcibly recommended by J. Henry Bennet, whose views on the hygiene in phthisis have exercised good influence. A rapid plunge into cold water is, in many cases of fair reaction, the best plan; in others, a very short shower-bath; and, again, in others, a tepid bath for a couple of minutes, followed by a momentary cold shower or plunge into cold water. Many sound hints on bathing, and on the management of the skin, may be gathered from the editor of the *Book of Health*, in his article on the skin.—*British Medical Journal*, March 28.

THE OFFICIAL AQUA CREASOTI, or Creasote Water, is so important a preparation for one special use that it is well to notice it in order to emphasize that special use. It is a simple 1 per cent. solution of wood creasote in water, and, like similar solutions of carbolic acid and of cresol, it is a most effective local anæsthetic, and topical dressing to burns and scalds. It is no better than the solutions of carbolic acid, or of coal-tar creasote, for this purpose, but is quite as good, so that whichever is most accessible or most convenient may be used. This creasote water, as made by the above formula—or diluted with an equal volume of water, or with more water for delicate surfaces in women and children—and applied by means of a single thickness of thin muslin, or worn-out cotton or linen, such as handkerchief stuff, and the application renewed from time to time, as the return of pain requires it—will relieve the pain of burns and scalds in five to ten minutes, and will maintain the relief as long as the applications are properly renewed, or until the painful stage is over. It is also very effective as a local anæsthetic for general use in all painful conditions which affect the surface only, such as the pain of erysipelas. The numbing effect of these phenols upon the skin is very promptly reached, and can be carried to almost any degree that is desirable, by simple management of the strength of the solutions and the mode of application. They are true anæsthetics to the skin, while the much lauded cocaine is not. This statement has been published so often during the past twenty years, and the treatment has been so effective in so many hands, the old and comparatively useless and hot dressings, such as carron oil, white lead ground in oil, flour, liniments, etc., or the newer application of solution of bicarbonate of sodium.—*An Ephemeris of Materia Medica, etc.*, March, 1885.

CORRESPONDENCE.

 FISTULA IN ANO—DOUBLE HYDROCELE—OBLIQUE
 INGUINAL HERNIA, WITH HEMATOCELE—HEMOR-
 RHAGE FROM THE NOSE.

By W. C. GALLOWAY, M.D., Snow Hill, N. C.

On the 13th day of last March I operated upon a negro man, 21 years old, for fistula in ano. The fistula made its exit a half inch from the left margin of the anus, and entered the rectum an inch and three-quarters above. Having just lost my probe, I explored the track with a small grooved director, the index finger of my right hand being oiled and introduced into the rectum. I withdrew the director and inserted a hernia knife, turning the cutting edge towards my finger. The internal opening being small, I made gradual pressure upon the knife until it pierced the bowel and came in contact with my finger; I then withdrew finger and knife together, cutting through skin, sphincter and gut at one sweep. Injected a weak solution of carbolic acid between the cut surfaces, and in two weeks the cure was perfect. Have operated for fistula with elastic ligature, but it is more tedious than the excision process. I, however, like either plan.

On the 14th of March a gentleman, aged 48, presented himself, suffering with a prodigious double hydrocele of fifteen year's duration, caused, so he said, by a sudden fall upon some scantling. The scrotum was stretched to its fullest capacity, and the penis, that wonderful mystic rod, the *sine qua non* of his existence, was like the head of a scared terrapin—so well drawn in that it was invisible. In fact, it presented only a cavity. The patient was a votary of Bacchus, and he had just gulped down a half pint of strong brandy, because, as he had explained, he did not want me to give him any chloral, morphia or chloroform. I placed him in a chair and took a medium-size trocar and plunged it into the right apartment, allowed the serum to escape, and then injected the tunica vaginalis with three drachms of concentrated tincture of iodine, which, on being well shaken in the bag for three or four minutes, was emptied. I then operated in the same manner upon the left side.

Patient suffered considerable pain from the injections, and I was compelled to administer nearly or quite a grain of morphia to compose him. On the second day he had some symptoms of peritonitis, which subsided in the course of six or eight days, and patient made a beautiful recovery. Before operating I had some misgivings in regard to using the strong injection of iodine, because some of the best authors, among them Ashurst, if I remember correctly (his work is not in my library), state that there is risk to run on account of the communication existing between a double hydrocele and the peritoneum. If I should have another case similar to the preceding, I think I should be tempted to operate by puncturing the scrotum into the tunica vaginalis with a trocar, passing it, after entrance, downwards and outwards again. I would then withdraw stylet and run a coarse thread through the canula, extract the canula, and allow the thread to remain until a cure was effected. If this procedure failed, I should then boldly attempt first plan, and risk the peritoneal complication. For unilateral hydrocele I do not think the tincture of iodine could well be improved upon. In three operations upon young children simply emptying the sac was sufficient.

March the 19th my friend, Dr. Powell, sent for me to see a patient of his, aged 45, suffering with an irreducible, right oblique, strangulated hernia. The rupture had from time to time given him trouble for many years. The man was taken suddenly on the afternoon of the 18th while engaged in violent exercise. On the same day Dr. Powell thoroughly chloroformed him, and used taxis and other expedients to no purpose. We concluded to try taxis again, but before doing so we prepared everything necessary—instruments, sponges, ligatures, etc., in case we failed, to operate without further delay. Dr. Powell anæsthetised him, using $\frac{2}{3}$ ether and $\frac{1}{3}$ chloroform. Taxis was tried unsuccessfully for a half hour. I then shaved the parts and made an oblique incision $3\frac{1}{2}$ inches long from without downwards and inwards towards the pubis immediately over the hernia, cutting through skin and superficial fascia.

The different coverings were carefully cut, partly upon a grooved director and partly with the handle of a scalpel. After the sac was exposed I made a halt to explore, wishing, if possible, to return the hernia without dividing the sac. Running my finger around the internal ring, I could feel no obstruction, and yet I could not effect

reduction. With a pair of forceps I held up the sac, snipped it with scalpel, inserted a director, and slit it up. I again searched for the constriction with my finger, which I could carry far enough into the abdominal cavity to feel the pulsations of the external iliac artery, but still the impediment could not be detected. The gut was closely examined and found healthy, and the epiploon, which was of considerable size, was rigidly inspected, and a small portion, about as large as the first joint of my thumb, was partly mortified. Here, of course, was the clue to the constriction. The gut was involved in the strangulation, and the epiploon was so tightly tied down by two small bridles (the epiploon swelled out on either side of the bridles) as to entirely conceal them; and when my finger partly circled the ring it came in contact with only a smooth surface, "simply that and nothing more." So very tense were the bridles that my finger could not be insinuated between them and the epiploon, so I was forced, though they were deeply situated, to divide them on a director. The diseased epiploon was pinched off, and, after dividing a few bands at the external ring where there was also a slight stricture, the hernia was returned without any further difficulty. The scrotum we found to be filled with a large quantity of sanguineous fluid, which we took to be a hemocele. This escaped readily through the external ring by making gentle but firm pressure upon the scrotum. After sponging the wound nicely with a 5 per cent. solution of carbolic acid, we closed it by putting in four interrupted silk sutures, leaving, however, the inferior edge open to allow of free drainage. A compress smeared with cosmoline was then placed over the cut surfaces and the usual bandage adjusted. Directed bowels to be locked for two days and to be evacuated by using an enema of soaped warm water. I saw the patient no more, but Dr. Powell, who visited him daily, came to my office ten days after the operation and said that the gentleman's pulse never rose above 85 (his pulse was naturally slow), and his temperature did not at any time reach beyond 100. Not one single untoward symptom supervened. The party is now able, by the aid of a truss, to go wherever he desires.

I have had three severe cases of hemorrhage of the nose to arrest by plugging the posterior nares with sponge. Ragweed, that Dr. Hill extolled so highly at the Tarborough Convention, did not stop them, nor anything else short of plugging; though in justice to the dear, lamented, potent ragweed (do give me a better and a more scientific

name for the homespun plant), I must confess that it seemed to do some good in one case.

I prefer a gum catheter (male) to any other instrument for the purpose of conducting the threads through the channels, and my index and middle fingers to forceps for pulling the catheter through the mouth.

NOTES OF A COUNTRY DOCTOR.

To the Editor of the North Carolina Medical Journal:

A NEW GALACTAGOGUE.

The discovery of any medicine, article of diet, or mode of treatment which will increase the flow of milk in nursing women, will be hailed with pleasure by the profession, and should be placed on record. The following case is given for what it is worth, and with the hope that the fruit will be further tried and the results published. No attempt is made to explain the physiological action or the *modus operandi* of the fruit. The writer does not recollect having seen this treatment alluded to by any author.

Mrs. R., at 25, is the mother of three living children. In the infancy of the two older ones the flow of milk was plentiful—almost excessive. The third child was born in September last. When the babe was a week old she noticed that the flow of milk was not as free as usual, and that the child seemed hungry, even after nursing. Under medical advice she took various remedies, rich diet, fluids in quantity, and though her general health was perfect, tonics were prescribed, all to no purpose. It was finally decided to supplement the child's nourishment with cow's milk. Six ounces of milk diluted with an equal quantity of water and sweetened with sugar, were given in the twenty-four hours. As this constipated the child's bowels, two to four ounces of corn meal gruel were given every morning. Under this treatment the child thrived for three months. The mother, in spite of all treatment, did not increase in the quantity of milk. In December a relative living in Florida sent Mrs. R. a box of oranges. Two days

after their reception she noticed an increase in the flow of milk, and expressed the opinion that eating oranges caused it. I had never heard of this fruit as a lactagogue, and asked her to suspend the eating of oranges for a few days to test the matter. This she did, and found that the milk did not flow so freely. She commenced the use of oranges regularly, three a day, as long as her box lasted, with a plentiful flow of milk all the while.

Mrs. R. is now visiting in Florida, and writes me that if the orange crop holds out, she has no fears as to the baby's support.

A PHYSIOLOGICAL ENIGMA.

M. was a rather delicate child, aged 1 year. She was disposed to pick and eat grains of sand, pebbles, etc., and her nurse had noticed that if common starch, such as is used for laundry purposes, was given her, she had no desire to eat sand. The mother was warned by two physicians of the danger of allowing her child to eat starch—was told that a child of that age could not digest starchy foods, and that it was dangerous to give the raw article in that manner. Without her daily handful of starch the child was peevish, fretful and running down; with it, she was bright and cheerful, and digested it well, contrary to all physiologists I ever read after.

P. S.—Mrs. R. has returned from Florida after a three months visit. She brought a quantity of oranges, but does not find as much necessity for them now as formerly, several days sometimes elapsing without her eating an orange. Again, if the flow is not at any time free enough, a couple of oranges will in one to two hours increase it to an abundance. It was intended to try the effects of kindred fruits, as the lemon, lime, etc., in the shape of *'ades* (lemonades) on the flow of milk, but she is now giving it freely enough for all purposes without any treatment, and the trial in this case would hardly be a fair one.

SALICYLATE OF SODA ON THE UTERUS.—M. Bapette says that salicylate of soda may prove very useful in dysmenorrhœa, relieving the pain and facilitating the discharge. Given in doses from one drachm to one and a half drachms it produced marked relief in three cases within an hour.—*Therapeutic Gazette*.

ATTORNEY GENERAL DAVIDSON'S CONSTRUCTION OF
THE NEWLY AMENDED LAWS REGARDING THE
PRACTICE OF MEDICINE.

In response to a request addressed to the Attorney General, the following opinion was given, which we lay before our readers at the earliest moment :

NORTH CAROLINA,
ATTORNEY GENERAL DEPARTMENT,
RALEIGH, April 21, 1885. }

THOMAS F. WOOD, M.D., *Secretary North Carolina Board of Health, Wilmington, N. C.:*

DEAR SIR:—The *Proviso* in Section 3,122 of "The Code" was stricken out by Chapter 117, Section 1, Laws 1855. By Section 2 of the same act Section 3,132 of "The Code" was amended by making "the practice of medicine or surgery, without having obtained license from said Board of Examiners," a misdemeanor, punishable by fine not less than twenty-five, and not more than one hundred dollars, or imprisonment, at the discretion of the court. Chapter 261 Laws of 1885, further amends Section 3,132 of "The Code" by adding the words: "*Provided* that the Section shall not apply to physicians who have a diploma from a regular medical college prior to January the 1st, one thousand eight hundred and eighty."

Section 5 of Chapter 237 of Laws of 1885, entitled "An Act Relating to the Board of Health," provides that the County Board of Health shall "be composed of physicians who shall have complied with the laws of the State in regard to the practice of medicine and surgery, or have a diploma from a regular medical college."

From a perusal of these provisions the following conclusions seem to me to be irresistible :

1. No person is eligible to the position of a member of the County Board of Health who cannot lawfully practice medicine or surgery in this State.

2. It is unlawful for any one to practice medicine or surgery in this State who has not been duly licensed therefor by "the Board of Medical Examiners of the State of North Carolina;" but persons who, prior to the 1st of January 1880, have received a diploma from a regular medical college, need not be licensed.

I am, sir, very truly yours,

THEO. F. DAVIDSON, Attorney General.

PROGRESS OF MEDICINE.

TRACHEOTOMY in diphtheria saves but few persons who take the disease in severe epidemics, according to Dr. Jacobi; this opinion is founded upon fifty consecutive unsuccessful tracheotomies during a period of two years.

THERE are more men in the country to-day who would seize the first opportunity presenting to get out an ovarian tumor, or an ovary, than there were thirty years ago who would have been willing to cut a tonsil.—*Emmett*.

A CASE of *pernicious anemia* recovered under the treatment of Dr. Guy Hinsdale, as reported in the April number of the *American Journal of Medical Sciences*. The case extended over two years, terminating in normal blood count and full bodily vigor.

TO DETERMINE NITRATES IN DRINKING WATER.—Evaporate one or two cubic centimètres of suspected water to dryness in a capsule, adding half a cubic centimètre of a solution of brucia and ferrous sulphate, then, dropping in ten drops of sulphuric acid, and comparing the red tint formed with a similar one formed by a standard solution of potassic nitrate.—*Hatfield Walker in British Medical Journal*.

NITRATE OF AMYL IN ARRESTING CONVULSIONS.—Dr. Eustace Smith speaks highly of the influence of this drug over convulsions. The remedy may be given by the mouth or by inhalation. To infants six or nine months old, one-quarter of a drop may be given in mucilage three or four times a day: the inhalation of a single drop will often speedily arrest an eclamptic seizure, even when dependent upon cerebral disease. He gives it without fear of danger in young children.

INHALATION OF TINCTURE BENZOIN IN INFLUENZA AND CATARRH. Upon the suggestion of Mr. Kebbell, Dr. Brydon has used tincture benzoïn in nasal catarrh by inhalation, and the relief he obtained in a short time was remarkable. The uncomfortable tight and stuffy feeling of the nostrils, along with lachrymation and headache, speedily disappeared, and by repeating the inhalation frequently all the unpleasant symptoms were overcome.

TREATMENT OF NEGLECTED SHOULDER PRESENTATION.—In such cases where version cannot be accomplished, and the death of the child is apparent, Dr. Wm. Donaldson, of Llanidloes, recommends the removal of the wedged shoulder by a very simple operation, namely, dissecting a sleeve of skin from the child's arm with the finger, breaking the clavicle with the finger also—or with the blunt hook in exceptional cases—when the entire wedged mass of the shoulder-joint, including the scapula, can be drawn away through the protecting sleeve, and the subsequent version thus greatly facilitated, and attended with much less risk than the forcible introduction of the hand, or traction on the foot after.

CALENDULATED BORIC ACID FOR CHRONIC PURULENT INFLAMMATION OF THE MIDDLE EAR.—Dr. Charles H. Burnett recommends calendulated boric acid by insufflation for the middle ear in cases of chronic suppuration, and it is made as follows: Triturate together equal parts by weight of boric acid and tincture of calendula. Evaporate the calendula down in a water-bath, at a temperature of about 150° F., to a pasty consistence, and then mix with one-half the boric acid; evaporate to dryness, add the other half and triturate. This to be mixed with twice its weight of pure boric acid, and further triturated when it is ready for use. Dr. Burnett gives illustrative cases, comparing the superiority of the dry over the wet treatment.

DIGITALIS IN FEVER.—A high temperature lessens the inhibiting power of the vagus centre in the medulla to such an extent that digitalis, and probably all drugs which act like it on this centre, to a great extent, their power of restraining the heart and slowing the pulse. When the body temperature falls the restraining action of digitalis on the heart is restored. If fever runs high, then we cannot expect from digitalis its usual effect on the pulse rate; but it must be remembered that since the slowing influence of digitalis will come into play when the body temperature falls, doses given at the height of fever may cause undue depression of the pulse rate as soon as defervescence begins. In pneumonia, for example, digitalis has no action on the pulse whilst the fever runs high, but, if given at this time, it induces abnormally low pulse rate and temperature when the crisis begins.—*Medical Chronicle, April 1885.*

MANAGEMENT OF SHOULDER PRESENTATIONS.—Dr. E. F. Wells, of Minster, Ohio, reports in the *Journal of the American Medical Association*, April 11, the conversion of a shoulder presentation with prolapse of cord, into a vertex presentation and restoration of the cord by placing the patient in the “knee-chest” position. His patient was in labor with her thirteenth child, and when he arrived he found the cord prolapsed, the left shoulder presenting at the pelvic brim, the amniotic fluid drained away, the vagina and os uteri swollen, dry, hot and painful. The cord was pulseless, but warm and moist, but had been pulsating only a short time before. He placed the patient in the knee-chest position before proceeding to turn, when he found he could readily push up the shoulder and by external manipulation bring down the head, which was done. Maintaining the parts in position, directing the patient to rise upright on her knees, he soon had the satisfaction of seeing the head engaged in the superior strait. The labor was easily terminated, the child being dead.

CONVENIENT AND EFFICIENT ANTISEPTICS.—We are very much pleased with some disinfecting agents and appliances sent for our examination by Messrs. Parke, Davis & Co., of Detroit. The sample of chlorinated soda is up to the highest standard, giving to the profession and the public, in the best condition, this disinfectant and antiseptic, which recent experiments have replaced at the head of the list. The solution of chlorides slightly odorized with gaultheria affords a most elegant and efficient disinfecting solution for surgical purposes, and in the lying-in chamber. The pastiles of sulphur, also made by this firm, give in a convenient form a means for the evolution of sulphurous acid gas. The pastiles have simply to be lighted with a match, and they burn until all the sulphur is consumed. Another convenience is the prepared blocks for disinfecting urinals and chamber vessels. The material is an insoluble block, saturated with disinfecting substance. It is lasting and efficient. Still another disinfectant is that suggested by Dr. B. W. Richardson, which consists of sulphur, chlorine, bromine and iodine in solution with alcohol, which is burned in a lamp, emitting disinfecting properties. This is a simple portable arrangement, which can easily be made available in every sick room. We recommend these articles with confidence for the sick room and public hospitals. They are all well known substances, but have been made specially available, on an economical scale, by this enterprising firm.

THE PREVENTION OF EPIDEMICS.

[Read in the section of Public Medicine at the annual meeting of the British Medical Association, by Ezra M. Hunt, M.D., N. J.]

In this brief paper I only attempt a syllabus of the method in which we should conduct our inquiries in order to accomplish more in the prevention of epidemics. In dividing up and assigning this study of epidemics, the following are the chief inquiries and observations to be made:

1. What is the *contagium vivum*? As to this, we have to determine in what its entity consists; whether it be particulate or gaseous, whether it be so specific and singular in its character that it is always the same as to quantity or quality; or, if capable of modification, how it can be modified; whether it be always derived, or whether it be produced so as to be in a sense spontaneous. In a word, we must study the contagium so as to know the most possible about it in its own individuality.

It is almost unnecessary to say that the germ theory of disease has immensely broadened this part of our study; but perhaps it is needful to say that the fact that we are nearer than ever before to the identification of certain or most contagia, does not clear up the question as to whether they are derived or spontaneous, or how the benign bacillus becomes malign. It does not settle their origin, and so does not by original dealing with the entity, assure us how we can prevent its existence, and so radically prevent epidemics.

Most contagia thus far seem identified with plant life. We may get lessons as to modes of study from the fact that many communicable diseases seem to have to do with plant life.

It is not surprising that Hallier, Panum, De Barry, Cohn, Thome, Darwin and others who were early in these studies, were botanists, and it has seemed to me that we would have done well, in our study and classification of this infinitesimal life, to have followed still more closely in their methods. The botany and zoology of microscopic parasitic life will doubtless have yet a classification well nigh as extended as that which belongs to life in its more visible forms.

The worker in this field is in a garden of contending vegetations in which it is not enough to say that each spore or germ or seed will produce its kind. *Omne ovum ab ovo* is true enough in animal life, but this does not prove the impossibility of a mule, or of some other

product, or of a disease equally unique in its way. It is a marvel to see how the same seed can be so cultured that its products may be greatly varied, and how marvellous are the hybrids or sports that may result. To me the views of Pasteur do not seem to conflict with those of Bastian, nor does the doctrine of a result in disease, so modified as to almost defy identification, or so crossed as to give a mongrel, or what practically as to treatment is new, at all lean to the doctrine of spontaneous generation as formerly taught. Cholera, typhoid fever, diphtheria, etc., may some day become existences amid intense disturbances of natural processes. Although how generally occurring from derived sources, this does not preclude the possibility of their occurrence locally and sporadically without an antecedent disease—the only antecedent being the same disturbance of natural processes. It is strange that nitric acid and glycerine—the one corrosive, the other emollient—should have been so long handled in the chemical laboratory before nitro-glycerine should have begun to exist. So, from special relationship of ordinary filth and extraordinary atmospheric conditions there probably have come, and probably will come, new diseases, the origin of which we do not define when we find a germ however much it may aid us in diagnosis.

2. Our next study, though allied, is quite distinct. Failing to find the seed or contagium, or destroying it, how shall we make of its *vivum* a case of suspended animation? How shall we sterilize it? I will not here discuss its culture in order to enfeeble it, as this is going on well enough. But I allude to the study of how we may provide it a sterile soil, either in the surroundings or in the person. This involves a close study of each contagium, on what it flourishes best within and without.

While the name filth-diseases is a convenient generalization, we are not exact in our study until we accurately define decompositions, putrefactions, associated animal or plant life, so as not only to affirm, for instance, that vegetable decay causes periodic fevers, and animal excretion typhoid fever, but also to carry the details of observation of facts and of experiment, to an extent which shall enable us to approach the exactness of the botanist, who says the silk-worm thrives best on mulberry, and that the potato-bug has an especial relish for the egg plant. For the prevention of epidemics there is this special field of study as to all the minute conditions or surroundings outside the body. We shall have gained very much when these scientific or expert methods, which are applied by the skillful naturalist, for instance, to

all harmful or poisonous plants or insects, are applied to all embarrassments to our lives productive of disease as found outside and about us.

While the first plan, that of discovering a germ, is radical, yet it is not necessarily indispensable, if we can so apprehend the necessary conditions for propagation so as to circumvent these. Hence students of this second class are not to be discomfited, even if the first study be incomplete.

III. The study of the individual in his relation to the *contagium vivum*, and to his surroundings, is another distinct study, inviting to another class of skilled observers—a laboratory in which minute work is much needed.

1. Under what circumstances does a human being come to be the host of something inimical to him, and prepared for an invasion of something producing disease? It is not enough to say of it that it is its nature to seek or to be communicated to human beings, and to develop into a disease. The fact that some persons, without having had a disease, are proof against its invasion, is a significant one, and worthy of great interest to those who would like to put all in the same restful condition. The fact that once having had a disease protects most from them afterwards, or does not protect some, or, while protecting all, does not protect all for an equal period, cannot but make the epidemiologist very inquisitive to find out the reason, and so put it into effective preventive operation. Watson and others have stated that it is because the disease exhausts its necessary pabulum in the system; but if this be so, the statement is incomplete until we find out what pabulum it has wasted and what it has exhausted. As in the old system of inoculation it was discovered that by diet or by certain preparative treatment, small-pox could be modified in virulency, and the secondary fever aborted, the why and the wherefore should not be given up by the modern medical profession, as it apparently had to be in the former.

2. When, too, we find that, as in inoculation to prevent pleuropneumonia in cattle, we secure an inflammatory reaction, and a constitutional effect through a muscle, and so prevent the fatal attack on a vital organ like the lung by a sort of artificial metastasis, we need to study how much of diversion and limitation of epidemics can be secured by their artificial and preliminary introduction into some part other than that which it seems their habit to attack with

virulence. How much of the modified effect is owing to the mode of introduction rather than to attenuation?

3. Still further, if we know that changes can be so wrought in systems as to make them unreceptive of diseases, as we know to be the fact with many ailments, cannot and do not quinine, alcohol, potassium-chloride, ferric chloride and other anti-microphytes, anti-zootics, or antiseptics cause the blood and tissues to be protected from the invasion while there is exposure thereunto, and so may we not prevent epidemics?

We know by actual experiments and observation that we can see the blood corpuscles multiplying during the administration of iron, and can, with small doses of quinine, potassium-chloride, arsenic, etc., have the sustained presence of these in the blood. There is good reason for thinking that during such presence the blood and tissues become resistant to that multiplying plant life which either directly, or by its overpowering abundance, or by mechanical clogging of blood-paths, constitute the gravity of the disease; also that we can anticipate the action of the introduced contagium and make the system refuse to nourish or propagate the parasite. Thus, either all may escape the prevailing influence, or so many that it cannot prevail among the people, and so cannot become epidemic. This temporary prophylaxis during what, for want of a better term, has sometimes been called an epidemic tendency or constitution of the atmosphere, is most worthy of accurate trial. As to its reality, many corroborative facts from Polli, Parkes, Panum, Bart, etc., can be adduced.

Then, last of all, comes the question of the limitation of diseases in their attempt to become epidemics, and after they have so become, the former being most valuable forethought, the latter being not unimportant forethought. This limitation involves the study of the natural history of every communicable disease in all its minutiae, that we may know its times and seasons, the distance at which it can be propagated, the length of period of its communicability, the secretions or families most likely to convey it, the relation of breath and of air to it, and all other facts which are relative to its transmissibility; and, as a sequel, comes in a study of isolation and of disinfection, etc., as a system of rules and regulations.

Our imperfect knowledge does not hinder us from general rules and methods founded on apparently correct generalizations as to

all communicable diseases, and specifications as to some, so far as we know.

The most inspiring result of what we may call the modern departure in epidemiology, is not so much the conclusiveness or completeness of facts in any one direction as the unmistakable indications of precision in the laws of communicable diseases, these being as accurate as those that obtain in nature, giving us the comfortable persuasion that they are ascertainable and classifiable, although for various reasons difficult of ascertainment, but likely to yield to analytic and statistical methods, and to that tact of experience in observation which can be acquired, but cannot be described :

The chief contentions of this paper are, therefore, as follows :

1. In the study of the *contagium vivum* we are to recognize not only change from culture or attenuation, but, as in plant life and animal life, to recognize manifold changes which may take place, so discursive as to obscure identity, and so as to make what in pathology and treatment what may be a new disease, without involving the doctrine of spontaneous generation.

2. We must give significance to the effect of imparting a disease to the system by channels or modes of introduction different from what may be called its normal method of entrance, and allow for modification of effect from this cause without any real attenuation.

3. We must study closely not only the general effects of surroundings, but the fertilization or rankness which some diseases attain from a compost especially adapted to them.

4. We need, with the same precision and in a similar direction, to ascertain what are the conditions of individuals who furnish in themselves extraordinary soil for communicable disease, or who withstand seizure amid exposure, or have but a mild attack, and to recognize that there are ascertainable reasons for this difference, a definite law of susceptibility.

5. We need to give great prominence to a study of direct prophylactic methods, and such as shall seek, during exposure or the prevalence of an epidemic, to prevent an attack by imparting to the blood and tissues the presence of such substances as shall prevent those changes which an introduced morbid agent would otherwise set up.—

British Medical Journal.

SMOKING AND CANCER.

The *British Medical Journal* very properly reproves the anti-tobaccoists for making capital out of the newspaper reports which attribute General Grant's condition to smoking. Dr. C. Partsch in the *Habilitationschrift*, Breslau, 1883, reports 98 cases of cancer of the lip, and states that amongst the irritants to which might have been attributed the disease, or awaked it from a dormant state, tobacco had little place. Ten of the cases were in women. The fact that cancer often originates in moles and warts, suggests to one that in cancers of the epithelial type, there exists before malignancy a colony of bastard cells, which in some only await irritation to become malignant, in others need no stimulus. In smoking the brunt of irritation is borne by the anterior lateral surface of the tongue. In General Grant's case the cancer is situated at the base of the tongue and palatine arch. If the seeds of disease were already there any stimulating article of food would cause them to sprout as well as tobacco. If the latter alone could change normal cells into malignant ones, the cancer should have been situated in the anterior lateral portion of the tongue.

One year ago I exercised an epithelioma from the left side of the lower lip (where the pipe is held) of a man who had never used tobacco in any shape, whose adjacent teeth were perfect, who did not shave, and had had no injury there. Last December, assisted by Dr. H. H. Mudd, I removed, through submaxillary incision, nearly the entire tongue and the right anterior palatine fold from a gentleman whose case resembles much the published reports of the case of General Grant. Up to date this patient is perfectly well. He had never used tobacco, but dated his trouble from a wound caused by a fish-bone—in fact, he thought, when he applied to me, that I would find a foreign body in the base of the tongue.—*St. Louis Medical and Surgical Journal*, J. C. Mulhall, M.D., Editor.

STAINS ON THE TEETH.—For removing stains from the teeth Dr. A. W. Harlan (*Jour. Am. Med. Ass.*) says: "Adjust a rubber dam, dry the teeth, paint three or four times with the compound tincture of iodine, allowing it to dry; then moisten with stronger ammonia, and wash with peroxide of hydrogen and polish."

ABSORPTION OF SALICYLIC ACID.

From time to time, very interesting and important facts are developed in the Biological Laboratory of the University of Pennsylvania. Drs. N. A. Randolph and Samuel G. Dixon have recently published a suggestive note on the absorption of salicylic acid (*The Medical News*, February 14, 1885).

Salicylic acid, rubbed up in a thin paste with olive oil, was applied to the uninjured skin in seven cases of rheumatism. In each of the seven cases the presence of the drug in the urine was demonstrated by the ferric chloride test. Existing rheumatic attacks were relieved in six cases; a negative result was obtained in one case.

The constitutional impress of the drug was obtained by application to the axilla, side of the chest and the affected joint, Drs. Randolph and Dixon are inclined to believe that the remedy has a specific local effect.

The drug proved an irritant to the skin in but one case.

The advantages of the exhibition of salicylic acid by the skin are numerous and important. The irritant effect of the remedy upon the gastric mucous membrane, and its disagreeable taste, frequently contraindicate administration *per os*.

This subject is worthy of thorough investigation. Quinine has been exhibited by injunction for a long period of time. Absorption, however, is neither so rapid nor so certain, moreover, the local action of the drug on the skin is of a highly irritant character.—*Journal and Examiner*, March, 1885.

SUCCESSFUL TREATMENT OF THREAD-WORMS.—Dr. Millard, of New York, in a communication to the *Medical Record*, calls attention to the fact that the habitat of the oxyuris, or thread-worm, is not the rectum, but, as pointed out by Cobbold, in the colon, and especially the cæcum. In the treatment of a case of a lady 23 years of age, after injections and local treatment had entirely failed, he obtained a rapid cure by administering forty-five drops of Parke, Davis & Co.'s fluid extract of pomegranate-root before each meal; santonine (gr. iss-ij) between meals and at bedtime, with sulphate-of-soda-waters (Pullna, Marienbad) before breakfast, to cleanse the mucus from the intestinal tract.—*Medical Times*.

THE RESULT OF THE FIRST EXAMINATION OF THE VIRGINIA MEDICAL EXAMINING BOARD.

We learn from the *Medical News* of the 25th of April, that there were two candidates for license examined prior to a meeting of the Board—one was accepted, the other rejected.

At the recent regular session there were twenty-five applicants before the Board, all but one of whom were graduates; of this number nineteen passed a satisfactory examination and six rejected. The rejected applicants are required by law to wait three months before they can again apply for examination.

The Board is desirous to correct a prevailing impression in some quarters that the examination of *graduates* would be a mere matter of form, and trust that the recent examinations will prove that this view is altogether erroneous.

BABYHOOD: Devoted exclusively to the Care of Infants and Young Children and the General Interests of the Nursery. Published at Spruce Street, New York, at \$1.50 a year, 15 cents a number.

We have received all the numbers of this excellent little periodical, and really must apologize for not telling our readers before how valuable it is. It undertakes to give advice to mothers on all the subjects appertaining to the health interests and sudden sicknesses of the children, together with advice about the wardrobe, and many topics of interest discussed by correspondents. The articles on medical topics are by some of the recognized teachers in the profession, and while divested of technicalities, are far removed from the sensational writing so often met with in newspapers. Send for one number for your wife, and you will see why we consider it the best instructor in household hygienics and "babyhood."

CHLORAL HYDRATE is being substituted for cantharides as a vesicant. The powdered chloral is dusted on ordinary adhesive plaster, gently heated and applied to the part. In ten minutes blisters are produced. The advantages claimed for it are: rapidity of action, almost painless, and free from the bad effects resulting from absorption of cantharides.

OFFICERS OF THE MEDICAL SOCIETY OF NORTH
CAROLINA AND ITS AUXILIARY BODIES.

President—Dr. W. C. McDuffie, Fayetteville.

Secretary—Dr. Walter C. Murphy, South Washington.

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Pathology and Microscopy—Dr. John M. Manning, Pittsborough.

Obstetrics and Gynecology—Dr. H. B. Weaver, Weaverville.

Diseases of Children—Dr. George L. Lloyd, Tarborough.

Materia Medica and Therapeutics—Dr. W. O. McDowell, Sect-
land Neck.

Practice of Medicine—Dr. S. S. Satchwell, Rocky Point.

The following physicians compose the Board of Medical Exam-
ners of North Carolina from 1885 to 1891 :

Surgery—Dr. William R. Wood, President.

Chemistry and Pharmacy—Dr. W. J. H. Bellamy, Secretary.

Anatomy—Dr. P. L. Murphy.

Practice of Medicine—Dr. Willis Alston.

Materia Medica and Therapeutics—Dr. Francis Duffy.

Physiology—Dr. J. A. Reagan.

Obstetrics and Diseases of Women—Dr. A. W. Knox.

The following compose the North Carolina Board of Health :

Dr. J. W. Jones, Tarborough, President.

“ Thomas F. Wood, Wilmington, Secretary and Treasurer.

“ R. L. Payne, Lexington.

“ S. S. Satchwell, Rocky Point.

“ John McDonald, Washington.

“ Richard H. Lewis, Raleigh.

“ Samuel H. Lyle, Franklin, Macon county.

Arthur Winslow, C. E., Raleigh.

Prof. W. G. Simmons, Wake Forest College.

These bodies meet in Durham, N. C., from 18th to 22d May, 1885.

HUTCHISON ON EXTRACAPSULAR FRACTURE OF THE
NECK OF THE THIGH BONE.

In the *Medical News* of December 13, 1884, is a report of an interesting case of extracapsular fracture of the neck of the thigh bone, read at the New York Surgical Society by Dr. Joseph C. Hutchison. A patient, a medical man, aged fifty-six, and of considerable weight, was on August 31 thrown violently from an overturned carriage. Immediately after the accident he walked, with a little assistance, five or six steps. He suffered deep-seated and severe pain in the right trochanter major, which had received the force of the blow. After he had been put to bed it was found, on careful examination by Prof. F. H. Hamilton and two other medical men, that there was no eversion of the limb, and that the foot could be inverted by the patient to a moderate degree. The skin was contused directly over the outer side of the trochanter, and an absence of bruises at any other part of the surface proved that this process had received the full force of the fall. No manipulation was made for the purpose of detecting crepitus. The patient could not raise the heel from the bed, but was able to flex the thigh slightly upon the pelvis by bending the knee-joint. On the following day Dr. Hamilton observed depression of the right trochanter, and an unnatural fulness in the inguinal region, which, with the development of muscular twitchings during the night about the seat of the injury, in addition to the signs previously mentioned, convinced him that there was an impact extracapsular fracture. According to Dr. Hamilton, muscular spasm in this region, after a recent injury, is generally pathognomonic of fracture of the cervix femoris. On the next day the patient was removed to his home, which was two hundred miles distant. No apparatus was applied, as the surgical knowledge of the patient induced him to keep the limb quiet during the journey. He was carried from the hotel to the station on an improvised stretcher, and travelled by train in a private car, in which he lay on a spring mattress, being turned upon his injured side, so that the trochanter major was well pressed upon. At the end of his railway journey, he was removed to his home in an ambulance. The injured limb was treated for three days by lateral pressure against the trochanter by means of a heavy bag of

sand, and application of a suspended weight to the leg, not for extension, but to steady the limb and to relieve muscular spasm. Afterwards Halsted's modified form of Volkmann's splint was applied. Towards the end of the third week a marked painless swelling, unmistakably callus, was noticed in the groin, just outside the femoral vessels, which disappeared in due time. The patient got out of bed on the forty-second day, moved about on crutches on the following day, and was able to walk without a stick on the eighty-fourth day. Eleven months after the injury there was nothing to indicate that the patient had had a fracture of the femur, except diminished prominence of the trochanter major, flattening of the corresponding side of the nates, and an unnatural fulness in the inguinal region. There was no limp, and the motions of the joint were perfect.

In this case, Dr. Hutchison points out, two of the most important signs of fracture of the neck of the femur, whether impacted or not, were absent. There was no pain on pressure over the trochanter, and no eversion of the limb. Outward rotation of the limb, in this class of injury, is the rule, but exceptional cases have been recorded in which the limb was inverted, or the position of the foot was normal. The position depends upon the direction of the fracturing force. When this is applied directly upon the outer surface of the trochanter in the direction of the axis of the neck, as in the case here reported, the whole base of the cervix is implanted into the trochanteric portion of the femur, and the limb will retain its natural position. In considering whether this was a case of fracture or of some injury which did not involve the integrity of the bone, Dr. Hutchison alludes to the difficulty that sometimes attends the diagnosis of fracture of the neck of the femur, and to the facts that most of the symptoms of fracture may be present in cases in which the neck of the femur is uninjured, and, on the other hand, that fracture may be unaccompanied at first by the more important of the usual diagnostic signs. In the case under consideration the pathognomonic symptoms of fracture were, firstly, depression of the trochanter major on the injured side; secondly, the spasms or twitchings in the muscles surrounding the joint during sleep; and thirdly, the deposit of callus, towards the end of the third week, in the groin, on the outer side of the femoral vessels, and just below Poupart's ligament.

In the treatment of any case of suspected impacted fracture of the neck of the femur, the most important point, Dr. Hutchison asserts, is to maintain the impaction. The surgeon should not incur the risk of damaging his patient by instituting any examination in order to produce crepitus, and it is better that malposition of the limb should not be corrected, than that impaction should be broken up by unwarrantable manipulation and the union of the fragments thereby endangered. The most suitable treatment consists in keeping the patient at rest, in avoiding undue manipulations, in moderate extension in the straight position in order to steady the limb, and in applying lateral pressure over the trochanter by means of a sandbag or of a long external splint, or by the use of Volkmann's splint. Violent extension would disengage and displace the impacted fragments, and so make non-union almost inevitable.

W. JOHNSON SMITH, *in the London Medical Record.*

READING NOTICE.

Messrs. William R. Warner & Co.'s Concentrated Pepsin in Powder is a preparation much appreciated by all who have occasion to use pepsin in scales, and especially where a concentrated article is required. It forms a clear solution, retains a pulvulent condition, and mixes with other substances. The use of this preparation in cases of ulcers of various parts of the body—particularly those of the stomach—has given very satisfactory results, from its power of dissolving albuminous products. This pepsin has been found useful as an application to diphtheritic ulcers; also for indigestion of children, who take it without much trouble. Again, this preparation is found very useful in nervous vomiting and diarrhoea. I find this pepsin has many more times the power of digestion than the saccharated form. The advantages of Warner & Co.'s Pepsin—as, indeed, of all their preparations—are that it is uniform and reliable.—*Virginia Medical Monthly.*

NORTH CAROLINA MEDICAL JOURNAL.

THOMAS F. WOOD, M. D., Editor.

Number 5. Wilmington, May, 1885. Vol. 15.

SELECTED PAPERS.

THERAPEUTICS OF DIGITALIS.

The following is a resumé of contributions by F. Williams, Ringer and Sainsbury, Donaldson and Stevens, Kaufmann, Brunton and Cash, van der Heide, Nickles and J. Stewart :

In the employment of digitalis as a remedial agent, we are usually influenced by our views on its physiological action on tissues and organs, as well as by our experience of its utility in various forms of disease, and it is therefore of importance that we should distinguish between opinions as to physiological action, which may be fully relied on, and those concerning which divergent views are held by competent observers.

Wood, in the third edition of his "Treatise on Therapeutics," published in 1879, p. 139, says, with regard to the effects of digitalis on the circulation : "The following proposition expresses our present knowledge, and probably is very close to the truth : Digitalis in moderate doses stimulates the musculo-motor portion of the heart (probably its contained ganglia), increases the activity of the inhibitory apparatus, and causes contraction of the arterioles,

probably by an action on the vaso-motor centres in the cord. As a consequence of the first action, the cardiac beats become much stronger; as the result of the last, there is narrowing of the blood-paths, and to the passage of the vital fluid an increased resistance, which, acting on the already excited inhibitory system, aids in the slowing of the pulse. * * * Poisonous doses induce, after a time, increase of the pulse rate, with smallness and weakness of the wave, and lowered arterial pressure." Experiments made by various observers since this was written, tend to confirm the views above stated as regards the influence of the drug on tension and pulse rate. But they have led to very opposite conclusions as to the effect of digitalis in strengthening the heart's action and contracting the arterioles.

In 1881 Dr. Francis Williams, of Boston, published in the *Archiv für experimentelle Path. und Pharm.*, a record of experiments which led him to the conclusion that digitalis does not narrow the arterioles. He worked on the separated frog's heart, which he fed first with unpoisoned blood, then with blood containing digitalin, estimating the pressure by a manometer connected with the aorta by an inelastic tube. Under the influence of digitalin the amplitude of the heart-beats increased, and more blood being ejected with each systole, the manometer indicated a rise of blood pressure. He attributes the increase in amplitude of the heart's pulsations to an alteration produced by the drug in the elasticity of the muscle, and not to an increase in the heart's power. From the analogy of the blood-pressure curve taken in the carotid of a dog under the influence of digitalin with that he obtained from the separated frog's heart, he infers that the cause of the increased tension is the same in both.

Now contraction of arterioles plays no part, of course, in the phenomena observed when digitalin acts on the isolated frog's heart, and Williams contends, therefore, that it plays no part in the high tension produced by digitalin in man.

Schmiedeberg fully accepts the conclusions arrived at by Williams, whose investigations were indeed conducted in the laboratory of the Strasburg professor. "Digitalin and allied substances," he says, "change in a peculiar manner the elasticity of the heart's muscle without at first interfering with its contractility. As a consequence of this, increase of the pulse-volume with lengthening of the dias-

toxic pause takes place ; the working power of the heart is neither increased nor decreased at this stage ; but the quantity of blood sent into aorta in each unit of time is augmented, notwithstanding the lessened number of pulsations. These conditions cause greater fulness of the arteries, as the relative work of the heart is thereby increased. In this way the blood-pressure is raised."* He denies that the rise in blood-pressure is attended by diminution in the calibre of the vessels.

In 1883 Ringer and Sainsbury communicated to the Medico-Chirurgical Society an account of their experiments made to ascertain the influence of digitalis and allied substances on the circulation. Their efforts were chiefly directed to find out whether contraction of the arterioles was caused by these agents. To determine this they tied a canula into the abdominal aorta of the decapitated and pithed tortoise ; the canula was connected with a reservoir of 6 per cent. chloride of sodium solution, which was allowed to flow through the arteries and tissues of the lower extremities, and caught and measured as it emerged from the cut ends of the abdominal veins. It was found that the flow took place at a tolerably equal rate in equal times ; but that by the introduction of a small percentage of certain substances into the salt solution, the discharge of fluid through the veins could be greatly diminished, and it was inferred that this diminution could only be connected with a decrease in the size of the arterioles. The introduction of a very small quantity of digitalin [5 per cent. of a 1 per cent. solution] caused the flow from the abdominal veins to fall one-fourth of the amount discharged before the addition of the drug. On replacing the poisoned by pure salt solution the outflow from the veins at once increased, to be again decreased if digitalin were added. The experiments were often repeated, and other substances, such as convallamarin, were tried. They were found to produce like effects, but none of them had so powerful an influence as digitalin.

Experiments of a similar kind on warm-blooded animals yielded corresponding results, and Ringer and Sainsbury, therefore, hold that contraction of the arterioles undoubtedly takes place when digitalin is introduced into the circulation. From further experiments, in which the vaso-motor centre was left uninjured and sub-

*Grundriss der Arzneimittellehre, 1883, p. 81.

jected to the influence of digitalin, they concluded that the drug acts directly on the vessels, and not through the centre.

In 1883, also, two American observers, Donaldson and Stevens, published, in the *Journal of Physiology*, a paper, from which it appeared that experiments on the heart of the frog and terrapin had led them to conclusions very different from those of Williams and Schmiedeberg.

They passed through the heart *in situ* pure blood, and blood poisoned with digitalis, and estimating the heart's work by the amount of blood ejected from the aorta per minute, they found that in the majority of their experiments digitalin caused a decrease in the amount of work done by the heart. They found, however, like previous observers, that it increases blood-pressure, and affirm that this increase is due to constriction of the arterioles by contraction of their muscular coats. The existence of such contraction, they consider, is proved by the results of experiments which they made, similar in character to those recorded by Ringer and Sainsbury.

Kauffmann's researches on the action of digitalis, published in 1884, lead him to hold views entirely in accord with those expressed by Wood. "Digitalis," he says, "increases the mechanical work of the heart, augmenting the cardiac contractions, and the volume of the blood-waves, and it also slightly augments arterial tension by its central and peripheral excitation of the vaso-motor nerves." Kaufmann's experiments were made on mammals, and he asserts they prove that intracardial pressure, both diastolic and systolic, is increased under the influence of digitalis.

Notwithstanding the arguments of Williams and Schmiedeberg against the contracting influence of digitalis on the arterioles, the balance of evidence is in favor of its existence; yet in the clinical use of the drug we have to remember that doubts on this point are entertained by some whose opinion is entitled to high value.

Donaldson and Stevens stand alone in the views they hold with regard to the depressing influence of digitalis on the heart's work, and as a recent writer in the *Therapeutic Gazette* (February, 1885, p. 119) points out, a careful study of their ingenious investigations shows that "the evidence upon which their conclusions are based is not as positive and free from contradiction as might appear at first sight."

The opinion of Williams and Schmiedeberg that digitalis influ-

ences the elasticity of the heart-muscle is not incompatible with the views usually held as to its action as a cardiac stimulant. The statement, indeed, of these writers that the quantity of blood sent into the aorta under the influence of digitalis is augmented without the working power of the heart being increased is somewhat difficult of comprehension.

Drs. Brunton and Cash, in their paper on the influence of digitalis on febrile temperatures, supply information of great value in the practical use of this drug.

They point out that in the cat and in all animals in which the vagus centre exerts a considerable restraining influence on the pulse, as it does in man, the heart's action, though somewhat quickened, owing to stimulation of the cardiac ganglia, is at first but slightly affected by a rise of body temperature; but when the temperature of the animal reaches about 39° C. the pulse suddenly increases greatly in rapidity. They adduce experimental evidence to prove that this increase is due to the weakening effect of the high temperature on the vagus centre in the medulla, and to a less extent on the peripheral termination of this nerve. If digitalis be given, it prevents, for a time, this sudden rise of the pulse-rate; but when the temperature of the animal reaches 41° to 41.5° C., the drug loses its power to control the heart's action through the vagus, and the pulse-rise takes place.

A high temperature then lessens the inhibitory power of the vagus centre in the medulla to such an extent that digitalis, and probably all drugs which act like it on this centre, lose, to a great extent, their power of restraining the heart and slowing the pulse.

When the body temperature falls, the restraining action of digitalis on the heart is restored. If fever runs high, then we cannot expect from digitalis its usual effect on the pulse-rate; but it must be remembered that since the slowing influence of digitalis will come into play when the body temperature falls, doses given at the height of fever may cause undue depression of the pulse-rate as soon as defervescence begins. In pneumonia, for example, digitalis has no action on the pulse whilst the fever runs high, but, if given at this time, it induces an abnormally low pulse-rate and temperature when the crisis begins.

Dr. van der Heide has made careful observations in the pathological laboratory, at Amsterdam, on the cumulative effect of digitalin

and helleborein, and on the influence of these drugs upon temperature.

It has been long noted that whilst large doses of digitalin depress body heat, a slight rise of temperature takes place after the injection of small doses, and opinions have differed as to whether this rise was due to the digitalin or to the irritation of the injection. Dr. van der Heide is inclined to think his experiments show that a slight rise of temperature is really produced by small doses of digitalin in healthy animals. To test cumulative action he administered the drug in varying quantities for several days to dogs and rabbits, giving for the most part one dose daily. In dogs he found that its influence was indicated by decreased rapidity and irregular action of the heart, and that the effect of several consecutive doses lasted an extraordinary time after the administration of the drug ceased; it could be detected, indeed, in some animals for four weeks. Reduction in speed was the most prominent symptom. Van der Heide found that return to the normal rate was not a continuous process, but that temporary acceleration often occurred some days after administration of the drug ceased, and then the slowing again set in; the pulse only returned to normal frequency after a series of such oscillations. The duration of the irregularity of the heart's action, produced by continuous doses of digitalis, depended on the severity of this disturbance, and, as was the case with the rate of pulsation, the return to the normal was not continuous. The most marked effect of digitalin, judged by duration and intensity combined, occurred, sometimes after the third, sometimes after the sixth dose. Death at times ensued from several daily repetitions of non-lethal doses, but if the dose was rapidly increased its influence on the intensity of the symptoms produced was not proportional to the increase in the dose, and he surmises that in addition to cumulative action a certain amount of tolerance is established.

The nervous system is influenced in a different manner. Gradually increasing doses at first affect it but little, then suddenly, restlessness, trembling, apathy, and other nervous symptoms appear, but after a few days tolerance is established and the indications of nervous disturbance pass away, even though the administration of the same dose of the drug is continued. Van der Heide infers that cumulative action and tolerance are to be noted both with regard to

the circulatory and nervous systems, but that the cumulative influence is most pronounced on the circulation whilst the establishment of tolerance is most distinct as regards the nervous system.

The effects on rabbits of continuous doses of digitalin were somewhat similar to, but less marked, than those seen in dogs, neither cumulative action nor tolerance being quite so evident. He found that small doses repeated several times daily did not produce so much effect on the circulation as slightly larger doses given every twenty-four hours, but he states that small doses often repeated are more effectual than large doses often repeated. With regard to the cause of cumulative action we get no new light from van der Heide's researches. It cannot be due to deficiency in solubility, for he used helleborein in many of his experiments because of its easy solubility, yet the cumulative action was as well seen as when he employed digitalin, which is not readily soluble in water.

The long-lasting effects of digitalis which van der Heide noted, and the curious influence produced by varying the size and frequency of the dose, are points well worthy of remembrance in the clinical use of this drug.

The papers by Nickles and Stewart on digitalis give good *résumés* of effects produced by the drug; it is somewhat curious, however, that Dr. Nickles, who aims at setting forth the most recent additions to our knowledge concerning the action of digitalis, adopts the views of Schmiedeberg and Williams as to its effects on the heart and arterioles, and does not even mention the later observations by Ringer and Sainsbury, and his fellow-countrymen Donaldson and Stevens. The paper by Dr. Stewart, which is the substance of a lecture given at the Montreal McGill University to his class, is an admirable example of the manner in which a somewhat difficult subject, such as the physiological and therapeutic effects of digitalis, may be made comprehensible to students.

D. J. LEECH, in *Medical Chronicle*.

CITRATE OF CAFFEINE does not, as was anticipated, produce *anæsthesia* when applied to the eye in solution.

ABSTRACT OF LETTSOMIAN LECTURES ON DISORDERS
OF DIGESTION—THEIR CONSEQUENCES AND TREAT-
MENT.

Delivered at the Medical Society of London on Monday, January
19th, 1885.

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Biliousness and indigestion are terms used so frequently together that we do not always sufficiently distinguish between them. Biliousness is, in all probability, of complex origin. The difficulty we have in ascertaining the exact causation of biliousness is no doubt largely due to the fact that disturbance of the liver affects the stomach and intestines, and *vice versa*. The arrangement of the bloodvessels in the liver and alimentary canal accounts for the close connection of these structures. Dr. Brunton, has found, by a number of experiments on the artificial circulation of blood through the livers of rabbits, that the liver is highly elastic. When the bottle containing the blood was raised two or three feet above the liver, so as to increase the pressure under which the blood flowed through it, the organ expanded almost like a sponge, and again contracted when the pressure was diminished. In the experiments the rate of flow from the hepatic veins was very variable; the rate appeared to depend upon the quality of the blood. A vicious circle may be readily formed by the production of venous engorgement of the liver from the absorption of the products of imperfect digestion. Fasting and the use of medicines may break this vicious circle. Dr. Beaumont's observations on Alexis St. Martin proved the close connection between the tongue and stomach. Stimulation of the gastric mucous membrane by gentle rubbing with a glass rod or feather may cause the same changes in the stomach as the ingestion of food. Pallor and secretion of mucus are caused by strong irritation, and stronger irritation still causes nausea and vomiting. These experiments throw light on the condition known as biliousness. The varying states of the appetite may be explained. Dr. Beaumont observed once in Alexis St. Martin that the tongue

had a thin whitish fur when the appetite was craving, the stomach showed several red spots and patches abraded of the mucous coat, tender and irritable; the gastric digestion was prolonged to seven hours. Here there was indigestion. Two days later the usual appetite was gone, the tongue was thinly coated of a yellowish tint the face was sallow, and the stomach showed several deep-red patches. Mucus and bile were present in the stomach, and coated a muslin bag. The sallowness showed that the condition was one of biliousness, and that the liver was involved. On the succeeding days the venous congestion of the stomach was increased. Persons who suffer from malaria may suffer from disturbance first in the liver and next in the stomach, the opposite to that just described. Malarial poison, whether it be a bacillus or not, appears to have a particular power to affect the liver, spleen and vaso-motor centres. The usual symptoms of indigestion are flatulence, weight in the epigastrium, acidity and pain; and it may be worth while to try to ascertain the conditions to which each of these symptoms is due. Analysis of gastric gas shows that it chiefly consists of the gases of the atmosphere from which the oxygen has been absorbed. The gastro-intestinal mucous membrane may secrete gas in large quantities. Malarial patients may suffer from a tendency to flatulence without any other symptom; this being probably due to obstruction of the portal circulation of the liver. Flatulence may be associated with cardiac distress, as in running to catch a train, and as occurs in patients with cardiac distress, as the term "heart-wind" of Dr. Mitchell Bruce indicates. Decomposition of food may give rise to the formation of gas. Gas may pass from the intestines into the stomach. Excessive swallowing of air is regarded by Dr. Brunton as the most frequent cause of gastric flatulence. Tenacious fluids like pea soup carry down a good deal of air. The conditions which give rise to frequent swallowing of air are: (1) Continued salivation; (2) a sense of irritation at the back of the throat; (3) a feeling of acidity in the stomach; and (4) a feeling of oppression about the epigastrium. Irritation of the vagus, as Czermak showed, is the cause of the feeling of constriction across the chest like a huge iron band clutching it, known to the Germans as "beklemmung." Depressing emotions probably act on the vagus nerve centre. Frequent swallowing may overcome the feeling of constriction, since Kroncker showed that swallowing does away with

the vagus cardiac inhibition; the popular phrase "swallowed his grief" is related to this. The observations of Ebstein and Zeckendorf seem to show that hysterical distension of the intestines is due to paralysis of the pylorus. An analysis by Kolbe and Runge of the gases passed per anum by a man after different kinds of food appears to show that it is the production of marsh gas, which chiefly gives rise to the flatulence of the intestines. Marsh gas may be passed in eructations. Ewald had a curious case under his care, in which the patient was astounded to find, on trying to light a cigar, that inflammable gas was issuing from the mouth. Persistent eructations of sulphuretted hydrogen point to serious organic disease.

Acidity and flatulence may alternate in the same individual. The feeling of acidity is not always due to the acid, but to an increased sensitiveness of the stomach or œsophagus, or to some abnormal condition of the cardiac orifice. Swallowing a piece of hot potato proves that the œsophagus is more sensitive than the stomach.

Dr. McNaught has shown that in irritative dyspepsia the acidity was not above the normal, and Professor Talma, of Utrecht, has proved the same thing by giving to patients who suffer from acidity an artificial gastric juice containing only the normal proportion of hydrochloric acid, and yet they suffered from the feeling of acidity. Increased formation of acid by the decomposition of food may cause the feeling of acidity.

The pain of heartburn seems to be due to irritation of the cardia and of the œsophagus, seeing that the pain of the stomach is rather a feeling of weight than of pain. An escape of wind may give relief. It may be that the wind stretches the cardia, and so allows the acid contents to come in contact with that structure. Colic may rarely be due to violent spasm of the stomach. Alkaloids absorbed from the rectum into the general circulation produce greater effects, as Mr. Savory showed for strychnia, than when absorbed higher up, probably because the liver has the power of excreting these bodies.

Retarded hepatic circulation, by preventing the too rapid absorption of the peptones, may prove of service to the organism. In his article on diabetes in Reynold's System of Medicine, Dr. Brunton has insisted on the difference between glycosuria and true diabetes. Lehmann found that sugar injected into the mesenteric veins of a

rabbit during digestion does not appear in the urine, although the same quantity injected in the same way in a fasting animal would produce glycosuria.

In some statistics of life insurance drawn up in New York one out of every eleven healthy persons was found to present traces of albumen in the urine. Some experiments by Leube on 119 soldiers showed that in 4 per cent. the morning urine contained albumen, and albuminuria occurred in no less than 16 per cent. after a severe march. Parkes found about 10 per cent. of temporary albuminuria in hospital patients. Dr. Warburton Begbie writes: "It is surely a satisfactory consideration that a condition of excessive albuminuria—the urine becoming nearly solid by heat and nitric acid—may, after all, not indicate the coexistence of any structural change in the kidney. The albuminous substances in the blood appear to consist of such large molecules that they will not diffuse through the healthy glomeruli, but the products of digestion, peptones and hemialbumose will diffuse through the glomeruli. The white of egg appears to have a smaller molecule than serum albumen. Dr. Brunton swallowed six eggs in rapid succession, with the result that no albuminuria followed, though a violent headache, with sickness, were produced. Dr. D'Arey Power, however, succeeded in taking a sufficient number of eggs to cause albuminuria. In this case the digestion was unable to deal with all the egg albumen ingested. The different kinds of albumen may be distinguished by noting the temperature required to cause coagulation. Stokvis proved that hemi-albumose injected under the skin may pass out of the kidneys without producing any injury to these organs, but if the injections be frequently repeated organic diseases may be set up. Oxaluria, like albuminuria, may be transient.

According to Esbach, cabbage is singularly free from oxalate of lime, and oxaluria, caused by its ingestion, must be due to some other cause than simple excretion. Esbach points out that if a reducing agent, like sulphuretted hydrogen, be added to a strong solution of urates, crystals of oxalate of lime are at once produced.

Shortness of breath may be due to dyspepsia; this may be mechanical from distension, or it may be due to disturbance of the circulation. Actual asthmatic attacks may occur in relation with disturbed digestion.

The "stomach cough" was next considered. Stomach irritation

may supplement irritation of the pharynx, and the combined irritation be sufficient to excite reflex coughing. The pharynx is the place where the respiratory and digestive tracts cross one another, and irritation may here excite coughing and vomiting; this site, too, is readily affected by digestive disorders. Faintness, shortness of breath and intermittent pulse are signs due to disturbance of the heart from indigestion, produced either mechanically or through the nervous system. Alkaloids may be formed in the intestine and absorbed there, acting like digitalis on the heart. Alkaloids, acting like muscarine, are formed from the decomposition of albuminis outside the body. The microbe of cholera may act by producing alkaloids. What is the cause of sudden death in some gouty patients? It is possible that the contracted kidneys may be unable to excrete a cardiac poison assumed to be formed by disordered digestion in such cases. Some symptoms of indigestion—languor and disability to move—resemble poisoning by curare, and these symptoms may be due to the production of an alkaloid in the intestines. The researches of Ludwig and Schmidt-Mulheim render it probable that peptones are the poisonous agents in such cases. Bocci has found that, from human urine, an alkaloid can be extracted which has exactly the same action as curare. This alkaloid has not been shown to be the same as that obtained by Brieger from the peptones formed by the digestion of fibrin with gastric juice, to which he has given the name of peptotoxin. Bile is not always bitter, though organic alkaloids may be. The absence of bitterness from freshly secreted bile has been observed by Dr. Brunton and Mr. W. E. Green, of Sandown; by the latter in a case of biliary fistula. It is conjectured that the bitterness of gall is dependent on admixture with alkaloids. Bence Jones and Dupré have shown that the liver and some other animal organs yield an alkaloid resembling quinine in many of its actions.

The Greeks showed their wisdom by locating hypochondriasis under the ribs and when they made use of the term melancholia. In the "Histoire de ma Vie," George Sands says: "Whether it is the bile which has made me melancholy or the melancholy which has made me bilious—this would resolve a great metaphysical and physiological problem which I will not take up—it is certain that sharp pains in the liver produce symptoms in all those who are subject to them of profound sadness and a wish to die. Since my

disease first appeared I have had happy years, and when it seized me again, although I was in the condition most favorable to love of life, I felt myself suddenly seized by a desire for eternal repose." Sydney Smith describes in a very humorous way the connection between low spirits and dyspepsia. People are fully alive to the liability of poisoning from sewer gas, but they do not perhaps sufficiently bear in mind the danger they are in from the putrefactive products formed in the inside of the body. Senator described a most instructive case in which the patient became collapsed and nearly died with all the symptoms of poisoning by sulphuretted hydrogen generated in his own intestines. Dr. Golding Bird has described a particular class of nervous symptoms in which hypochondriasis and depression of spirits are accompanied by a deposit of oxalate of lime in the urine. Dr. Roberts says, "these symptoms may be present in typical completeness without oxaluria, and conversely, oxaluria may exist in the highest intensity, and even go on to the formation of a mulberry calculus, without causing any of the above-mentioned symptoms." Murchison and Garrod have treated of the irritability due to poisonous substances in the blood.

Headaches are usually due to decayed teeth or irregularity in the eyes; when from the latter the pain is usually occipital or frontal, but it may be temporal. In headache from indigestion the upper surface of the eyeball will be found excessively tender, and the tension in the globe appears to be increased. As the subjects of such headaches grow older the headaches tend to be replaced by giddiness, and this change occurs about the period when the eyes are becoming hypermetropic.

With regard to the treatment of disturbances in the digestive function, the first step towards restoring it to health is to remove, if possible, the disturbing causes. Imperfect mastication is one of the commonest causes of disordered digestion. Man is a low-pressure engine, and works almost all his organs considerably under their full power. A healthy stomach can usually digest a good deal more than it is commonly called upon to do. There is, however, a limit to all things, and that limit is more easily reached in some cases than in others. The reserve powers of any function gradually diminish as age increases. If the mind be excited in any way, the movements of mastication are apt to sympathize with the mental excitement. It is evident that, during meals, all ideas of action to be taken by the

individual himself should be banished from the mind. Reading anything which interests strongly should not be done during meal time; and solitary meals are, as a rule, to be avoided, for the presence of a companion serves to maintain the nervous activity to which reference was made in the first lecture as an important factor in perfect digestion. The condition of the teeth is another cause of imperfect mastication. No teeth at all is far better than a few teeth; an absolutely toothless old man may masticate and enjoy even hard toast, and here the gums may be like the mandibles of a turtle. The nature of the food plays a considerable part in the process of perfect mastication; for if the meat be tough or the bread new, proper comminution is impossible, and so digestion is more difficult. The fine subdivision of fatty food is also of great importance in regard to its digestion. The fat of hot mutton is indigestible because it cannot be pulverized, whilst cold fat can. The more minutely we can subdivide the fat the more easily it is digested. Many years ago Professor Hugo Kronecker asked Dr. Brunton: "How should butter be spread in a sandwich? Should the whole of it be put on one slice of bread and the other slice of bread simply put over the top of it, or should the pat of butter be divided into halves and one of them spread on each piece of bread?" The professor answered the question: "The butter should be divided into halves, and one spread on each piece of bread, because in this way the butter is more minutely subdivided, and thus not only gives a more agreeable taste, but is more readily digested." In regard to butchers' meat, there are great differences, depending both on the kind of meat used and at its condition at the time of cooking. Meat cooked in a state of rigor mortis was tough to eat, but the old Romans used to eat still a newer meat; they suffocated their fowls in wine and cooked them forthwith, so that both meat which is perfectly freshly killed, and also meat which has been kept for a sufficient time, are tender. Dr. Brunton thought the taste for "high" meat was an acquired and morbid one. Eating high meat may overtax the antiseptic powers of the gastric juice and bile. The Esquimaux and Icelanders can consume decomposing food to an extraordinary extent without suffering. The effect of keeping may, to a certain extent, be imitated by the application of a vegetable digestive ferment. In the West Indies a tough beefsteak is rendered tender by rubbing it with the juice of a fresh papaw fruit, which contains a ferment, papaine, having an action very much like the trypsin of the pancreas. Bad cooking is another

cause of imperfect digestion. Pleasant and repulsive food will act on the stomach through the nerve centres; while the idea of pleasant food will excite appetite, the very idea of unpleasant food will excite disgust, and even bring on nausea and vomiting. The appearance of the table furniture may also exert an influence on the digestion. That food itself is a moral agent has long been recognized, and has found expression in the proverb, "A hungry man is an angry man." The favor with which Isaac blessed Jacob was augmented by the ingestion of savory meats. Cookery may not only be a powerful moral agent in regard to individuals, but may be of great service in regenerating a nation. "Schools of cookery for the wives of working men in this country will do more to abolish drinking habits than any number of teetotal associations." A clear-headed clergyman in New York has perceived that dentistry may be a moral agent, and he has insisted on all the people attending his mission chapel keeping their teeth in good condition. Since the clergyman adopted this plan he has had very much less trouble from drunkenness in his congregation. In Switzerland the relation between the consumption of alcohol and the quality of the cookery has recently been investigated. Savory substances probably stimulate the circulation of the blood in the nervous centres.

Another important question is the kind of food which a person may eat. The appetite is the best guide for the healthy man. As Dr. Austin Flint very sensibly puts it, "the diet should be regulated by the appetite, the palate, and by common sense." The duration of the meal is an important item, and the comfort of digestion at a *table d'hôte* may be safely attributed to the forced slowness of the progress of the meal.

The pleasurable sensation of perfect satisfaction, ease and quiescence of body and mind should be the criterion of sufficient alimentation. To effect this most agreeable of sensations and conditions—the real elysian satisfaction of the reasonable epicure—timely attention must be paid to the preliminary processes, such as thorough mastication and moderate or slow deglutition.

Many a man has been saved much misery by a weak stomach, which punished its owner by sickness or headache whenever he tried to overburden it, and thus checked his tendency towards excess at the very outset. The late Professor Laycock observed that patients recovering from a severe illness not infrequently have a craving for salt herrings, pork or ham; but the fact is that these patients really want salt, and

if salt be given them in the form of a mixture the appetite is appeased and the harm is avoided which the herring or ham might have caused. The degrees of digestibility of various meats, fruits, vegetables and drinks were discussed at length. Sour wines are apt to set up gastric catarrh. A single glass of good wine sometimes disagrees, and some of the people who suffer in this manner also have an unpleasant burning feeling in the gullet whilst swallowing the wine, and Dr. Brunton suggests that hyperæsthesia of the mucous membrane may have something to say in the matter. Coffee does not affect the stomach to such an extent as tea. In its preparation, however, a substance called *caffeon* is produced, and this, along with the *caffein* which is present in coffee and tea, appears to dilate the abdominal vessels and cause a feeling of fulness in the abdomen, with a tendency to piles in some persons.

Another cause of imperfect indigestion is fatigue. When exhausted it is far better to get forty winks before dinner than after. Walking or other exercise after a long day's work and prior to dinner, by exhausting the nervous system, was a potent cause of indigestion. Effects somewhat similar to those of fatigue may be produced by depressing or disturbing mental emotions or bodily conditions. Different emotions appear to affect specially, not only different organs like the heart and intestinal canal, but different parts of the digestive apparatus. Thus disgust affects the stomach, causing vomiting; fear is seen, in some of the lower animals, to affect the rectum, causing defæcation; compassion affects the small intestine, producing *borborygmus*; worry and anxiety appear to have a very special influence upon the liver. In treating indigestion due to injurious mental influences, bromide of potassium, either alone or combined with bromide of ammonium, is very useful, both in lessening the sensibility of the nervous system to worry and in procuring sleep; for, as Shakespeare truly says:

"Sorrow's weight doth heavier grow,
Through debt that bankrupt sleep doth sorrow owe."

Disorders of the genital organs are apt to give rise to mental depression and to digestive derangements.

The pathology of indigestion and the action of remedies cannot be properly understood unless we bear in mind the intimate relation which exists between the alimentary canal and the rest of the body.

The gastric tonics are chiefly vegetable bitters, and they increase the appetite, lessen flatulence and tend to diminish discomfort and languor. *Nux vomica* is one of the most useful of this class, and the great benefit derived from its use is probably due to its stimulating action on the nerve centres, by which the coördination of the digestive processes is rendered more perfect. Carminatives tend to disperse flatulence; the ethers and volatile oils probably act by increasing the movements of the stomach and intestine, and altering them in such a way as to allow the gases they contain to escape upwards or downwards. Charcoal, subnitrate of bismuth and binoxide of manganese would appear to act largely mechanically; and cases of dyspepsia are reported which have been successfully treated by the administration of fine sand. The ethers and alcohols are closely allied to the carminatives. The difficulty about alcohol is to define its place. There is a great deal of practical truth in the definition of dirt as "matter in the wrong place." In regard to the use of alcohol in dyspepsia, Dr. Brunton thought St. Paul's advice to Timothy was very good: "Drink no longer water, but use a little wine for thy stomach's sake and thine often infirmities." Another important chapter in treatment is the removal of waste products. The regular action of the bowels must be maintained at all cost. Headache from constipation is probably due, in part at least, to poisonous products formed in the intestine and absorbed from it, for Brieger noticed that it was only in the first stages of albuminous decomposition that alkaloids are formed, and afterwards they seem to disappear. So that prolonged constipation without headache may be explained. The manner in which the salts of Carlsbad are used at the site of their natural origin accounts for the greater benefit derived from them than when they are used at home. The shipping has a powerful influence on the heart, as already pointed out in the first lecture.

One cause of biliousness, which deserves attention, is the alteration in the condition of the bile itself. Biliousness is accompanied by two different conditions of biliary flow. In the one kind the stools are clay-colored from the absence of bile; in the other, the stools are either normal or are dark-colored, from excess of bile. Certain bodies of the aromatic series have a powerful action upon the secretion of bile. Salicylate of soda is a powerful hepatic stimulant, increasing greatly the quantity and rendering very fluid

the consistence of the bile. Other substances of the aromatic series, especially toluylendiamin, greatly increase the quantity of solids in the bile, so that sometimes the bile, from being viscid and thick, will no longer flow through the biliary capillaries, and jaundice results. A similar action may be exerted by poisons manufactured in the intestines. Mercurials may have an antiseptic action in addition to their other well-known effects. Horse exercise acts in a mechanical manner on the liver, tending to squeeze the bile out of the organ into the intestines; rowing, or its imitation in the gymnasium, may effect the same purpose. The alteratives, though ill-understood as is the manner of their action, must occupy an important place. The acids are probably a means of carrying out nitrogen in the form of ammonia, nitrogen which should normally pass out as urea. Nitro-hydrochloric acid is found to be clinically useful in patients suffering from eructations of sulphuretted hydrogen; it is also useful in oxaluria and depression of spirits. Ammonia and chloride of ammonium have a powerful action on the liver. Ammoniacal salts increase the formation of glycogen. Diuretics are useful in some cases of indigestion. Hot water is thus useful in some cases of gouty dyspepsia. Alkalies increase the diuretic effect, and effervescent citrate or tartrate of potash is useful, both as a diuretic and as a local sedative to the stomach in neurotic and gouty gastralgia. By the frequent use of water as a diluent, either alone or with salines, the consequences of indigestion in regard to the lungs, heart and head may often be averted or remedied. Asthma in gouty subjects is, perhaps, best treated by a mixture of bromide and iodide of potassium, and the addition of a little arsenic is said to increase the effect. Bromide of potassium is frequently useful in cases of intermittent pulse, though Dr. W. Begbie used with success a remedy composed of two grains of powdered rhubarb, ten of subnitrate of bismuth, one and a half of nux vomica, and three of compound cinnamon powder, to be taken before meals, and, if there be acidity, ten grains of bicarbonate of soda or of magnesia may be added to it. It may be given in water or in a wafer swallowed along with a little water. Giddiness frequently takes the place of headache in persons of middle age suffering from biliousness, and both headache and giddiness are frequently connected with disorders of vision. Bilious headaches with tenderness of the globe of the eye may be relieved by small doses of salicylate

of soda, half a grain in an ounce of water being taken every quarter of an hour or half an hour. Considerable attention ought also to be given in confirmed cases of indigestion to a most important method first introduced to notice by Weir Mitchell—namely, massage. A case of most profound emaciation, apparently dependent upon tubercular peritonitis, was narrated by Dr. Brunton, in which the effects of massage seemed little short of marvellous. From the hasty sketch given of the disorders of digestion Dr. Brunton thought it would appear that although our knowledge of the subject is still very imperfect, yet a large number of observations have been accumulated which we may hope will, before long, enable us to understand the pathology more fully and to treat these disorders more perfectly.—*London Lancet.*

AN OPERATION FOR DISPLACED SEMILUNAR CARTILAGE.

By THOMAS ANNANDALE, F.R.S.E., Regius Professor of Clinical Surgery, University of Edinburgh.

The pathology of the condition called by that wise old surgeon, Hey, of Leeds, “internal derangement of the knee-joint;” by Sir Astley Cooper, “partial luxation of the thigh-bone from the semilunar cartilages,” and which is now by some authors termed dislocation or displacement of the semilunar cartilages, has not yet been thoroughly worked out, as few opportunities occur for the dissection of a joint so affected. It is, however, a clinical fact that one of the semilunar cartilages, usually the internal one, does occasionally become loosened from its attachments; and, in consequence, this body is liable to be displaced either forwards or backwards, and so to interfere with the proper movements of the knee-joint.

Two classes of this displacement are met with; one in which the condition takes place suddenly, as a result of a twist or wrench of the knee; and the other in which the displacement is not so sudden, but appears to depend upon a gradual stretching of the attachments of the cartilage, owing to some effusion into the joints, or owing

to some continued strain upon the joint, as is illustrated in connection with certain occupations.

When the displacement has once occurred in either case, it is liable to occur again ; but from my experience I judge that in cases, the result of a sudden rupture of the ligamentous attachments, which are promptly and carefully treated, the displacement is less likely to recur than in the more chronic ones.

If the condition be not permanently relieved, the displacement of the cartilage takes place more or less frequently in different cases ; and sometimes in connection with the slightest movements of the joint.

The symptoms of this accident, as is well known, also vary in degree in different cases. The movements of the joints may be merely stiffened in one direction, or the joint itself may be firmly locked, and remain so until manipulation returns the displaced cartilage. Two patients have come to me from considerable distances suffering from this condition, and in both the knee-joint had been firmly locked in a fixed position for many hours. Manipulation easily replaced the cartilage, and the movements of the joint were at once re-established.

In all cases of this affection some effusion into the joint follows the displacement.

The ordinary treatment of a displaced semilunar cartilage is to reduce it by flexion, extension and manipulation ; to apply a splint or elastic bandage, in order to keep the joint at rest and prevent the displacement from recurring ; and, if effusion be present, to employ the usual remedies to promote its absorption. When the accident is recent, I would strongly urge the importance of keeping the affected joint absolutely at rest for two or three weeks, so as to promote the union of the ruptured attachments.

This affection may become so troublesome, owing to the constant recurrence of the displacement, that a patient's occupation and comfort are seriously interfered with ; and I relate the following example of such a condition in order to illustrate a new method of procedure which I successfully adopted in connection with it. The excellent result obtained in this case encourages me to express the opinion that this, or some similar proceeding, may now become an established means of treatment, when the more simple methods fail to give relief, and to obtain for the patient an useful limb.

Case.—Thomas M., aged 30, miner, was sent to me from the north of England, on November 1st, 1883, with the following history: About ten months before his admission he was working in a kneeling position, when he felt something give way in his right knee. He suffered sharp pain, but continued at his work for a few hours. Great swelling of the joint followed, and the pain became much aggravated, so that he could not return to his work, and he had not since worked at his occupation. The condition was treated by rest, blistering, the application of iodine and various liniments, with the result of reducing the swelling; but pain still continued, and the movements of the joint were interfered with by something “slipping” in the knee.

On admission, the joint was slightly swollen, and there was a small amount of effusion into its cavity. The patient complained of acute pain in certain movements of the joint, which frequently became locked in the flexed position. He was able, by a little manipulation, to unlock the joint, but the frequency of this symptom made him quite unfit to follow his employment as a miner. On careful examination of the joint, there was a well-marked hollow over the anterior border and position of the internal semilunar cartilage. This hollow was most marked when the knee was flexed. Having decided that the case was one of displaced semilunar cartilage, and one not likely to be cured by any ordinary treatment, I, on November 16th, performed this operation. An incision was made along the upper and inner border of the tibia, parallel with the anterior margin of the internal semilunar cartilage; and, the few superficial vessels having been secured, the joint was opened. It was then seen that this semilunar cartilage was completely separated from its anterior attachments, and was displaced backwards about half an inch. The anterior edge of this cartilage was now seized by a pair of artery catch forceps, and it was drawn forwards into its natural position, and held there until three stitches of chromic catgut were passed through it and through the fascia and periosteum covering the margin of the tibia. The forceps were then withdrawn, the cartilage remaining securely stitched in position. The wound in the synovial membrane and soft textures having been closed with catgut stitches, a splint and plaster-of-Paris bandage were applied, so as to keep the joint at rest. The progress of the patient, after the operation, was perfect, the temperature

never rising above 99° F. Seven weeks after the operation, the splint and bandages were removed, and gentle movements of the joint practiced.

On January 25th, 1884, the patient was dismissed cured, the movements of the joint being good, and the limb steadily gaining strength. In April of the same year, the patient returned to show the result. He was then seen and examined by many of our distinguished guests at the tercentenary, who all expressed the opinion that the result was everything that could be desired. He had perfect movement in the joint, and had never had the slightest stiffness or locking of the joint since he commenced to move about after the operation.—*British Medical Journal*.

VALVULAR DISEASE OF THE HEART, ACCOMPANIED BY RHEUMATIC SUBCUTANEOUS NODULES.

Reported from Salford Royal Hospital, under the care of Dr. EDGE.

A boy, aged 14, was admitted on October 23d, 1883. He had had an attack of rheumatic fever about a year previously, from which he was considered to have made a good recovery. For six weeks before admission, he had been complaining of weakness and breathlessness; and, when first seen, he presented the usual symptoms of insufficiency of the aortic valves, there being a double basic murmur, enlargement of the heart, and a perfectly typical pulse. He improved slowly, and about the beginning of November was allowed to sit up. He had no symptoms of rheumatism until November 17th, when he complained of pain in the metacarpo-phalangeal joints, which were found somewhat swollen.

On November 19th the swelling had disappeared; but the knuckles presented small nodules, which seemed to be attached to the extensor tendons; they were (like all the others which will be mentioned hereafter) free from pain and tenderness, and movable, not being attached to either skin or bone. All the metacarpo-phalangeal joints of the left hand presented these nodules, except that of

the thumb ; but, on the right hand, the corresponding joint of the second finger only was affected. The palms of both hands were noticed to be constantly sweating.

On November 23d the only nodules observable on the left hand were on the second and third fingers, while an additional one was found on the forefinger of the right hand.

On November 30th the only nodules remaining were those situated on the second fingers of both hands ; but a fresh one began to appear on the extensor tendon of the left great toe.

On December 10th the nodules on the hands still persisted, and there were two new ones on the extensor tendon of the right great toe, and one on the second toe of each foot.

On December 20th all these nodules had disappeared, with the exception of one on the right great toe, and this soon disappeared also.

There were no fresh manifestations until January 9th, 1884, when the hands began to sweat again ; and, on examination, nodules were found on the extensor tendons on the dorsal surface of both hands.

On January 11th a nodule was observed above each wrist, situated on a flexor tendon, and one also just above the styloid process of the left ulna. All the nodules which have been hitherto mentioned were about the size of small peas, and they had almost disappeared on January 22d, when a fresh crop was noticed on the lower limbs, affecting principally the knees, but one was situated on the dorsum of the right foot. On the right knee there were two nodules situated immediately above the upper edge of the patella, and two over the external condyle, one of which was of the size of a large hazelnut. On the left knee there were three nodules at the upper edge of the patella, one on the external condyle, and one on the internal condyle. The soles of the feet, as well as the palms of the hands, were now noticed to sweat profusely.

On January 25th two nodules were observed on the dorsum of the left foot, and the upper limbs again became conspicuously affected. The right elbow presented three, situated over the external condyle, and one over the olecranon ; while, on the left side, one was situated over the external condyle, and two over the olecranon.

On January 26th nodules appeared on the right forearm, just above the wrist ; and, on January 28th, a row of three nodules, each about the size of a large pin's head, was noticed above the left

wrist. There was also a reappearance of the one above the lower extremity of the left ulna. Those on the left foot were larger, and an additional one was noticed above the external malleolus.

On February 8th those above the left wrist and those on the feet had disappeared, and those about the elbows and knees were all smaller. On February 19th a fresh nodule appeared on the knuckle of the left forefinger. On February 22d the nodules above the patellæ were not discoverable; and, on February 26th, the boy was made an out-patient.

On February 29th the nodule above the right wrist persisted. The elbows were in the same condition, except that the nodules were all smaller, and that the one on the left external condyle had disappeared. The right knee presented one over the internal condyle, and two over the external condyle; while on the left knee there was one above the patella, two over the external, and one over the internal condyle.

On April 18th the large nodule over the right external condyle was reduced to the size of a pea, and there was still a nodule over the left internal condyle. The only other remaining nodule was very small, and was situated over the left olecranon.

On May 9th there was no change, except that the last-mentioned nodule had disappeared. There is little to be said about the temperature in this case; there was slight pyrexia, and the temperature was usually observed to be rather higher than usual before a fresh crop of nodules made its appearance.

REMARKS BY DR. EDGE.—This case seems worthy of being placed on record, as it is a typical example of the affection to which Drs. Barlow and Warner called attention in 1881. The symmetry of the nodules was very marked in this case, but this has not always been noticed. The case illustrates how much the nodules vary as regards duration, some lasting a few hours only, while others persist for several months. They are usually found in young subjects, from four to eighteen years old, and are then nearly always associated with rheumatism and heart disease, the latter being frequently of a progressive character. They vary in number from one to fifty, about forty-four having been noticed in this patient. These nodules often appear in successive crops, and, as illustrated in the case in point, sometimes return after a temporary disappearance. They are always more or less movable, being attached to tendons or deep

fascia ; they never become bony, nor do they suppurate or become infiltrated with urate of soda. They are found to be composed of fibrous tissues, and are very vascular. Dr. Barlow considers that these nodules are analagous to the inflammatory exudation which forms the basis of a vegetation on a cardiac valve ; and it is interesting to note that Dr. Angel Money has found, after death, similar nodules in the substance of the heart, in a case in which subcutaneous nodules existed during life. Observers vary as regards the frequency of this affection ; for, while the late Dr. Mahomed saw only two cases in two years, Dr. Angel Money finds them in at least 50 per cent. of his cases of rheumatism in children.

Similar nodes have been observed and described by Dr. Dyce Duckworth, Dr. Stephen Mackenzie and Dr. Kingston Fowler, as occurring in adults ; but they are probably not identical with those referred to by Drs. Barlow and Warner. Dr. Duckworth is of opinion that there are several varieties of this affection ; at any rate, the cases described in adults differ very considerably from such an one as has just been reported. The nodes which occur in adults seem to be not necessarily associated with rheumatism or heart disease (in Dr. Mackenzie's case the affection occurred in a patient who was the subject of syphilis) ; they last for a longer period ; they are frequently painful on pressure ; they may be much larger than those found in children, reaching, as in Dr. Fowler's case, the size of an olive, a Tangerine orange and a walnut, respectively ; and, lastly, according to Dr. Duckworth, they may be adherent to the skin and periosteum. In all these respects these adult cases differ in a marked manner from those described by Drs. Barlow and Warner, and from the one which is now reported, so that at least two varieties of this affection may be distinguished.—*British Medical Journal*.

PREVENTION OF CHRYSAROBIN STAINING.—The staining of the clothes caused by chrysarobin may be prevented by making the latter into a dough with water, and after applying to the diseased spot, covering it with a layer of collodin.—*Birmingham Medical Review*.

SURGICAL TREATMENT OF ABDOMINAL ANEURYSM.

Amongst the numerous triumphs of surgical skill and enterprise in the treatment of affections of the abdominal organs, which recent years have put on record, few have been more striking than the operations for stricture of the pylorus and œsophagus by Professor Loreta, of Bologna, which were recorded in our *Journal* for February 21st. The same surgeon has now published a case of abdominal aneurysm, which has a double interest for English surgeons, both as an instance of apparent cure in a disease which has hitherto resisted all methods of treatment, and as the realization of an idea originally promulgated by that excellent surgeon and excellent man—the late Mr. C. H. Moore, of the Middlesex Hospital. Our space will only allow a very brief summary of the original report, which will be found in the *Memoirs* of the Royal Academy of the Sciences of the Institute of Bologna, for February 8th, 1885, ser. iv, vol. 6, and which will well repay a careful perusal. The patient was a sailor, 30 years old, who had always enjoyed good health, except for an attack of primary and secondary syphilis five years before. In the month of February, 1883, while making violent efforts in furling a sail, he felt something give way in the belly. This was followed by excruciating pains in the back, and in the iliac and hypochondriac regions, gradually increasing in intensity, till at last, in the course of a year, he was wholly laid aside. But it was not till October, 1884, that a pulsating tumor was found in the left hypochondrium. When admitted into hospital in December, 1884, there was a large pulsating tumor in the epigastrium and left hypochondrium, with a loud *bruit*, having its maximum of intensity in the epigastrium. The pulse was hardly perceptible in the femoral arteries, and ceased altogether when the tumor was compressed; the patient suffered grievously from neuralgic pains down the limbs, which were feeble and cold, and from gurgling noise in the viscera compressed by the aneurysm.

Regarding this as a traumatic sacciform aneurysm, probably springing by a narrowish neck from the aorta or one of its large branches, Signor Loreta, determined to attempt to separate the sac from its connections, and, if possible, close its opening out of the artery by suture or ligature; or to empty the sac, invert it, and sew

it up ; and, if neither of these proceedings should prove possible, to stuff the cavity with wire. He chose wire in preference to horsehair, silk, or other substances, which have been suggested, for reasons which he states, and which seem satisfactory. The use of a coagulating injection was also contemplated, but, as the sequel showed, would have been impracticable.

The operation was performed on December 19th, through an incision reaching from the end of the sternum (that is, the root, not the tip, of the ensiform cartilage) to the umbilicus. It was made so high, in order that the hand might be freely introduced to compress the sac if it should give way when the pressure of the abdominal wall was taken off. Numerous superficial adhesions were found, and carefully separated ; and then more deeply situated adhesions came into view, which united the sac to the stomach, omentum, transverse colon, and liver. Most of these were divided, but it was found impossible to dissect the sac from the spleen, diaphragm and cardiac end of the stomach. Hence it was impossible to trace the aneurysm down to its mouth, nor could it be compressed and emptied. It remained uncertain, therefore, whether the abdominal aorta itself, or one of its great branches, was the vessel involved, though the former supposition seemed the more probable. The tumor, which was now fully exposed on its right side, was punctured with a fine trocar, and silvered copper wire was passed in, in the direction of the current of blood, that is, from above, on the right, downwards, and to the left. As soon as the wire experienced resistance, the canula was removed, the end of the wire pushed in with a needle, and the puncture, together with the surrounding tissues, lightly cauterized with pure carbolic acid. About two mètres (that is, a little over two yards) of wire had been introduced. The consecutive symptoms are fully and accurately detailed in the pamphlet above referred to. They were those of rapid, progressive, and, it is hoped, permanent recovery. The man passed a good night after the operation, a thing which he had not done for two months, and which he attributed to the diminished pulsation of the aneurysm ; and the pulse in the femoral arteries, which had been almost suppressed, reappeared. The *bruit* also diminished in intensity, and had entirely disappeared on January 10th ; and in a month from the operation the tumor seemed quite consolidated, and had diminished to a quarter of its former size. It had no pulsation be-

yond the movement communicated to it by the artery on which it lay, and did not impinge on the parietes of either the thorax or the abdomen. The hypochondrium, which had been considerably prominent, had resumed its normal shape. The patient left his bed on February 2d, and after remaining under observation for three weeks, was discharged as cured. The whole period which had elapsed from the date of the operation to the publication of the paper was seventy days.

Such is the outline of this remarkable case ; a case which, as far as our reading extends, may be truly called unique. No aneurysm in this situation has ever before, we believe, been submitted to deliberate surgical operation, nor are we aware that any aneurysm so situated has been cured by rest and medicine. In fact, its position, so closely adjacent to the stomach, liver and colon, would render it peculiarly ill-situated for Tufnell's treatment. It need hardly be said that proximal pressure would have been impossible, distal pressure in the highest degree uncertain, and direct pressure so extremely dangerous, that no prudent surgeon would attempt it. In our own country, we believe, an attempt was made by Mr. C. Heath (and we cannot name this enterprising and distinguished surgeon without expressing our sincere pleasure at his convalescence, and the hope of his speedy restoration to activity), to submit an abdominal aneurysm to direct surgical treatment by laparotomy ; but it was found necessary to abandon the attempt.

Moore's case (*Medico-Chirurgical Transactions*, vol. xlvii) involved no exposure of the sac, as the aneurysm projected against the walls of the thorax. But the event of this case was not such as to recommend the method, which is dismissed in this brief fashion in one of the most recent works on aneurysm : "Doubtless the substance used was too irritating ; and the use of wire is now abandoned." (Holmes's *System of Surgery*, third edition, vol. iii, page 78.) And there can be no doubt, both from Mr. Moore's account of the case, and from the preparation which is preserved in the Museum of the Middlesex Hospital, that the wire did set up fatal irritation. It is probable, however, that the quantity introduced (twenty-six yards) was too large ; and it appears certain that the disease had advanced to an extent which rendered it practically incurable. Moore anticipated this criticism, and he suggested "that it may be possible to effect an equal consolidation with a less

quantity of wire. * * * Should this method be adopted, it would be important so to manipulate the wire as to insure its coiling in the cavity, and not merely lying in circles against the wall." (*Op. cit.*, page 168.) This suggestion Signor Loreta's operation kept in view. It is also interesting to see that the idea of applying his method to abdominal aneurysm had occurred to our countryman, though it is not surprising, considering that the case happened twenty-one years ago, that he dismissed the idea as impracticable. Now that the position of the aneurysm is no longer regarded as inaccessible to operation, we may be sure that surgeons, stimulated by Signor Loreta's success, will give an ample trial to the introduction of foreign bodies into the sac, in the treatment of these otherwise hopeless cases; and we may hope to hear of fresh advances in surgery. Our only fear is that operators may be too enterprising, and may run risks which the stage of the disease, and the condition of the patient, do not justify. It will be noticed that the case before us presented many features which are wanting in too many cases of internal aneurysm: a young, and otherwise healthy, patient; an arterial system apparently free from any general degeneration; a firm complete sac; and a manageable size of tumor. Even with all this, the risks and difficulties of the operation were evidently enormous; and to have met them successfully, reflects honor on Italian surgery in general, and especially on the distinguished Professor of Bologna.—*British Medical Journal*.

BELLAMY ON CUCAIN IN CHRONIC CYSTITIS AND IRRITABLE BLADDER.—In the *Lancet*, February, 1888, p. 315, Mr. E. Bellamy writes that he has used cucain with much success in cases of irritable bladder with spasmodic contraction of the sphincter vesicæ. The author has had made some small bougies of gelatine, about three inches long, charged with one quarter of a grain of hydrochlorate of cucain. These have been pushed down the urethra to the irritable neck of the bladder by an ordinary elastic catheter; the result being that the patient in the first instance almost immediately expressed the opinion that he was "going to get control" over his bladder, and secondly, that the surgeon was enabled to make a most thorough examination, without the patient suffering any pain whatever.—*British Medical Journal*.

REVIEWS AND BOOK NOTICES.

THE CURABILITY AND TREATMENT OF PULMONARY PHTHISIS. By S. JACCOUD, Professor of Medical Pathology to the Faculty of Paris, etc. Translated and Edited by MONTAGU LUBBOCK, M.D., M.R.C.P. New York: D. Appleton & Co, 1, 3 & 5 Bond Street, Pp. 407.

The title of this volume is very gratifying. That one man in the profession can say so boldly and conspicuously as on his title page that there is a hope for consumptives, and that the volume is from M. Jaccoud, the eminent Professor of the Ecole de Médecine, recognized on the Continent as one of the best authorities on pulmonary phthisis, carries with it a great deal of weight.

When this book was written, Koch had not discovered the bacillus of phthisis, but the author at that time was of the opinion that there was an infective agent which passed was capable of transmitting disease from person to person, but that auto-infection was possible, the virus being disseminated through the body from pre-existing caseous or tuberculous deposits which contained it. Although he knew nothing of the size and shape of the agent causing phthisis, he believed that the chief factor in the liability to tuberculosis, and the actual production of tubercle, whether it be an exudation or cellular formation, was regarded as due to an irritative process termed "phymatogenous (tubercle-producing) irritation," or to actual inflammation of the lung. Though regarding every form of phthisis as curable, he looked upon the so-called inflammatory forms as specially so by means of fibrous transformation of the tubercle, the result to be specially sought in all cases of this disease. To an author holding such a theory, in the main, one will probably need to endorse the Koch theory, to have faith in any practice which promises a cure.

M. Jaccoud in turn discusses climatic, hydrotherapeutic, aërotherapeutic treatment, and treatment by inhalation of benzoate of soda and salicylic acid used as a febrifuge.

Almost the first ray of hope ever held out to the consumptive was in the clinical lectures of Dr. J. Hughes Bennett and Dr. Charles J. B. Williams. Up to that time, little more than a quarter of a century ago, there was an all-but universal opinion that consumption was

necessarily fatal, and now comes a book laden with good promise, and in accord with the latest discoveries as to the etiology of phthisis. There is no doubt that this disease is the great scourge of the civilized world, and every book that can stimulate the profession to renewed efforts in grappling with it, should be heartily welcomed, as we do this.

We desire to quote the summary of M. Jaccoud's experience with benzoate of sodium by inhalation :

"To sum up," he says, "the treatment is far from being always accepted, and when employed is undoubtedly a cause of fatigue. Nor, according to my experience, do the results obtained compensate for the difficulties encountered. Its utility in cleansing the bronchio-pulmonary surfaces appears to be certain, but it seems also that this result may be more easily obtained by means of treatment by inhalation, which is less prolonged.

Doubtless the circulation of this book will not be limited to the profession, but will be read with interest and profit by the thousands of consumptives and their friends.

SPECIAL REPORT OF THE SUPERINTENDENT OF THE NORTH CAROLINA
INSANE ASYLUM, April 15th, 1885.

Owing to the great reduction by the last Legislature of the appropriation for the Raleigh Asylum for the Insane, the Superintendent has made this special report, to show the inadequacy of the means furnished, and the consequent great injustice to the helpless insane. It needs only to be said that, by the showing of Dr. Grissom, the average cost of food per diem for 1884 was 13 1-5 cents per day, and that the present appropriation reduces it to 9 9-10 cents a day, or 3 3-10 cents a meal. The former rate, 4 2-5 cents per meal, Dr. Grissom says, with warmth, is "a sum less than the smallest amount charged in the cheapest possible soup-houses established for the relief of out-door paupers, or for the aid of the destitute among the working population in times of scarcity."

We ended the perusal of Dr. Grissom's report with the feeling that surely the people of North Carolina do not know how terribly our Legislature has neglected its duty in not making the proper provision for the insane.

What is the other side of this question? Will not the men who undertook the responsibility of reducing the per diem below the point which the Superintendent declares to be one of stringency, come

before the public with their statement in the public press? The people have a right to know what principles of economy actuated them, and also to decide whether these principles are really tenable. It is too late now to remedy the wrongs and relieve the burden of the Superintendent, Board of Directors and patients for two years, but it is in plenty of time to submit to the people all that is to be said, and, with the subject fairly stated, be prepared to take steps for the prevention of this blunder at the meeting of the Assembly. As by our law none of the present legislative committees will be in existence when the appropriation for the next two years is to be made, and there is no way to cause a legal succession of experience to be transmitted from one Legislature to another, the press must take the matter in hand and use its influence to get better men and better laws.

MUSHROOMS OF AMERICA, EDIBLE AND POISONOUS. Edited by JULIUS A. PALMER, JR. Published by L. Prang & Co., Boston.

Among the agreeable surprises of the year is the issue of a chart of edible and poisonous mushrooms, under the editorial management of Mr. Julius A. Palmer, Jr., of Boston, and from the press of Messrs. L. Prang & Co., the well-known publishers of the "*Flowers and Ferns of the United States.*" Mr. Palmer has investigated most thoroughly and satisfactorily the food qualities of mushrooms, for ten years past, and having mastered the practical difficulties which lie in the way of mycophagy, he has embodied them all in a very succinct and untechnical description, enabling intelligent persons, though unacquainted with the botany of these plants, to avoid the danger of being poisoned, and enabling them to make a choice of them for food. The illustrations are remarkably fine. It needs but a casual comparison to place them above those in Cordier, on the one hand, and the chart of Worthington Smith on the other. The former, although exquisitely rendered, are too highly colored, and the latter are quite inferior. One of the above is from the French, the other from the English, press..

This is the first attempt in America to popularize the fungi, or rather we should say that the Messrs. Prang are the first publishers to issue an illustrated guide to the use of mushrooms. The late Dr. M. A. Curtis left in manuscript a work on "Edible Fungi," illustrated with 40 colored species, drawn by the Rev. Charles J. Curtis, but this book has never found a publisher. Mr. Palmer's

work goes beyond that of Dr. Curtis, in that it describes and figures four of the poisonous or suspicious species.

It is the intention of the publishers, should these charts receive a welcome from the public, to furnish a supplement from time to time, until their illustrations comprise nearly or quite all of the mushrooms of America.

We cannot conceive how a work could more admirably fulfil its design than this, and it cannot fail of success. To our readers in the middle and western counties where mushrooms abound and are more in use as articles of food, we recommend this chart as an aid in extending gastronomic ventures, and also to enable them to diagnose an unfortunate venture by their patients.

TRANSACTIONS OF THE NEW YORK STATE MEDICAL ASSOCIATION
FOR THE YEAR 1884. Volume I. Edited for the Association by
AUSTIN FLINT, Jr., M.D. New York: D. Appleton & Co., 1885.
Pp. 654.

This volume has somewhat the appearance of McMaster's History, and is a pleasant departure from the conventional style of the elder society of the same State. It is the scientific and literary first-fruits of the division of the profession in New York, and as such will be read with critical strictness by many into whose hands it will pass. It was expected that the stimulus of rivalry would bring out the best work of the profession, and the severest critics will easily concede that such has been the result.

Some of the papers in this volume have appeared in full in the leading journals of New York, and are well known to the reader. The papers cover a broad range of topics, and are from the pens of such men as Dr. Joseph C. Hutchison, of Brooklyn; Dr. Gouley, of New York; Dr. E. R. Squibb, of Brooklyn; Dr. Rochester, of Erie county; Dr. T. Gaillard Thomas, of New York; Dr. Nathan Bozeman, of New York; Dr. C. S. Bull, of New York; Dr. John P. Gray, of Oneida county; Dr. Stephen Smith, of New York; Dr. Wm. T. Lusk, of New York; Dr. E. G. Janeway, of New York, and many others of national reputation.

We notice that Dr. Bontecou, of Rensselaer county, reports one of the first cases of resection of the humerus done in the Northern Army, which reminds us of the first case similar to this done in the Southern Army, by Dr. Otis F. Manson, of Richmond, in the per-

son of Wm. H. Ricketts, reported in the first volume of the *Confederate States Medical and Surgical Journal*.

The volume closes with an alphabetical list of members to the number of 514.

After all, it may not have been such a bad day's work when the profession of New York was divided.

MINOR SURGICAL GYNECOLOGY: A Treatise of Uterine Diagnosis and the Lesser Technicalities of Gynecological Practice, Including General Rules for Gynecological Operations and the Operations for Lacerated Cervix and Perineum, and Prolapsus of the Uterus and Vagina, for the Use of the Advanced Student and General Practitioner. By PAUL F. MUNDÉ, M.D., etc., etc. Second Edition. Revised and Enlarged. Three Hundred and Twenty-one Illustrations. New York: William Wood & Co., 56 & 58 La Fayette Place, 1885. Pp. 552.

The first edition of this volume was one of the regular edition of Wood's Library in 1880. As was predicted for it then, it has achieved great success, encouraging its author to enlarge and revise it. There was never a truer saying than the sentence quoted by Dr. Mundé in his preface to the first edition, that "Success in the treatment of diseases of women lies wholly in attention to minute details." This was the text which inspired the treatment of the subject, and to it the author has adhered throughout.

The abundant experience of the author as the editor of the *American Journal of Obstetrics and Gynecology*, put him in a position to know the wants of the general profession; and while his book is not intended as a rival to the text-books of Thomas and Emmett, it will be consulted far more frequently by the country doctor, who has so often to work out diagnoses and treatment unaided by special assistance, than the above voluminous works.

This volume is now sold separately from Wood's Library.

CLINICAL STUDIES OF DISEASES OF THE EYE: Including those of the Conjunctiva, Cornea, Sclerotic, Iris and Ciliary Body. By Dr. FERDINAND RITTER VON ARLT, Professor of Ophthalmology in Vienna. Translated by LYMAN WARE, M.D. Philadelphia: P. Blakiston, Son & Co., 1012 Walnut Street, 1885. Pp. 325. Price \$2.50.

The translator has done a good service to the American profes-

sion by presenting an English version of the lectures of Professor von Arlt, already well known to specialists who read German. The volume was intended to give to physicians engaged in general practice a book of reference which they could consult regarding the common and most frequent diseases of the eye.

The book is divided into sections on Diseases of the Conjunctiva, of the Cornea, of the Sclerotic and of Iris and Ciliary Body. The completion of the lectures, the author tells us, depends upon the favor with which the present volume is received.

The translator has interpolated very few individual opinions, but has not failed to mention, though, indeed, very slightly, the value of hydrochlorate of cocaine as a local anesthetic.

While not as useful to the general practitioner as the hand-books of Nettleship and Swanzy, it is a timely addition to our literature from the pen of an author to whom the profession owes a great deal.

MODERN THERAPEUTICS OF THE DISEASES OF CHILDREN, WITH OBSERVATIONS ON THE HYGIENE OF INFANCY. By JOSEPH F. EDWARDS, M.D. Philadelphia: D. G. Brinton, 115 South Seventh Street, 1885. Pp. 346.


This volume is similar in execution to several works by the same publishers, viz: a retrospect of the therapeutics of several branches of medicine, arranged for ready consultation by the reader. The diseases of children have within a few years received a large share of professional attention, and several excellent works have been issued, some of them having been reviewed in the *JOURNAL*. This differs from them all in being a mere compilation of treatment from the writings of a very few authors, or, rather, a very few authors have been quoted under nearly every important disease. It would not be a damaging criticism to say that under many important heads, such as that of diphtheria, there is nothing new, because new remedies in diphtheria are little better than old ones, but the editor has failed to give a digest of the best line of treatment under the heading especially mentioned. Even if he had strung pearls of treatment together with no other editorial help than that he offers, we doubt if the reader for whom such books are intended would be any the better practitioner. But such books are sought after, and some one must edit and publish them, but to the readers of such volumes we must volunteer the advice that they had better go into the sick chamber armed with more substantial weapons.

EDITORIAL.

THE NORTH CAROLINA MEDICAL JOURNAL.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY, PUBLISHED IN
WILMINGTON, N. C.

THOMAS F. WOOD, M. D., Wilmington, N. C., Editor.

 *Original communications are solicited from all parts of the country, and especially from the medical profession of THE CAROLINAS. Articles requiring illustrations can be promptly supplied by previous arrangement with the Editor. Any subscriber can have a specimen number sent free of cost to a friend whose attention he desires to call to the JOURNAL, by sending the address to this office. Prompt remittances from subscribers are absolutely necessary to enable us to maintain our work with vigor and acceptability. All remittances must be made payable to THOMAS F. WOOD, M. D., P. O. Drawer 791, Wilmington, N. C.*

ANOTHER PHASE OF THE QUESTION, WHO IS ENTITLED TO THE PRIVILEGE TO PRACTICE MEDICINE?

Some of the promoters of the objects of our license law in the last Legislature, in endeavoring to substantiate the color of title to practice medicine in the State, caused to be enacted a proviso which really defeats their intention. It came about in this way: Thinking that the obstacle to the privilege of practice on the part of their medical friends was the failure to obtain license, and that a diploma ought to be accounted sufficient, so far as the practitioners of a date previous to 1880 were concerned, they got a proviso enacted, the terms of which exclude all physicians from the penal-

ties of the law "who have a diploma from a regular medical college prior to January 1st, 1880."

Upon close examination it turns out that this clause places, by implication, a large number of physicians who have been practising for years previous to 1859, without a diploma, under the minor penalty of the law, viz: debarring them from collecting their fees by law, and also of becoming members of the County Boards of Health. At least it appears so to the present writer, and if it turns out that this is the construction which the Attorney General places upon it, the Medical Society has an important duty to do.

At no time has the Medical Society of North Carolina demanded more of the gentlemen proposing to become members of that body than the law of the State imposed. In fact, it was not until the Wilmington meeting (1880) that the Constitution was so altered as to make the legal qualifications imposed by the State a precedent test of membership. The strictest construction yet put upon the requirements of membership were that the applicant should be of good moral character, should have been a regular practitioner in good standing before April, 1859 (his credentials being approved by the proper committee), or should be a licentiate of the Board of Examiners. It only remained, then, to receive a two-thirds vote of those present. We believe we have stated the position correctly, and if so, then we desire to ask that the Society, at the approaching meeting in Durham, will reiterate this position.

We are sufficiently informed about the condition of the medical profession for the last fifty years to convince us that, as a Society, we do not desire to see imposed upon them any restrictions which go further than the law of 1859, and we ought to be willing to make the declaration that those physicians who are in good standing, and practitioners before 1859, are welcome to take part with us in building up the interests of the whole profession. There is no doubt that the Medical Society is in accord with the spirit of the fundamental law, which forbids the application of a retrospective penalty, and no construction of the law should be allowed to place us in any other position.

It is well to be plain in this matter. If we do not at the first opportunity reiterate our adhesion to the precedent which we as a Society have established, we may look for an opposition in the next Legislature strong enough to jeopardize the whole law.

OBSCENE LITERATURE IN THE DAILY AND WEEKLY
NEWSPAPERS.

If one will not shut his eyes to the fact, and overcome the force of habit of skipping advertisements in our daily and weekly newspapers, he will be surprised and shocked at the frequent appearance of obscene and filthy suggestions of treatment offered by the swarm of quacks whose whole living is the attention they can attract among the young men of our land.

It would be hardly credible if the number of young persons who respond to such advertisements could be made public. The cunningly worded paragraph frequently alarms some guileless young man, who for the first time is brought under the conviction that he is a wreck of the worst sort, sexually and morally, and that here is a public benefactor of larger experience than his doctor at home, and who, best of all, he does not have to meet face to face and make known his terrible sin, but to whom he may lay open the rankling secret of his heart, and get advice under the cover of the mail.

This class of quacks have no other stock in trade than a skill in picturing the symptoms which most every healthy young man must experience in some degree or other, and setting forth how surely these symptoms are leading them to destruction if they are not relieved. Their next move is to place these advertisements in such papers as will receive them under a contract system which affords no very broad margin of profit to them. Many of them are beardless young men, who have no knowledge of medicine, but have received some sort of education in this villainous game in the offices of other "advertising specialists," as they call themselves. Others are broken-down medical men, who, by a career of dissipation, have lost the confidence of their former patrons.

What we desired to speak more particularly about, though, is the frequency of obscene advertisements in our papers. One paper, which has greeted the eyes of thousands of readers for several months, gives an illustration of an instrument to restore sexual vigor. It consists of a highly pictorial apparatus, which is intended to buckle around the pelvis, to which is attached a perineal band and apparently a scrotal bag, the whole machinery darting flashes of electricity. By this means impotency is to be cured, and the

method is explained in nasty detail. The columns of the same papers were eloquent on the subject of the statutory limitation of obscene literature during the session of our last Legislature, but have not the independence to do as medical journals do—scorn the admission of such matter to their advertising columns. Any amount of moral dissertation on obscenity in editorial columns cannot offset the corrupting influences which these villainous advertisements are secretly working among our girls and boys.



VACCINIA AND VARIOLA AT THE SAME TIME IN THE SAME INDIVIDUAL.—Charles E. Rowling, Hon. Medical Officer Paramatta Hospital, New South Wales, contributes a very interesting note to the *Australasian Medical Gazette* on the above subject. A man aged 27, fearing that he might contract small-pox, asked advice respecting vaccination. He was immediately vaccinated in four places on each arm. This was successful; on the second day, however, forty-three umbilicated pustules appeared on different parts of his body. This disease ran a perfectly normal, but very mild course. Everything at first pointed to a decidedly severe attack, and a very mild one ensued. On the eighth day some perfectly clear lymph was taken from the Jennerian vesicles and a healthy child, eight months old, was vaccinated. Vaccinia and vaccinia only, was developed and ran a perfectly normal course. Thirteen others were then vaccinated, eleven of which were successful. Is any better proof required of the well-known, but occasionally contradicted fact, that vaccination carefully performed will result in nothing but vaccinia? Now, did this case show in a wonderful manner the protective power of vaccinia, or did it not?—*St. Louis Medical and Surgical Journal*.

CURRENT LITERATURE.

THE ACTION OF PARALDEHYDE.

* * * * *

As a therapeutic agent the special value of paraldehyde resides in its power of procuring sleep in cases requiring a hypnotic, but in which chloral and opium are contraindicated. As compared with the first-named drug it has appeared less potent. It acts quite as quickly as chloral, but frequently fails to produce its expected results, especially if pain be present or the patient be in any way disturbed. Its use as a soporific is indicated :

1. When chloral seems called for, but the heart's action is so weak or irregular that danger may arise from any depressing cardiac influence. In the enlarged flabby or fatty heart chloral is a dangerous remedy, but paraldehyde may be given without fear, and where there are anginal symptoms, perhaps with advantage, because of its tendency to reduce arterial tension. In delirium tremens chloral is doubtless the best sedative which we can employ, and yet at times the weakness of the circulation indicates that its free administration is not quite devoid of danger, and the use of large doses of bromide of potassium is likewise objectionable. Now paraldehyde may be substituted for, or combined with, chloral in the treatment of this ailment with great advantage.

It seems especially useful in subduing the attacks of excitement to which those suffering from progressive paralysis are liable, and also in hysterical excitement ; but it has also proved of service in acute mania and in almost all those conditions calling for the use of sedatives. There is no evidence that it is of greater value than chloral in overcoming the restlessness of insomnia, which has so often to be treated in asylum practice ; but it certainly may be substituted for chloral with advantage wherever there is a weak circulation as well as an excited brain. Langreuter speaks less favorably of its use than the two other observers, and considers that it possesses only one-third the efficacy of chloral ; but in eighty-two per cent. of the 210 instances in which he gave paraldehyde it produced the desired effect. In fever where the heart's action is weak

paraldehyde may perhaps at times be substituted for chloral or opium with advantage ; but in the only case in which Dr. Leech tried it, the result obtained was not satisfactory ; the patient became slightly flushed and did not sleep.

2. When grave disturbance of the respiratory functions, from bronchitis or other causes, is accompanied by great restlessness and insomnia, sedatives of all kinds are looked upon with suspicion, and yet it not infrequently happens that it is necessary to induce sleep. Opium is out of the question, and bromide of potassium is usually ineffectual. Chloral may be given more advantageously, but its exhibition is accompanied with considerable risk.

3. When the administration of chloral is followed by unpleasant symptoms, paraldehyde may often be substituted with advantage for it. Sometimes the patient who has taken chloral suffers, on waking, from severe headache, almost more painful than want of sleep itself ; or nausea, or giddiness may follow. Slight discomforts do at times occur after paraldehyde. Headache, giddiness and nausea may be complained of, and in two hysterical cases Langren-ter noted slight delirium on awaking from paraldehyde sleep ; but, as a rule, discomforts are much less frequent and severe after paraldehyde than after chloral, and when the latter drug has caused ill after-effects Dr. Leech has given paraldehyde with good results.

4. When slight conditions of insomnia are present, paraldehyde has often an advantage over chloral or opium ; for evils sometimes arise from commencing with the use of these two drugs, which prevent us resorting to them in all cases where a sedative seems desirable. In hysterical people especially, should the milder sedatives fail, we often elect to allow a patient to suffer from the discomfort of insomnia rather than take the responsibility of risking the development of a morbid craving for chloral or opium. Now, in such cases, we may give paraldehyde with every hope of success, and without fear.

As compared with opium, paraldehyde has a disadvantage which it shares with chloral. Its anodyne effects are feeble, hence it often fails conspicuously to relieve sleeplessness dependent on pain or cough. At times, indeed, it does act as an anodyne in neuralgia and other painful affections.

Whilst paraldehyde has certain advantages over other soporifics, it has some disadvantages. Its taste is objectionable—to some par-

ticularly so, and it sometimes causes an unpleasant taste in the mouth long after it has been taken. Then, too, if the stomach be at all irritable, it is apt to cause sickness, or even pain and vomiting, and not infrequently patients will decline a second dose on account of its taste and the nausea it causes. Others, however, prefer it to chloral in every respect. Its odor can be perceived in the breath for hours after it has been taken.

Notwithstanding these defects, however, paraldehyde will prove a useful addition to our therapeutic resources. If it be indiscriminately used instead of chloral, it will soon be cast aside, since it is the less powerful of the two; but if its employment be limited to the cases for which it is specially applicable, its value will soon become generally appreciated.

With regard to its administration, as it is a nauseous drug, it is desirable to mask its flavor as much as possible. For this purpose many formulæ have been suggested. It forms an emulsion with powdered acacia, and may then be mixed with syrup of almonds, so that an ounce will contain 40 ℥. Mixtures of paraldehyde with oil and alcohol have also been recommended, but Dr. Leech prefers the following form :

℞ Paraldehyde, ℥ i.
 Syr. Aurantii, ℥ ii.
 Aquam ad, ℥ i.
 Fiat haustus.

Dr. Quinlan recommends the addition of spirit of chloroform to a similar but more dilute solution. Paraldehyde may be given in capsules. Taken a little while after food, these capsules burst in the stomach without producing more than a trifling sensation of warmth; but if the stomach be empty, the sensation of heat which they cause on breaking is somewhat unpleasant, though only of short duration.

If paraldehyde produces stomach discomforts, it may readily be administered by the rectum. Subcutaneous injections of the drug are not advisable, as they produce considerable pain.

As a rule, it is well to begin with a dose of fifty minims. Less than this may be effectual at times, but more is often required.—

Therapeu Gazette.

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COCAINE IN GENERAL PRACTICE.

NC med J. (O.S.) 15: 287-290, # 5, May 1885.

That there is such a thing as fashion even in therapeutics can scarcely be questioned by those familiar with medical literature. New drugs and chemicals are being constantly discovered, and, after a more or less thorough experimental and clinical trial, are presented to the profession in rather eulogistic terms. But as the sphere of application of the new remedy enlarges, the appearance of undesirable, often positively objectionable features, previously unnoted, frequently leads to a reaction, the drug gradually loses its reputation and ultimately disappears from the field of practice. This fate, we can confidently assert, is not likely to be shared by cocaine, which, though possibly not sustaining its rapidly gained reputation to the alleged extent, seems nevertheless destined to secure a permanent place in therapeutics.

The readers of the *Therapeutic Gazette* having been sufficiently well informed of the excellent services cocaine is capable of rendering in ophthalmological surgery, we desire now to consider its therapeutic worth in general practice, simply calling attention to the wide scope which experience has shown it to possess.

In cases of minor surgery involving the mucous membranes which are sufficiently painful to call for an analgesic, but do not warrant the induction of constitutional anaesthesia, cocaine fills up a long-felt gap. Its value is enhanced in case of a direct contra-indication of both ether and chloroform, as in heart disease or in patients of very tender age. Its action on the skin not denuded of the epidermis being of course but very slight, it has to be used hypodermically to obtain any decided effect, though when so employed a sufficient number of trials, both in private and in hospital practice, vouch for the promptness and constancy of the remedy. In a case of phlegmonous inflammation of the hand requiring several incisions, Dr. Burke found the subcutaneous injection of ten drops of a twenty per cent. solution of the hydrochlorate of cocaine to exempt the operation from any pain; Dr. Wilson also rendered the operation of extirpation of an adenoma perfectly painless by a previous hypodermic injection of cocaine (*N. Y. Med. Journal*, November 29, 1884, *N. Y. Med. Record*, November 22, 1884). So, too, Dr. Croston reports having removed an epithelioma of the cheek with-

out causing more than slight pain after using three injections, consisting each of four drops of a four per cent. solution of the hydrochlorate of cocaine (*Boston Med. and Surg. Journal*, December 11, 1884). To determine the extent of surface rendered insensible by the subcutaneous use of cocaine, Drs. Hall and Halstead made several interesting experimental trials with the remedy, and found the zone of anæsthesia produced by a hypodermic injection to extend two to three inches from the point of injection. They also noted vertigo, nausea, cold sweats and dilatation of the pupils accompanying its exhibition, and justly concluded that cocaine exerted a toxic influence upon the central nervous system (*Deutsche Medicinal Zeitung*, No. 7, 1885).

In cases of dental surgery of the most varied description the drug has rapidly gained a high reputation. In extensive burns and scalds cocaine has no rival in almost instantaneously subduing the usually very intense pains. Dr. Adelbert Weiss, of Vienna, being called to attend a gentleman severely scalded in the face by an explosion, ordered, after temporary application of oiled rags and ice, the well-known mixture of aqua calcis and oleum lini, and at the same time a two per cent. solution of hydrochlorate of cocaine. The pains were so agonizing that convulsions were feared, since the pains could not be mitigated by the constantly renewed ice application. The very moment that the scalded parts, partly progressed to vesication, were touched by the brush dipped into the cocaine solution, the pains disappeared as if blown away, and did not return. (*Wiener Med. Wochenschrift*, January 3, 1885.)

Equally instantaneous is the relief which cocaine gives in hæmorrhoids in anal fissure, in fact, in all affections of the rectum and anus. Dr. Krause praises the beneficent services of the drug in the painful dysphagia of tubercular patients. (*Gazette Médicale de Paris*, January 31, 1885.)

In persistent vomiting of pregnancy the drug was successfully exhibited by Dr. Holz in ten-drop doses of a three per cent. solution, repeated three times at an interval of twenty-four hours, producing the entire cessation of this grave symptom.

In otology, cocaine seems to render no lesser service than in ophthalmology. The experiences of Jellinek, Schröter, Schnitzler and Störk regarding the indications for the use of cocaine in otological practice, are fully corroborated by Zaufal. (*Centralbl. f. d. ges. Therapie*, February, 1885.)

The principal indications for its use are otitis externa, to produce anæsthesia of the external auditory canal; operations on the tympanic membrane, paracentesis, galvano-cautery, plastic operations; in myringitis, otitis-media and chronic catarrh. In tinnitus aurium Zaufal obtained encouraging results with an instillation of four drops of a two per cent. solution of the hydrochlorate of cocaine. This observer also calls attention to the fact that cocaine is capable of reducing and preventing hyperæmia at the points in which it comes in contact with the tympanic membrane, and hence he thinks the drug is possessed of a vaso-inhibitory power.

In affections of the urino-genital organs, cocaine has also been advantageously employed. Its uses in obstetrical practice have not yet been sufficiently studied to obtain a just conception of its value, though it is certain that it is very serviceable in the pain produced by the tension of the perineum and the dilatation of the os. Dr. Cabot, of Boston, has used cocaine in an operation for phimosis, and found it to give satisfactory results. The researches of Dr. Blemenfeld showed that a complete urethral anæsthesia, extending to the posterior limit of the prostatic portion, might be induced by an injection of a small quantity of a two per cent. solution of cocaine. Solutions intended for the urethra ought to be prepared without alcohol (*Deutsche Med. Wochenschr*, No. 50, 1884). The indications for the use of cocaine for the urethra are, endoscopic explorations, operations, retention of urine, catheterization in cases of irritable urethra, prostatitis and lithotripsy.

That in vaginismus the drug is highly useful, is acknowledged by all observers. Dr. Cazin, of Brooklyn, reports a case of vaginismus of six years' standing, which was easily cured with the aid of cocaine. So also the use of the speculum can be rendered painless by a previous application of cocaine.

Dr. Bettelheim recommends its use in tenesmus of the sphincter ani and recti, the effect being instantaneous, though of little permanence.

There is apparently no limit to the sphere of usefulness of cocaine. It is also positively serviceable in all painful affections and operations on the larynx, and in various forms of neuralgia. Dr. Murel found it to bring prompt relief in certain forms of neuralgia, when administered either by an hypodermic injection, or, preferably, by frictions on the seat of the pain.

It is to be hoped that the present enormous price of the drug, created by the large and sudden demand, will soon drop sufficiently to allow of a general introduction into practice of this very efficient remedy.—*Therapeutic Gazette.*

SELF-DELIVERY BY LAPAROTOMY.

One of the strangest cases, perhaps, on record in the annals of gynaecological practice, was reported by Dr. Guggenberg at the meeting of German physicians in Tetschen, Bohemia—the case of a confined woman performing laparotomy successfully on herself, the woman herself in perfect health being presented to the Society. At 2 o'clock, as Dr. G. related, he was summoned to hurry to a woman who had cut her abdomen open. He found a woman of large and strong build, but of a thoroughly anæmic type, on a poorly-furnished bed, surrounded by unmistakable evidences of poverty. Examination of her eyes, which were lightly closed, revealed that her pupils reacted promptly to light and shadow; her pulse was scarcely perceptible; her consciousness, though not perfectly intact, was sufficiently clear to enable her to answer questions put to her by corresponding motions of her head. Examination of her body showed an incised abdominal wound running from above downward and inward, exposing a considerable quantity of intestines. The uterus was seen below, firmly contracted, of about the size of a child's head; bleeding had stopped altogether. Between her knees he discovered a dead child.

The parts having been carefully cleansed and the intestines replaced, the wound was sewed up and dressed antiseptically. Besides vomiting and moderate fever for a few days, no unfavorable symptoms appeared. The history of this case showed that the woman had seven previous confinements, all more or less of a severe type. This time the labor-pains had been so intense that the woman felt convinced that she had to die; and having heard or read of the Cæsarean section, she decided to perform it on herself, with the hope of thus gaining an easier death. She divided layer after layer, until a profuse hæmorrhage arrested her operation. A dark pro-

truding mass was taken up, recognized as the afterbirth, and placed under the bed; finally a foot appeared, on which she dragged until the whole body had been drawn through the external wound. Having cut the cord, the woman lay down to die, but was shortly after discovered by her relatives in her precarious condition. She recovered completely, and is capable of performing the hardest kind of work.—*Wien. Med. Bl., January 15, 1885.*

CLINICAL USE OF CHRYSAROBINE.

There is perhaps no remedy known to the Dermatologist which has been of more interest and used with more favorable results in the treatment of psoriasis, chronic eczema and the parasitic diseases, especially those of a vegetable origin, than the active principle of goa powder—Chrysarobine—formerly known as chrysaphonic acid.

It was used in the form of an ointment, prepared by gradually dissolving in various proportions the powder and simple ointment while being heated.

There being much discoloration of the hair, nails, and especially the clothing with which it comes in contact, and many times producing a violent dermatitis, even by the use of a mild ointment, its use was almost entirely abandoned.

However, with these objections its employment could not entirely be ignored by those who best know its virtues until a more extended investigation was made to determine the proper method of its application, which has been done within the past twelve years in the following mixture, known as "Pigmentum Chrysarobine Compositum," the credit of which is due Dr. George H. Fox, and which is now extensively used in the New York Skin and Cancer Hospital:

℞. Chrysarobine	
Acid Salicylici aa	10
Etheris	15
Collodi flexis Q. S. ad	100

There is another, which is also extensively employed, and with

about the same results, but very much more expensive, the gutta percha being substituted for the collodion in the following manner:

℞. Chrysarobine	
Acid Salicylici aa	10
Liq. Gutta Percha ad	100

Either of these prescriptions should be prepared in small quantities and kept in dark-colored, well-corked, salt-mouthed bottles, otherwise it will become of a dark, thick, muddy liquid from decomposition, which renders it entirely useless.

When properly prepared it should be of a light, bright, canary yellow and about the consistency of olive oil.

Physicians after using the above mixtures found that they furnish the best means of its application, consequently the ointment is rarely used.

The liquid is especially indicated in those cases where the psoriatic condition has existed for any great length of time or in those cases of a more recent date, where the eruption is extensive, with much elevation and induration. It may be used in such cases with almost unlimited success by applying it with a small brush after having carefully removed the dry scales which should always be done just before its application, the number of which should be governed by the amount of induration, elevation and exfoliation.

Should there be continuous scaling with a thickened condition, daily applications may be necessary accompanied with alkaline baths once or twice a week, as the case may require.

Its employment as a parasiticide is of recent origin, especially in the treatment of trichophytosis either of the hairy or non-hairy parts. It was thought dangerous until within the past year to apply this remedy to the face or scalp, but now it has been fully demonstrated that its employment in diseases of these parts is not only safe, but a sure cure for trichophytosis (ring worm) chromophytosis (tinea versicolor) and many others that might be mentioned. Dr. W. T. Alexander (*Journal Cutaneous and Venereal Diseases*) speaks of having successfully treated fifty cases of trichophytosis in one of the public institutions of this city in which there was an epidemic. Great care should be taken to prevent dermatitis, a condition which often follows its application to the scalp, especially made bare by epilation or shaving, one or both of which should precede its application.

This condition is characterized by a peculiar pink discoloration of the skin, with swelling, congestion and tenderness, if this extends to or near the eyes, there may be slight conjunctivitis.

There is no reason why this remedy properly managed with the use of alkaline baths should not cure ninety per cent. of all cases of psoriasis, also any of the parasitic diseases.

While its use in chronic eczema is not so marked, it is many times followed with favorable results.

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—*Cincinnati Lancet and Clinic.*

THE POSSIBLE DANGERS, IMMEDIATE AND REMOTE, OF TRACHELORRHAPHY.

* * * * *

Résumé.—The most important points which may be deduced from what has been said concerning the *primary dangers* would seem to be :

1. That primary hemorrhage, though not uncommon, is rarely alarming, and when severe, is easily controlled by traction exerted upon the cervix, or by one or more sutures passed deeply under the bleeding points.

2. That secondary hemorrhage is rare, but, when it does occur, is a serious danger. That it may happen, not only when the circular artery has been wounded during the operation, but also at times as a consequence of the cutting of a suture into a previously intact arterial twig. That when it does happen, if very severe, and the instruments are at hand, time should not be wasted in trying other means, but that we should at once apply the deep suture, twisted tightly on the side from which the bleeding comes.

In the absence of the proper instruments, and in moderate cases, tight tamponing with discs of alum-cotton will suffice, and not interfere with union.

3. On account of the danger of secondary hemorrhage from the cervix, it is an open question whether, in those cases where both lesions exist together, it is not best and wise to defer the repair of the lac-

rated perineum to some time after the closure of the cervical rent, and not, as a routine practice, do both operations at one sitting.

4. Menstruation commencing on or before the removal of the sutures does not necessarily cause trouble, if only they be allowed to remain *in situ* for a few days longer, or until it ceases.

5. Non-union occurs in about eight per cent. of all operations, the percentage of failures being larger in hospital than in private practice.

A flabby, hyperemic condition of the cervix is most apt to lead to this result, but it may also be produced by too tight or too many sutures.

6. Serious inflammation is a not very infrequent sequence, and even death occasionally follows.

7. Inflammation frequently occurs where there has been previous cellulitis, and it can be best avoided by recourse to the manipulative measures described.

What have been considered as *secondary dangers* by some writers, are shown to be in most cases palpable benefits, the facts given proving the following :

1. Trachelorrhaphy does not cause sterility.

2. On the contrary, it causes a decided increase in the productive fertility of the subjects of the operation.

3. After the operation there is even less liability to subsequent cervical laceration than there was at first.

4. There is no danger of anything like serious obstruction to subsequent labors by the cicatricial tissue formed in the cervix.

5. There is very little danger of producing serious stenosis of the cervical canal, except through inexcusable carelessness—*American Journal of Obstetrics and Diseases of Women and Children*.

PALATABLE POISONING.—We ask pardon of our friends, the publishers of the little work on “Palatable Prescribing,” for misprinting it in our table of contents for April “Palatable Poisoning.” We must have had in mind the case of a Russian patient of ours who took a teaspoonful of green paint with suicidal intent, and took a little “tsirop” to take the taste out of his mouth. But the little book is a good one, and we hope now that it has been unintentionally slandered it may gain hosts of friends.

CASES OF PRURIGO (HEBRA'S).

Dr. C. Handfield Jones thus writes in the *London Medical Times*, February 28, 1885:

Case 1.—J. L., æt. 17, errand boy, admitted November 8, 1884. Father died of consumption, mother living. Is a stout-looking lad. No history of scrofula or syphilis. Does not remember having any serious illness, suffers from cough occasionally, and from rheumatic pains in shoulders and loins. Has occasionally some asthamatoid paroxysms, which are apt to come on when his skin disease is better. His present illness commenced three and a half years ago, when he was working in a bakery. Was treated at St. Mary's as out-patient, and afterwards was admitted, and placed under the care of Dr. Cheadle. At date of admission he had been suffering for eighteen months. He remained in the hospital thirty-five weeks, and left much relieved. He then got employment at a dyer's, and after two months the eruption came out again. At present both his legs are covered extensively with eruption, which affects chiefly the extensor surface of thighs, legs and arms. There is also a large patch on the front of his upper chest. His skin is very tough and hard, and in the affected parts more or less rough and red and thickened. Some discharge occurs, which stiffens linen. The affected parts itch severely, especially when he is warm in bed at night. One of his nails is marked by furrows. No albumen in urine. Some cough. Some pityriasis of scalp. Is otherwise healthy. Ordered a full warm bath with patent size every night, and a tobacco lotion, gr. 20 ad. ζ x., to be applied in the day to the itching parts. Improvement had commenced by November 13th, but was interrupted by my ordering ungt. staphisagriae in place of lot. tabaci, which coincided with a worse state of eruption and increase of itching. 18th.—Eruption looks much better, ungt. zinci is very agreeable, more soothing than the lotion. Bismuth ointment is not more effectual than zinc. November 27th.—No itching, sleeps well. He was discharged on December 12th very much relieved. His temperature in seven observations was normal. Phosphori gr. 1-33, *ter die* ē cibus, was administered internally during his whole stay in hospital.

Case 2.—B. Ph., æt. 15, milk-boy, admitted April 4, 1884. Father dead, was subject to same eruption as patient, so is his eldest brother. The other members of the family are quite healthy. He has had the

malady more or less since birth, but it did not become very bad until two years ago. He attended as out-patient for nine months, was then better, and ceased attending. Got worse subsequently, and was advised to become in-patient. Has had no other illness during his life. Generally after much exertion, and getting hot thereby, he has difficulty in breathing and hurried respiration. This lasts from one to twenty-four hours at different times; he does not feel ill, but occasionally diarrhœa comes on with or soon after the attacks, and lasts a day or two. Eruption discharges at night when he is warm in bed, or is warm from other causes. Appetite good. He looks bright and fairly healthy. Says he is very well. Pulse 34, irregular. Skin dry and harsh, is thickened generally, and presents brown, scaly patches on feet, legs, front of thighs, back, upper third of abdomen, forearms, front and back, front of right arm. Temperature 100.2°. Heart and lungs fairly sound, rhythm of sounds at apex not regular. Urine s. g. 1025, no deposit, no albumen. Much itching. Ordered gelatine warm baths o.n. Lotio glycerini, ol. morrh., ʒj. *ter die*.

On 10th, ungt. staphisagriæ was ordered, which he used four days without any good effect. Ant. pot. tart. gr. 1-20 + tr. calumbæ, ℥v., + aq. ʒj. *ter die*.

21st—Improved, eruption disappearing in all parts, itching ceased. Antimony caused nausea at first, but not now.

24th—Much improved, eruption almost gone from all parts except outer edges of legs and arms.

May 3—The eruption which lingers on the legs and arms is more the result of scratching than true eruption. Bowels act regularly every two or three days, but has colicky pain after defecation. Phosphorus, gr. 1-33 *bis die* commenced on May 1.

5th—Had an attack of shortness of breath to-day, after getting up in morning.

8th—Omitr. antimonium. Went out June 4 much relieved. He was readmitted September 8, with recurrence of skin disease. Musical sounds were heard in both lungs, in fronts and backs. Heart's sounds normal. Ordered warm gelatine bath o. n., and phosphorus, gr. 1-33 *bis die post cibos*.

September 11th—Skin at back of calf and in popliteal space of both legs looks angry, but causes no pain except smarting on entering the bath. No trouble in breathing. Pulse 96, regular.

October 9th—Hardly any itching, no eruption.

October 13th—Cough rather troublesome in night. Urine neutral ; no albumen.

15th—Legs same, arms not so well. Had asthma this morning for about an hour.

23d—Arms and legs better. Bowels constipated ; headache.

October 30th—Discharged, cured (?). Temperature normal.

Remarks.—The first of these two patients does not appear to have inherited his prurigo ; it made its appearance between the thirteenth and fourteenth year of life. In the second, the disorder, or the tendency to it, was evidently transmitted from the father to two of his sons, and its external manifestation dated almost from birth in B. Ph. Hebra refuses to allow that prurigo is an hereditary affection, but this view is too extreme. In both cases the disorder was inveterate, being relieved for a time by treatment, but soon recurring again in full force. In both the patient was subject to attacks of quasi-asthma, which were more prone to appear when the cutaneous disease was brought into abeyance. In both the general health, apart from the irritation of the skin and bronchial membrane, was good. Only in case 2 some similar derangement of the intestinal mucous surface was occasionally associated with the pulmonary. The eruption itself was rather of indeterminate character, and had it not been for the severe itching, the obstinate tendency to recur, and the associated asthma, one might have hesitated to pronounce positively on the diagnosis. Hebra remarks (p. 259, Syd. Soc.) that “there are many cases of prurigo which may at first sight be taken rather for some other affection—for ichthyosis, eczema, impetigo, or ecthyma, from the peculiar and characteristic features of the disease being obscured by other more obvious symptoms.” He prefers to be guided, not by what may be seen here and there on the skin, but from the *general impression* which the eye should always be trained to receive. The diffused roughness, harshness, discoloration and thickening of the skin were, with the other symptoms, decisive in my cases. As to the pathology, we may agree with Hebra in rejecting the popular notion of “acidities and acrimonies” as the cause of prurigo, but it is by no means certain that his own view is any better founded. He regards a pruriginous papule as a local lesion, originating primarily in the skin, which gives rise to itching by the pressure of its fluid contents—a minute drop of blastema—on the nerves of the cutaneous papillæ. He affirms that it is “only at those places where papules appear that itching is felt,” that without papules

there is no itching, at least in true prurigo, though he admits that "there certainly are cases in which itching is first felt, and consequent scratching produces all the visible appearances on the skin." But these are different pathemata, and he draws a marked and exact distinction between pruritus and prurigo properly so-called. Hebra's hypothesis seems to me opposed by the non-occurrence of itching in common pressure bullæ—as from rowing or walking—as also in herpes labialis, varicella and varioloid. Dr. Tilbury Fox maintained strongly the opposite view, that the basis of prurigo was a paresis, a disorder of the nervous element of the skin, that it was in fact a neurosis. He writes, "Since the intense itching is often the sole, as it is the primary and important thing present, other phenomena observed in the skin are secondary." The same view as to the essential importance of primary nervous system derangement had been previously maintained by Cazenave and others. If Hebra's statement as to the necessary dependence of itching in prurigo on the pre-existence of papules was established, it would be an important point; but, as we have seen, T. Fox denies it positively, while Hilton Fagge remarks that it is almost impossible to feel certain on this point, since we scarcely ever see prurigo cases before the skin has been scratched. Mr. Hutchinson, with his vast experience, actually questions whether Hebra's prurigo is met with in English practice, and is half-inclined to deny that there is any malady deserving the name of prurigo, and to affirm that "we ought rather to think of pruriginous irritation as a symptom which may attend a large number of different skin diseases." It seems to demand explanation on Hebra's view, why, since the scabies eruption produces itching in remote parts as well as *in loco*, the prurigo eruption acts so differently? The essence of Hebra's view seems to be that in prurigo the local lesion is everything, and the general condition goes for nothing. Hence, he consistently affirms that "external remedies alone are of any use in prurigo." But the existence of winter prurigo and of summer prurigo, as well as of prurigo uninfluenced by weather or climate (Hutchinson), goes far to negative the above dogma. The papular eruption must be identical, one would think, in all; but there is something else to be considered, probably the nervous system, on the peculiar state of which the result very largely depends. Until I met with the two cases recorded in this paper, Hebra's prurigo was scarcely known to me. They seem fair instances of it; but have the interesting feature, which Hebra does not notice, of pulmonary (or intestinal)

disorders alternating to some extent with the eutaneous. This seems to me absolute proof that the morbid action was not merely local, but to some extent at any rate general. In the *Lancet* of July 6, 1867, I have mentioned a case where severe pruriginous itching suddenly ceased, and was replaced by melancholia. Metastases of this kind where one nervous disorder is succeeded by another at a remote part, can scarcely be regarded otherwise than as neuroses. As such I certainly reckon my two cases. All instances of pruriginous disorder may not be alike; to some Hebra's view may be fairly applicable; but in the great majority the nervous system seems profoundly implicated, and to recreate deteriorated nerve-force seems to me a rational object of treatment.—*Medical and Surgical Reporter.*

DR. CAMPBELL'S ADDRESS

Before the American Medical Association in New Orleans, April 28.

The "President's Address," by Dr. Henry Fraser Campbell, of Georgia, in the course of which, speaking of the position of expert medical witnesses in court, he said: "That the position of the medical witness, and, to a certain extent, all professional and expert testimony before the courts of law, is anomalous, and often one of false relation to justice, as well as to the ends of humanity, and sometimes mortifying to the pride and self-respect of the deponent, few will deny; for but few have been so fortunate as to escape the annoying experience of being at one time or another the subject of such arraignments—happy has he been who has had only his intelligence and his integrity assailed, and happy, too, that no malpractice suit has deprived him of his liberty and living as well.

"My object is more to bring the position of the medical man summarily before you, as he stands in his several relations to the tribunals of law, rather than to describe minutely that with which we are already familiar, or to present elaborate arguments to establish the existence of evils of which we are already convinced. I will, therefore, briefly refer to only a few of the more prominent rôles in the forensic drama (too often a farce), in which he is often

forced to play his part, and in which, though he may be repeatedly *encored*, he seldom elicits applause.

“At the present time, and in the eyes of most communities, the plane to which the medical deponent and expert has at last gravitated is but little above that of the ordinary, if not the partisan, witness. The light of scientific truth he sheds is even sometimes suspected as coming with bent and refracted rays through the distorting lens of self-interest and a paid opinion. From circumstances which condition his testimony, he seldom now occupies in this country the honorable position of *amicus curiæ* or friend and instructor of the court on scientific questions, upon which may rest an important judicial decision. He is almost invariably presented as the medical witness, or the medical expert, in behalf of one side or other of the case upon trial. He is cited to appear as a witness in its behalf more frequently, not because he possesses superior knowledge of the scientific truths about which his testimony is to be conversant; not because his medical opinion *per se* is entitled to more confidence than that of another, and still less frequently—we could hope, never—because he has been suborned; but he is often selected because, with a certain standing in the community, he is known to hold opinions, or, on the representation of the attorney, can be made to adopt opinions favorable to the side on which he is to depose. Quite often his only claim to the character of a medical expert depends upon a summons thus conditioned. The reliance upon medical testimony, and, in time, confidence and respect for the medical profession, must necessarily be depreciated by such exponents of them both.

“Professor Washburn, of Cambridge, quotes the following words of Lord Campbell in addressing the House of Lords in regard to scientific testimony in general: ‘What are called scientific witnesses come with such a bias on their minds to support the cause in which they are embarked, that hardly any weight should be given to their evidence.’

“Without further general remark, I will here refer more or less briefly to the three principal positions or attitudes in which, as professional men, we most frequently stand related to the tribunals of law, viz: first, as the medical witness; secondly, as the medical expert; and, thirdly, as a defendant in suits of malpractice.

“In each one of these relations it could readily be shown that

the medical man labors under disadvantages which do not, in the same degree, embarrass either the testimony or the defence of any other class of citizens. This is not the occasion to enumerate them, much less to put them under discussion. They have been long and fully recognized by the members of our own profession, while some of the most profound and astute minds of both the bench and the bar have diligently studied and yet have failed to remove them. For the deponent, whether medical witness or expert—and here we can consider them together before the jury—these difficulties often arise from the unlimited number and diversity of facts, and sometimes of principles, necessarily used as predicates for medical induction, and from the unavoidable complexity apparently connected with the reasoning by which conclusions, often perfectly legitimate, are arrived at. Thinking in technicalities, he is yet called upon to express himself in the plainest vernacular, often before an ignorant jury, or at least in terms simplified for the ready comprehension of non-professional minds.

“This last requirement is often violated; not always from a pedantic inclination, but from embarrassment under the novelty of the situation, and from the little familiarity with, and thought given, to questions in forensic medicine, and to the object of medical testimony as being instruction to the jury. He may be like Moses, ‘learned in all the wisdom of the Egyptians,’ but if he deposes only in the Egyptian dialect, only an Egyptian jury can be enlightened by him.

“Not alone in our own country, but at a still earlier date, and apparently with even a more sedulous care, have the forensic wisdom and ingenuity of foreign judicatories been exhausted in various attempts to elevate the position and to render more available to the ends of justice and equity the scientific witness and expert. Prussia, recognizing the evils of ignorant and unworthy experts in the medical profession, as well as in all others, from which scientific testimony has to be elicited in grave questions pending before the courts, has a toxicologist appointed by the government, and a permanent commission of experts in matters connected with medical science. In Scotland, medical witnesses are said to deliver their examinations in writing, but are subjected to oral cross-examination before the court; in France, the judges decide who shall act as experts in certain cases, also what questions shall be submitted to

them, the answer being returned to the jury in writing ; and ‘practically it is said to have the weight of conclusive evidence.’—*Washburn*. ‘In England,’ continues Professor Washburn, ‘much speculation and various schemes have been suggested for obviating the objectionable features of expert testimony, but thus far without the adoption of any system.’

“It will be seen that all these efforts, both in the United States and in the several countries of Europe, comprehend all scientific experts, and among them the medical deponent. They are not made in behalf of the witness, either to elevate his position, or, except incidentally, to recognize the high order of his testimony, but only to guard against his ofttime ignorance and unworthiness, and to make his testimony available to the courts. In most of the European courts mentioned, however, there is an incidental protection given to the scientific medical witness, from the assaults and indignities offered by the examiner and the advocate.

“In the United States, even, this incidental protection is rarely enjoyed by the medical profession. Often each side calls its medical expert, and his testimony, whether scientific or ignorant, impartial or partisan, is dealt with in open court by the advocates and examiners, at whatever cost to the witness, so that it can be made only to subserve the interest of one or the other side. Quite often the cause of justice is lost sight of, the significance of the deposition perverted by the artful methods of the examiners, and the casting of doubt on its credibility by the advocate. He is, as a witness and also as an expert, subject in his disposition to the arbitray, and sometimes offensive, and often irrelevant interrogation of the interested attorney, whose duty it may become to misinterpret or to suppress the significance of his testimony, and not infrequently to wrest it to the ends of that which, though the common practice of the law, are not the ends of equity and justice. In this way can the profoundly scientific and strictly conscientious medical witness or expert, on account of the inherent difficulties of his deposition, as before stated, more than any other class of witnesses, be made to appear to the average jury and to all ordinary minds present in the light of a crafty charlatan—the tool of some hidden interest guiding and directing his testimony.

“Albeit, the situation is one of grave and deplorable falsity and humiliation, I may here, for its aptness, perhaps not improperly

indulge in what might otherwise be considered a facetious illustration of this perversion and suppression of medical testimony to the nullifying of justice, and, 'for the nonce,' to the degradation of the medical witness and expert in the eyes of the jury and 'all spectators.' The incident is accurate in all essential particulars.

"The case was one in which the wife had been accused of causing the death of her husband by poison—all attendant circumstances and testimony in the case confirmed the suspicion; and, lastly, arsenic had been found in abundant quantity, by careful and laborious analysis, in the stomach and tissues of the dead man. The medical expert was one of the most conscientious and distinguished members of our profession, and a founder of this Association; and, withal, 'as mild a mannered gentleman as ever'—had his throat cut, or his testimony scuttled, before an American jury. The advocate for the defense was one whose name, if mentioned, would at once be recognized by all present as one of the leaders of the American bar, and a statesman of the land; and, withal, one of the most powerful criminal lawyers that ever swayed the minds of a jury in behalf of the accused.

"*Scene.*—The crowded court-room many counties distant from the homes of both the medical witness and the advocate.

"Lawyer: 'Are you a physician?'

"Medical Witness: 'Yes.'

"L.: 'You are a professor in —— College?'

"M. W.: 'Yes; Medical College of ——.'

"L.: 'What Chair do you hold?'

"M. W.: 'Chemistry and Pharmacy.'

"L.: 'Are you in the habit of analyzing for arsenic?'

"M. W.: 'Yes.'

"L.: 'Do you often find it in cases when called upon for your testimony in court?'

"M. W.: 'I have repeatedly found arsenic or other poison in the stomach of such persons.'

"L. (*with emphasis*): 'Have you ever failed to find the poison?'

"M. W.: 'It has so happened that in the cases I have examined the existence of poison had been circumstantially made out, and my analysis established the fact.'

"L.: 'You have always detected the arsenic, Doctor, in such cases?'

“M. W. : ‘Yes.’

“L. : ‘May it please your honor, we are satisfied with the witness.’

“Medical witness retires.

“This was the cross-examination, and this lawyer for the defendant had the closing argument. No further questions were asked the witness. He had shown to the satisfaction of all intelligent persons present that he had, in a most scientific, conscientious and expert method, supplied the last and convicting link in the unbroken chain of evidence required to establish the guilt of the accused.

“This was the attention the lawyer gave to this medical expert testimony :

“‘Now, may it please the court, as to this medical—what they call ‘expert testimony.’ Consider the facts : He is a doctor ; he is a professor in a college ; his chair is chemistry and pharmacy.

“‘Gentlemen of the jury, he is in the habit of testing for poison—he is the arsenic hunter and arsenic finder for his college, and, you see, he is a good one ; he *always* finds the arsenic. He is obliged to find it—it would ruin his college and ruin him if he did not find it ; but, gentlemen of the jury, I appeal to you as intelligent and scientific men, you are not going to allow my innocent, unfortunate client to suffer to support the credit of that college !’

“The murderess was acquitted by the jury almost without leaving their seats, as any one who knew the giant of an advocate she had might well have expected.”—*Medical and Surgical Reporter*.

VARICOSITY OF THE LINGUAL VEIN.—Just as varicosity of the hæmorrhoidal veins at the other end of the alimentary tracts points out the state of the portal venous system, so a varicose condition of the lingual becomes indicative of a dilated state of the whole jugular system. It is only an exaggerated varicosity that would seem to be prognostic. It does not always accompany the arcus senilis ; that suggests rather arterial anemia than venous hyperæmia. The lingual vein being a branch of the internal jugular, will indicate the state of the blood-current in it, and so will approximate to the state of the brain-sinuses, the veins of Golen, and, indeed, the whole intracranial venous system.—*Dr. G. C. Dickson in British Medical Journal*.

AN EPIDEMIC OF ACUTE CATARRHAL CONJUNCTIVITIS—"PINK EYE."

By H. F. HANSELL, A.M., M.D.,

Chief of Clinic of Eye Department of Polyclinic, Ophthalmic and Aural Surgeon to Southwestern Hospital, etc.

Within the past few weeks so many cases of acute inflammation of the conjunctiva have occurred in Philadelphia and surrounding country, as well as in several other Eastern cities, as to warrant the use of the term epidemic. Some have presented the features of the ordinary non-epidemic catarrhal inflammation, while others, on account of the violence of the inflammation, have had the appearance of Egyptian (purulent) ophthalmia, and seemed bordering on it. Saemisch* thus defines conjunctivitis catarrhalis (simplex) "in general a condition of abnormally diffuse hyperæmia of the membrane attended with increased mucous secretion." It is a more or less active exudative inflammation, developing suddenly, and frequently, without assignable cause, reaching its acme in twenty-four or thirty-six hours, receding nearly as rapidly, entirely disappearing in three or four days, and leaving no trace.

As is well known, most of the forms of conjunctival inflammation are contagious, hence their liability to occur in epidemics. Exactly how the contagion is communicated is not known. It may be by actual conveyance of the discharge from a diseased eye to a healthy one by means of towels, fingers, etc.—*material means*—and it undoubtedly is in some cases, for example, in a family of several persons where each one is successively affected; but the majority of cases owe their origin to contagion conveyed through the air—*ethereal means*. An epidemic could hardly be produced by material means, but, as in yellow fever, cholera, etc., by the ethereal dissemination of the poisonous germs or bacteria. The indirect cause of conjunctivitis, that is, the direct cause of the epidemic, may probably be ascribed to a specific poison, which depends for its life and sustenance on moist filth, decaying refuse of all kinds collected during the winter, and which, liberated from its home by the warm

* Graefe and Saemisch Handbuch der Augenheilkunde.

rays of the spring sun, makes its way to our bodies, lighting up in one acute catarrhal conjunctivitis, in another typhoid fever, in a third acute tonsillitis, etc.

The recognition of this disease is not difficult. The inflammations most resembling it, and with which it is most apt to be confounded, are scleritis, episcleritis and iritis; but, if its prominent symptoms are remembered—bright red conjunctival injection—involving the entire membrane, greatest on the lids and gradually growing fainter towards the cornea; the mucous discharge collected in flakes in the folds, the adherence of the eyelids to one another in the morning; the history—epidemic—its sudden appearance, rapid development, and almost entire absence of pain, its disappearance in a few days under the simplest treatment, and its binocular character, the affection taking the second eye within a few hours of the first—and these signs are seen in every case—a mistaken diagnosis must be a rare occurrence.

The prognosis is always favorable. No serious complication is apt to arise. In severe cases the inflammation extends by contiguity into the tissue of the lids beneath the conjunctiva, and produces acute blepharitis. The adjacent connective tissue becomes infiltrated and œdematous, presenting the appearance of gonorrhœal ophthalmia. The secretion, although abundant, is never purulent. (Edema of the ocular conjunctiva (chemosis) may also be present, but is never very intense, nor does the inflammatory action extend to the cornea or iris. The former remains perfectly transparent, and the latter reacts readily to light and mydriatics. A symptom which may give the patient considerable anxiety is the peculiar appearance of a gas-jet, or other small luminous object. It is distorted from its proper shape and surrounded by a ring of colors. This symptom is caused by flakes of mucus on the cornea, through which the patient sees the light. It disappears for a short time, or is changed after winking and is of no importance. An existing error of refraction may be discovered after the inflammation has passed away by the inability of the muscle of accommodation to resume its abnormal contraction, a good and not an evil result.

The *treatment* is entirely local and of the mildest character. A weak astringent wash, such as borax, gr. v., and $\bar{3}$ ss each of camphor water and pure water, or the same strength alum solution, used freely and frequently on a soft, clean sponge to the closed lids, and

the application at night of Pagenstecher's ointment—hydrarg. ox. flav., grs. ʒj—or simple cerate will be proper for the majority of cases. If the inflammation shows a tendency to become chronic, touching the everted lid daily or every second day with silver nitrate, gr. ij— $\frac{3}{4}$ j, will speedily effect a cure.

My experience with abortive measures is not sufficient to warrant conclusions, but in one case I was able to prove the efficacy to a ten-grain solution of silver. The patient, who was suffering from a severe attack in the right eye, was instructed to present itself immediately upon the appearance of the injection or sense of discomfort in the left. He did so. The silver was applied, followed by cocaine to mitigate the pain, and the next day the left was quite as well as the right. The injection had disappeared in twenty-four hours and did not return.

To prevent the spread of the disease all cloths, sponges, etc., used to cleanse an affected eye should be destroyed or thoroughly washed in a disinfectant solution. Precautionary measures, however, seem to be of little avail. In a private family, consisting of a mother, four adult sons, and two servants, all were affected except one servant, although one of the sons who was the first attacked was warned to be exceedingly careful lest he should spread the disease to the others. Five of the six cases were binocular.—*Medical News*.



PERMANGANATE OF POTASH IN AMENORRHŒA.—Dr. P. M. Deas, of Exeter, England, says (*Brit. Med. Jour.*) that from his experience he draws the following conclusions about permanganate of potash : 1. It is a useful and safe emmenagogue, and free from the disadvantages of some other medicines of this class. 2. Its use may be continued for months without any bad effects, and success need not be despaired of, even after many months. 3. Even when it fails as an emmenagogue it acts beneficially as a general and neromè tonic. It is best given in pill form, using Radlm ointment as an excipient ; all saccharine material should be avoided in making the mass. The dose is from one to six grains three times a day.

READING NOTICES.

Dr. DUMARS, of Peoria, reports the case of a man about 45 years of age, the janitor of the building in which his office is located, who had been a sufferer from *Rheumatism* for nearly ten years. The attacks were very frequent and very severe, often necessitating the use of crutches, and would not yield to treatment with any degree of certainty. During the paroxysms relief from pain was secured only by the use of morphine. Having received a sample bottle of *Tongaline* he gave it to this patient, who derived so much benefit from the use of its contents, that he took the remedy regularly. Having used three bottles within four weeks, he found himself entirely free from the complaint, and has experienced no recurrence since, although eighteen months have past, and he has been able to attend to all of his duties during two very severe winters.

DUNLAP'S "CHAMPION" STYLOGRAPHIC PEN.—A person who has never used a Stylographic Pen cannot possibly know its value or convenience, or he would certainly procure one at any price. We have used a Pen, presented to us by Mr. L. E. Dunlap, of Boston, Mass., for over two years, and we now intend to send for one of the new "Champion" Pens recently patented by Mr. Dunlap, as we are advised that it contains valuable improvements; one of the improvements being a compound spiral spring formed from a tube of hard rubber, while other Stylographic Pens have fine gold wire or metallic springs, which soon rot and corrode.

This newly invented Pen is unanimously endorsed by the trade as giving perfect satisfaction to their customers, and many say it is the only Stylographic Pen worth having at any price.

In order to successfully introduce to the public this new and valuable Pen, the manufacturers (Dunlap Stylograph Co.), 296 Washington Street, Boston, Mass., offer (for a short time only) to send by return mail, to any address in the U. S., a "Champion" Pen, six months supply of ink, and a beautiful gold-mounted pencil, on receipt of the price of the Pen, which is \$2.00 each for plain, and \$2.50 each for gold-mounted.

The "Champion" Pen is the same in style and finish as Pens sold everywhere at \$3.50 and \$4.00.

NORTH CAROLINA MEDICAL JOURNAL.

THOMAS F. WOOD, M. D., Editor.

Number 6. Wilmington, June, 1885. Vol. 15.

ORIGINAL COMMUNICATIONS.

A CASE OF INTRA-CAPSULAR FRACTURE OF THE NECK OF THE FEMUR IN A YOUNG SUBJECT.

By B. M. CROMWELL, M.D., Eckhart Mines, Md.

On the 20th of last June (1884), while Adolph Hoeffler, a youth of 18 years, was on his knees digging coal, he noticed that the roof was insecure, and in attempting to move out of the way, while still on the left knee, a lump of coal weighing about 300 pounds fell from the roof, a distance of about six feet, on his sacrum, crushing him down. He was brought out of the mine, and in less than a half hour I saw him.

As he lay on the stretcher, his pantaloons being removed, this is the condition he presented on inspection: His countenance pale, pinched and anxious, skin cool and pulse very feeble. He was evidently suffering from shock verging closely on collapse. His left leg was shortened about two inches, slightly flexed and inverted, so that the toes of the left rested on the dorsum of the right foot,

and above the trochanter and a little behind it, was a tumor about the size of a small orange.

I did not doubt, from the aspect of the case on inspection, that I had a dislocation of the head of the femur on the dorsum ilii to contend with. On proceeding, however, to make a more critical examination, having first ascertained that there was no fracture below the trochanter, I found that by grasping the ankle and making quodrate traction the limb could be readily brought down to its normal length; that the motions of abduction, adduction and elevation, and rotation could all be easily produced, but with much pain to the patient. On examining the tumor on the dorsum ilii I found it to be soft and yielding in any direction to pressure; it was evidently fluid. The inversion, I found, could not be perfectly overcome by any force I thought prudent to apply to the leg. On relaxing my hold on the ankle the shortening at once reapared.

I could detect no bony crepitus, and only once thought that I detected such crepitus as is produced by torn ligament or cartilage. I examined for crepitus repeatedly during the progress of the case by placing my ear over, and at times on the trochanter, while an assistant would gently rotate and otherwise move the leg, but never detected it. The trochanter on the affected side seemed as prominent as its fellow on the opposite side, but was felt on a plane higher up on the pelvis. I could detect no injury to any of the bones of the pelvis, and as he could sit up, and for a reason hereafter to be given could not lie down, I was sure there was none.

It was not until the day after he had received his injury that I found him sitting propped up in bed, and on asking his reason for doing so, he said that the lower part of his back pained him so much that he could not lie on it. On examination I found the sacrum covered by a sack of fluid partially filled. Not knowing the nature of the contained fluid I punctured it, and there escaped about six ounces of bright arterial blood. This gave him so much relief that I evacuated the sack four or five times during the progress of the case, each time letting out arterial blood and serum. The last puncture gave vent to nothing but serum. He called my attention also to his scrotum, the lower segment of which was black from infiltration of blood. There were also evidences of effused blood in the tissues all round the rim of the pelvis, from the sacrum to either anterior spinous process. The tumor on the

dorsum ilii first noticed, entirely disappeared after the sack over the sacrum had been opened, leading me to believe that the blood from that point had gravitated to the sacrum and formed the sack there.

My diagnosis was fracture of the neck of the femur within the capsule, with laceration of the capsule and complete displacement of the fragments—the force from above, while he was on his knee, driving the pelvis down and with it the head of the bone, and forcing the trochanter up about two inches.

It was possible, however, that the neck might have given way at its junction with the trochanter, which would have made the fracture extra-capsular. Such was my hope—a hope strengthened somewhat by the youth of the patient and the obliquity of the neck in young subjects. The marked and persistent inversion of the leg was a symptom I could not readily account for, as in fractures of the femur above the trochanter, both within and without the capsule, eversion is the almost invariable rule. Prof. Frank H. Hamilton, however, in his admirable work on “Fractures and Dislocations,” cites several instances where inversion has occurred, and says that one instance came under his own observation. He speaks of the difficulty of accounting for this condition when it does occur, and refers to a specimen that Dr. Bigelow had an opportunity of examining, from which he (Dr. Bigelow) concluded “that the inversion was due to the extent of the comminution, which had separated the walls of the shaft so as to receive in the interval the whole neck, instead of the posterior wall only, as commonly occurs.”

In the case under consideration, when we reflect on the position the patient was in when he was injured, and the direction of the injuring force, we can readily imagine that the distal end of the fracture in pushing through the capsule, would lacerate only its upper segment, and that the lower segment, in following the bone, would not be lacerated, but stripped off from one or the other of its attachments, and would thus become a loose flap or valve, that might readily interpose itself between the ends of the bones, that it might also become so twisted as to counteract the natural tendency of the leg to fall outwards.

There is, however, another fracture occurring at the hip-joint—one likely to be produced by just such an accident as we have in this case, where the inversion of the leg is the rule. I refer to fracture of the rim of the acetabulum.

I excluded this accident in making up my diagnosis, because in these fractures there is really a dislocation of the head of the bone on the dorsum ilii. The head of the bone can be plainly felt in its new position; it requires much force to bring it again in the acetabulum, and thus restore the length of the limb; it does not immediately fly back when the reducing force is removed, and there is crepitus. This crepitus, Dr. Hamilton says, "is sometimes discovered the moment we begin to move the limb, and this will aid us in distinguishing it from fracture of the neck of the femur, accompanied with much displacement."

The readiness with which the patient's leg was brought down, the absence of crepitus and of the head on the dorsum, and the free mobility of the limb in any direction except eversion, leave no doubt that it is a fracture of the neck; while the great displacement of the fragments, coupled with the fact that after five weeks there is no attempt at union, and no discoverable callus thrown out, warrant me in believing that the fracture is within the capsule.

He was kept under the influence of opium to relieve pain, and he was sustained, after subsidence of the acute symptoms, by moderate stimulation and generous diet. Towels wrung out of cold water were applied over the injured hip, and these were kept up until the effused blood had been absorbed, and all danger from local inflammation had passed away. His leg was placed upon a double inclined plane for the first day, but believing that the irksomeness caused by the apparatus was proving too great a strain upon his already over-taxed vital powers, it was removed, and the leg was supported by pillows for the following three weeks—until all pain had subsided in the injured part, making it unnecessary to continue the opium, and until all fever had subsided. This course I would have pursued regardless of the nature of the fracture and the almost hopelessness of obtaining union. The first duty of the surgeon is to preserve the life of his patient, and afterwards to give him as good a limb as circumstances will allow. I am satisfied that I have seen many valuable lives lost after compound comminuted fractures of the thigh from gun-shot wounds, by the persistence of their surgeons in harnessing them up in stiff and irksome apparatus to procure good results; and I have seen these cases die out with a persistence and regularity that astonished those having them in charge. I have seen, on the other hand, four such cases at one time, where, fortunately for them, no apparatus of any kind was procurable,

stretched out on their straw pallets, with their legs supported on either side with sand bags, recover without an untoward symptom and in an incredibly short time. There were five of these cases brought to me on that occasion; one was removed to another hospital, where he had the benefit of surgical appliances of all kinds, was placed, I think, on an inclined plane, and died in about ten days. The other four recovered, as stated above, and (if my memory serves me correctly) were up and on their crutches in periods ranging from six to eight weeks.

At the end of three weeks, the patient under consideration having recovered from all constitutional symptoms, it was thought best to place his leg in extension by means of Porter's modification of Smith's anterior splint. Dr. A. B. Price, of Futburg, who was conversant with this splint, was kind enough to aid me in applying it, and by it we were enabled to bring the leg down its full length, until it was of the same length as its fellow on the opposite side. This extension was uniformly maintained for two weeks, when, on examination, it being found that there was no effort at union, and no callus thrown out, it was considered useless to maintain the position any longer, and the splint was removed and he was given his crutches.

At the date of this writing (May, 1885) the condition of the patient is as follows: The shortening in his injured leg is apparent enough, although he wears a huge heel on the shoe of that foot—giving him the peculiar rolling gait, when he walks, of a sailor on land. He has been in my employ as stable boy for the last six months, and has therefore been under daily observation. He seems to suffer no inconvenience whatever from his injury, never complains of pain, rides a horse, and otherwise stops at no work.



PLOVER'S EGGS are found out to be more digestible, because that, like all eggs which hatch fledged chicks, the albumen is thinner, and it is peptonized eight or ten times more readily than ordinary white of egg.

ADDRESS OF W. C. McDUFFIE, M.D., THE RETIRING
PRESIDENT.

Delivered before the Medical Society of North Carolina, at Durham,
N. C., May 20, 1885.

Gentlemen of the Medical Society of North Carolina:

The haltless march of time brings us again to the threshold of another year of our existence as an organized association.

To-day we enter upon its thirty-second annual cycle; and when I reflect upon the seeming brevity of the fifty-two weeks that have elapsed since our last anniversary, I am impressively reminded of the "but yesterday's" enjoyment in "the City of Oaks," and of the magnificent hospitality of its warm-hearted citizens.

We assemble to-day in this youthful but vigorous town, invited to partake of its "nectared sweats," and while it is our chief concern to study the enigmas of life, and by deep research discover the causes of all human suffering, and the surest modes of their removal, yet let us enjoy unalloyed the pleasure that these our annual respite days afford. It is with this feeling I greet you, and grasp with hearty zest the hands of those I meet but once a year.

A retrospect of the affairs of our Society during the past year shows much that will interest the historian, and while it is not my intention, in this short address, to look back, but ahead, yet I cannot forget, or omit, to notice the labors of our profession as a sanitary organization, and the crown of success obtained by persistent effort. Like the faithful sentinel on the watch-tower, who spies the enemy afar off, so we know that the price of health is "eternal vigilance," and while our shores were free from the dread pestilence which was devastating other lands, we reorganized, as it were, and secured the means wherewith to prevent its spread, to stay its progress, should the emergency arise.

The legislative enactment for this, and those for the State Board of Health and the practice of medicine, was the result of the combined efforts of members of our Society inside and outside of the Legislature, and are long strides in the path of advancement, to which I shall allude further on.

The past year has been one also of peculiar interest to the busy practitioner. The almost unprecedented dry summer and fall, extend-

ing from July to November, nearly throughout the entire State, brought many of us in contact with diseases showing much malignancy in character. This is the experience of all with whom I have conferred. We have suffered defeats, perhaps, as well as gained victories during this busy period of our professional existence, been depressed, as well as elated, as the battle went on, but we have the consolation that follows duty well performed, and again, "To hallowed duty, here with loyal and heroic hearts bind we our lives."

"Rugged strength and radiant beauty,
These are one in nature's plan,
But humble toil and heaven-ward duty,
These will form the perfect man."

Death, our common enemy, has invaded our own ranks since last we met. 'Tis meet that we pause and drop a sympathetic tear. We have been called upon to deplore the loss of such estimable members as a Robinson, a Whitehead and a Pender. Men whose kindness of heart and benevolent example have ennobled human nature. It is the death of such men that communities mourn, that social circles weep over—men whose places cannot be filled. These were burning and shining lights that have gone out in the Medical Society of North Carolina. Those busy brains are at rest. Those great hearts, always responsive to duty's call, to the cry of distress, or the sweet accents of affection, are still! Those once elastic frames, that never wearied in well-doing, "in journeyings oft, in labors many," are stark in death; and those brilliant minds, that irradiated beyond mere localities, are lost in the blaze of infinite intelligence! Their eulogy is left for abler pens than mine. Suffice it now that we hear the whisper from the spirit land, "Be ye also ready."

It is not, in my humble judgment, the rightful province or the proper function of the presiding officer to consume the time of the Convention with a lengthy thesis upon any particular medical subject. Such thesis should be the work of the members, and especially of the chairman of sections, and I trust we may have the pleasure of listening to much at this Convention which will command our attention and make our session both interesting and instructive. It would seem rather to be the duty of the President to suggest or point out ways and means of improvement in our workings, something whereby our progress and advancement as a

body of men seeking to benefit mankind, may be made more rapid, more interesting, and withal more harmonious ; if he can do that he will have accomplished enough to gratify the ambition of the most aspiring member of our Association.

I am not vain enough, my friends, to expect *great* results from my feeble effort to-day, but it may be that, perchance, in my earnest desire to see our noble profession go forward in advance of others, I may let fall a word, or give vent to an idea, that will eventually assist in raising the standard of our high calling. I shall at least impose upon myself the obligation of candor, as all conscientious inquirers should do, and if the suggestions are not based on sound reasoning, let them fall.

With this view, I will ask the attention of the Society for a short time to the subject of

PREPARATORY EDUCATION.

That learning is useful for the purpose of perfecting civilized society, has been so frequently repeated and so generally and unhesitatingly received as a maxim, that no one would be found to question its truth. But probably one of the greatest evils which accompanies the spontaneous assent to evident propositions is that, generally, being couched in universal terms, expression becomes ambiguous, and while words are preserved, ideas may be lost. It is well, then, sometimes to revert to those maxims in order to fix their meaning by elucidating their phraseology.

Literature has usually been considered under a two-fold aspect—speculative and practical—while the former merely regards abstract truth, the latter applies it to our concerns. I am inclined to believe that there exists much less of mere speculative learning than is generally supposed, and that what frequently receives the appellation, is but the appropriate basis upon which is raised the great superstructure of that which is practical. Allow me to illustrate by example. The demonstrations of mathematics and the calculations of algebra, would by many persons be denominated speculative, and even some might be found who would call their study idle, but abandon them, and see how much practical knowledge you destroy.

The observation of the paths of the planets, the distances of stars, their magnitude, relation and position, would seem to have

little influence upon the ordinary avocations of busy life, yet it is clear that the science of navigation depends chiefly upon astronomy, and thus much of the profit derived by our active merchant from the facilities of our age has been remotely created by the researches of some secluded sage, whose bones have mouldered in former centuries in Chaldea or in Egypt. There is no such thing as speculative science that is not applicable to the common purposes of life.

Let us take up what are usually designated as the "learned professions." Law, which is the creation of rules of conduct, and the enforcement of those rules, perpetually implicates life, liberty, property, public peace and private security. Here, besides, that mental discipline and habitual restraint which arise from a good education and a regular exercise of superior faculties—a nice power of discrimination and an extensive acquaintance with ancient legal enactments, etc., will be at least highly desirable, in fact, necessary. It is true, that here there is much of what is usually called practical, rather than speculative; but to converse most beneficially with the ancient legislators we should speak their language. This is only attainable by the aid of a classical education. It is not unfrequently urged against this position that we have seen many instances of great men who have well discharged their duty without these aids. I do not question the truth of the assertion, but my inference would be that they would have done better had they been so aided. It is added that men of this description have in some instances outstripped those of classical attainments. I would only reply that with the help of those attainments they would have gone farther. Let us view the requisite qualifications for a useful member of our own profession—for an accomplished and scientific physician and surgeon.

Besides that power of acute perception with which, as a kind of instinct, a man might be specially gifted, so as almost intuitively to detect the seat, the nature and the extent of a disease; it is highly desirable that the mind should have been so disciplined as to avoid the hasty conclusions to which an overweening and too confident self-sufficiency would rush. The general and usual diagnostics are greatly modified by the habits of the individual, by the influence of climate, by the period of life, by the previous treatment, and by a number of other peculiarities, which vary to an indefinite extent. If the truth of the admonition *festina lente* can be more usefully

practical in any one case than another, it is here. Genius, decision and action, quick as thought, can, and often do, much for life and health, but unfortunately they may also, by one mistake, fix the irrevocable doom of the patient. It is not by the knowledge of the vocabulary of a dispensatory, and an acquaintance with some of the chief properties of drugs ; it is not from the hasty and wanton mangling of a decaying subject, and possessing a general notion of the uses of bones, muscles and vessels, that correct and useful medical skill is acquired. No ; it is by the laborious investigation of a clear, calm and cautious mind. No reading can supply the place of judgment, but no power of judgment will avail much without facts upon which decisions may be formed. *An original and distinct perception, united to deliberate reflection, and a steady habit of observation, form the best foundation for useful healing knowledge ;* and every mode by which these faculties can be improved is an important branch of previous education.

I would ask here whether, generally speaking, the mind is prepared to receive the seeds of any science with no better preliminary education than is generally afforded by an ordinary "old field" "rule of three" school? I would unhesitatingly say no ; and my belief is that it would be just as reasonable for the farmer to expect a superior crop from unprepared soil, as it would be to look for medical or surgical proficiency from the attendance upon lectures by a half educated youth, let his natural abilities be what they may. Whoever, either from his own experience or the testimony of others, is acquainted with the progress of knowledge amongst students, must at once concede that the unprepared tyro in science will lose much more than is usually supposed, at the commencement, from the mere inability of an untrained mind to comprehend the views or to keep pace with the strides of an experienced proficient. We are the creatures of individual habit ; no speculative observation will supply the place of training—it will certainly do much to improve the observer ; but it will never, even in a moderately remote degree, be equally beneficial. It is true, you may sometimes meet with apparent exceptions to this rule, but I apprehend that, upon close examination, they will not be found such in reality.

As there are men of great natural strength of body, of well regulated courage and extraordinary ability, who will always be an overmatch for the best trained individual of puny frame and

nervous debility, so in the literary world, there are those to whom God has given great mental energy, but to which man has added little cultivation; such persons will always surpass these others, upon whom great human labor has been comparatively lost, because the Creator has withheld the necessary share of capacity. I need not dwell upon the impropriety of raising a sophism upon this fact. I believe you will agree with me that they whom this delusion could influence are not of the race of intellectual giants. Yet in this broad land of ours, where there exists a general ambition to obtain the honors and emoluments of the learned professions in the shortest possible time, with the least possible expenditure, and only that quantity of exertion which will barely suffice, there must always be a disposition to dispense, as far as possible, with extensive preparatory education. When we add to this that self-love, which in every individual creates partiality and great esteem for ourselves, and take into account a propensity to draw conclusions rather from possibilities and the imaginary fitness of things, than from observation and fact, we need not be surprised at the prevalent disposition to dispense with, or at least greatly curtail those preliminary modes of mental exercise which discipline the understanding and regulate the judgment. We need not be astonished that by many persons the information which I would call practically useful will be denominated speculative; such, for instance, as mathematical and metaphysical reasoning. These strengthen the youthful intellect, and a mind thus prepared will be more powerful, more attentive, more patient, more discriminating and more expert.

The attendance upon a single course of scientific lectures by a person thus prepared will generally be more beneficial than the same course *thrice* attended by the same person without this previous exercise.

Medicine is a more extensive school than that of the other professions; here we need absolutely a knowledge of the dead languages. It is in those languages that we are enabled to converse with the great fathers of our science especially, and the youth who expects to walk in the path of scientific investigation, will find that training here is far from wasted time, or labor spent in vain, for in after years he will find that the labor of a few years in his youth is in fact the economy of a large portion of his subsequent life, and the greatest aid to his accuracy in practice. For him a large part

of what is hastily called speculative, is the basis of truly practical knowledge. I desire to be understood as holding that, in each of the learned professions, and in that of medicine, in particular, the usual classical education is an exceedingly useful preparation for the professional study *itself*, and that what is so often pronounced unnecessary literature, is, in reality, absolutely and truly practical.

During centuries the way to the temple of literature has been through the halls of the ancients, and the languages of the republic of science have been principally the Greek and Roman, especially and more generally the latter. They who have been eminent in these great departments of knowledge were made familiar with these tongues by their early and assiduous labors amongst the classic authors.

We have occasionally, it is true, beheld some gigantic warrior, careless of discipline, untutored in tactics and despising evolutions, rush boldly into the fight, and spread destruction and terror for a time, but when the first emotion subsided, and his manner was observed, how easily was he overcome. The transient success which he obtained was the result of the mighty force with which he had been gifted originally, and the unusual mode in which he made his assault; but suppose he had added to his natural prowess the advantages or discipline, how much more formidable would he have been? The war cry of such a combatant seems to furnish a practical illustration of the soundness of his cause, yet I would ask, to what are we to attribute that suggestion which is continually urging the observer to make considerable allowance in favor of such men, *because* of their want of regular education, if it be not a universal concession that the mind thereby prepared is made therefore superior? For why should anything be conceded because of the neglect of a sound education, if the want of that disciplinary course be not a manifest disadvantage? Besides the energizing influence of this early discipline upon the mind, the acquisition of such an education affords such pleasing and profitable recreation in after life.

I can recall to mind men who, even in their old age, found in classical literature that recreation which improved, while it relieved, the mind—men who could feel emotion at Cicero's eloquence or melt at Virgil's pastoral strain. In exercises like this the understanding is informed, the memory is strengthened and the mind is relieved. In the midst of our struggles through this changing life,

it is well to have some literary scenery, which will be to us "as a city of refuge" until we shall be able to recruit. The effect will be like that described by Moore :

"Let fate do her worst ; there are relics of joy,
Bright dreams of the past, which she cannot destroy ;
Which come in the night time of sorrow and care,
And bring back the features that joy used to wear."

There is no "royal road"—arduous study, along the same path (in the field of classical cultivation), trod by all immortal authors of the past. Pope says :

"Twas from learned Greece, which her useful rules indites,
Where to repress and where to indulge our flights ;
High on Parnassus' top her sons she showed,
And pointed out these arduous paths they trode."

It is no waste of time for the young man to equip himself to the fullest extent possible before entering upon his career as a medical student—it is time saved.

I have touched upon classical education as of great importance to the literary character of our professional men, not so much from an expectation to escape the insinuation that this "higher education," as it is sometimes called, has not been attained by all of us in our preparatory course, as it is with the expectation that you will devote all your efforts to its attainment by the rising generation, and that we may all insist upon carrying out the resolution passed at our last Convention, offered by Dr. Cobb, in which we pledged ourselves, by unanimously adopting said resolution, "to take no young man into our office to read medicine who did not possess the requisite preliminary qualifications." Indeed, it was reflecting upon the great advantages that would result from this advanced step, if the resolution was strictly adhered to, that led me to select this subject for consideration. The prospects are fairer now than ever before that the standard of the medical profession in North Carolina, individually and collectively, will be greatly advanced in the near future. We have the greatest encouragement. The law-makers of our State have at last shaken off their long-existing apathy and opened their eyes to the necessity of recognizing our unselfish claims in the cause of humanity. Let us now feel that State prid

which will cherish every institution of learning within her borders, so that, as she rises in the scale of political and commercial importance, she may also be elevated in scientific and literary fame. And this should be our legacy to posterity—inform the youthful aspirant for medical honors “’tis education forms the common mind.” Remember, too, that we must keep pace ourselves with the progress of the times. Human science, like human labor, is progressive, and the peculiar duty of the physician, like that of the workman, is to exert himself for the improvement of what he received in a State of imperfection; for while primary equipment is necessary, continual study is equally essential to the physician who expects to improve himself, or to advance the science of his choice. Are we doing this? I fear there is too much reason in the charge that we are not. One evidence of our culpability is seen in the almost total absence of original communications to our valuable State JOURNAL. With a very few exceptions, the editor’s own fertile brain supplies the original matter, and the neglect of his co-laborers in the State to assist, compels him to make selections from foreign writers. True, they are good selections, but why not furnish him with State productions, and let him select from them? Have not our members the taste, the pride and the ability! Then why neglect the encouragement of literary culture in those coming after them? Some of this apathy may be attributable to timidity, some to actual laziness, and perhaps much of it to want of taste for literature generally. This latter is what I would wish above all things to see changed, not to “*cacæthes scribendi*,” but to a habit of writing their views correctly, as well as to increase the desire for reading; and I am free to say that *the neglect of a thorough preparation for the study of medicine is the great cause for this want of taste*. The mind has become easily satisfied, and, though the field is ample, the taste is wanting. Suppose this state of things becomes universal in our Society, where will we find ourselves in a few decades? Excelsior must be our motto, and who will undertake to say what another half century will unfold?

And in order to further advance our position as a literary association in the eyes of the world, as well as to improve our own minds as physicians, and increase and intensify our interest in the noble calling of our choice, I would most earnestly recommend that a special and separate section on Medical Jurisprudence, or, more

properly, Forensic Medicine, be created, and a chairman appointed at each annual meeting, as is done with other branches.

The reasons for this movement, I think, are obvious. We see almost daily reports of great criminal investigations going on in the country, and we are too frequently put to the blush at seeing some of our profession staggering under the heavy blows of some astute attorney, whose whole store of medico-legal lore consists, perhaps, in what he read the night before in Beck, Taylor or Wharton and Stillé. And in many instances we see, also, that there is very little agreement amongst the experts themselves—wide differences, perhaps, upon some physiological aspect of the problem. We need uniformity, an unmistakable standard, based upon scientific principles. Until such a standard is established, and such progress made, the public may expect many flagrant defeats of justice. At present there is too little thought given to this subject by our profession.

It should be remembered that forensic medicine, or the application of medical knowledge to the purposes of the law, is a distinct branch of medical science, and does not properly include hygiene or sanitation, but embraces all those questions which bring the medical man into contact with the law. Its history is comparatively modern, for while we have to start with the earlier periods of Greek civilization to find a distinct and organized profession of medicine, we have only to go back to the beginning of the present century for the *first* lectures delivered on forensic medicine, which was in Edinburgh in 1801. In 1822 there was not in the English language a single treatise on medical jurisprudence, but since 1829 there has been an abundant crop of literature on the subject. Christison's admirable treatise on "Toxicology," Taylor's elaborate works, Guy's "Forensic Medicine" (English), while American has not been behind "Wharton and Stillé's Manual" and "Womley's Toxicology" are standard works. The high position which our profession occupies to-day, in every other respect, and the bright prospects in the future of its ranks being filled by the best material, should encourage us to make every effort to keep pace with every literary organization in the land; and yet there are many of us who could not, to-day, undergo the crucial test of the witness-stand and come away with credit to ourselves or honor to the profession; or, what is equally important, with much benefit to mankind. Why is it? Is it because we are deficient in education,

intellectual ability, natural endowments, or professional attainments in our ordinary practice? or is it not simply because we have paid little or no attention to medical jurisprudence as a *distinct* science, and have therefore allowed ourselves to fall an easy prey to the sharp interrogatories of the bar. This should not be. We should attain to such a thorough knowledge of this important branch of our profession, that at any time, when called upon, we could not only enlighten the bar, but the bench, and be competent to overshadow the flimsy excuses for crime, upon the one hand, or guard and shield the innocent upon the other.

I have no doubt of the practical advantages that would accrue from this step. The chairman of this section, in his report, could not only give statistics of important cases of recent occurrence, and the medical testimony, with its special bearings, but also could select for his subject some of the deadly poisons and discuss the points of distinction between symptoms produced by these and those produced by disease, or the various character of wounds, would afford an ample field; or infanticide—a crime altogether too frequent in our country, and too frequently unpunished for want of clear medical testimony—any of these subjects in his report, accompanied by the highest medico-legal authorities upon their judicial aspects, would call the attention of the members annually to this branch, and thus enable them to familiarize themselves with a matter of such great importance to the public and to their own honor and standing. I would therefore repeat the recommendation for the establishment of this section separately.

Again, I would suggest that our code of ethics be published with the transactions, and distributed to all members of the Society.

It is an important matter that we should keep our rule of action before us—the one rule for the guidance of all—else how can we expect true ethical conduct in those who have not even read our law on professional etiquette. We must make ourselves familiar with our professional limits, remembering that while we are “separate as the waves, we are one as the sea.”

One word now to the younger members of our Society, already at work, but just at the threshold of practical investigation and restlessness. I would ask them why should not North Carolina indulge and cherish the holy ambition of placing the standard of medical science on as lofty an eminence as that of any of her sister

States? This State has held high rank for the literary attainments of its professions—surely she ought to complain of her sons in one of the grandest of all professions, if, recreant to their patriotic and literary reputation, they degenerate from their fathers, and slothfully permit themselves to be surpassed by those of any other State! I will not believe it, but rather cherish the expectation that they will arouse to exertion, and in their own favored State, under their own serene sky, they will generously climb the hill of science, and cultivate to its very top, crowning its summit with all the improvements pertaining to medical skill, which will not only delight the eye by the richness and delicacy of their color, but will gratify the taste by the excellency of their fruit, and send through leagues on every side an odorous perfume fitted to regale the home of her children, and attract the praise and admiration of the stranger!

DR. FERRÁN.—The Madrid correspondent of a daily paper gives the following particulars of Dr. Ferrán, whose astounding researches on cholera have been received with such enthusiasm in Spain and with so much suspicion elsewhere: “Dr. Jaime Ferrán is only 33 years of age, and, after passing through the customary curriculum at the Institutes of Tortosa and Tarragona, took his M.D. degree at Barcelona. He has been in practice at Tortosa for several years, and is already well-known for his work on micro-telephony in 1878, and for his curious investigations on micro-biology and parasites, which were rewarded by the Royal Academy of Medicine in Madrid. Dr. Ferrán was sent to Toulon and Marseilles during the last epidemic of 1884, and he spent several months with German, French and Italian surgeons, studying the epidemic, and especially Dr. Koch’s comma-bacillus. Those studies impelled Dr. Ferrán to pursue his investigation, on his return to his own country, and he thus came to the conclusion that Dr. Koch had only observed one of the many stages of this microbe’s successive developments. Senor Ferrán has discovered that, by submitting the comma-bacillus to certain chemical elements very similar to the bile of animals and to the gastric juice of the human stomach, this microbe passes through successive and invariable stages of development, in one of which he has detected the eggs, which are, in his opinion, the real generators and propagators of cholera.”—*Med. News.*

A STUDY OF THE SUBJECT OF SPONTANEOUS RUPTURE OF THE MEMBRANES AT FULL TERM OF GESTATION PRECEDING THE BEGINNING OF LABOR.

Dr. G. W. H. Kemper, of Muncie, Indiana, in the April issue of the *American Journal of the Medical Sciences*, offers a careful study of fifty cases of spontaneous rupture of the membranes, occurring in his first seven-hundred obstetrical cases, and he finds that :

1. The spontaneous rupture of the membranes at full term of gestation, and preceding the beginning of labor-pains, is an event of common occurrence, averaging about once in every fourteen labors.

2. When the membranes are broken, as a rule, labor supervenes at once, or within the next four hours, but may be delayed several hours, days, or even weeks.

3. When such an accident occurs, the duration of the labor is not necessarily prolonged, nor rendered more painful.

4. The mortality of the mothers is not augmented, and the ratio of still-born children, if at all, is so slightly increased as to amount to a minimum.

5. The causes are not well defined. The repetition of the accident in certain women shows that with some a tendency is inherent. A possibility of atmospheric influences, especially a low temperature, as an exciting cause is admissible. Smellie considered obesity a cause. His observations have not confirmed this statement.

6. It is probable that the duration of labor is shorter in cases where the appearance of pains is delayed for sometime after the membranes are ruptured.

7. The proper plan of treatment, as given by Smellie, McClintock, Bard, Denman and Dewees, and corroborated by Dr. Kemper's experience, is rest, if necessary in a recumbent posture, and patience. All efforts to excite labor-pains are hurtful, meddlesome and mischievous. Wait for pains, and treat the case on general principles!

8. Finally, that the fear of delay and danger in this class of cases—the classical “dry labor”—promulgated by our early obstetrical fathers, and indorsed by successive authors generally, is based on a merest spark of truth, and is one of those medical traditions that experience shows to be overestimated, and, to a large degree apocryphal.—*Louisville Medical News*.

MINUTES
—OF THE—
THIRTY-SECOND ANNUAL SESSION
—OF THE—
MEDICAL SOCIETY OF NORTH CAROLINA.

FIRST DAY—MORNING SESSION.

DURHAM, N. C., May 19, 1885.

The Medical Society of North Carolina met in annual session in Stokes' Hall, pursuant to the resolution of adjournment at the last meeting, Dr. W. C. McDuffie, the President in the chair.

The Convention was called to order by the chairman of the Committee of Arrangements.

The opening prayer was offered by Rev. W. S. Davis, of the M. E. Church.

Dr. A. G. Carr, chairman of the Local Committee of Arrangements, introduced to the Convention Mr. James S. Manning, whose address of welcome on behalf of the people of Durham was listened to with appreciative enthusiasm. The following is a copy of the address ;

*Mr. President and gentlemen of the State Medical Society :—*It is my pleasure to welcome you to the town of Durham in the name of our corporation and our people. We are sensible, gentlemen, that you confer upon us distinction by holding your annual Convention here. We honor the purpose of your Society. The people of the State have regard for your efforts and bless you for the work you have accomplished. Your Society has already received the praise of popular approval. It has already received the sanction and protection of the strong arm of the law, and recently its effectiveness has been increased by legislative enactment. * * * Your field of labor is large—

coextensive with the pain and sufferings of humanity. Your purposes are commendable—to raise the standard of professional labor in the State, and to inspire the spirit of careful inquiry and communication in those subtle and mysterious things which ever aid in producing new pains and disease. Your duty is nobly to guard the life and health of our people from the trifling of men who seek to impose upon us the pleading of ignorance and fatal mistake.

Your profession, gentlemen, deserves well the merit of being regarded one of the three learned professions. I have always considered if there be one profession more than another that requires greater zeal, more skill, more unselfish devotion, it is the profession of medicine. The human organ with which it has to deal is so sensitive, so delicate, so complicated, its derangements so considerable, its idiosyncrasies so enormous, so concealed from the observation of man, that the greatest discrimination, the profoundest labor is required to determine the nature of the disease that is preying upon the life of its victim. Such being your purpose, we cannot but respect you. We know that the pessimistic philosopher may scorn, may undervalue you in his estimation, he may scorn the effort to lengthen the span of the human life, still the care of human suffering, the desire to protect life and health, will drown the scorn of his stagnant, unprogressive philosophy.

We bid you welcome to our town. We delight to extend to you the cordial invitation of our hospitality, and we wish during this Convention that your labors may produce to you the most satisfactory results. While you are here we wish you a pleasant visit. It will be our pride and our fondest pleasure to point out to you those industries that the thrift, and enterprise and energy of our people have established, and that have extended the reputation and name of Durham to wherever the foot of civilized man treads the earth.

Then, gentlemen, I bid you welcome to the town of Durham in the name of its corporation and its people.

President McDuffie appropriately acknowledged on behalf of the Society the hospitable invitation of the citizens of Durham, and returned thanks for the same.

Secretary Murphry called the roll of the Society and the following members responded :

Drs. J. B. Jones, R. B. Haywood, James B. Dunn, S. S. Satchwell, A. B. Pierce, H. W. Faison, J. J. Summerell, George A. Foote,

Eugene Grissom, R. L. Payne, F. M. Rountree, Charles J. O'Hagan, J. W. Jones, John K. Ruffin, William R. Wood, Thomas F. Wood, G. G. Smith, H. T. Babnson, R. F. Lewis, Willis Alston, W. J. H. Bellamy, George F. Lucas, W. T. Ennett, G. Gillett Thomas, Francis Duffy, A. G. Carr, J. M. Hadley, P. L. Murphy, Joseph Graham, A. A. Hill, L. J. Picöt, W. J. Cooke, W. H. Whitehead, W. C. McDuffie, A. V. Budd, George W. Long, R. H. Lewis, L. H. Hill, W. P. Mallett, J. R. McClelland, R. J. Noble, William H. H. Cobb, I. Wellington Faison, Hubert Haywood, C. E. Bradsher, W. P. Beall, N. McJohnston, J. T. Sledge, John Chapel Walton, Julian M. Baker, Thomas E. Anderson, J. McQ. Stansill, J. L. Nicholson, C. M. Poole, George H. West, Thomas Hill, J. M. Eyle, J. A. Reagan, R. S. Baynes, S. H. Lyle, J. Anderson, Thos. M. Jordan, W. L. Hilliard, T. A. Crowell, R. L. Payne, W. D. Hilliard, W. L. Reagan, H. B. Weaver, John H. Williams J. R. Irwin, J. T. Strickland, J. B. Gunter, R. S. Young, C. F. Anderson, W. W. Faison, Isaac M. Taylor, William H. Bobbitt, B. L. Long, W. C. Whitfield, W. J. Jones, James A. Burroughs, John W. Long, J. H. Cook, G. T. Sikes, William B. Pritchard, John B. Beckwith, E. T. White, G. W. Purefoy, B. F. McMillan, J. E. Grimslye.

The President then announced the following committees :

Committee on Credentials—A. G. Carr, W. H. H. Cobb, H. B. Weaver.

Committee on Finance—Thomas Hill, R. F. Lewis, Jos. Graham.

Dr. Thomas F. Wood introduced the following resolution :

WHEREAS, It is desirable to make the requirements of membership in the Medical Society of North Carolina accord with the law enacted by the General Assembly of 1885, therefore be it

Resolved, That the following persons are eligible to membership in the Medical Society of North Carolina :

1st. All physicians in good standing who are graduates of regular medical colleges prior to January 1st, 1880.

2d. All physicians who began the practice of medicine previous to April 5th, 1859, and who produce testimonials of good standing and skill sufficient to satisfy the Committee on Credentials of this Society.

Secretary Murphy read communications from Dr. W. O. McDowell, chairman of Section on Materia Medica, regretting his inability to be present ; also from Dr. G. S. Floyd, chairman of Section on Diseases of Children, to the same effect.

On motion of Dr. G. G. Thomas, Dr. Charles T. Peckham,

Surgeon United States Marine Hospital at Wilmington, North Carolina, was invited to a seat in the Convention, and to participate in the deliberations of the Society.

Dr. Peckham very gracefully acknowledged the courtesy of the Society.

Dr. Cobb, on behalf of the Committee on Credentials, made a partial report, recommending as eligible to membership in the Society the following gentlemen :

F. J. Cooper, Hives ; C. W. Sawyer, Elizabeth City ; B. W. Hathaway, Edenton ; W. E. Powell, Castalia ; J. B. Carr, Old Sparta ; J. P. Smallwood, Lewiston ; R. A. Whitaker, Trenton ; E. S. Ashe, Wadesboro ; H. Willis, Summerfield ; J. H. Baird, Briggsville ; J. C. Whiteside, Morganton ; J. E. Ragen, Alexander ; J. Brank, Weaverville ; L. M. Archey, Concord ; C. E. Adams, Gastonia ; P. J. Kluttz, Gold Hill ; W. H. Wilson, Dallas ; Samuel D. Booth, Oxford ; Patrick Booth, Knap of Reeds ; F. W. Hughes, Newbern ; J. B. Powers, Wake Forest.

Dr. Thomas F. Wood moved that the address of the President be made the first order of business for the afternoon session after "Unfinished Business."

On motion of Dr. Murphy, the Society adjourned till 3 P. M.

FIRST DAY—AFTERNOON SESSION.

The Society was called to order at 3 o'clock.

The President asked for the supplemental report of the Committee on Credentials.

Dr. Carr made his report, as follows : S. B. Dew, S. L. Montgomery, J. S. Bell, J. A. Wise, J. C. Perry, A. C. Jordan, J. M. Faison.

Dr. Payne moved that a committee be appointed to award the prize and also to select a case of surgical instruments suitable for the award.

The President appointed on that committee Drs. T. F. Wood, H. T. Bahnsen and T. E. Anderson.

The President announced as the next business in order the reports of chairmen of sections. By reason of the absence of chairmen of sections the reports were deferred.

Dr. Bahnson moved that the roll be called again.

Dr. Weaver moved that the order of business be the President's address.

The President then delivered his address, for which see Appendix.

Dr. Carr moved that the thanks of the Society be returned to the President for his address, and that a committee be appointed to carry out his suggestions therein contained.

The chair appointed on said committee Drs. Thomas F. Wood, W. H. Whitehead and H. B. Weaver.

The chairman of the Section on Materia Medica being absent, Dr. Thomas Hill read a communication on the "Hæmostatic Properties of Rag Weed"—*Ambrosia artemisiaefolia*. (See Appendix.)

By request of the President the Secretary read out the chairmen of sections.

The Secretary moved that the annual essay of Dr. Haywood be made the special order for to-morrow morning at 10 o'clock.

Dr. Payne moved that the reading of the "Prize Essay" be made the special order for to-morrow afternoon at 3 o'clock.

On motion, the Society then adjourned till Wednesday at 10 o'clock A. M.

SECOND DAY—MORNING SESSION.

WEDNESDAY, May 21, 1885.

The Society was called to order at 10 o'clock, pursuant to adjournment.

Dr. Carr reported from the Committee on Credentials as follows:

W. T. Spreill, T. R. Haring, J. B. H. Knight, W. H. Herrell, James MacHays, James F. McKay, George C. Cope, D. B. Reinhardt, Annie Lowrie Alexander, J. T. Nicholson, J. A. Hodges, D. N. Dalton.

Secretary Murphy read a communication from Dr. Hines regretting his inability, on account of sickness, to be present at the Convention.

On motion of Dr. J. W. Jones, the President declared the Society adjourned out of respect to the memory of Mrs. W. T. Blackwell.

Dr. Wood, through Dr. Bahnson, requested that the prize essay be handed to the committee as soon as possible.

The Society then adjourned in accordance with the motion.

After a recess of fifteen minutes, the Society was called to order by the President, who announced as the order of business the reading of Dr. Haywood's essay.

Dr. Haywood then entertained the attentive audience for an hour with an interesting and instructive address on "Micrococcus in Relation to Disease."

Dr. Bahnson moved that a vote of thanks be tendered Dr. Haywood for the pains and labor he has manifested in the preparation of his essay, and that it be referred to the Committee on Publication, which was adopted.

Secretary Murphy moved a suspension of business for ten minutes for members absent at roll call to come forward and report their presence to the Secretary.

Dr. A. G. Carr made an additional report of the Committee on Credentials as follows:

M. L. Hicks, Henry Sloan, J. H. Burton, D. B. Jordan, W. P. Kennedy and T. C. Bullock.

The President announced that the hour of conjoint session with the Board of Health had arrived—12 M.

Dr. Jones, President of the Board of Health, took his seat, and the conjoint meeting was called to order.

Dr. Jones then delivered his address. (See Appendix.)

Dr. Thomas F. Wood, Secretary of the Board of Health, read the resolutions of Drs. Satchwell and Jones introduced at the last meeting. He spoke of the arduous labor brought to bear by the committees appointed in accordance with these resolutions in getting passed by the last General Assembly a law so much in advance of anything we have heretofore had, that those who have been interested in the Board feel that they have made a great start in the business which had heretofore been entrusted to them without the money to carry it out. He then read by sections the amended act relating to the Board of Health, and referred particularly to those portions concerning the payment of the superintendents, and the fines imposed on superintendents for not making reports to the Secretary of the State Board. He stated that a member of the Board was sent to the Convention of the State Boards of Health held in Washington, D. C., last December, where it was agreed to ask the Legislatures of our States to give a contingent appropriation for making prompt application of money for

the isolation of any case of pestilential disease which may appear, particularly in the case of cholera. He read the minutes of the meeting of reorganization held at Raleigh, March 20-21. He said that the National Board of Health has offered to supply this Board, immediately on the appearance of any case of cholera or other infectious disease, with means for the isolation of the same—they to be reimbursed when this Board shall have obtained the money from the State treasury. He proposed that each county be called out in its alphabetical order, and if there be a Superintendent of Health or other representative of that county present, he be asked to give the standing of his county in relation to the Board of Health. About twenty-five counties were called in this manner with responses from some eight or ten.

Dr. Wood said if the superintendents cannot get full statistical reports from the county physicians, a report from the superintendents as to the condition of the jails, poor-houses and other public institutions, is very desirable.

On motion of Dr. Satchwell, the Society then adjourned till 2½ o'clock P. M.

SECOND DAY—AFTERNOON SESSION.

Dr. Jones, President of the Board of Health, called the Society to order at 2½ o'clock.

By suggestion of Dr. Wood it was decided to correspond with the different counties instead of calling them in the meeting.

Dr. Wood said he was requested by the Board of Examiners to announce that there was a clerical error whereby one person reported as having passed his examination had failed to pass, and asked that their report be returned to them. So ordered by the President.

President Jones announced as next in order the election of two members to fill vacancies on the State Board of Health.

Dr. Thomas F. Wood was nominated to fill one of the vacancies, and on motion the Secretary was instructed to cast the vote of the Society for Dr. Wood.

The following nominations were then made to fill the remaining vacancy: By Dr. R. H. Lewis, Dr. W. D. Hilliard, of Asheville; seconded by Dr. Ennett. By Dr. Baker, Dr. Summerell, of Salisbury. By Dr. Ruffin, Dr. Satchwell, of Rocky Point.

By request of Dr. Satchwell Dr. Ruffin withdrew his nomination.

Dr. Summerell withdrew in favor of Dr. Hilliard.

On motion of Dr. Lewis the Secretary was instructed to cast the vote of the Society for Dr. Hilliard.

Dr. Jones requested the members of the Board to remain in the hall after Dr. Picöt's address.

The conjoint session was then declared adjourned.

The North Carolina Medical Society was then called to order by the President.

Dr. Lewis offered a resolution, as follows:

Resolved, That the members of the Nominating Committee be elected one from each Congressional District by the members present on the night of the first day.

Dr. Faison stated that the resolution of Dr. Lewis involved a change in the Constitution; but reminded the Society that at the last meeting he offered a resolution to increase the number on the Nominating Committee to nine.

Dr. O'Hagan thought that as the Society had been getting on, and smoothly, for nearly twenty years, it were best to "let well enough alone." He did not object to distributing the committee throughout the State, but was afraid it was liable to some objections on account of the size of the State and the consequent trouble in members always being present on the first day.

The chair overruled the point of order taken, that Dr. Lewis' resolution should lay over for one year.

Dr. Lewis modified his resolution by striking out "first day" and inserting "second day," and adding "and, in the absence of any member from any district, the vacancy shall be filled by the President.

The resolution as modified being put to a vote, was adopted.

The report of the Finance Committee was then read. (See Appendix.)

Supplementary to the report Dr. Graham said he found among the accounts to be audited bills for publishing the meeting of the Society, and suggested that the committee instruct the Secretary not to publish the meeting of the Society in any paper which charges for the same. They ought to publish it as a matter of news.

Secretary Murphy read the duties of the Secretary as set forth in the Constitution, and added that as it was impossible for him to reach,

through the ordinary records of the Society, many who would be glad to know of the time and place of the meeting of the Society, he thought best to advertise it.

Dr. Graham denied any intention on the part of the committee to criticize the action of the Secretary, but had reference to the future.

Dr. O'Hagan thought the meetings of the Society ought to be spread as far as possible, and that there is no other way to do so, and that as the treasury of the North Carolina Medical Society is in a healthy condition, the Society does not begrudge the outlay of \$25 or \$30 to make its meetings known.

The Committee on Credentials reported on the names of Drs. N. D. York and W. B. Small.

Dr. Bobbitt read a paper of personal privilege.

Dr. Bahnson rose to a point of order, saying the reading of the paper was out of order.

The chair reserved its decision till Dr. Bobbitt had stated his position.

After the reading of the paper, Dr. G. G. Thomas thought he was forced to rise to a point of order. There was no feeling in the matter for either party, but this case had already been before the Board of Censors and finally settled by them, and this Society has no control in the matter.

Dr. Hill could not see why Dr. Thomas could not make this in order. Dr. Bobbitt had been refused consultation by the Raleigh Academy of Medicine, and now only asks that the Society endorse him as a member in good standing.

Dr. Bahnson thought his name being on the roll was sufficient endorsement for his good standing.

Dr. Foote said the Board of Censors had done nothing in the matter, but declined to have anything to do with it. He thought Dr. Bobbitt's position was, whether or not he should suffer the ban of the Academy of Medicine. He wanted to know if he had violated the Code of Ethics. If not, he wanted their endorsement; if he has, he is willing to submit to their condemnation.

The chair said the question before the house was a point of order, and remarks should be germane to that subject.

Dr. Foote said his remarks would lead him to that subject, viz: has a local organization a right to do that which this Society says

is wrong, and thereby misplace before the public a member of this Society?

The chair stated that so far as he ruled in the matter, he did not think a question could come up before this Society twelve months after it had been laid before the State Medical Society, and for that reason thought the point of order of Dr. Thomas well taken, unless Dr. Bobbitt desired to bring it in another shape. He understood from his reading that it was the same case he presented at the 1884 meeting in Raleigh.

Dr. Bobbitt said he only wished his status in this Society defined, and rehearsed the events that the members might know his position.

Dr. Payne thought the Code of Ethics required a practitioner to conform to the local rates adopted in his section.

Dr. John W. Long thought the Society and the Raleigh Academy of Medicine are two distinct associations, and have nothing to do with each other.

Dr. Foote suggested that a committee of three or five be appointed to inquire into the matter.

Dr. Eugene Grissom thought that any action whatever upon this question would be an act of supererogation. This Society has nothing to do with local matters. As to the status of Dr. Bobbitt, his name on the list unimpeached is sufficient vindication of his status. He said this Society had adopted for its code the code of the American Medical Association, and read an extract from Section 7 of that code bearing on the point. He thought this was a question out of the jurisdiction of this Society, and moved the indefinite postponement of the matter, which motion was lost.

Dr. Cobb thought the question should be settled between the Raleigh Academy of Medicine and Dr. Bobbitt.

Dr. Satchwell moved that a committee of — be appointed to investigate and report at this annual meeting on the standing of Dr. Bobbitt.

Dr. Graham thought the motion entirely unnecessary.

Dr. Thomas thought that the committee should be none else than the Board of Censors.

The resolution of Dr. Satchwell being put to the house, was carried by a vote of 33 to 31.

The chair appointed on said committee Drs. Payne, Satchwell, Graham and J. W. Jones.

The Committee on Credentials reported on the name of Dr. Shubrick.

Dr. Foote said he was requested by Dr. ————— to pay his dues to the Society. He had been dropped from the roll in 1880 for non-payment of dues, and they amounted up to this time to \$17, which he was willing to pay.

Dr. Faison thought according to the Constitution he should be admitted for the regular fee of \$5, after paying the amount due at the time his name was dropped, and made a motion to that effect.

Dr. Payne thought he should pay the whole \$17.

Dr. Faison's motion was carried.

Dr. Thomas F. Wood read a telegram from the President of the American Medical Association, stating there was a vacancy in the Committee on International Medical Congress of the American Medical Association, and asking the Society to make a nomination.

Dr. O'Hagan, after giving an account of the meeting of the American Medical Association at New Orleans, which he attended, nominated to fill the vacancy mentioned above Dr. Thomas F. Wood, of Wilmington, who was unanimously elected.

The chair appointed on the Committee on Nominations Drs. A. G. Carr, C. J. O'Hagan, W. D. Hilliard, J. R. McClelland, R. F. Lewis, R. L. Payne, H. W. Faison, T. E. Anderson.

The Committee on President's Address recommended that a section be formed on Forensic Medicine, and that the Code of Ethics of the American Medical Association be printed in the Transactions of the Society for 1885.

The chair appointed as Obituary Committee Drs. Cobb, Payne and J. W. Jones.

Dr. Wood offered the following resolution :

Resolved, That on and after this date, this Society deems it out of its province to attempt to regulate fees.

Dr. Pierce thought the resolution unnecessary, as the Society has never attempted or pretended to regulate fees, and moved the indefinite postponement of the resolution.

Dr. Wood's resolution was lost.

The chair announced that Dr. Picôt would deliver his oration on this (Wednesday) evening, at 8½ o'clock, in Stokes' Hall.

Dr. Carr, chairman of the Committee on Nominations, announced a meeting of that committee immediately after adjournment.

The chair asked for the report on prize essays, made special order for 3 o'clock.

Dr. Bahnson stated that only two essays had been received by the committee, and said if any more were to be handed in the committee would like to have them at once.

The chair postponed the report on prize essays till to-morrow.

Secretary Murphy read a communication from the Association of American Superintendents of Insane Asylums relative to the immigration of the defective classes.

CONVERSATIONAL.

Calcified Cord and Placenta.

Dr. H. W. Faison reported a case of calcification of the umbilical cord occurring in his practice.

Dr. Cook, of Leasburg, exhibited specimen of calcareous degeneration of the placenta.

The Committee on Credentials reported on the name of Dr. W. S. Monroe, of Montgomery.

The President set to-morrow morning, the 21st, for hearing the report of the chairman of the Section on Gynæcology and Obstetrics.

Dr. S. S. Satchwell, chairman of the Section on "The Practice of Medicine," presented an elaborate paper, which, on motion, was read by title, and referred to the Committee on Publication.

Dr. L. Julien Picöt delivered his oration entitled "Shall Women Practice Medicine?" in Stokes' Hall, Wednesday evening at 8½ o'clock, to a large and very attentive audience. It was a masterly effort, and the pleasing oratory of the speaker added to the beauty of his rhetoric and the force of his argument. At the close of the oration, on motion of Dr. Pierce, a copy was asked for to be placed in the published minutes of the Association.

The President then announced that the Committee on Prize Essays had decided to award the prize case of instruments to Dr. R. S. Young, of Concord, and, calling the gentleman to the stage, presented him with the case, saying :

"No labor has been rewarded so pleasantly as I think, sir, you will appreciate this. It is the result of your intellectual effort, which we are glad to say we see in the younger members of our

association. The hand that wielded the pen that won the prize will not lose its cunning in handling the instruments."

The Society adjourned till Thursday morning at 9 o'clock.

THIRD DAY—MORNING SESSION.

THURSDAY, May 21, 1885.

The meeting was called to order by the President at 9 o'clock.

Prayer was offered by Rev. Mr. Darnall.

Dr. Walter C. Murphy tendered his resignation as Secretary of the Society.

Dr. Satchwell read an obituary paper on the recently deceased members of the Association, which, on motion of Dr. Carr, was referred to the Obituary Committee.

The Committee on Credentials reported on the following names: Drs. B. G. Webb, E. P. Williams, D. C. Parriss, J. W. Littleton, D. T. Tayloe, J. J. Coleman, W. T. Pate, F. P. Cunningham, F. W. Ritter, G. B. Nance, M. T. Fox.

The chair appointed the following as chairmen of Sections:

Medical Jurisprudence.—J. D. Roberts, Goldsboro.

Surgery—William B. Pritchard, Faison.

Obstetrics and Gynæcology—C. M. Pool, Rowan.

Pathology—J. A. Hodges, Fayetteville.

Materia Medica—J. L. Grimsley, Snow Hill.

Practice of Medicine—J. L. McMillan, Red Springs.

Diseases of Children—J. B. Powers, Wake Forest.

The Committee on Credentials reported on the names of D. G. Caldwell.

The chair announced as next in order the report of the chairman of Section on Obstetrics and Gynæcology.

Dr. Weaver then read an extended and ably prepared paper on those subjects.

The committee appointed to investigate the status of Dr. Wm. Bobbitt in the North Carolina Medical Society made the following report:

"We, your committee appointed to inquire into and define the status of Dr. Wm. H. Bobbitt in the North Carolina Medical

Society, beg to report that we find nothing against the personal or professional character of Dr. Bobbitt, and that he is entitled to all the privileges and courtesies of a member of this Society.

“ Respectfully submitted,

“ S. S. SATCHWELL, Chairman,

“ J. W. JONES,

“ JOS. GRAHAM.”

Dr. Grissom asked the chairman if the report was intended as a reflection, either directly or indirectly, upon the Raleigh Academy of Medicine.

Dr. Jos. Graham answered, as a member of the committee, that he wished this report to be distinctly understood as in no way reflecting upon the Raleigh Academy of Medicine. It merely defines the status of Dr. Bobbitt in this Society.

Dr. Grissom moved that the annual oration before the Society and public last evening, by Dr. L. Julien Picöt, be referred to the Committee on Publication, with instructions to publish it in the Transactions. Dr. Grissom remarked that the address contained much of beauty and elevated thought, and expressed in pure and elegant English. It was, in his opinion, in many respects, among the best addresses delivered before the Society on similar occasions for many years, and that its ideas commended themselves to the Society and to the profession.

The motion was unanimously adopted.

On motion of Dr. Cobb, it was decided to pay the phonographer \$15 for his services.

Dr. S. D. Booth offered the following resolutions :

Resolved, That all regular meetings of the Medical Association of North Carolina be held in the city of Raleigh.

Resolved, That a tax of \$1 *per capita* be levied upon the members of this Society, which shall be collected each year in addition to the regular dues, and the amount so raised shall be set apart as a sinking fund.

Resolved, That the said fund shall be put into the hands of a committee which shall be selected for that purpose, and this committee shall so invest or lend the money so raised as will continually draw a good interest.

Resolved, That when a sufficient sum shall have been raised, that this Association direct such a building to be erected in the city of Raleigh as will be a suitable depository for interesting and useful articles pertaining to medicine and surgery, and that the museum

and library shall always be under the immediate direction of the officers of the Medical Association.

Dr. Bahnson moved to lay Dr. Booth's resolution on the table, but the chair ruled that, according to the Constitution, it must lay over to be acted upon at the next meeting.

Dr. Thomas F. Wood offered his resignation as chairman of the Board of Censors, thinking the office incompatible with his position of editor of the *JOURNAL*.

Dr. Jones explained why it was desirable that the Board should reside in the same town, when, on the nomination by Dr. Bahnson, Dr. George G. Thomas was elected to fill the place vacated by Dr. Wood.

The Committee on Credentials made the following report: J. M. Emmett, H. W. Dorsett, Gilbert McLeod, J. J. Harrell, Zeno Brown, K. Leggett.

Dr. Ennett presented a paper entitled "Reduction of Dislocation of the Femur," which, upon motion, was read by title and referred to the Committee on Publication.

The Committee on Nominations reported as follows:

President—Joseph Graham, Charlotte.

Vice-Presidents—H. T. Bahnson, Salem; L. J. Picöt, Littleton; J. L. McMillan, Red Springs; W. W. Faison, Goldsborough.

Secretary—Julian M. Baker, Tarborough.

Treasurer—R. Lee Payne, Jr., Lexington.

Orator—George W. Long, Graham.

Essayist—R. S. Young, Concord.

Committee on Publication—Thomas F. Wood and George G. Thomas, Wilmington; W. T. Ennett, Burgaw; J. M. Baker, Tarborough.

Board of Censors—W. J. Love, Geo. G. Thomas, W. W. Lane, Wilmington.

Delegates to American Medical Association—I. W. Faison, T. F. Wood, Eugene Grissom, W. W. Lane, J. McDonald, S. H. Lyle, S. W. Stevenson, J. B. Gunter, W. P. Beall, J. L. Nicholson, D. B. McNeil, F. M. Rountree.

Delegates to Virginia Medical Society—W. H. Whitehead, N. M. Johnson, George A. Foote.

Delegates to South Carolina Medical Society—G. G. Smith, S. B. Jones, W. L. Crump.

Delegates to American Public Health Association—R. H. Lewis, W. H. H. Cobb.

Dr. A. G. Carr offered the following resolution, which was adopted :

Resolved, That the Medical Society of North Carolina return its thanks to Dr. Walter C. Murphy, our retiring Secretary, for the efficient manner in which he has filled the office, and regrets that his private engagements deprive the Society of his valuable services.

Dr. Harriss read a paper prepared by Prof. Holmes, of the University of North Carolina, exhibiting a specimen of petrified body, adding some remarks of his own in regard thereto.

The paper was referred to the Committee on Publication.

Dr. Harriss exhibited a post mortem specimen of bone removed from the spleen ; also a lot of No. 5 shot removed from the vermiform appendix in another post mortem case. He remarked that as regards the specimen from spleen, this was the only case reported in Reynold's system of medicine from this country.

Dr. Harriss made a short report on Hydrochlorate of Cocaine, reporting two cases of successful cataract operations under its influence as perfectly painless.

Dr. Booth reported a case of vaginismus relieved by a vaginal injection of 4 per cent. solution of cocaine ; and also found it useful in gonorrhœa.

Dr. Harriss reported a case of abscess of stump, in which hydrochlorate of cocaine injected into the cavity relieved pain so as to allow exploration. In extraction of teeth he did not find it so satisfactory.

Drs. O'Hagan and Payne both made remarks on the same subject.

Dr. Thomas F. Wood said he used cocaine in 10 per cent. solution with satisfactory results in urethral surgery, and in operations for stricture. In ear practice, he said, the results are variable. It is especially useful in removing missiles from the eye.

Dr. Baker read a paper on Aphasia.

Dr. Carr moved that the thanks of the Society be tendered Dr. Baker for his excellent paper, and that it be referred to the Committee on Publication. So referred.

Dr. Carr made a few remarks on brain injuries. He made mention of two or three cases of persons receiving apparently fatal

injuries to the brain, but in which skillful treatment brought about a cure. In the case of a child run over by a wagon, the skull was crushed, and the brain, or portions of it, had oozed out on the cloth in which the child's head was wrapped. He found some portions of the skull overriding others. He raised the sunken portions until in their natural position, after which the child got well without any untoward symptoms.

Dr. Hayes introduced the following resolution :

Resolved, That a vote of thanks is hereby tendered the citizens of Durham and members of the North Carolina Medical Association for the hearty welcome and hospitable treatment that were received at their hands during our brief stay in their midst ; and especially to Dr. A. G. Carr, we return thanks for his never-tiring assiduity in his attention to the wants and conveniences of every member of our Association.

Dr. Carr disagreed with the second part of the resolution, and thought he ought not to be singled out as doing more than others, and asked that it be stricken out.

Dr. Hayes would not accept the change, and the resolution as introduced was adopted.

Dr. Payne reported a case of lateral lithotomy for the removal of a stone weighing $2\frac{1}{2}$ ounces from a child eleven years old.

Dr. J. W. Long reported a case of dry gangrene in a child which its former physician said had had diphtheria about three weeks previous. Dry gangrene formed very rapidly, having, in three or four days from the start, advanced to the knee.. There was no line of demarkation, and while waiting for it to develop the child took pneumonia and died. The child had no heart trouble, and he thinks had not had diphtheria, as he saw no evidence of it, and there was none in that vicinity at the time.

Dr. Thomas F. Wood said that, in lieu of a syringe, he had found a common sewing-machine oil-can very useful in pumping the oil into the urethra, in operations for strictures, and found in his experience in practising among the very poor where instruments were not at hand and not likely to be purchased, that the employment of just such familiar articles to be found in a household, often enabled the physician to render immediate service of some value. He had also used the small oil-can for syringing the bladder. Some of them were made flat, and were more convenient for carrying in the surgical bag than the conical ones.

Dr. Baker read a letter from Dr. D. N. Patterson, regretting his inability to attend the Convention.

Dr. Pierce mentioned the recovery of a child nine months old from paralysis of the left side, arm and breast, treated on doses of 6 or 8 grains of calomel, with a little milk and water warmed ; and gave it also a solution of bromide of potash. The child recovered from paralysis entirely in three or four days. During the winter the child was taken in the same way, and he being out of town, another physician was called in, and the child died within a few hours. He did not use mercurials, but used bromide of potash, and gave it a warm bath. This produced temporary effect, which soon wore off. He mentioned this to show that excessive doses of calomel could be used in the case of children.

Dr. Carr cited several instances to show how generally heart-disease follows rheumatism in children.

Dr. J. W. Harriss mentioned a case caused by a woman throwing a pair of scissors at her son. The point struck him in the abdomen and must have punctured the gall-bladder, his shirt being covered with a fluid which must have been bile. Looking up authorities in this case, he found wounds in the gall-bladder classified as invariably fatal. This fellow, however, got well. A little abscess formed there, but seemed to be entirely superficial. Temperature never exceeded 102°.

On motion, the meeting then adjourned until 2½ o'clock this afternoon.

N. C. med. J. (O.S.) 15: 344-345, #6, June 1885
THIRD DAY—AFTERNOON SESSION.

THURSDAY, May 21, 1885.

The meeting was called to order at 3 o'clock.

Dr. W. R. Wood offered the following preamble and resolutions, which were adopted :

WHEREAS, The increasing demand of our people for a higher order of education in all the departments of knowledge render action in the premises on the part of this Society not only necessary, but imperative ; therefore be it

Resolved, That it is the deliberate opinion of this body that the want of proper facilities for acquiring a more extended knowledge of the medical sciences by the young men of the State demand that a Medical Department should be organized at the University of North Carolina, as nearly as practicable on the same basis as that of the Medical Department of the University of Virginia.

2d. That a committee of seven medical gentlemen, members of this Society, of whom the President shall be one, be appointed by the President to consider the advantages and feasibility of such a measure, and report the result of their deliberations at the next annual meeting of the Society, to the end that the matter may be properly laid before the Legislature at its next biennial session.

The chair appointed the following members on the committee suggested in Dr. Wood's resolution: Joseph Graham, W. R. Wood, A. G. Carr, H. T. Bahnsen, C. J. O'Hagan, T. D. Haigh, Thomas F. Wood, R. H. Lewis.

The following resolution, as offered by Dr. Julian M. Baker and amended by Dr. A. G. Carr, was adopted:

Resolved, That this Society offer the following prizes to be competed for at its next session on the conditions hereinafter named: For the best essay on surgery, a case of instruments valued at \$25. For the best essay on a subject pertaining to Obstetrics or Gynecology, a case of obstetrical instruments valued at \$25. For the best essay on a subject pertaining to the Practice of Medicine, \$25 in currency.

All essays are to be forwarded to the chairman of the committee, to be appointed at this meeting, one week prior to the next meeting of the Society. Said committee to act as judges of merit and report on the second day of the session. All such essays as the committee deem worthy, to be published in the Transactions of the Society. They are to be handed in under assumed names.

The chair appointed on the Committee on Prize Essays Drs. R. L. Payne, Geo. G. Thomas, P. E. Hines.

Dr. Whitfield reported a case of a lady over 23 years of age cutting her lower teeth on the right side. He noticed in extracting a tooth that the root was partially absorbed, and the second tooth took its place in about two weeks. He wanted to know if anyone had seen such a case.

Dr. Long said he knew a man forty years old who had not cut his.

Dr. Satchwell said there was a paper read this morning from Prof. Holmes, and moved to have it referred to the Committee on Publication, as it was not done this morning. So referred upon vote of the house.

Dr. Thomas F. Wood gave some observations he had been making as to

TUBERCULOSIS AMONG DOMESTICATED FOWLS.

He said: Microscopists are making investigations into the pathology of tuberculosis by studying the life-history of the lower organisms, and were making what appeared to non-experts to be wonderful advancement in knowledge. In this department of learning, though, it would probably not be the privilege of many of us to join as workers, and we would content ourselves with the finished work as it comes to us from the pathological laboratories. But there is another side of the investigation in which we could join most effectually, namely, in the clinical study of phthisis as it relates to man and the domesticated animals. The special point which now interests us is the contagiousness of phthisis. How far are we justified in giving credence to the doctrine of the contagiousness of phthisis? Are we to regard the bacilli found in tuberculous matter the causative agency, and are they always present? At any rate, while the laboratory pathologists are busy with their work, we must not be idle.

At this late hour in the session he did not especially care to give publicity to a study in animal pathology he had just began, but it might incite others who had the same means at their command to pursue the study during the coming year.

He read from his note-book :

Capt. Buncker, a patient afflicted with pulmonary phthisis for a year or so. He is a learned German, with cultivated power of observation. He spends most of his time in the early spring on the piazza in the sun. He expectorates in the yard in front of the piazza, at random. He has several domesticated fowls that feed about in the yard. He noticed that they greedily devoured expectorated sputa, and especially one lusty cock, got the largest share. This fowl was really "cock of the walk," and had vanquished his antagonists in such a way as to establish his supremacy. His voice was strong and loud. After Capt. Buncker's attention had been attracted to him for his pugnacious qualities, he noticed with regret that the animal's voice became more husky, and he finally became voiceless. He would flap his wings and stretch his mouth open, but there was little audible sound. Finally his feathers became less

glossy, his wings drooped, his strength failed, and, after becoming quite emaciated and wretched, he died. The cock had what was apparently analogous to laryngeal phthisis. Some hens in the same brood are since affected and are under observation.

Dr. Wood said he knew it was premature to present such preliminary study, but he did not expect it to be barren of results. He had communicated his observations to Dr. D. E. Salmon, director of the Bureau of Animal Industry, and he was kind enough to quote some observations bearing upon the same experience :*

KOCH : *Mittheil. a. d. K. Gesundheit's. Ant. II.* 1884, P. 41.

Tuberculosis in hens appears frequently endemically, destroying not infrequently all fowls of a poultry yard. In the intestine and liver of diseased animals are found, more or less irregular at times, quite smooth tumors, ranging from size of pea to walnut—in one case even to the size of a small apple. These tumors are tough, whitish and yellowish in spots, on section the yellowish spots in part calcified. In one case the marrow of the long bones contained tubercles as large as hemp seed. These were rich in tubercle-bacilli, most numerous around calcified portions. In the nodules, situated in intestinal walls, the bacilli could be traced as far as villi. This points to infection from intestine, as the lungs were only slightly implicated. It might also be inferred from this that bacilli may escape from intestine with *fécès*, the latter acting as foci of infection.

HENRY : *Recueil de Méd. Vét.* 1884. P. 233.

Reports a case of generalized tuberculosis in a hen. Great emaciation and feebleness preceded death. On post mortem a large tumor was found in the abdominal cavity attached to the terminal portion of the intestine. Its interior was made up of numerous cavities, with partition in part destroyed, containing a grayish liquid of a disagreeable odor. Another tumor near the kidneys, liver and lungs, being implicated. The presence of bacilli was not determined.

CORNIL ET MEGNIN : *Tuberculose et Diphthérie des Gallinacéo in Compt. Rend. Soc. Biol.* 1884. P. 617.

Tuberculosis is very common among the fowl, the turkey, the

*The above abstracts were only referred to in outline in Dr. Wood's statement, but were considered of enough interest to be given now in full.

pheasant, the partridge and the pigeon. Its chief seat is the liver, the spleen and the peritoneum.

In the liver of a hen and a pheasant the tubercles appeared at the surface up to the size of a hemp seed, either homogeneous and of a semi-transparent grayish, yellowish color, or filled with very minute opaque grains. Bacilli found chiefly in ovoid or round cells, with one or two nuclei. These cells (10-15 m.) were situated in the meshes of a reticulated fibrillar net-work, at times in vessels. No hepatic cells to be seen. (Recent.)

Calcareous yellowish grains observed in the tuberculous lesions. Bacilli so numerous as to be seen with the naked eye as a colored map in stained sections.

RIBBERT: *Deutsche Med. Wochenschrift.* 1883. P. 413.

Has seen in four cases an abundance of tubercle-bacilli within the tuberculous nodules of intestine and liver. He found these nodules quite dense, projecting from the intestinal walls into the peritoneal cavity covered by the smooth serous membrane. In some cases a cicatrix on the mucous surface corresponded to the nodule in the wall of the intestine. In nodules scarcely distinguishable with the naked eye, the bacilli were in the centre with a zone of inflammatory infiltration. In larger nodules the centre was necrosed and surrounded by a zone free from bacilli. Outside of this they appeared abundantly. No giant-cells were observed.

In one case the bacilli were so numerous that in the stained section their map could be distinguished by the color with the naked eye.

JOHNE: *Deutsche Ztschr. f. Thiermedizin.* 1884. X. P. 155.

Cites an epidemic among fowls of a poultry-yard lasting over a year. Many fowls, chiefly young, died of general debility, after great emaciation and weakness. On post mortem the livers and intestines showed extensive tuberculous lesions in which the bacilli could be demonstrated. The cause of the epidemic was supposed to be a young lady who died of tuberculosis at about the time of the epidemic. She had been in the habit of feeding the fowls, especially chewing meat for them. The sputum was habitually poured on the manure pile frequented by the fowls.

Communication of M. Nocard to *Société Centrale de Médecine Vétérienne.* Meeting of the 12th February, 1885:

A farmer near the Veterinary School possessed a superb barn-

yard cock. For two or three months he had lost successively a dozen fowls, young or old, that had died in a state of extreme emaciation.

He had been able to make autopsies of the last victims, and in all he found formidable tuberculous lesions of the abdomen. The liver always proved to be the first and the most profoundly attacked, then, in the order of intensity, the intestines, the kidneys, the glands, the ovaries, and, in the last place, with the very rare lesions of the lungs. In all the diseased organs were found prodigious numbers, with all the morphologic and histo-chemical characters of Koch's bacilli.

How is this disease developed in the fowl? The following is what the investigation of the question establishes :

Among the laborers on the farm there is one who for a long time showed signs of tuberculosis : voice, cough, expectoration, hæmoptisis, night sweats, nothing is lacking in the picture, not even the presence of characteristic bacilli in the products of expectoration. Little by little this unfortunate man became incapable of doing his ordinary work, and, that he might not be deprived of all means of gaining his living, the farmer entrusted the fowls to his care ; during five or six months he filled this *function*—easy place ; three months elapsed before the first fowl succumbed to tuberculosis. The progress of the contagion is very simple. You know how voracious chickens are ; from the time one lets anything drop they eagerly swallow it ; as soon as one spits on the ground, they dispute for the meagre morsel.

Our poor sick man, who spat much, laughingly told how the fowls appeared to consider this supplement to their rations very dainty. It is not necessary to seek elsewhere for the way which the contagion invaded the animals of this poultry-yard.

The Committee on Credentials reported on S. T. Nicholson, David Lucas, A. G. Person, A. A. Maynard, P. R. Hardie, W. P. Galey, M. Bolton, W. E. Turlington, C. G. Nichols, C. S. Pratt, A. P. Keever, James M. O'Kelly, R. B. Ellis, J. W. McGhee, J. L. McMillan, W. Pharr, W. B. Crisp.

On motion of Dr. Ennett, the Convention adjourned, to meet in Newbern on the third Wednesday in May, 1886.

W. C. McDUFFIE, M.D., President.

WALTER C. MURPHY, M.D., Secretary.

REPORT OF THE BOARD OF MEDICAL EXAMINERS.

The Board of Medical Examiners of North Carolina met in Durham at 8 A. M., May 18th, and continued in session, with but slight intermissions during the morning hours, until 10 A. M. Friday, 22d inst.

One hundred and one applicants appeared for examination, of whom 84 were duly licensed, after giving satisfactory evidence of competency and good moral character. The following applicants passed their examination successfully :

- Drs. James Allison Hodges, Fayetteville.
“ John Hannibal Baird, Briggsville.
“ John Morehead Emmitt, Hope Mills.
“ Leona Marion Archey, Concord.
“ Archibald Currie Jordan, Caldwell Institute.
“ Joseph Ira Coleman, Hurdle’s Mills.
“ Charles Gettis Nichols, Mount Tirzah.
“ William Rankin Goley, Long Branch.
“ Furman Paine Covington, Norwood.
“ John Washington Littleton, Albemarle.
“ Daniel Greenlee Caldwell, Charlotte.
“ Harrison Wood Dorsett, Bethany.
“ Albert A. Hill, Lexington.
“ Addison Garland Person, Fremont.
“ Millard Fillmore Fox, Greensboro.
“ Thomas Benton Ashbuy, Mount Airy.
“ Alfred Sidney Atwater, Rialto.
“ Robert Lindsay Mullen, Ringwood.
“ James Andy Wise, Red Mountain.
“ Francis Wade Hughes, Newberne.
“ Kenelm Leggett, Palmyra.
“ Joseph Irving Rogers, Alexander.
“ Joseph Brank, Weaverville.
“ William Pendleton Kennedy, Warsaw.
“ John Benjamin Powers, Wake Forest.
“ Thomas Cleaborn Bullock, Blockersville.
“ William Theophilus Spruill, Youngsville.
“ Thomas Renny Harding, Huntsville.
“ Josiah Burke H. Knight, Eagle Rock.

- Drs. William Henry Harrell, Williamston.
“ James Mackintosh Hays, Wilton.
“ Joseph Foy McKay, Averysboro.
“ Samuel Barnes Dew, Wilson.
“ George Columbus Cope, Heilig's Mills.
“ Dabney Belvin Reinhart, Thomasville.
“ Annie Lowrie Alexander, Cowan's Ford.
“ Samuel Timothy Nicholson, Washington.
“ John Thorne Nicholson, Bath.
“ David Nicholas Dalton, Winston.
“ Samuel Lewis Montgomery, Monroe.
“ James Sylvanus Bell, Matthews.
“ William Watson Pharr, Query's.
“ David Lucas, Enfield.
“ James Clifford Perry, Newbegun.
“ Gilbert McLeod, Morven.
“ John Miller Faison, Faison's.
“ Joseph Calloway Whiteside, Bridgewater.
“ William Hill Wilson, Dallas.
“ Charles Edward Adams, Gastonia.
“ John Cooper, Hives.
“ Charles William Sawyer, Elizabeth City.
“ Burton Walker Hathaway, Edenton.
“ Edwin Boushall Ferebee, Belcross.
“ William Edgar Powell, Castona.
“ John Buxton Carr, Old Sparta.
“ John Pugh Smallwood, Lewiston.
“ Romulus Alonzo Whitaker, Trenton.
“ Adolphus Pinckney Kever, Keeversville.
“ Edmund Frederick Ashe, Wadesboro.
“ Hugh Willis, Summerfield.
“ Paul Joseph Kluttz, Gold Hill.
“ Samuel David Booth, Oxford.
“ Patrick Booth, Knap of Reeds.
“ Benjamin Griswold Webb, Asheville.
“ Maltis Laudrie Hicks, Wakefield.
“ Henry Sloan, Lisbon.
“ James Horton Benton, Newton Grove.
“ David Bryan Jordan, Grantham's Store.

- Drs. Thomas Newby White, Belvidere.
“ James Jacob Harrell, Gulf.
“ Zeno Brown, Greenville.
“ William Beauregard Crisp, Ceffo.
“ William Thoroughgood Pate, Laurel Hill.
“ Atlas Allen Maynard, Clayton.
“ P. R. Hardee, Durham.
“ Frederick William Ritter, Shiloh.
“ David Thomas Tayloe, Washington.
“ George Benton Nance, Olive Branch.
“ Egbert Perses Williams, Cedar Creek.
“ Mayland Bolton, Rich Square.
“ David Clingman Parris, Hillsboro.
“ Henry Harding Dodson, Milton.
“ Willis Edgar Turlington, Elevation.
“ Charles Sumner Pratt, Raleigh.

Temporary licenses, to hold good only till the next meeting of the Board of Examiners, were issued as follows :

- Drs. Kenneth McKenzy Clark, Kittrell.
“ Julius Jasper Hilton, Hillsdale.
“ Willis Jasper Vestal, Tyro Shops.
“ James Munroe Raby, Roxobel.

One was allowed to withdraw, and twelve were rejected.

A resolution of the Board provides that an applicant for temporary license can appear before one member of the Board, and, after submitting to a written examination upon all the branches, said examination to be submitted to another member, and, if satisfactory to both, a temporary license will be issued.

The opinion of the Attorney General not being adverse to the propriety of it, the Board resolved to hold a meeting in August of this year, to facilitate and encourage the further examination of applicants for the license.

W. J. H. BELLAMY, M.D.,
Secretary Board of Medical Examiners of N. C.

PRELIMINARY MEETING OF THE STATE BOARD OF HEALTH.

DURHAM, N. C., May 19, 1885.

A preliminary meeting of the State Board of Health was held in the Hotel Claiborn on the evening of May 19th, 1885. Present, Dr. J. W. Jones, President; Dr. Thomas F. Wood, Secretary; Drs. Lyle and Satchwell, and Prof. Simmons.

The reading of the minutes of the last meeting were dispensed with as the record book was inaccessible.

Dr. Wood suggested to mark out a course of business for the conjoint session of Wednesday.

Dr. Wood mentioned two letters received by him inviting the Board to visit the institutions and examine them. One from the Institution for the Deaf and Dumb and the Blind, and the other from Dr. P. L. Murphy, Superintendent of the Western North Carolina Insane Asylum, at Morganton, North Carolina.

A letter from Mr. E. R. Stamps, President of the Board of Directors of the North Carolina Penitentiary, was read, inviting the Board to examine the convict quarters in the W. N. C. and A. & S. R. R. Action on these matters was postponed to the Wednesday meeting.

It was proposed for order of business Wednesday for conjoint session—

President's Address.

Secretary's statement of the workings of the Board.

Suggestions of desirable things for the Society to do.

Reports from County Superintendents.

Election of members to fill vacancies.

The question of subscribing to a few practical papers was brought up, and it was the sense of the meeting that the Board is a progressive body, and ought to instruct themselves in matters appertaining to the public health.

The subject of hygiene in public schools and text-books on physiology and hygiene was discussed.

The Board then adjourned to meet on Wednesday, May 20, 1885.

THOMAS F. WOOD, M.D., Secretary.

REGULAR MEETING OF THE STATE BOARD OF HEALTH.

 DURHAM, N. C., May 21, 1885.

A meeting of the State Board of Health was held in Stokes' Hall on Thursday, May 21, Dr. Jones, President of the Board, in the chair. Present,

Mr. Arthur Winslow,
 Prof. W. G. Simmons,
 Drs. W. D. Hilliard,
 " S. H. Lyle,
 " R. L. Payne,
 " R. H. Lewis,
 " J. W. Jones,
 " Thomas F. Wood.

A dispatch was read from Dr. McDonald regretting his inability to be present.

Dr. Lewis was requested to write a paper on the Care of Eyes and Ears in Children, and Prof. Simmons to make an investigation and report at the next annual meeting on Illuminating Oils.

It was decided to divide up the work of inspection, Drs. Wood, Hilliard and Payne going to the Western part of the State, and Drs. Jones and Lewis, Prof. Simmons and Mr. Winslow to the Raleigh Institutions.

Dr. Wood asked for suggestions as to papers and books to be procured for the Board.

It was decided that Dr. Wood procure such sanitary papers as he might be acquainted with, and which would be of use to the Board.

Authority was given Dr. Wood to complete his set of the papers of the American Public Health Association for reference by the Board at a cost of \$5 per volume.

The report of the Treasurer was read, as follows :

Postage.....	\$ 19 55
Receipt book.....	50
Copy of Act relating to Board of Health.....	3 10
Expenses of members at Raleigh meeting March 20-21...	104 60
Furnishing office.....	50 00
Preparation of office in lieu of rent.....	75 00
Express on stationery to members of Board....	4 50
Salary of Secretary and Clerk March and April.....	200 00
Total.....	<hr/> \$457 25

On suggestion of the President, it was decided to appoint an auditing committee at the next meeting.

Dr. Payne suggested that the Secretary issue a pamphlet for the instruction of country physicians as to the duties of the Superintendent of Health, and also in the organization of County Boards of Health.

Dr. Wood referred to a mistake made at the Raleigh meeting, reading from that part of the proceedings relating to the election of county superintendents, as follows :

Resolved, That, in view of the recent amendments enacted to promote the efficiency of the North Carolina Board of Health, we respectfully appeal to our medical brethren of the counties that have no auxiliary county board, to proceed to organize at once, and elect their county superintendents ; and we recommend to county boards that have held no biennial meeting the present year, to meet as early as practicable and elect their respective officers and superintendents to serve until the next regular biennial election, and report to the Secretary.

It was afterwards discovered by the terms of the law that meetings of organization of County Boards were not admissable where such Boards were in existence, and that superintendents already holding office would hold over until the regular meeting in January. Correction so ordered on record.

Dr. Jones suggested cautioning county superintendents when making a visit to jail or poor-house, to do so without giving notice to the person in charge of said institution.

It was decided to require County Superintendents of Health to give a descriptive memorandum from the County Superintendent of Health for each prisoner sent to the Penitentiary from the county jail. Also to state the number of prisoners received at the jail who can read and write. It was suggested, and the duty was undertaken by Prof. Simmons, to correspond with the chief officer of the Signal Service Bureau for instruments for twelve observatories to be distributed throughout the State.

Dr. Jones thought it very desirable for the promotion of immigration that climatological records should be established.

The Board then adjourned *sine die*.

CLINICAL RECORD.

By ROBERT S. YOUNG, M.D., Concord, N. C.

(Twelve Selected Cases, dating from May 20, 1884, to May 20, 1885.)

(Read before the North Carolina Medical Society, at Durham, N. C.,
May 20, 1885.)

CASE 1.—ATONIC IMPOTENCY.

A hardware salesman, 25 years of age, consulted me on May 30, 1884, with the following history: He began to masturbate at the age of 16, and he continued to indulge this propensity until three years ago. Upon abandoning this habit, he became the victim of profuse nocturnal seminal emissions of a more or less periodic character, that is to say, they would occur almost every night, and frequently as often as four times in one night, for from ten days to two weeks, and then there would be an intermission of about a week's duration, during which time, however, his nightly repose would be occasionally interrupted by the most lascivious dreams, with imperfect erections, showing that the hyperexcitability of the sexual organs, although greatly diminished, is by no means abolished. He had been under treatment for a year before applying to me, which resulted in considerable improvement in his general health and materially lessening the frequency of his nocturnal discharges. Several years had elapsed since he had experienced sexual intercourse, he having relinquished the more natural method of gratification in favor of the more convenient plan of masturbation. About two months before placing himself under my care he, desiring to test his sexual powers once more, was disgraced by failure by reason of an incomplete erection, the glans penis especially being very soft and inelastic, ejaculation also being premature, taking place at the moment of contact, before intromission was accomplished. From this time until I saw him May 30th, 1884, the nocturnal seminal emissions were occurring at the rate of from three to five times a week, and flakes of mucous, which the patient supposed to be serum, were discharged in advance of the stream of urine. He was easily fatigued, highly excitable, and his hands were tremulous and cold, and he suffered from dull,

heavy pains in the groin and lumbar region, together with habitual constipation.

Upon his first visit to my office I made an examination with a set of soft, acorn-headed, bulbous explorers, which disclosed slight tenderness of the urethra at one and a half inches from the meatus, and more decided tenderness and stricture, calibre No. 25 (French scale), at four and a quarter inches from the meatus, the tenderness increased as the prostatic portion was approached. On withdrawing the instrument a stricture, calibre No. 12, was found at five and a half inches from the meatus. The bulb drew out a large quantity of a whitish fluid, supposed to come from the prostatic portion of the urethra. The urine was acid and loaded with the lithates, but the genital organs were normal. I prescribed a mild cathartic mineral water, to be taken every night, also warm hip-baths and warm enemata night and morning, with 30 grains bromide of potassium every eight hours. The diet was restricted to perfectly bland and digestible articles; sexual intercourse and alcoholic stimulants were forbidden. I ordered one drachm of a solution of nitrate of silver, 2 grains to the ounce of water, to be injected into the urethra four times a day. On June 3d, 1884, four days after treatment was begun, I introduced a No. 14 steel bougie (French scale), and repeated the operation every other day for about two weeks, and then had the patient to pass it himself once every day. At first, whilst the urethra was so sensitive, the instrument was withdrawn immediately, but as the hyperæsthesia was reduced it was allowed to remain longer, frequently as long as ten minutes, which limit, however, I never exceeded. I gradually increased the size of the bougie used in proportion to the decline of hyperæsthesia and the enlargement of the stricture, until we reached No. 32, which was the largest that would pass through the meatus without cutting. The coarctation was now cured, or at least it was as large as the meatus, and the sensitiveness was completely obtunded. During the first fortnight of treatment there were eight nocturnal emissions, but from that time until discharged the patient had only one.

He was discharged on October 10th, 1884, perfectly restored. His restoration was closely followed by marriage, and he has frequently told me since that event that he experienced no difficulty whatever now in the sexual act, and as a proof of the truth of his statement he will soon become the father of at least one baby, and if there be anything in appearances, I should say two.

CASE 2.—UTERINE HEMORRHAGE DURING THE EARLY MONTHS OF PREGNANCY.

Mrs. V., aged about 26 years, came into my office on June 2d, 1884, to know whether or not she was pregnant.

She had been married a little more than two months. Her general health was excellent—had no history of previous uterine trouble, her menstruation having always been regular up to the last period which she missed.

Having had slight morning sickness, the uterus being slightly but uniformly enlarged, and the vaginal mucous membrane being of a decidedly blueish tint, I gave the opinion that she was pregnant.

Ten days later I was called to her, and found considerable hemorrhage occurring. I at once made a thorough examination with a speculum, but was unable to discover the cause of the flow.

As the same natural and physical signs existed as before, I anticipated an abortion, and ordered her confined to bed, and administered the remedies usually given on such occasions.

The next day the flow had ceased. A history similar to this was given at various intervals for a month longer, when, after the closest interrogation, I discovered that her husband, a strong, robust and vigorous man, was in the habit of having connection with her, never less than three times, and frequently as often as six times, with but one or two exceptions since they were married, and that, in addition to this excess of coition, the husband was possessed of a most redundant penis, which I deemed a prominent factor in the existing trouble.

Lately it had been usual to notice a little blood after each intercourse—sexual congress was at once interdicted, and there was no more blood from her uterus.

I saw my patient frequently afterwards, but not professionally until term, when I delivered her of a large, healthy female child. The labor was complicated by placenta prævia, which necessitated the turning of the child.

Now it is an admitted fact that there is an abnormal determination of blood to the uterus during coition. It is quite likely that there is considerable shock to the uterus by the penis coming into violent contact with the os, which in the case of very short vaginas and unusually long penises, as in the present instance, may amount

to considerable displacement, leading to a partial separation of the secundines and its consequent hemorrhage. It is quite possible that the attachment over the mouth of the uterus may have predisposed to the hemorrhage, but that coition was the exciting cause admits of no doubt.

CASE 3.—SYPHYLITIC HEPATITIS.

On June 15th, 1884, I was called to see a ten-year-old white girl, suffering from abdominal enlargement and dyspepsia, with the following history: Both parents living and in good health. The patient has been remarkably free from the ordinary diseases of childhood, and seemed to enjoy better than the average health until about one year ago. She then began ailing without being actually sick. Her appetite failed; she lost flesh; had some eructations; her bowels moved sluggishly, and a general lassitude came over her. She was treated for serofula, dyspepsia and worms; tried a change of climate and the numerous mineral springs; nor did she escape the trial of every "patent medicine" which was recommended and urged by her many friends; she was kept from school and placed upon all kinds of diet, all to no good. The abdomen began to swell and continued from day to day to grow larger; her strength completely broke down at last, and she could no longer leave her bed. This was the history of the case up to the time of my first visit. When I saw the little girl I at once noticed her cachectic appearance; her wrinkled face; the dull, listless expression of her sunken eyes; the peculiar dirty-yellowish hue of her skin; her emaciated body, and the prematurely old expression of countenance so often met with in children suffering from hereditary marasmus. The organs of the chest were normal. The abdomen was greatly enlarged by serous effusion. The fullness of the superficial abdominal veins denoted a congestion of the portal circulation. The great amount of the effusion and the tympanites above, effectually prevented me from determining the size of the liver with any degree of accuracy. Her tongue was pale, flabby and covered by a whitish coat, and was indented by her teeth, which presented the characteristic notching of the central incisors first described by J. Hutchinson, which is of great significance in the diagnosis of retarded hereditary syphilis.

Remembering that ascites is rare in children, and that, when it happens, it is generally caused by tubercular peritonitis, or by cancer of one of the abdominal viscera, I made, more by exclusion than anything else, and by reflecting upon the failure of all kind of treatment tried so far, the general diagnosis of retarded hereditary syphilis, and the special diagnosis of syphilitic hepatitis. If success of treatment can verify a diagnosis, then mine was correct. Paracentesis was performed, the effusion and tympanites seriously threatening a fatal interference with the action of the heart, and nearly a gallon of a slightly opaque, yellowish fluid, containing a large percentage of albumen, was slowly withdrawn.

Mercurial inunction into the abdominal walls, and gradually increasing doses of the iodide of potassium, formed the treatment, and I had the gratification of seeing the child in good health by August 10th, a little less than three weeks after beginning these therapeutic measures.

Immediately after the performance of paracentesis the liver was found to extend down to within an inch of the ilium; the organ was soft, tender, and its margins smooth and even. The spleen was also slightly enlarged. The fluid never accumulated again. The patient was afterwards placed upon a tonic treatment, and when discharged the liver still extended two inches below its normal position.

Several months later (December 6th) I saw her again; she seemed in excellent health, and there was no trace left of her former illness, except the notches in her teeth. The liver and spleen promptly returned to their natural size. The urine had never contained albumen in abnormal quantities, but for a short time there was present therein a trace of the coloring matter of the bile.



CASE 4.—REMITTENT FEVER COMPLICATED BY THE VOMITING OF PREGNANCY.

On Sunday, July 6th, 1884, I was called to see Mrs. Mc., aged 27 years. Had been married six years, and was the mother of two strong, healthy boys, aged 2 and 4 years, respectively. She had been sick about three weeks when I was called in. She had been attended by a man who called himself a physician, but who in

reality knew nothing about medicine at all, having never seen the inside of a medical college, but had acquired his whole knowledge of the subject while acting in the capacity of a nurse in one of the Petersburg hospitals during the late war. As the case did not progress favorably, her husband had repeatedly asked the medical attendant to procure some competent aid; this he persistently refused to do, saying, with that degree of "cheek" which only this class of men can exercise: "The case is perfectly clear to me." Finally, however, he concluded that the case was not altogether as clear as he had once imagined, and, abandoning all hope of his patient's recovery, took his departure. Then it was that I was invited to see the case. I found the patient with a temperature of 103° , pulse 120; skin hot, dry and of a yellow hue, of which color the sclerotic coats also partook; the head ached severely in the frontal region; the tongue was dry and covered with a yellowish-brown coat. The bowels had not moved for nine days, which action was produced by a large dose of Epsom salts. Physical examination revealed a greatly enlarged and extremely tender liver; also an enlarged spleen. There was considerable tenderness over the stomach also, which, they said, was due to a blister which had been placed there several days previous to control the vomiting, which, however, it had failed to do. She had missed her last monthly period, her time having been about the beginning of this attack (three weeks ago). But the most distressing symptom of all was the vomiting. Her stomach would retain absolutely nothing, the mere mention of any remedy frequently being sufficient to bring on a paroxysm of vomiting, which in every case would be accompanied by the most terrible retching and nausea. This excessive vomiting and elevated temperature (which had now lasted for three weeks) had reduced the naturally plump form to little more than skin and bones. The first thing I did was to administer a large, simple enema, which emptied the bowels effectually; then a hypodermic injection of $\frac{1}{8}$ grain morphine, which calmed her stomach considerably. I then applied cantharidal collodion over the liver and produced a blister there, to obviate an abscess in that organ, which I believed was highly imminent, and then I began with my anti-emetic remedies, and exhausted the whole list without receiving one particle of benefit from any. After failing in this line I concluded to allow the stomach to rest, and began the administration

of quinine for rectum, in 30 grain doses every four hours. After showing the nurse how to give the enemas I went home, leaving instructions not to give anything, not even ice, by the mouth, and keep up the injections until I returned.

It was 9 A. M. on the 7th when I saw my patient again. I went prepared to produce abortion in case the quinine had not exerted its oxytocic properties and done it for me. She had vomited numerous times during the night, but had retained all her enemas, having received five up to this hour; she still complains of headache. I tried her stomach with a little lime water and iced milk, but it was immediately ejected. I did not attempt it again that day. Her temperature was 100° , pulse 110. Said she felt no effect from quinine as yet; no uterine contractions. I added 1 grain of opium to each injection, and ordered them to be continued at the same interval. I returned that evening about sun-down, and found her with a temperature of $100\frac{1}{2}^{\circ}$, pulse 112; said she could hear a little roaring in her head, and that it still ached a little. She had vomited eight times since I saw her last. The vomit consisted of bile and mucous. The day before I took charge of the case she vomited a good deal of matter which they described as looking like beef liver (which I supposed to be blood-clot) and some little pure blood; it was this fact which caused their first physician to despair. The blister over the liver had done well. I ordered it to be dressed with carbolized vaseline, and the quinine and opium to be continued through the night as usual.

July 8th, temperature $99\frac{1}{2}^{\circ}$, pulse 92, strong and firm. She vomited five times during the night, but would sleep between times, and said she felt a little refreshed. Head still ached a little; was deafened by the quinine, and complained of a peculiar sensation about the eyes and dimness of vision; her pupils were both dilated (both to the same extent) in spite of the opium she had taken. I did not know how to account for this, but reduced the dose of quinine to one-half the quantity she had been taking. I returned again that evening, and found the temperature 100° , pulse 98; had vomited only twice that day, but had strained very much both times; pupils still more dilated and vision almost gone; she could not distinguish a man from a woman by sight. I ordered the quinine and opium to be continued through the night.

July 9th, 8 A. M., temperature 99° , pulse 86; patient strained

twice last night, but vomited nothing. She says with the exception of the roaring in her head and her blindness, she feels pretty well. She cannot distinguish daylight from darkness to-day. I ordered the same treatment continued. I could not see her again that day, but on the next morning at 8 o'clock, July 10th, her temperature was normal, as was also her pulse. She had not vomited in twenty-four hours. I tried her again with iced milk and lime water, and was gratified to have it retained and actually relished by the patient. Her vision was totally gone. I had the quinine and opium continued until that night, and then withdrawn. I called only once more to see her during that attack. Her temperature never arose again, and has not vomited to this day, that I am aware of. She had severe vomiting with her previous pregnancies. It was nearly two months before any improvement took place in her eyes; all this time her pupils remained dilated, but from that time on vision gradually returned until it was entirely restored. I delivered her at term of a fine, healthy boy baby. I was anxious to have her eyes examined by a specialist with an ophthalmoscope, but did not succeed, owing to our remoteness from an oculist. My opinion is that either the straining and vomiting, or the quinine, produced the trouble—probably both played a part in producing an effusion into or behind the retina, which underwent a gradual absorption and allowed things in the interior of the eye-ball to again assume their normal position and discharge their normal functions. I do not pretend to assert that this is the proper solution of the problem, but mention it as the probable state of affairs within the eye-ball.

I gave the patient during the treatment 525 grains of quinine.

CASE 5.—DIABETES INSIPIDUS.

A gentleman of about 40 years of age called at my office on the 4th of September, 1884, to obtain advice with regard to a malady under which he was suffering.

Mr. B. had a good family history. He drank moderately of whiskey, but never to excess.

He passed, on an average, ten pints of urine daily, of a specific quantity of 1005, of acid reaction, and without a trace of albumen or sugar.

The disorder came on gradually, and when he first noticed it he was in excellent health. There was actually no cause to which it could be assigned, unless, perhaps, to overwork and worry, or to a doubtful history of a strain in lifting a heavy weight. He never had venereal disease, and had received no injury to the head or to the spine; he had not had a sun-stroke; there was no malarial history. His digestion was fairly good; his bowels were rather constipated; no disease of the heart, lungs, or any of the viscera could be discovered; the temperature was normal; the pulse a little fast. He had lost flesh steadily and rapidly, and was strikingly emaciated when I saw him, about six months after the outbreak of his malady. He complained of nothing but debility, of a feeling of weakness in the small of the back, of the incessant urination, and of an irritability at the neck of the bladder, with a sense of burning, for which no adequate local cause could be discovered.

He declared that he was not thirsty, and that he passed more water than he drank, and unless he deceived me such was indeed the case. I had him to measure the fluids of every kind he took; they never exceeded six pints, and I cut them down to four pints, whereas he passed not less than eight, and oftener ten pints in the twenty-four hours. He was very restless. There were occasionally chilly sensations and flushes of heat, and he was sometimes bathed in perspiration, but there were no night-sweats.

After observing his case while he was taking no medicine and under varied diets, and finding it uninfluenced, he was placed on drachm doses of the fluid extract of ergot three times, and subsequently four times, daily, and for four days six times daily. In a few days after beginning this treatment he was no longer obliged to get up at night, and the pains had all left him; the flow had decidedly decreased. On the eleventh day I saw him and noticed a great improvement; he said he had passed only five pints during the last twenty-four hours. On the twenty-second day of treatment he was voiding a little less than four pints of urine, and his whole condition was greatly better. The ergot was reduced to a drachm three times a day. It had, throughout, not given him any inconvenience whatever. On the twenty-fifth day the ergot was still further reduced; he only got thirty minims thrice daily, and was discharging three and a half pints of urine daily, of almost normal specific gravity.

On the thirteenth day the ergot was withheld entirely, and the patient given the elixir of iron, quinine and strychnine for ten days. At the expiration of this period he was passing about three pints of urine, while drinking about five pints of fluids. His general condition was good, but I prescribed cod liver oil for him, under which he fattened and grew strong. The irritability at the neck of the bladder and all other uncomfortable symptoms, disappeared when the diuresis was controlled.

I discharged him cured on November 1st, 1884, over six months since, and he still remains strong and vigorous, passing about the right quantity of normal urine.

I have not, I regret to say, been always successful in the treatment of diabetes insipidus with the fluid extract of ergot; while I have effected a cure in some cases by its use, I have signally failed in equally as many, if not more.

CASE 6.—MALARIAL HÆMATURIA.

On November 22d, 1884, about noon, I was called to see Mr. C., a young gentleman 23 years of age, who gave me the following history: He had been having chills throughout the whole fall and latter part of summer; he had one last night, together with sick stomach and occasional vomiting, and since daylight had passed from his bladder a quantity of almost pure blood. He had a fine physique, good constitution and regular habits. During my visit he was seized with another chill. His face exhibited more than ordinary pallor, lips became livid, skin dry and had a violent pain in the lumbar region. His tongue was slightly coated and his bowels were loose. I at once gave him 10 grains of calomel, divided into two doses, the second dose to be taken in two hours; at the same time gave $\frac{1}{4}$ of a grain of morphia hypodermically to relieve the pain in back. At this time the pulse was 116 per minute, and temperature was 99°. I returned at 4 o'clock that afternoon, and was told that the patient had thrown up just after taking each powder I had left. The pain in the back was better, the skin dry, hot and of a saffron color; pulse 120, feeble and soft; temperature 100°; urine scant and of a dark blood color. I then ordered

quinine in 5 grain doses every hour, but the stomach would not retain it ; then I resorted to the gelatin capsules, but with no better result.

At once appreciating the urgency of the case, I determined to administer the drug by enema, which I proceeded to do, in 30 grain doses, repeated every three hours, but apparently without effect. The next morning, November 23d, at 8 o'clock, I again saw the patient. His skin was more intensely yellow ; he had voided about one ounce of urine, which was, in fact, almost pure blood ; nausea and vomiting continued ; no evacuation of the bowels ; pulse 120, with same character as at last examination, and temperature $\frac{1}{4}^{\circ}$ lower. I determined, in addition to the enemata of quinine, which I ordered to be resumed, to employ the hypodermic method also, as an auxiliary, repeating it every hour until profound cinchism was produced. At 9 A. M. I applied a sinapism over the whole abdomen, and had the extremities and back rubbed with the spirit of turpentine on a coarse cloth and gave hypodermically 1-16 grain of morphia to allay vomiting, which seemed to exert a salutary influence for a short while. Hiccough now supervened, which proved exceedingly troublesome throughout the case. I remained with the patient until 9 P. M., and when I left there had been no appreciable change in his condition.

The next morning, November 24th, at 8 o'clock, the general appearance and symptoms were the same ; no discharge from the bladder ; one dark, tarry evacuation from the bowels ; pulse 108, very soft ; temperature $99\frac{1}{2}^{\circ}$; inclination to sleep slightly increasing. The skin has become moist during the night, which condition recurred at short intervals for twenty-four hours ; the same treatment continued throughout the day. I called at 11 P. M. and found my patient growing worse. The bladder feeling somewhat distended, I introduced a catheter and drew off almost four ounces of bloody urine ; tried various diuretics, but to no effect.

On November 25th, 10 o'clock A. M., condition much worse ; more stupor ; pulse 120, soft and compressible ; temperature $100\frac{1}{2}^{\circ}$; quinine treatment continued ; other diuretics tried ; hot vapor baths applied as often as circumstances would permit ; counter-irritation continued, but the location of same changed to various places.

November 26th, 10 o'clock A. M., pulse 100 ; temperature 100° ; general condition much the same ; catheter brings away one ounce

of clear fluid, inodorous; free evacuation of the bowels during night. Same treatment continued.

November 27th, 10 o'clock A. M., patient growing worse; evidently much weaker; stupor increasing; no urine; bowels quiet; pulse 96; temperature 98°; tongue dry and sores upon teeth and lips. Ordered beef extract, hot vapor, turpentine and friction over the kidneys; 9 o'clock P. M., still growing weaker; beef extract forced throughout the whole night.

November 28th, 8 o'clock A. M., condition still worse; pulse declining in frequency and volume; total suppression of urine or other fluid from bladder; hiccough persistent; beef extract continued; all medicines withdrawn; the symptoms continue slowly but steadily to grow alarming; pulse failing; temperature lowering; respiration sighing and irregular; no action from the bowels or kidneys until the morning of the 29th at about 11 o'clock, when quiet death suspended all efforts.

CASE 7.—PUERPERAL ECLAMPSIA.

At 8 o'clock A. M. on December 2d, 1884, I was called by Dr. A., of our town, to assist him in a case of puerperal eclampsia.

The patient, E. W., aged 25 years, single, was seized about 12:30 or 1 o'clock that morning with a slight spasm; it was so slight as not to alarm the attendants, but in the course of a short while she had another, and in a little time a third, and then a messenger was dispatched for their physician. He arrived at 4 o'clock A. M., and found his patient profoundly comatosed. She had been unconscious since 2 o'clock A. M.. She had had six convulsions before his arrival, and was in the midst of one when he entered the room. Vaginal examination revealed no dilatation of the os, and there were no uterine contractions. Her mother said she was at term. Her breathing was stertorous, her pupils dilated, her pulse small and feeble. She had three convulsions during his examination. He administered $\frac{1}{4}$ grain of morphia and 1-64 grain of atropine hypodermically and retired. He returned at 8 o'clock A. M. and took me with him.

When I arrived the patient was still comatosed and having convulsions at intervals of about ten minutes. We relaxed her with

inhalations of chloroform. Digital examinations performed again and found the os patulous but not dilated. The patient would not swallow chloral, so we again gave hypodermically $\frac{1}{4}$ grain of morphia. She had bitten her tongue fearfully. At 11 o'clock A. M. we again relaxed her with chloroform and again gave her the hypodermic of morphine. The convulsions were still occurring, but they were not so severe and the intervals were growing longer.

At 12:30 P. M. suddenly recalled; found child born. *The membranes were intact.*

The child had been expelled by one terrible throe during a convulsion; it was born lifeless, of the male sex; quite small (weight $5\frac{1}{2}$ pounds), looked to be badly nourished, but was fully developed.

There was but little amniotic fluid in the membranes, which were immediately opened with a pair of shears.

After delivery the convulsions did not cease, but continued to recur in close succession. The pulse at this time was entirely incompressible at the wrist. Hypodermics of morphia were kept up every two hours. At 6 o'clock P. M. her condition was such as to make us abandon all hope of her recovery; death seemed imminent, but morphine kept up to prevent recurrence of convulsions.

December 3d, 8 o'clock A. M., convulsions ceased during the night; pulse still so feeble and fast it cannot be controlled; breathing still stertorous. Ordered that stimulants and nourishment be given in case she got able to swallow; also directed doses of the bromides and chloral in the event she regained the power of deglutition. We returned at 4 o'clock P. M. and noticed signs of returning convulsions. She had swallowed nothing as yet. The bladder had not been emptied for two days. Had made two fruitless efforts at catheterization because of the violence of the patient when the genitalia were touched, convulsions being produced if the finger should perchance impinge upon the clitoris. Chloroform was given to the surgical degree, and the bladder successfully evacuated; about $\frac{1}{2}$ gallon of dark ammoniacal urine being voided.

An old lady in attendance recognizing the necessity of having the bladder emptied, had tried the potency of pouring water from one vessel to another to produce urination, and was greatly chagrined and disappointed when her device failed.

Our patient had about forty convulsions in all; had no more after her bladder was emptied.

She made a prompt and perfect recovery, and was discharged on December 6th, 1884.

CASE 8.—MAMMARY CARCINOMA.

Mrs. H., aged 42 years, mother of one child, aged 22 (a daughter), whose health is not good, but no local disturbance of any kind.

About three years since Mrs. H. discovered a small lump in her breast, her attention having been called to it by pains of a lancinating character. The mass was not larger than a common hazlenut, when first found, but was extremely painful at times, especially at the menstrual point; it was situated in the left mammary gland to the lower and outer side of the nipple; perfectly mobile, but from the first of a stony hardness. The case progressed with a very slow but steady growth, being at times so pained as to keep her awake and impair the general health by interfering with her alimentation and digestion. About one year ago the nipple was found to be retracted and firmly fixed to the morbid growth, as was also the integument overlaying the mass. Pains now became more frequent and radiated to the surrounding structures, especially to the shoulder and arm of same side. I noticed that my patient was now becoming emaciated, and that if anything was to be done it must be done without delay. One year ago I advised the extirpation of the diseased mass, but failed to have her understand the seriousness of her condition; however, now she concluded to have it removed, and on January 7th, 1885, I proceeded to the work.

She was at first placed upon the operating table and anæthetized with chloroform; then an elliptical-shaped piece of integument about five inches in length and three inches in width was removed, and the carcinoma dissected out. I went down upon the pectoralis major muscle and removed some of its fibers, for the tumor had become adhered to the fascia covering it. The vessels, all but one, which I tied, were secured by torsion, they being unusually small and few. Before I began I prepared a 10 per cent. solution of carbolic acid, and during the process of the operation this was used in sponging out the wound; after the cutting was finished the wound was thoroughly cleansed with this solution and left open for two hours, simply covered with a linen cloth saturated with the solution of carbolic acid. At this time the wound was clean and the edges presented the gluey

appearance familiar to every surgeon. At the expiration of two hours I closed it with ten very fine silk sutures and strips of adhesive plaster; over that a linen cloth, folded four-fold and dampened with a 4 per cent. solution of carbolic acid, and over all a roller bandage.

This dressing was not removed for four days, and the wound was found to have united by first intention throughout three-fourths its whole extent, and not a drop of pus about the remaining portion of the wound; on the seventh day the sutures were removed, and it was found that only a small portion (about $\frac{1}{4}$ of an inch) was not yet healed. The pain had vanished, and the patient said she had not been so well for many a day.

In about ten days a very small quantity of laudable pus was found covering the small unhealed portion.

Upon the fifteenth day the union was complete, and remains so up to the present date, with every indication that it is permanent.

The general health of my patient was never better than at the present time.

I regard the antiseptic method of treatment as almost absolutely necessary to the speedy and perfect union of wounds of this kind, especially if there be a particular desire to avoid constitutional disturbance.

CASE 9.—RECURRENT FŒCAL ABSCESS.

I was summoned on January 17th, 1885, to see the mother of one of our most respected colored citizens.

Her age is 56 years. I found her in bed, complaining of a somewhat obscure abdominal pain, and she presented me with the following history:

On the 9th, about a week before my visit, she had been exposed to both cold and wet for a considerable time; from this she dated, and to this she attributed, her trouble. On the next day after her exposure she began to experience vague uneasiness and pain in the abdomen, but kept about her household duties until the 4th, when she was obliged to go to bed; the pain did not subside, so she sent for me on the 17th. She had no fever, and lay on her bed in the dorsal position, with left leg drawn up; the pain was mainly confined to the left inguinal region and iliac fossa. Upon examination I found quite an extensive cicatrix, which she informed me was the result of an opera-

tion for strangulated hernia performed upon her by Dr. Johnston at the age of 26. This cicatrix occupying the usual site of operation for femoral hernia, consisted of two parts, one extending an inch or more parallel with Poupart's ligament, and the other joining it almost at a right angle and extending two inches down the thigh, giving the whole scar a T shape. I examined this whole region very thoroughly, but elicited nothing but deep-seated tenderness. From her account of the old operation for strangulated hernia, I was led to believe that at that time there was gangrene of the gut and faecal fistula, the wound being many months in healing. She stated that her pain was paroxysmal in character, though the soreness and inability to extend the limb was constantly present. The paroxysms were accompanied by a great deal of borborygmus and a free discharge of gas, which always relieved them. I left her some small doses of calomel and opium, to be taken every three hours. Next day, the 18th, her condition was about the same; bowels had been moved without discomfort, but with no relief to the abdominal pain, which was rather worse than before. There was some induration and tenderness around the cicatrix, with slight fever. I ordered a poultice, and directed nitre and aconite, with an anodyne, at bed-time; 19th, no material change; treatment continued; 20th, patient had a chill last night; considerable fever to-day; pulse 115; fevered tongue; rather anxious expression of countenance. I could discover no decided evidence of suppuration, although I felt sure it had occurred; ordered the same treatment to be continued; 21st, last night, or rather this morning early, she called her daughter up with the exclamation that something was running from her; this was found to be pus. The abscess, which had been so insidiously forming, had burst during sleep. The daughter stated that it had discharged about a pint of highly offensive matter. The opening, which was large enough to admit the point of one's little finger, was just at the point of juncture of the two cicatrixes already described. The discharged pus was mingled with a yellowish, rather feculent smelling material, like the contents of the small intestines. I dressed the abscess with absorbent cotton, strongly impregnated with carbolic acid, to absorb and disinfect the discharge, and prescribed quinine and whiskey internally, with a diet as nutritious as possible, but as little likely to leave faecal residue; 22d, patient feeling much more comfortable; sat up to have bed

made, which she had not been able to do for several days ; the discharge rather free and decidedly more feculent. A probe inserted into the opening, passed upward and inward its whole length. No change was made in the treatment ; 24th, did not see patient yesterday ; opening has enlarged to about double its original size ; its edges are ragged and sloughy-looking ; there is a very free feculent discharge, which is darker and more consistent than has been observed heretofore. She complains of considerable pain. There is now no fever or acceleration of pulse. Yesterday she had a large costive evacuation of the bowels. I ordered her a large dose of castor oil. Her daughter says that prunes which she had eaten were soon afterward seen in the discharge, and fluids taken seemed to pass immediately through. The patient is beginning to look ashy and thin ; 26th, did not see patient on yesterday ; the castor oil ordered at last visit operated once quite freely, part of the fæces passing through the wound, from which there has been less discharge since. He is entirely free from pain and feeling better than at last visit ; sat up a little this morning.

The edges of the wound have lost their sloughy appearance ; they look clean and granulating nicely. There is some induration and infiltration extending down the thigh. Ordered another dose of castor oil. From this time, for a month or two, the opening in the groin kept discharging feculent matter very freely, and the patient's condition became very unpromising and precarious.

The discharge was thin and copious, and though distinctly feculent, was not especially offensive ; it seemed to be undermining the patient's strength quite seriously. The administration of opium and other astringents at length diminished the amount of discharge, and it became more consistent, more of it passing by the natural avenue and less by the artificial anus. I supported the patient's strength in the meanwhile by the administration of cod liver oil and other tonics.

By the beginning of April the wound began to diminish in size and kept on slowly contracting until within the past week it has closed entirely, and seems to be firmly and securely united, and the patient is as well as she ever was.

The successful termination of two attacks of fæcal abscess is as unusual as it is interesting. The long period between them (30 years) is a feature of great rarity.

I presume that after the first attack the bowel in some way was bound down by a mass of inflammatory deposit in the left iliac fossa ; some strain or other injury to this may have set up an inflammation, or some pouch or cul-de-sac may have formed and some indigestible substance lodged in it and ulcerated its way through ; but most probably from cold and exposure inflammation was set up in the mass of new-formed tissue and communicated with the intestine ; at any rate the case is one of great rarity and interest, and full of instruction and encouragement upon a subject about which none of us know too much.

CASE 10.—POLYPUS OF THE UTERUS SUCCESSFULLY TREATED BY
LIGATURE.

A lady 60 years of age consulted me more than two years since for a difficulty in passing her water. She stated that the effort was occasionally attended with pain, as it was at that time ; and further, that she had had falling of the womb for more than eighteen years, from which she had suffered very much and for which she had worn an instrument for a long time by the advice of her family physician. Supposing that she labored under procedentia uteri, I did not interrogate her upon that subject, but prescribed for the difficulty of which she complained. Of that she was soon relieved, and I was not employed by her again for nearly two years.

On February 4th, 1885, she called upon me and said that her health and strength were failing her, and the instrument had for some time past failed to afford her the support it formerly did. The last remark led me to inquire regarding the supposed displacement of the uterus. Her replies led me strongly to suspect that she and her physician had been mistaken relative to the cause of her difficulty ; but being informed by her that she had been examined by a number of physicians, who had all agreed that it was prolapsus, except one who thought it was ulcer of the womb, I was distrustful of my own opinion, but did not at that time inform her of my doubts in her course. I prescribed a tonic and she retired. She informed me that she had borne four children, and had been a widow for thirty years. While deliberating upon the subject I became convinced that if her replies were correct, she had polypus,

and not prolapsus, as she supposed, and determined to acquaint her with my opinion, notwithstanding her assurances. This I had the opportunity of doing next day, and accordingly I intimated to her that I entertained doubts of her having falling of the womb, and that it was more probable that it was a tumor, which might perhaps be removed. It was difficult to persuade her of the possibility of a mistake, as she had great confidence in those whom she had consulted. She then confessed to me that she had never had an ocular or digital examination performed; this encouraged me to propose such an examination, which she at first promptly declined, but a day or two later, after she had conversed with those of her acquaintance upon the subject, some of whom had undergone such an examination, finally, but with great reluctance, submitted on February 7th, 1855. An examination confirmed my opinion; a polypus was found of no inconsiderable size; it was of the fibrous character, cylindrical in form, and ulcerated at its most dependent part; it had near its neck a small protuberance, which appeared like a small tumor, arising from the polypus itself. On removing the instrument it was partially protruded without the vulva, when, by traction and separating the labia, the os uteri surrounding the neck of polypus could be brought into view. Its pedicle was from $\frac{1}{2}$ to $\frac{3}{4}$ of an inch in diameter and contained a large artery which pulsated strongly. The os uteri surrounded the neck of the tumor, through which it no doubt issued at some former period, as it was probably originally formed within the uterine cavity. The edges of the mouth of the womb were continuous with the neck of the tumor, which had been kept open by uterine discharge. Into this opening I introduced a silver probe an inch and a half. Though the lips of the womb and the peduncle of the tumor were continuous, the line of union could be distinctly traced by the dissimilarity of the color of the womb and the tumor; the former being of its natural color, the latter of a dusky purple. She had constant puriform discharges, frequently mingled with blood, and she said she had the change of life on her for seventeen years, and that she was not free from it yet.

After the examination I informed her that it was a tumor, which could, in all probability, be safely removed; but as it had been of so long-standing, and the system accustomed to the puriform and bloody drain, and the health and strength so much reduced, I

deemed it prudent to take advice before proceeding to remove it. Accordingly I consulted several of my medical friends, the most of whom advised against interference, only one, in fact, concurring in my own opinion, but as I had great confidence in his judgment, and as my patient was such a sufferer, I concluded to make the venture, which I did on the 12th of February, 1885.

The presence of the large artery made me decide upon the old method of ligation, as I was afraid I could not control the hemorrhage if I cut it.

I threw around the pedicle, just at the line of juncture above described, a piece of silver wire, and then twisted it down upon the enclosed tissue, thereby strangulating the tumor. On the second day, February 14th, the wire ligature was twisted still tighter, and again on the fourth day, February 16th, and on the fifth day, February 17th, the tumor was separated. It then measured six inches in circumference and four inches in length, although much diminished by discharges after ligation. While the ligature was applied she was unable to void her urine, which was drawn off by the catheter. The next day after the application of the ligature there was some derangement of the stomach and a little elevation of temperature, but nothing serious.

She had been unable for several years to hold her water perfectly, but since the separation of the polypus she has regained the power to control its passage entirely.

Her health has very much improved. No unfavorable consequences have followed the operation; and although so long accustomed to a constant drain upon the system, yet no inconvenience from plethora has arisen.

It is now more than two months since the operation. The vaginal discharge ceased almost immediately.

CASE 11.—CHOREA DURING PREGNANCY.

On March 31st, 1885, I was called to see Mrs. W., 23 years of age, in her second pregnancy, twenty-one days before her accouchment. She had had chorea from the commencement of her pregnancy; at first mild, but gradually increasing until it became so exceedingly severe that when I first saw her I had but little hope of

her recovery. Almost every muscle in her body seemed to be in a state of extreme agitation. Her upper and lower extremities were so completely beyond her control that, to keep her safe from injury, it was necessary to have them constantly restrained by two assistants; and then, as she was sitting upon a sofa, her body was so violently moved about that her head was forcibly brought in contact with the wall before I could have her removed to a place of safety. She was then carried to an adjoining room and placed in the middle of a large bed, and in the course of my examination I discovered that her movements had been so violent and long-continued that the skin was worn off the elbows and knees, and that the garments were stained with blood. Her pulse was accelerated, but otherwise natural; tongue coated, bowels constipated and appetite slightly impaired.

I ordered a bottle of the citrate of magnesia at once, and 20 grains bromide of potassium, with one teaspoonful of the elixir of valerianate of ammonia every two hours. On the morning of April 1st I found her not improved. The bowels had been moved. I ordered the bromide of potassium and the valerianate of ammonia to be taken before each meal and at bed-time, and 2 grains of the sulphate of zinc after each meal, which was increased on the 2d to 4 grains; on the 3d to 6 grains; on the 4th to 8 grains; on the 5th to 10 grains; on the 6th to 12 grains, and on the 7th to 15 grains, which last increase, however, was rejected by the stomach on taking the second dose. From this time the symptoms of chorea declined so rapidly that in twenty-four hours she could use her hands to feed herself, and even to sew, and in a few days she went about as well as any other person. On April 20th she had an easy natural labor and a speedy recovery.

Large doses of the zinc could not be tolerated by the stomach except in pills, nor at any other time than after a full meal.

This patient had been attacked similarly during a previous pregnancy, but a miscarriage at about the sixth month brought the disease to an end before it had produced such terrible results.

The bromide of potassium was used then, as well as all throughout the latter attack, but without good effect, and in my opinion it did little or no good aside from its enabling the stomach to retain the large doses of zinc which I discovered it could not do without.

The patient had chorea at the age of 13 years, and her catamenia

made its appearance shortly afterward. The disease then lasted about two years, and in that time a great many physicians had treated her, but does not know to whom or to what remedy she must attribute her recovery.

CASE 12.—CARBOLIC ACID POISONING FROM INTRA-UTERINE INJECTION.

On the 24th day of April, 1885, during the treatment of a case of puerperal fever, I thought proper to use the intra-uterine antiseptic douche, and employed a 10 per cent. solution of carbolic acid, the effect of which was to produce acute carbolic acid poisoning. This occurred with the first application, and it is not necessary to say that I did not again use the intra-uterine wash in that case.

The following were the symptoms present in the case: livid face, rolling of the eye-balls, with consequent strabismus and contracted pupils, absence of consciousness, increase of respiration to 40, and pulse to 150 per minute, clonic spasm, jerking and twitching after cessation of convulsion; then came a cold, clammy sweat, vomiting and the characteristic black carbolic acid urine and hemorrhage from the uterus.

Fortunately, after several hours of anxiety on my part, she fully recovered from her poisoning, and in a week's time followed her entire restoration to health. By reporting this case I do not desire to be understood as underrating intra-uterine irrigation in the management of puerperal septicæmia, for I have too often seen most excellent results follow this plan of treatment, to wish it abandoned; nor would I ever have its use curtailed, but I regard this case, as well as others similar that have occurred, to be significant warnings against carrying on the modern irrigation of the uterus with carbolic acid solution in an indifferent way.

THE THIRTY-SECOND ANNUAL MEETING OF THE STATE MEDICAL SOCIETY—THE HARD WORK OF THE NEW BOARD OF MEDICAL EXAMINERS—THE VERY LARGE NUMBER OF CANDIDATES EXAMINED—THE SOCIETY WORK, LITERARY AND ETHICAL—THE INTERNATIONAL MEDICAL CONGRESS COMMITTEEMAN—THE CONSTRUCTION THE SOCIETY DESIRES TO HAVE PLACED UPON THE NEW LAW.

The largest number of medical gentlemen ever assembled in North Carolina, attended this, the thirty-second meeting of the State Society. Over eighty names were added to the list of regular members. Over one hundred candidates were examined for license, necessitating the assembling of the Board of Examiners on the Monday preceding the meeting. The Board devoted nearly seventeen hours of the twenty-four to their work, less the short time taken for meals, in all about two hours. During this time over one hundred candidates were examined in a most careful and conscientious manner, and several of them carefully re-examined. The results, we believe, as far as the Examiners are concerned, have caused great disappointment. These gentlemen, who for the first time have obtained an insight into the character of the education of the newly-graduated, find that they have to observe a considerable degree of leniency towards candidates. They find, as the Old Board found, that the public did not know the half of the iniquity that some schools of medicine are perpetrating upon the public in the wretched sham education with which they send classes of young men out upon the public. The New Board has acted with wisdom and discretion, and will surely build up a strong public opinion in its favor. The amount of labor they are thus rendering to the public and the profession cannot be estimated by dollars, nor can the anxiety of the Board be appreciated but by those who have served in the same capacity. We believe that there still exists the same great distance between the successful candidates of the maximum and minimum standing, that gave the Old Board so much solicitude. Never before have half as many candidates applied for license, nor has there been such a wide geographical representation.

The Board found it a necessity to call an extra session in Asheville on the 26th day of August.

Of the Society proper there was a very good meeting in every respect. The profession of the whole State, perhaps one-fourth of the entire number, was represented in this meeting. The papers presented were of more importance than at any preceding meeting, and the literary and scientific spirit more largely prevailed.

The ethical question which agitated so many of the members was settled somewhat satisfactorily, but it must have been apparent to all that the Society has but little real mandatory power in the settlement of such issues. We believe the Society itself made the prime mistake in attempting to regulate the fee for life-insurance examination, because, as Dr. Grissom showed, the American Medical Association pronounces against the attempt of State Societies to make such fee-bills. In actual practice, too, the attempt must fail to make a fee-bill apply with equal justice to Swain and New Hanover counties, for instance. The Society acted unwisely in not rescinding all fee-bill regulations, but the resolution introduced for that purpose was brought in at a time when those interested in the report of the Committee on the Bobbitt case believed it was intended to influence the report of that committee. Some of the gentlemen present overlooked one element of strength in the discussion of the case of Dr. Bobbitt vs. the Raleigh Academy of Medicine (the ethical issue referred to above), viz: that the Society numbers a strong and influential majority who are the active promoters of the benevolent mutual insurance societies in the State, and who are so warmly attached to the great work they are doing, that they regard the cause of any member who is striving to maintain the interests of these societies, as a common cause. The action of the Society in the cause at issue did not, in our opinion, touch the true question; and even if it had, there would have been no difference in the final results. As much of a hardship as it must sometimes be, local societies will regulate local fees according to the ruling of the majority. It is a cause of congratulation that the gentlemen who are parties to the issue are satisfied with the results.

The action of the Society, upon the request of the President of the American Medical Association, to nominate a member to serve on the supplemental committee for the organization of the International Medical Congress in 1887, caused some misunderstanding.

Although the Society unanimously nominated one of its members, it was afterwards ascertained (after adjournment) that another had been nominated by Dr. Lynch, the Vice-President of the American Medical Association, and, after all, the President of that Association, discovered that no one could be chosen to serve on this committee who was not present at the meeting in New Orleans. The choice finally fell upon Dr. Charles J. O'Hagan, and it is very certain that this selection will meet the hearty approval of every member.*

The Society, early in the session, defined clearly what construction they desired in regard to the amendments to the law regulating the practice of medicine. All doctors now, who *before* 1859 were practising in the State, whether they are diplomated or not, can become members upon personal application to the Committee on Credentials at any meeting, by bringing sufficient evidence of their moral standing and professional acquirements. And all physicians graduates of a *regular* college from 1859 to 1880, and have been practising, need not be licensed, and are eligible to membership in the Society. The Society has not defined what standard it will set up for a *regular* college, but we presume it would exclude the graduates of all schools who found their practice upon any exclusive dogma, and also all schools having a disreputable standing. The Committee on Credentials would decide this point.

As we look back upon this meeting, and recall the great amount of work entailed upon the Society by the recent law, we consider it a matter of congratulation that so much was accomplished, and that there was so little jarring. Perfect order and good feeling was everywhere apparent—in the crowded hotel and at the Opera House. Although a gloom hung over the community in consequence of the death of an estimable lady who had taken active part in the preparation for the meeting, the citizens were assiduous in their attentions, and provided for the wants of all. There is no doubt this was the most important meeting of the Medical Society of North Carolina.

As a matter of convenience and economy to applicants for license, the Board of Medical Examiners have decided to hold special meetings in Raleigh August 24th and 25th, and in Asheville August 26th and 27th.

* Dr. N. J. Pittman is also named by the *Jour. Am. Med. Ass'n.*

REPORT OF THE FINANCE COMMITTEE.

Dr. Graham, Chairman of the Committee on Finance, made the following report:

To balance in hand at last session (1884).....\$ 70 41
Amount received at said session and during interim..... 651 51

Total.....\$721 92

Contra:

To expenses for year 1884.....\$465 00

Balance in Treasury..... \$256 92

We recommend an assessment of \$2.00 *per capita*, as heretofore, and that the Secretary and Treasurer be paid the same salary as before.

JOSEPH GRAHAM,
THOMAS HILL,
R. F. LEWIS.

READING NOTICES.

A MALARIAL ANTIDOTE.—I have prescribed *Fucus Marina* (Peacock), and find that it will do all that is claimed for it. As a Malarial Antidote (and to prevent the return of ague after it has been checked with quinine) *it surpasses any agent I have ever employed.* I shall continue to prescribe it whenever it is indicated.

Dongala, Ill.

I. N. GRAVES, M.D.

W. R. WARNER & Co. have received the first premium at the World's Exposition, New Orleans, for great Uniformity and Solubility for their Sugar-coated Pills. This is the ninth World's Fair prize which attests to their excellence.

THE CHAMBERLAIN WATER CLOSET advertised in this JOURNAL has been used by patients by direction of their physicians, and it proves to be a valuable aid to many afflicted with troublesome hæmorrhoids and prolapse of the anus. It is seldom that we can recommend any advertised device with as much confidence as we can this.

ST. LOUIS, Mo., June 3, 1885.

Dr. Weathers, of San Antonio, states: "From the character of the formula I observe Tongaline is a combination of such agents as my experience suggests to be very valuable, and it is deserving of great praise. I find it a splendid remedy, not only for those complaints for which it is recommended, such as Neuralgia, Rheumatism and Nervous Headache in their various forms, but have also done good work with it in Pneumonia and Fevers, especially when the latter arise from malarial causes. Combined with a small quantity of Aconite, I have found there is nothing better to equalize thoroughly the circulation and produce free Diaphoresis. When followed by a few doses of quinine the results have been remarkably successful. All who try Tongaline will be constrained to acknowledge its virtues."





