Typhoid Fever. By S. W. Burney, M. D., of Forsyth, Ga.

For fifteen years, or more, I have been solicited by many physicians in our State, as well as some who reside without her limits, to submit my views of the pathology and treatment of Typhoid fever to the public at large. Besides, many other persons who have sustained me throughout my professional career, with a devotion that knew neither "variation or shadow of turning," have, through their confidence and partiality, urged upon me the same task. These considerations, rather than a desire to come uninvited before a reading and censorious community, have given rise to this article. I am not unmindful of the fact, that, he who often comes voluntarily before the readers of a public journal, though he may discourse and analyze wholesome truths, often, very often, fails to win golden opinions from either friends or foes. Hence the origin of that trite adage—"O that mine enemy would write a book." With this explanation, I throw myself, with confidence, upon the kindness and indulgence of my professional brethren, believing that the errors of style and opinion will be generously and forbearingly overlooked. While, on the other hand, the same commendable spirit will give me credit for candor and honesty of purpose, in submitting this communication to your pages. Let me remark, right here, that I expect to say but little in relation
towards the symptoms of Typhoid fever. For every man who has skill enough to conduct a patient safely through an attack of this disease, will seldom or ever fail to recognize it, by reference to its peculiar pathognomonic symptoms. What I may say, shall be said mainly in relation to the pathology and treatment of this fever.

Again: much has been said about the difference (if any) between typhoid and typhus fevers. Some of our best physicians and pathologists, as well as those who reside in England and on the continent of Europe, assert, with great confidence, that there is but little, if any, similarity between typhoid and typhus fever: whilst others, of equal celebrity and skill, claim that they are synonims, differing only as to grade and dissimilarity of constitution. For my own part I agree, most fully, with the latter. Ever since typhoid fever made its appearance in Monroe county, I have narrowly scanned the symptoms of every case to which I have been called, and the result has been to satisfy myself, beyond all cavil, that there are no good reasons why any material difference should be made between the two diseases. Abler pens than mine have discussed this matter without setting the question at rest, and, for that reason alone, I shall refrain from entering upon a labored argumentation to establish their identity. Let it suffice for the present to say, that, I have seen in various parts of the country typhoid fever, and another form of disease, every symptom of which corresponded in the aggregate with the fever eclept by Dr. Armstrong, and other able and experienced physicians, *typhus gravior*. The symptoms were so very prominently developed as to place this proposition beyond all doubt. In some of those cases the *adynamic* symptoms were never more plainly depicted in any of the New England States or Great Britain: the low muttering delirium, a frequent compressible pulse, the sordes about the teeth, the dry black and fissured tongue, the copious secretion of foetid and unhealty urine, the frequent discharges from the bowels, the great prostracion of strength and disgusting foetid breath, together with all the other indications mentioned by the above writers, were plainly to be seen in the cases occurring in my practice, and upon which I confidently rely to prove their identity—differing only as to grade. It will not do to say the differences of symptoms, generally occurring in typhoid and typhus fever, prove the diseases to be unlike in pathology; this
argument is certainly fallacious. Who is prepared to say that the symptoms of bilious fever, pneumonia, pleurisy, and other affections, present the same train of symptoms in every case? They are always modified by peculiarity of constitution, difference of exciting cause, &c. We must rely mainly upon the predisposing cause, as well as the pathological indications thereby produced, to point out the true character of every case.

If the constitutions of all mankind were alike, and the predisposing and existing causes were the same, in every instance, then diseases would be a unit. The poison giving rise to typhoid and typhus fever is, in my opinion, whatever may be its true character, essentially the same; and this poison is what I call the predisposing cause. It acts upon the recuperative powers of the system for a longer or shorter time, gradually, but surely, under-mining their energies, and nothing is wanting to develop the aggregation of symptoms save some slight cause, often overlooked, which we term the exciting cause. We repeat it, there can be little doubt as to the predisposing cause being the same in both diseases, and if their pathology differs essentially, that difference has not, in my opinion, been shown to the profession.

Typhoid fever was a stranger to the profession in Middle Georgia, and probably to the whole Southern States, previous to the year 1836. During the winter of that year, it made its appearance in Monroe county, and prevailed with increased violence and fatality until the spring of '87. From that date down to the present, the disease has been of frequent occurrence, having for the last five or six years acted as an Aaron's rod, swallowing up, except in certain localities, bilious remittent and bilious continued fever. So complete has been the change in this respect, that we are now rarely called to any disease of malarious origin, and quinine and mercury have given place to leeches, blisters, &c. Typhoid fever and the different forms and grades of pneumonia, are now the diseases of this climate, and such has been the violence of their onset, in some communities, as to decimate our population. It has been our fortune to encounter a great many cases of this fever, at the bed-side, and when we assure the professional brethren that we have studied its rise, progress, and the various phenomena presented by its symptoms, with anxious thought—we speak the words of soberness and truth—and whatever reputation we may have acquired by meeting and battling with this recent
scourge of the South, we repeat, if we can boast of any professional character thus acquired, we obtained it through much tribulation of matter and spirit.

Twenty years' experience with typhoid fever has forced upon our mind the following convictions in relation to its predisposing cause:—First, that it is a poison originating from an accumulation of filth under and around houses of long standing. Second, the primary impression of this poison is upon the great sympathetic nerves, and the diseased state of the mucous membrane of the smaller bowels; and the evidences of disease of the brain—the first of which is almost invariably present, and the latter often seen—together with the other morbid phenomena characterizing the disease, occur as the effect of the debilitating influences of this poison upon the nerves controlling digestion, etc. This view has been entertained ever since we became acquainted with the peculiar modifications of the nervous system, existing in every well developed case, and it was found that opiates exert a controlling influence in every case, when prudently used; but more of this anon. The most obstinate and fatal cases of this disease it has been our lot to treat originated in cabins of long standing, so constructed as to allow of no circulation of air under them, and under the puncheon floors of which the sweepings of half a century had accumulated. If one desires to see this fell destroyer developed in all its frightful beauties and realities, let one manage to crowd these ancient buildings with sleeping inmates, and his desire will be gratified to its fullest extent. This combination of circumstances does not only originate the gravest and best marked cases of typhoid fever, but it many times becomes indispensably necessary to scatter these crowded sacrifices to the God of Sleep, before any diminution takes place in the many-times daily and hourly advent of the disease. Besides, it occasionally becomes necessary to perform various rakings and burnings, and the erection of new cabins, with a sufficient altitude to allow and secure a free circulation of air under the building, before the owners and friends of the sufferers may claim exemption from the disease. Who is it that has had any experience in watching, and tracing the rise, progress and termination of typhoid fever, will deny these facts? We do not claim to be exempt from errors or mistakes, but nothing is hazarded by the assertion, that whatever may be the true nature and character of the specific, remote, or rather the predisposing
cause of this disease of adynamia, it is not marsh effluvia. This miasma invariably gives rise to a form of disease of certain leading characteristics, among the most prominent of which is their periodicity. No one who values his reputation a baubee will dare attempt to gainsay this proposition. Well, this being admitted, as all will admit, and as it is equally plain that the disease does not rise and spread from contagious influences, the question again presents itself—Whence comes the poison of typhoid fever? It cannot arise from that peculiar constitution of the atmosphere in which influenza and some other affections seem to originate and spread themselves many times from continent to continent.

Reflection, observation and experience have fixed the above expressed opinion upon our mind, and we most respectfully direct the minds, the master minds of this our day and age, to the elucidation of the matter. As has been already remarked, the first link in the chain of morbid action in typhoid fever is the great system of sympathetic nerves, and the pathology developed by post obit examinations are the results of this primary impression upon the nerves. It has long been an opinion of ours that when this impression reacts upon the parenchyma of the lungs, we have a case of typhoid pneumonia; when the first impressions are upon the smaller bowels and kidneys, etc., we then have what is termed typhoid fever; and when the poison arising either from the filth under, or about old buildings, or the badly ventilated air of ships or jails, inhaled in a concentrated form, we have presented to our observation the typhus gravior of writers. Being, however, wholly unacquainted with this disease as it prevails north, we feel we should subject ourselves to the charge of arrogance, and peradventure ridicule, were we to insist upon the correctness of our theory. The fact is, we have long since ceased to spend our time and labor in the vain endeavor to divest of mystery the charming theory of some charming writer. At the outset of our professional career, nothing gave us more pleasure, or engaged our time more, than the examination of the writings of these men. Then we could spend our leisure in drinking down the arguments of the sympathist and solidist. But we have lived long enough to discover that all were right, and all wrong, to a greater or less extent; and as age creeps upon us, and the hand of time begins to press heavily upon us, we are better satisfied with one practical fact than a thousand theories. Hence, if we are taught by experience
that certain leading symptoms obtain in typhoid fever, and that certain remedies, when employed by us, invariably alleviate, if they do not cure these symptoms, we consider that time, always valuable to the physician, would be unprofitably employed in the endeavor to satisfy the world why these symptoms exist, or, how it is the remedies employed effect a cure.

Let the writers of the present age, whose seeming province it is to give tone and direction to public sentiment among the members of the healing art, deal more in fixed practical facts, and less in theory, and the cause of suffering humanity will thereby be greatly blessed. Theory may do something towards diverting the mind of the medical student to wholesome channels; but after he has it in his power to study symptoms at the bed-side, and by bringing the appliances of the science to bear towards alleviation of the "ills to which flesh is heir," he must, to be successful, reason inductively. Some men, of splendid mind and rare opportunities, who theorize so very eloquently and learnedly, as to astonish their friends, and provoke the jealousy and envy of others, are notoriously unsuccessful in the treatment of every disease of formidable character; whilst, on the other hand, we sometimes see practitioners of limited opportunities, having been educated in some cabin in an old field, by some teacher hardly able to conjugate a verb—we repeat, some of these men have been known to build up for themselves, unaided by fortune or the influence of friends, and that too in enlightened communities, a reputation of which any man should feel proud. Now, why is this so? It is mainly attributable to the fact, that the uneducated man has a more logical head, with more tact than the other. Hence, place him at the bed-side, and, by reasoning from cause to effect, he is enabled to form a correct diagnosis, which is often overlooked by the eloquent theorist. But let us not be misunderstood. It is not our intention to assert, or even intimate, that a good education is not necessary to make a good Doctor: because some men have succeeded well in the healing art, unaided by a collegiate course, it does not follow as a corollary that a sound and thorough education is unnecessary. No man can be over-educated. Had these men of limited education enjoyed, in early life, the instructions of a Gamaliel, it would have added greatly to their usefulness.

Such are the facilities now enjoyed for making M. D.'s that any child of nature, for a few hundred dollars, may enjoy the soubri-
quet of Doctor. Hence our objections to the rapid multiplication of Medical Colleges in Georgia and Southern States. It is neither our province nor wish to draw invidious distinctions, but we confidently predict that unless our lawgivers shall apply the corrective upon this furor for chartering medical colleges, the cause of humanity must bleed at every pore, and the science of medicine be turned into ridicule and contempt. But having already digressed more than we intended, we must return to our subject.

We come now to speak of the proximate cause, or, in other words, the morbid pathology of typhoid fever. The proximate cause of any disease is nothing more nor less than the disease itself. The effect of the poison generating this disease is, after making its specific impression upon the nervous system, to react upon the mucous membranes most generally of the stomach and small bowels. Should the question be asked, why this membrane should be implicated in preference to others, the reply is, we do not know, nor will we dare assert. The whole matter is shrouded in mystery. There is nothing more mysterious, however, about this primary reflexed action in typhoid fever, than the phenomena attending every disease, of whatever character. Why it is that cold should act upon certain organs and tissues, and marsh effluvia upon other tissues, and so on through the whole catalogue of diseases, is for others to determine. It is enough for the sound practitioner to know that the morbific influences of the poison giving rise to typhoid fever is most generally exerted upon the mucous membrane of the stomach and smaller bowels. This proposition is based upon the post-mortem examination of Louis, and many others. Out of the several hundred cases treated by us, from its first visit to this county, up to the present time, we do not remember the first one in which there were not unmistakable evidences of inflammation or irritation of the lining membrane of the ileum, and in all severe cases there were like evidences about the lining membrane of the stomach. Let this fact be borne in mind, and then remember the pathognomonic symptoms of ileitis, viz., fever, diarrhoea, and tenderness over the left ileac region, and it will account for the contrarieties of opinion entertained in some communities upon the treatment of typhoid fever. Some practitioners, without taking the pains necessary to form a correct diagnosis, seeing the symptoms of ileitis present, all of which usually obtain in typhoid fever, arrive at the erroneous conclusion
that the disease is of the latter character, when in fact it is wholly
different, originating, it may be, in a surfeit at a dinner party the
day before. It should ever be remembered, that ileitis is an idio-
pathic disease, usually superinduced upon some irregularity in
eating and drinking, and that typhoid fever arises, invariably,
from the morbid influences of a poison, specific in its character
and influence upon the system. This poison is also adynamic in
its effects, the recuperative energies of the system, therefore, re-
quiring a wholly different plan of treatment from ileitis. We
repeat, let this be never forgotten, and it will serve to lessen the
difference of opinion urged upon the symptoms and treatment of
typhoid fever. Again: we have seen cases of bronchitis superven-
ing upon attacks of this fever treated as idiopathic bronchitis.
Now every practitioner is certainly very much to blame for these
mistakes. The usual effect of the irritation in the ileum is to en-
large and ulcerate the glands of Peyer and Bruner. If it be safe to
rely upon external evidences, ulceration always takes place in
fatal cases as well as those which run beyond the second week.

There being strong prejudices entertained here against post-
mortem examinations, we have nothing to offer upon this division
of our subject, except the facts of other morbid pathologists, and
those predicated upon external data. There can be but little, if
any, doubt that many cases recover after ulceration has superven-
ed. Everything depends, however, in these cases, upon the plan
of treatment employed. A mild, soothing, and coaxing plan will,
in every instance, accomplish much; but let purgatives, nay, laxa-
tives be employed, to the neglect or mal-adroit use of stimulants
and refreshing diet, and there would be no way of computing the
injurious consequences. But more of this anon.

Let the pathology of typhoid fever ever be kept in view; for any
plan of treatment, to be rational or successful, must be based upon
the morbid condition of the tissues and organs implicated. Never
forget that the disease progressing in the bowels, lungs and brain,
is the result of a debilitating poison reacting upon these parts.
These facts being overlooked and forgotten, and the practitioner
goes groping about in the dark, as liable to injure as to benefit. It
were like placing a club in the hands of a blind man, and direct-
ing him to hit therewith a certain person standing in a crowd.
The object in view might be accomplished eventually, but it would
be to the injury of many not aimed at, or directed to be struck.
Having now said as much as we deem necessary by way of elucidating our opinion of things to be considered in typhoid fever, we come to the most important part of our task. Before we enter upon the discharge of it, however, we would once more repeat, that no man ought to be allowed the exclusive management of this disease who could not, from the various symptoms presented to the senses, diagnosticate it correctly. For the practitioner who could not perform properly and correctly this part of his duty, would be like the mariner at sea without mast or rudder, all left to his care liable to destruction.

TREATMENT.

Emetics.—Whenever there are evidences of biliary derangement, at the commencement of the fever, or soon after, indicated by constant nausea, loathing of nourishment, together with an occasional vomiting of thick mucus, mixed more or less with bile, it has been our constant practice to administer a puke of ipecac, with much benefit. If it be managed so as to secure a thorough action upon the system, the result is to emulge the liver, cleans the stomach of its morbid secretions—thus relieving nausea, equalizing the excitement, and preparing the way for other remedies. But emetics have never yet cured a case of typhoid fever, and nothing is hazarded in saying they never will: indeed we are distrustful of their influence, except in the first stages of the disease.

Venesection.—In the winter of 1836, we used the lancet in a sufficient number of cases to satisfy us of its non-efficacy and danger. We are aware of the fact, that we tread upon dangerous ground in making this avowal—the very highest authority being in favor of the remedy. This, however, proves nothing, as the disease is always modified by climate and constitution, this not admitting of the same plan of treatment in all hemispheres. What is the condition of the blood in this fever? Let it be remembered that the blood is very black, and in a dissolved state in every case. If coagulation takes place at all, it does so only to a partial extent. General bloodletting never does good in any disease when this condition of the blood obtains; for it cannot be denied, that the vis viva is hereby already greatly prostrated, and the only effect the general abstraction of blood can produce, is to lessen very much what we wish to preserve—the recuperative powers of the system. It seems to us no man can be successful in the man-
agement of this disease who neglects to nurse the vis vitæ. But while general bleeding should never be employed, topical bleeding is strongly indicated, and in most cases indispensably necessary. Let twenty (20) leeches be applied over the right ileac region, and repeated daily, and in severe cases twice a day, so long as the heat of skin, abdominal tenderness, and the strength of the pulse, shall indicate their use. The good effect of the leeching, when not contraindicated by the symptoms present, is plainly pointed out by the reduction of the heat of skin, the diminished velocity of the pulse, and the alleviation of abdominal tenderness. It should constantly be borne in mind, that the ulceration in the ileum is the result of the preexisting inflammation. Then cure the inflammation of the stomach and bowels, by the local abstraction of blood, and other means, and you thereby prevent ulceration and death. We prefer leeching to cupping in this disease, because we have satisfied ourselves of this important fact, viz., that in all inflammations implicating mucous tissues, leeching is far preferable to cupping; but where the irritation is situated in the nervous or parenchymatous structures, the application of the cups is preferable to leeches. Now this is not a figment of a disordered fancy, as all may determine by using these means as here indicated.

Purging.—This class of remedies should be wholly reprobated in the treatment of typhoid fever. Dr. Graves says, in his clinical lectures, and we fully concur with him, "the idea of curing fever with purging is absurd." What is the condition of the organs to be disturbed by using purgatives, or even laxatives? The mucous coat of the stomach and bowels is either greatly irritated or highly inflamed. The effect of the action of the purge must be to increase this inflammation, by inviting the blood to the parts upon which it exerts its influence. But, says the advocate for purging in this disease, "the secretions of the stomach and bowels are diseased, and unless they are removed, they superadd to the already existing irritation." They are certainly diseased; but what is the cause thereof? Is it not owing wholly to the fact, that inflammation is going on in these organs? Nothing is plainer than the fact, that the secretions of all organs must per se be diseased, so long as their parts are inflamed. In a majority of cases a persistent diarrhoea is present from the first, instituted by nature to deplete mildly the parts diseased. Then why increase it, with even the mildest means? It should not be interfered with, unless
there be danger of prostration, as there generally is after the first week; then the bowels ought to be locked up, and allowed to remain in this condition throughout the remainder of the attack. Never shall we forget the importunities of the parents of two young men, whose bowels, after running freely during the first week of their attack, were arrested at the commencement of the second. After the expiration of eight days, in one case, and ten in the other, their kind mother, supposing that no one could get well of fever, who was allowed to go this length of time without an action on the bowels, began to intercede with us, to give a mild laxative. But being well satisfied with the state of affairs, we resisted every influence she and others could bring to bear upon the matter. One of these young men was without an action upon his bowels for twenty-one (21) days, and the other seventeen. We thought then, as we believe now, that the administration of the mildest laxatives would have resulted in death. Where constipation is present from the beginning, the plan employed by us is to give an enema of cold water, from two to three times a day. It generally serves to keep the bowels in a soluble condition, and is also refreshing to the patient. Nothing is more valuable than the daily use of cold water enemas toward the winding up of the case, when there is a slight rise of fever of evenings, attended with a flushing of the cheeks, occasioned by the persistence of a slight irritation of the bowels; used under these circumstances, it cools the head and bowels, brings down the fever, and relieves the redness of the cheeks.

An extensive experience of twenty-five years, has forced upon us the conviction, that he who uses purgatives freely in the treatment of this fever will never have much cause for self-gratulation, as the effect must be, to hurry to the grave many a poor fellow-creature, whose fate would have been different, had his case been left to the providence of God. Then away with your purgatives and laxatives—study the pathology of this disease, and follow the unerring indications of nature.

Mercury.—There are many advocates for the mercurial plan of treating typhoid fever. There are certainly many serious objections to it. In the first place, such is the inactivity of the absorbent system and the irritability of the bowels, that it is impossible to secure its specific influence upon the system.

In the second place, any dose of this article, given with the
view of producing ptyalism, would, from the very nature of circumstances, aggravate the attack; for it certainly would pass off by the bowels, thus increasing the disease going on in these parts.

Thirdly: Such is the peculiar nature of typhoid fever, that the specific effect of mercury would not cure the disease, even if we could secure it. This declaration is not made “curiente calame.” In two of the first half dozen we ever had, we succeeded by mixing cayenne pepper with the calomel in suitable doses, in bringing about ptyalyism; but still both cases spread themselves out to an almost interminable length. The only effect of the salivation, leaving out of the question its usual sequiter, was an increase of the hitherto existing nervous symptoms.

Fourthly: Two of the worst cases of the disease we have ever witnessed, supervened upon salivation, which had been employed to cure a preexisting diseased state of the system. The subject of one of the cases was a negro girl aged 18 years, our own property; she was severely salivated to cure an attack of syphilis, which she had unfortunately contracted three weeks previously. Several of our slaves were then prostrate with typhoid fever. Albeit, the chaneres and bubos had disappeared; we thought it best to keep her a few weeks longer under the influence of mercury, and supposing she might have been predisposed to an attack of the fever—several inmates of the cabin she lived in having been already attacked—we directed her to take moderate exercise in the open air, but not to get wet under any circumstances. The directions were disobeyed, for she got very wet a few days afterwards, and a severer case of typhoid fever has never fallen under our care and management. The nervous symptoms were peculiarly severe and perplexing, and after running for forty-one days, the fever left her with two bed sores, the worst I ever saw—the mere wreck of her former self. The subject of the other case was a negro woman twenty-one years old; she had been salivated a few weeks before for the cure of a cutaneous disease. The existing cause of the fever, in this instance, was not so apparent as in the other; it was hidden in obscurity, unless the ptyalism itself was the existing cause. Her owner had between fifteen and twenty cases of typhoid fever on his plantation at the time the mercury was used in this case.

Whatever opinion may be entertained with reference to the matter, there is nothing preposterous in the opinion, that the spe-
specific effect of mercury may, under favorable circumstances, prove the exciting cause of typhoid fever. But, however much the use of mercury—with the view of securing its specific effect—should be deprecated, it is highly necessary that it should be administered cautiously and prudently in most cases, narrowly watching its effect upon the bowels. The plan pursued by us has been to use hyd. cum. creta in preference to all other preparations, in those cases unattended with looseness of the bowels. Two grains of this article with three or four grains of Dover's powder, given every four hours, has a soothing and beneficial influence; besides, the alterative effect of mercury desirable in most cases, is secured without much danger. But if diarrhea be present, or if there be great irritability of the bowels—every thing passing off as soon as given—the hyd. cum. creta, if given at all, should be administered in much smaller doses. In these cases, it were preferable to give the blue pill in doses of the quarter of a grain, morning, noon and night; use this cautiously, and there is little danger of irritating the bowels, and its constitutional or functional influence on the liver, is sure, first or last to be attained. This is of the last importance in all those cases in which the vis viva is mostly prostrated. In much the larger portion of the cases occurring in the winter of 1837, the symptoms were so very closely allied to those depicted by the writers of the past and present day, as distinguishing typhus fever, the most experienced and best practitioners in this county were unable to draw the distinction.

Blue pill, in doses as above advised, was given by us in conjunction with proper doses of opium or Dover's powder, in every case that came to our hands. Every case, to the best of our recollection, that recovered, was attended in the last stages with the frequent discharge of a thick tarry, sort of bilious matter. So very constant were these operations towards the termination of our cases, that we remember with what anxiety the secretions were watched, for the passing off the black tenacious bile gave presage of a favorable termination. The crisis, however, seldom takes place in this way, unless the disease is strongly adynamic in its character.

Cold Water.—It has already been remarked under what circumstances we feel ourselves bound to use cold water enemas. There are still other symptoms requiring the use of cold water in a different manner. Should the "calor mordax" be strongly developed,
the patient ought to be sponged nearly all over with cold water, frequently repeated, according to circumstances. In some violent cases, we have ventured to envelope the whole body in a cold wet sheet, with the very best results. Whenever this is resorted to, however, blankets should be thrown over the sheet, so as to bring about perspiration. Remove them as soon as the sweating takes place, and should the fever rise again as high as ever, repeat the cold sheet. We have thus repeated it several times, before we were satisfied with the results. Again, the abdominal region is very hot, in all cases attended with severe inflammation of the ileum. When this is found to be the case, there is a strong reason why every appliance should be brought to bear, so as to lessen the inflammation, thereby preventing ulceration, present in all protracted cases, and abridging the stages of the attack, which is a matter of no mean importance. To attain this end, let towels be folded, dipped in cold water, and laid over the abdomen, renewing every fifteen or twenty minutes, till the heat is overcome. Nothing exerts a more potent influence over the circulation, and we have seen the patient collapsed, in this very way, in a few hours; hence, it must be evident to all, the remedy is not admissible, provided the attack is of long standing, and even when properly used must be closely watched—the attending physician using it himself, narrowly watching the pulse, and always stopping it as soon as the temperature of the skin over the bowels is properly reduced.

**Blisters.**—After leeching, and using other remedies called for by the disease, and the blistering grade of the disease has made its appearance, cover the whole abdominal surface with a vesicating plaster, and repeat often enough to keep up a constant discharge. We have applied a blister to the bowels as often as six times in the same attack. It was discoverable to all, that every time the blister was used, the patient, after passing through the nervous derangement thereby produced, underwent a desirable change. This is certainly a valuable adjuvant in the treatment of typhoid fever, and if prudently and cautiously used, will never disappoint the attending physician. It should never be forgotten, however, that blisters make a strong impression on the nervous system, and as they are generally used in the last stages of the disease, when the energies of the system are on the wane, and the nerves always more or less affected, the first influence is decidedly deleterious.
They frequently when thus used, produce a nervous rigor, attended with a great and sudden diminution of the pulse. A dose of opium or camphor, or musk and valerian, promptly relieve these untoward symptoms.

Opium.—We come now to what we consider the most important and valuable remedy among the whole range of medical science, in the treatment of typhoid fever. Deprived of the privilege of using it, we would not consent to attack a case characterized by prominent nervous symptoms. If there is a single remedy calculated to cut short an attack, it is opium; we use it in all cases freely, relying upon its conservative influence. Dr. T. Fort, of Milledgeville, Ga., is probably the only physician in the State, who uses this article as boldly and as confidently as we do, in the treatment of this disease. We have conducted a great many persons safely through an attack of some length, by the single use of tinct. opii. Our favorite mode of administering it—from forty to sixty drops given every six hours, or eight, does more towards relieving every urgent symptom of the disease than anything else with which we are acquainted. When the brain becomes implicated, producing great jactitation and wakefulness, the patient can be saved, only by the bold use of opium. The following case will show the effect of this practice:

December 10th, 1849. Called to Mr. B., who had been ailing of the worst grade of typhoid fever for ten days. The physician in attendance informed us that his patient, three days before, manifested the strangest symptoms of diseased brain, since which time he had not slept a moment. We found him with a hot scalp, cool feet, redness of the adnata, which was secreting a tenacious mucus; sordes about the teeth; throbbing of the carotids; a constant raging delirium, making frequent efforts to get out of bed. To cure these symptoms, which portended a speedy dissolution, the patient was ordered to take sixty drops of laudanum every four hours, until he fell into a sound sleep; apply mustard to the feet, and then cold water upon the much heated scalp, every half hour, until it became comfortably cool. The third portion of laudanum brought on a sound sleep, out of which he awoke twelve hours after with his mind fully restored. The after treatment gave but little trouble, the patient fully recovering in a few days. If time and space allowed, we could detail many such cases, in all of which the afflicted were snatched from the jaws of
death, by the fearless use of this remedy. In some cases we have conjoined tartar emetic with the tinc. opii, with signal benefit. This is Dr. Graves' plan of treating this brain fever, and when properly used is attended with signal advantage. Some persons condemn opium in these cases, because, say they, it invites the blood to an already highly inflamed organ. All admit the propriety, nay the necessity, of keeping all other inflamed organs in a perfectly quiescent state, but from some cause or other, hitherto unexplained, the brain, when inflamed, must be permitted to remain in a state of preternatural activity. The truth is, opium instead of inviting the blood to the brain in these cases, takes it from it, by equalizing the nervous energy, and the circulation generally. Those who may hereafter encounter these brain cases of typhoid fever, may be assured, that their patients will never undergo any amendment, until they are brought under the wholesome influences of a sound sleep; and he who shall attempt to save his patient in a different way, will be sadly deceived.

We repeat, we could fill several sheets by the detail of interesting cases, in all of which, this valuable article more than sustained the opinion we entertain of it; but prudence forbids this course.

Stimulants.—There is a time, in all cases, running beyond the twelfth or fourteenth day, when stimulants are not only required, but indispensably necessary. The physician who purges least, and eschews general bleeding, pursuing a temporising and soothing plan of treatment, and who shall soonest detect the time when nature calls for the use of such means as are required to keep up the energies of the system, thus supporting the vis viva, will, ceteris paribus, always be the most fortunate and successful in the treatment of typhoid fever. Sometimes, if six hours are allowed to pass off unemploy'd, after this stage has arrived, the doom of the patient is sealed. The most skilful is much troubled in determining when his patient ought to be sustained. Whenever there is doubt resting upon his mind, let the practitioner try such restoratives as would in his own judgment best suit the exigencies of the case, narrowly watching the effect, thus feeling his way, as it were. When they reduce the frequency of the pulse increasing the volume of the artery, let him persevere; on the other hand, if the first effect is to increase the frequency and quickness of the pulse, and augmenting the heat of the skin, take it for granted the stage called the stimulating, has not yet made its appearance, and they
must for the time being, be discontinued. Well, the practitioner
being satisfied as to the necessity of stimulating, which of this
whole class of remedies is best calculated to subserve the end in
view? We have in the course of our career used many, but of
late years have settled down upon grain musk, gum camphor and
the oil of valerian, as the very best belonging to the materia medi-
ca. From two to four grains of the former, and four grains of the
latter; should be made into a pill and given every two or four
hours, according to the urgency of the symptoms. Six drops of
the oil of valerian mixed in a tablespoonful of mucilage gum ara-
bic should be given every six hours. These medicines are not
only diffusible stimulants, but are also strongly anti-spasmodic in
their character and influence: they all, when properly used, dimin-
ish the frequency of the pulse, while they enlarge the volume of
the arterial system, and very often invite sleep when it is much
needed. The whole train of nervous symptoms generally attend-
ing, are often by them promptly arrested. Quinine is strongly
recommended and extensively used in some quarters in the treat-
ment of the disease; we have often tried it, though without bene-
fit; there is only one symptom, in our opinion, which would au-
thorise its use, and it is this:—In the last stage of some cases of
long standing, after the disease has formed a crisis, the patient,
from the long hitherto nervous derangement, is attacked very un-
expectedly with a periodical nervous rigor or shake, unattended
with much, if any, arterial excitement. For the relief of these at-
tacks quinine may be used with much confidence. There is yet
another medicine which, although not a stimulant, is used by some
gentlemen, (who seem to be easily captivated with new things,) not
only in almost every stage of this disease, but in almost every at-
tack of disease attended with arterial excitement: we allude to
the veratrum viride. From the universality of its employment, it
has, in our opinion, done more harm than good. It possesses no
curative properties, as all admit, and as it generally affects the
stomach and bowels before its specific influence is exerted upon
the system, we have seen this disturbance produce much harm.
Whatever may be the opinion of others, we shall never, so long
as we entertain our present notions, dare use it to any great extent
in the treatment of typhoid fever. Indeed, it has so very frequently
disappointed us in typhoid fever and pneumonia, that we have
been forced, reluctantly we confess, to the conviction, that Dr.
Norwood's great physic is pretty considerably overrated, and that
the time will soon come when sound thinking men will pronounce
it to be a humbug. But to return: wine should be freely used in
conjunction with the other stimulants mentioned, and the patient
nourished with chicken broth.

There is yet another remedy classed with stimulants, though
possessing many other curative properties in the latter stage of the
disease, to which we invite attention: we allude to spirits of tur-
pentine. It possesses, and many times produces the most aston-
ingish sanative influences, not only in the latter stages of this
disease, but in all others depending upon inflammation of the mucous
surfaces. Whatever of credit has accrued from the introduction
of this remedy into the treatment of this class of diseases, belongs
exclusively to us. As early as 1834, we were in the habit of
using it in all cases of bilious remittent fever, spinning themselves
out to great length, in consequence of the mucous membrane of
the ileum taking on disease, as the result of the unwise use of pur-
gatives in the first stage. Besides, in all cases of diarrhoea among
children, where the disease seemed to be perpetuated by an in-
flamed state of the living membrane of the small bowels, we were
constantly in the habit of using this article in small and frequent-
ly repeated doses, with astonishing good results. It is very com-
monly the case, that remittent fever is converted into a modifica-
tion of disease, termed by some "slow fever." This change in the
type of the fever is generally the sequence of an unthinking, un-
wise persistence in purgatives. It was for the cure of a case like
this we first ventured to use spirits of turpentine, and its success in
this case led us and others to administer it in the treatment of
genuine typhoid fever. The subject of this case was a lady twen-
ty-five years of age; she was attacked thirty-one days before we
saw her, with remittent fever; she had been treated by Dr. J. our
then partner, a gentleman of much skill, and enviable celebrity.
When first called to her by her husband, in the absence of our
partner, there were unerring evidences of inflammation in the
mucous membrane of the ileum; the tongue was very red and dry,
the cheeks flushed every evening, the abdominal region tender
and slightly swollen; there was also borborygmus, a strong pre-
disposition to diarrhoea—the mildest laxative exciting action in a
few minutes—strong pulsation in the bowels; a sparseness of urine,
which was very red, and much dryness about the throat, with a
pulse ranging from 110 to 120 in the minute. We recommended ten drops spts. terebinthum, morning, noon and night, in a little sweetened water; a mush poultice to the region of the bowels, to be renewed every six hours; mucilaginous drinks; forty-five drops tinct. opii, every night at bed-time, and boiled milk to nourish her. It was astonishing to witness the prompt relief following this treatment. The fever began to abate after the second dose of turpentine was given, the patient remarking at the time, "I feel the spirits of turpentine taking hold of the disease in my bowels, and I believe now, for the first time since the supervision of my illness, I shall get well." Well, she did recover, and that too with such rapidity as to astonish all friends, as well as physician. This case gave me much eclat in our community, besides imparting a celebrity to the chief remedy employed, which it has ever since deservedly enjoyed. It were a task of supererogation to point out minutely the symptoms which call for the use of spirits of turpentine in typhoid fever; let it suffice to say, that in the last stage, where there are evidences of inflammation as well as ulceration of the ileum, the remedy may be administered with confident assurance of speedy benefit. The practitioner who is ignorant of these symptoms, would do well to transfer his cases to those who are wiser and better qualified to discharge their duty. Our usual plan is to give from six to ten drops, morning, noon and night, in a little sweetened water. When it manifests a tendency to increase the peristaltic motion of the bowels, amounting to looseness, ten drops of tinct. opii ought to be conjoined with each dose. Such is the confidence we have in the curative properties of this article that we would not undertake the management of the fever were we deprived of its use.

It is, however, occasionally necessary to assist the spirits of turpentine by the use of astringents, especially when there are evidences of ulceration of the bowels. Those preferred by us are nitrate silver and alum. Nothing is sometimes better calculated to arrest the troublesome diarrhea superinduced by ulceration, than half grain doses of nitrate silver given in the form of a pill, three or four times every twenty-four hours; it probably has a wholesome influence in a two-fold sense, acting directly and specifically upon the ulcerated and inflamed surfaces, and secondarily benefiting the ulcers, &c., by arresting the peristaltic motion of the bowels; for nothing can be plainer, in our view, than that the
ulcers and inflammation will never be arrested so long as this state of things shall continue. Then lock up the bowels, if it be possible, and give nature as well as art some chance to effect a cure; and he that understands best the art of controlling the bowels, will be most successful in curing the disease. Should the nitrate silver fail to attain the end in view, try alum in doses suited to the age and condition of the patient: an adult will usually bear four grains every four or six hours. This article, like nitrate silver, acts in more than one way; it certainly produces a direct influence upon the ulcers and inflamed surface, and has also an indirect action, by controlling the bowels. It sometimes acts like a charm, lessening the fever and diarrhoea, and cleansing the tongue in a few hours. Then never fail to give it a fair and impartial trial. In every case of the fever, mucilaginous drinks made cold with ice, ought to be used in every stage of the disease; it many times does much toward curing the disease, and such is the confidence some have in it, they believe a severe attack could not be cured without a constant persistence in the use of the ice. The diet should be wholesome and nourishing throughout the attack: boiled milk, tea and coffee, etc., are preferable to all other articles in the first, or non-stimulating stage; but after the patient reaches that stage, when stimulants prove to be antiphlogistic, chicken broth and beef-tea are preferable. Let him be nourished at proper intervals and in proper quantities in the day time; but never wake him up of nights to take either drink or nourishment. This rule should be constantly borne in mind, for more depends on it than meets the eye at first. He who is allowed to sleep on without disturbance, stands a much better chance for his life, than one who is annoyed by officious and ignorant nurses and attendants, every now and then waking him up, with the vain endeavor to get him to feed.

There is yet another important item in the treatment, to which attention must be called; it is this:—The patient must always have the attention of the nurses directed to his clothing, and prompt removal of the secretions from the room. Nothing contributes so much to the comfort of the sick, in cases of long standing, as the frequent change of clothing; and it is to the neglect of this, as well as the prompt removal of the secretions from the sick apartment, we must attribute the notion so prevalent in some latitudes, to-wit, that this disease is contagious. There can be no evidence adduced
in support of its contagiousness, but there is no doubt the disease may become infectious, by the neglect of the highly important rules above mentioned. Never forget the indubitable necessity there exists for scattering the families of those who suffer, to any great extent from the disease. The attending physician many times does more good by insisting upon this desideratum, than in any other way.

Having already said more than we intended at the outset, we must bring this article to a close. If we have been fortunate enough to make a single suggestion which shall prove beneficial to our professional brethren, in their efforts to relieve suffering humanity, we shall consider ourselves amply remunerated for the trouble we may have undergone, in preparing this essay for the press. And, in conclusion we would remark, once for all, that we were not constrained, either by motives of vanity or egotism, in submitting these views to a censorious public.

ARTICLE XXIX.

LETTERS FROM SAML. D. HOLT, M. D., UPON SOME POINTS OF GENERAL PATHOLOGY.

LETTER NO. 16.

MONTGOMERY, ALA., September 25th, 1856.

Messrs. Editors—Up to the summers of 1853, '54 and '55, I had considered myself an incompetent witness to testify as to the character of yellow fever, as, until that time, all that I knew about it was from "hear say" evidence, and I should have been unwilling, previous to that time, to have been put upon the stand for the purpose of giving even parole evidence. But, having during those periods formed somewhat a familiar acquaintance with its character, I feel willing, whether competent or not, to submit my testimony in writing, which shall, according to the rules of law, be confined to the facts of the case, claiming, at the same time, the privilege of "experts" of forming and expressing opinions from the testimony of other witnesses, as well as from observation and experience, of which I must confess, in this disease, I have had comparatively little. I cannot testify as to its paternity, or its genealogy; whether it is a native American, or a naturalized foreigner—whether it is a creole, or a foreigner, making occasional summer and autumnal visits to our southern sea-ports, and now
and then extending them to the interior river towns. Upon these points, and many others in relation to it, the testimony is abundant, but contradictory, and in many instances unsatisfactory. Some have testified, very positively, that it is a native American; and others, as confidently, that it is a foreigner. My own opinion is, from the evidence, that it is a creole, and belongs to the typhoid family, and is decidedly democratic, from the great love it has at times for the people, and the wonderful fondness and partiality which it always shows for foreigners. But seriously: There is no disease concerning which so much has been written, and such a mass of testimony has been collected, as yellow fever; and yet, strange as it may appear, there is none concerning which there is such a conflict of opinion, and concerning the nature and treatment of which the profession are less agreed. This is certainly not owing to a want of facts regarding its history and character; for any one who will examine the work which Dr. La Roche has recently furnished to the profession, (which is an ingenuous embodiment of the opinions of every observer, of any note or distinction, upon every important point relating to its history and character, from the earliest records of its existence to the present time, constituting a perfect encyclopedia of yellow fever,) will be satisfied that there are but few facts which remain to be established, which can be expected to be done by observation of the disease. I do not know that I shall be able to add a single fact, worthy of record, derived from my own observation and experience, which is not already known to the profession; nor do I expect to be able, nor shall I undertake to reconcile the conflict of opinions upon points which always have, and must always continue to divide the profession. But I do hope to be able, from the great mass of testimony which has been collected, and which we must regard as truthful, to show that the causes of disagreement, as to the character of the disease, are not as numerous as well founded, and as irreconcilable as they seem to be. As an apt illustration of these causes of disagreement, and of my views of the subject, I will cite the fable of the "Travellers and the Chameleon." Each one saw the same animal, and each described it accurately in its proportions; but each one saw it in a different light, and a different shade of color, to which each was willing to swear; yet no two were agreed as to the color of the animal. So it is with yellow fever. The great chroniclers who have furnished us with an account of the disease,
have each done so with an honest conviction, no doubt, that the light in which they have observed it, and the character in which they have represented it, was the true and natural character of the disease. Some of these who have had an opportunity of observing it, in different parts of the world, at different periods, and under different circumstances, in the same localities, have found the disease so changed and modified in its character, from their first impressions, as to raise a doubt in their mind as to its identity, or, to use our metaphor, whether it is the same animal which they had seen under different colors and aspects, or not.

I have on a former occasion, though on a different subject, expressed the belief, that yellow fever is a disease "sui generis," and that in its essential typical character it is universally the same. This opinion is sustained by the greatest weight of testimony, and it is in this light and character that I shall examine the disease, with respect to its pathology, considering the chameleon hues and complexions of the disease to depend upon extrinsic and adventitious influences, and not upon those which are inherent either in the disease or the cause which produces it. To be still more explicit: What I mean, is that yellow fever has one essential and specific cause, which, in operation, produces a certain and determinate set of phenomena and results, which no other cause can produce; and that the causes which so often combine to produce diversity in the character of the disease are non-essential to its production, but necessary for a change or modification of its character. One cause produces the chameleon—the other its colors. But it would be a difficult matter to determine who, or whether any one has ever seen it in its pristine color, or character; for, as I have before stated, the combination of influences which are necessary for the generation or production of the cause of yellow fever, if not identical, are nearly allied to those which determine its modifications, and these are found so universally to co-exist, and so generally to co-operate, that it is doubtful whether the disease ever exists in its pristine character, fully divested of the non-essential and modifying influences. It is in this character, however, that I shall consider it, observing the same classification which I have adopted with respect to other fevers, believing that it will fully cover all the forms and modifications to which the disease is liable. My object for thus considering it, is to endeavor to fix the pathology of the disease in its essential typical character, so far as it is known,
upon which a general and uniform system of practice may be founded. For so long as the pathology remains unsettled, or is made to rest upon the modified forms of the disease—to which it is continually liable—so long will it be a subject of dispute, and the practice little better than a system of empirical experimentation.

With regard to the pathology of yellow fever, Dr. La Roche says: "Painful as the avowal may be, it is a fact, the truth of which cannot be denied, that, notwithstanding all that has been written on the subject of the yellow fever in this and other countries—all the labor that has been bestowed on an investigation of its causes, characters, and anatomical phenomena, little progress has, so far, been made in a knowledge of the pathology of that disease." Now, I am not prepared to admit the truth of this avowal, in its full import, or to admit that the profession are as much in the dark, or as much behind hand, with respect to the pathology of yellow fever, as they are with some other diseases, of which they profess to know more. Of what advantage to us is the great store of information which has been collected upon every important point connected with the history of the disease, or where shall we go for more reliable testimony, if from this we cannot form correct views with regard to its pathology? The truth is, in my opinion, that there is not so much a lack of knowledge with respect to its pathology, as there is a want of agreement as to the special pathology of the disease, in its essential, unmodified, and uncomplicated form; the pathology having, unfortunately, too often been founded upon groups of symptoms, and conditions of the system which may belong to, and are often observed in connection with other diseases besides yellow fever, and are consequently non-essential. I have founded my classification of fevers upon the general pathological conditions of the system, and have maintained, and shown, that the causes which produce and determine these general pathological conditions, were non-essential to the production of any particular type or form of fever, but that all fevers under their influence were determined in their character by the general pathological condition of the system, and that the particular cause of the fever, of whatever type or form, had no necessary or essential agency in determining the general pathological condition which determines their character.

If this matter requires any further elucidation, I will take examples from the disease in question—yellow fever—which appears
sometimes in an inflammatory garb, sometimes an irritant, and sometimes congestive, with the intermediate grades, not generally recognized, as the congesto-inflammatory and congesto-irritant, and always the typhoid, which I consider the true type of the disease. Now, the point which I particularly desire to impress upon the mind of the reader is, that the specific cause which is essential to the production of yellow fever, has no necessary or essential agency in determining the general character of the disease, except so far as the latter, or typhoid character, is concerned; and that fever from any other cause will assume the same garb, or character, under a like general pathological condition of the system, illustrations and examples of which I have given in pneumonia, and intermittent and remittent fever. Hence it follows that no pathology of yellow fever can be perfect, and free from objections, which is based upon a general condition of the system, which the cause of yellow fever has no agency in determining, and which determines alike the general pathological character of all fevers. And though the treatment must necessarily conform to the general pathological character of the disease, which is constantly liable to change, yet, in its essential character, the principles of practice founded upon its special pathology, which is universally the same, admits of no change.

As the views and opinions which I entertain with regard to the pathology of yellow fever, have been derived chiefly from the great mass of testimony which has been collected concerning the disease, and which is open to, and now the common property of the profession, I do not deem it necessary that I should resort to argument and proof to establish every position which I may assume, at least, not until they are assailed, or called in question, particularly as I shall be careful to assume none which is not sustained by at least respectable weight of authority. The position which I have taken, with respect to the pathology of intermittent and remittent, and other periodic or miasmatic fevers is, that they belong to the dynamic class, having their origin in such a change of nervous power, as to disturb to a morbid extent the balance of the circulation, causing unequal distributions and accumulations of blood, without necessarily affecting materially its healthy or normal condition; and that in all such diseases in which the blood becomes depraved, and its vitality impaired, it is the consequence of pre-existing morbid actions in certain organs, which the condi-
tion of the blood has no necessary agency in exciting. That which I assume with respect to the disease in question (yellow fever,) is, that it belongs to the zymotic class and is a necromic disease, having its origin in an altered and depraved condition of the blood from the action of a specific poison, which, in addition to its direct tendency to destroy the vitality of the blood by a destruction of its fibrin, produces by its sedative action upon the nervous centres, a shock or state of nervous depression, followed by a febrile reaction, being a single effort of the system, more or less prolonged, to overcome or relieve itself of the morbid impression, which so far as the febrile movement alone is concerned, differs little from other fevers of the same class, being limited in its duration to the term of the zymotic action of the poison, which seldom or never continues longer than the longest interval, or quartan type of intermittents, (seventy-two hours,) and often terminates with the shortest interval of those fevers, (twelve hours,) during which time such molecular changes are effected in the general capillaries, (which system of vessels I believe to be the seat of the disease,) as to diminish their tone and vitality, giving rise to irritation and consequent engorgement in those vessels, which in connection with the previously altered, attenuated, and depraved condition of the blood from the direct influence of the specific cause, gives rise to a general hemorrhagic diathesis, and a putrescent tendency of the system, which constitutes the essential pathology of the disease, under whatever form or modification it may appear. Whatever changes may have been effected in the condition or constitution of the blood from the action of the poison anterior to the actual invasion of the disease, which should date from the commencement of the febrile movement, at which time it begins to localize itself, not only with respect to the capillaries generally but to particular organs, which as one or more become permanently involved, during the progress of the first or febrile stage of the disease, have their functions so deranged and even suspended, as not only to prevent the elimination of the specific poison from the system, but to cause the blood to become overloaded with noxious matters, even more deleterious than the specific poison itself. Now, if by the efforts of nature or art, these organs, the lungs, the liver, the skin and the kidneys can be kept in the exercise and performance of their respective depurative functions, so as to prevent the retention and accumulation in the blood of the septic and noxious matters which
are generated in the system, during the progress of the febrile stage of the disease, I am strongly inclined to the belief that there would seldom be more than one stage to it. This opinion is sustained by the fact, that the disease can be aborted, that is, prevented from manifesting any other signs of morbid action than those which belong properly to the febrile stage of the disease: in other words, that it can be arrested in that stage from which the process of reparation will commence and go on to convalescence. I would not pretend to say that all cases could be so aborted or arrested in their progress, however judiciously managed, but I must say, that judging from my own observation, the larger number may be, as during the prevalence of the disease with us, during the summers of 1853, '54 and '55, I had the management of about fifty cases, all of which, after a single paroxysm of fever of about thirty-six hours duration passed into a state of convalescence, with the exception of two, one of which died on the third day with black vomit, and the other, after a paroxysm of fever of seventy-two hours, had black vomit, but recovered. Such a result justifies me in the belief, that the disease is not so much an "opprobrium medicorum," as certain learned and experienced members of the profession would induce us to believe. But one thing is certain, that there is no point more clearly established in the history of the disease, than that it is amenable to treatment only in its first stage, and that subsequently, all heroic measures are rather injurious than beneficial. This matter it is necessary we should examine into a little: The fever, which is always one of a single paroxysm, is unquestionably, in my opinion, a fever of irritation of the general capillaries from the direct action of the specific cause upon those vessels, and the uniform consequence and effect of that irritation is, to keep them in a state of active engorgement during the febrile stage, whatever may be the general pathological condition of the system with respect to its amount of vigor and excitability, that is, whether the condition of the system favors the congestion, the inflammatory, or the irritant form or modification of the disease, which (the latter) I consider as its true and essential form, and to leave them in a state of passive engorgement when the febrile action subsides. Although general capillary irritation throughout the system is characteristic of the disease, its tendency is always to localize itself by falling with much more force upon some organs, tissues and systems, than upon others; and these are
unfortunately the organs which are chiefly employed in elaborating the materials for supply and reparation, or in the elimination and excretion of the products of disintegration and decay. Hence, the stomach is so uniformly found to be a point of attack, as to give plausibility to the idea, that it is the "Throne" of the disease, (but this I cannot admit, if for no other reason than that I had already pronounced the disease "Democratic," which renders it incompatible with any Throne except the general capillaries, the seat of its power)—this may be ascribed, however, rather to the greater vasularity and extent of the mucous membranes, in the stomach, than to any particular elective affinity for this, over other organs; for, though next to the nervous symptoms which arise from capillary irritation in the nervous centres, the stomach is usually the first organ to manifest disturbance of function, it by no means follows as a consequence, that the stomach should be considered as the prime seat of the disease, or that other organs are not as deeply involved, though they may not show it as early. On the contrary, the disordered condition and suspended function of the stomach, bears no proportion in its direful consequences, to the disordered condition and suspended functions of the liver, kidneys and other depurating organs; and there is no good reason for supposing that the cause of the gastric disturbance, and the nature of the morbid action which exists in the stomach, is at all different from that which exists in, and interrupts and suspends the functions of the liver, kidneys, etc.,—all of which alike owe their disturbance to irritation and engorgement of their respective capillaries. But it is not to be inferred that all the vital organs are invaded simultaneously, or that each one suffers in the same degree, or that indeed, they should all become subject to the process of localization at least, to such a degree, as to cause a suspension of their functions. This process, which is generally progressive, commences, as I have stated, with the febrile movement and continues through, but ceases with the febrile stage, though many of the symptoms which are consequent upon its localization, and which are considered characteristic of the disease, do not become manifest until that stage of the disease has passed by; indeed, during that stage, there are but few symptoms characteristic of the disease, except its general irritative character, and its type, or term of continuance of its hot or febrile stage. Although from the want of plasticity in the blood, and from the general capillary irritation and engorgement
there exists from the commenceement, a hemorrhagic tendency, which is sometimes manifested by active hemorrhage during the febrile stage; yet, ordinarily, it is not until the subsidence of the fever, when the whole vital forces of the system are left in a state of prostration, and the capillary system in a state of passive engorgement, that the characteristic hemorrhages occur. The same may be said with regard to the liver, kidneys, etc., that though the functions of the liver may be suspended early in the disease, from the influence of the specific cause, or from adventitious influences, causing an accumulation of bile matter in the blood, or of the lungs causing an excess of hydro-carbonaceous products, or of the kidneys, causing an accumulation of the azotic compounds, it is not until the subsidence of the febrile stage, or rather not until its declination, that the symptoms resulting from the disturbed and suspended functions of these organs, manifest themselves, and when once manifest, it is evidence, irrefragable of the localization of the disease in those organs, and of a failure, (if the attempt may have been made,) to abort the disease. Although I do not much admire the term abort as applied to an arrest of the progress of yellow fever, yet from its having been sanctioned by high authority, and for the want of a better, I shall adopt it, and proceed to examine in what the process consists, and by what means it may be accomplished. What I understand by aborting the disease is, to prevent it from becoming localized, or prevent it from falling upon certain important organs with such force as seriously to disturb or suspend their functions, which is to be accomplished in great part, by directing such remedies to those organs as will maintain them in the exercise of their respective functions during the continuance of the febrile stage; and by directing such remedies to the general capillaries, as to elevate their tone and activity, and fortify them against collapse, upon the decline of the fever. It is not to be understood, that the aborting process means a cutting off of the fever; for, being a fever of a single paroxysm and self-limited, it will run its course, though, that the crisis of the fever may be hastened by the means used for its abortion I have no doubt. To abort the disease then, is to arrest it in its febrile stage, and thus prevent the consequences and the manifestation of the phenomena, which are characteristic of other and subsequent stages of the disease. Can this be done; and have we the means for doing it? If not always with unerring certainty, at least, so often, as to render an effort
always necessary and proper, as the abortable stage of the disease is the only curable one.

In corroboration of my views, and of my observation and experience, I will make a few extracts from a "Report on Yellow fever," by Dr. Daniel Blair, Surgeon-general of British Guiana, which, without disparagement to other writers, is one of the best articles on yellow fever which I have read. He says: "When the epidemic poison was in moderate intensity, or quantity, the results of treatment were highly gratifying. At such times, when the disease was recognized and treated early, the chances of aborting the seizure were very favorable and decisive." . . . "But at times, when the system seemed thoroughly saturated with the poison—when every mucous tissue was more or less irritated by it—when no auxiliary or exciting cause was required—when the attack was violent on many points, and spontaneous—when, in fact, the exacerbations of the epidemic became pestilential, medication was powerless, and the morbid processes terminating in death were scarcely, if at all, modified or interrupted. The prime object, however, was to abort the attack. If that failed, after one, two, or three doses, although still much could be done in putting the patient in the best condition for sustaining the struggle, and keeping off intruding complications, there was little room for active interference on the part of the medical attendant. Early attention to first symptoms among the susceptible was of priceless value in saving human life." Among other instances, Dr. Blair relates, that of ten cases which occurred on a vessel, and received prompt medical attention, all were aborted; while three out of four died on another vessel, where treatment had been delayed. "One of the earliest and most uniform effects of the dose in the treatment of aborted cases is the removal of the headache symptom. It is likely that this symptom properly belongs only to the early stages of yellow fever, and that its tendency is to subside spontaneously, but its departure is unquestionably hurried by the agency of the medicine, and the first or second dose is generally adequate to its removal. While the same amount of the compound, given in small and frequently repeated doses, would infallibly cause salivation, such an effect is of the rarest occurrence in the large doses, and when it has happened, never, that I have seen, but mildly. I have prescribed it, without injury, to females far advanced in pregnancy, and to my own infant three and a half months old, in
a similar dose, proportioned to the age, and found it attended with no practical inconvenience of any consequence. The modus operandi of the dose in aborting yellow fever, probably, is not by the constitutional effects of mercurialization. Calwell, while accidentally salivated for another malady, got a violent attack, which was aborted by the usual method. Three doses were in this case required, and found sufficient, and without any increase of salivation. The aborting dose should be used as early as possible. When a state of apyrexia is induced, it may be relinquished—the end is attained; but if the urine has become coagulable, or the epithelium of the tongue has begun to peel, it is of no use pushing it further, the time for its administration is past, and subsequent to this it will be a noxious irritant."

"From information which we received through the Surgeons of the West India mail steamers, we could see that the use of calomel and quinine in the treatment of the epidemic was not understood, or rather was completely misunderstood, among the West India Islands. We were told that it was pushed on, in various doses and proportions, through all stages, and whether the stomach retained it or not. Nothing could be more injudicious. Its benefits are confined to the first and early stage, and though, if the case run on, some mitigating effects may flow from its previous use, still it is for aborting the attack completely and at once that it is prescribed, and is suitable."

The apology which I have to offer for so long an extract, (if indeed any apology is necessary,) is that it comes from one of much larger experience than myself, and tallies with my own views and opinions, not only with regard to the character of yellow fever, and the power which we possess of aborting it, but also with regard to the means by which it is to be accomplished, and confirms what I have previously written with respect to the action of calomel, namely, that large doses are usually safer and more efficient than small repeated doses. Now, the dose of which Dr. Blair speaks as the aborting dose was 20 grs. of calomel and 24 grs. of quinine. As to which of these articles, or whether to the joint action of both, the credit of aborting the disease is due, we are left in some doubt. Dr. Fenner, and others, have succeeded in aborting the disease with quinine alone. I, and others, have succeeded in aborting it with calomel alone—at least without the use of quinine; though I must confess, that notwithstanding my greatest
confidence is in the powers of calomel, I would always, when circumstances would permit, call to its aid the powers of quinine. The objects and purposes for the administration of calomel are manifold:—To relieve irritability of the stomach; to excite the liver, and relieve it of bilious engorgement and venous congestion, and thus to diminish its capillary engorgement, as well as that of the stomach, and other organs whose blood passes through the liver; to re-establish or keep up the secretory function of the liver; and last, though not least, by its purgative effect, to aid materially in the removal of the excrementitious and noxious matters from the system. Will calomel do this in yellow fever? My limited experience in three epidemics assures me that it will—though in "pestilential epidemics," in which I have had no experience, upon the testimony of others, and particularly of Dr. Blair, I am compelled to believe that it would fail. Its failure, however, would never deter me from its use, until something more reliable in such cases is found out; for though in ninety-nine cases it should fail, in the one-hundredth it might succeed.

The object and purpose for the administration of quinine is, to impart tone to the capillaries, which it unquestionably has the power of doing, and thus it aids the laboring organs in keeping up their secreting, eliminating and depurating functions, and to that extent prevents the localization of the disease; or what is probable with regard to its action is, that the tone which quinine imparts to the capillaries, enables them better to resist the irritative action of the specific poison, and to rid themselves more easily of the consequent engorgement. At all events, it exerts in most cases a decided salutary effect in sustaining the sinking energies of the whole system, upon the decline of the fever, whether the case has been aborted or not. These two remedies, first calomel, then quinine, or both conjoined, I consider as the cardinal remedies in yellow fever, and all others as auxiliary. They are alike applicable (one or the other,) to all forms or modifications of the disease, being applicable to its essential or sui-generic character; and whether the disease assume an inflammatory character, requiring the use of the lancet, and other antiphlogistic remedies, or congestive, requiring the use of stimulants and tonics, these remedies will be alike necessary and efficacious; for, while the modifications which render the use of auxiliary remedies necessary, depend upon extrinsic or adventitious influences which would determine the same modifi-
cations in other diseases, and which are consequently non-essential; these cardinal remedies are reliable, not from the control which they are capable of exercising over any particular modification of the disease, but of the disease itself under every modification; these regulate the chameleon, while the auxiliary remedies regulate its colors.

I will now, in a few words, state the plan which I adopted for the abortive treatment of yellow fever, reserving the more minute details of practice for the report of some cases, which I expect subsequently to make of this and other diseases; and reserving, also, what little I may have to say, concerning the latter stage of yellow fever, for consideration, in connection with some other forms of typhoid fever.

If called to a patient in the chill, or before the febrile reaction was established, it was my custom to treat them entirely upon general principles, by enveloping them with blankets and bottles of hot water, or a mustard foot-bath, and if the stomach was irritable, or if I suspected it to be loaded, or containing irritating matter, I washed it out with warm water, or a mustard emetic, and as soon as it became quiet, or as soon as the action of the emetic had ceased, I gave from thirty to forty grains of calomel, with from six to eight grains of Dover's powder, mixed in a little brown sugar, as I have described. This dose, if retained, (and it generally will be,) will usually operate upon the bowels in eight, ten or twelve hours, producing one, two, or three large offensive fecal and bilious discharges. If it operated much earlier than this, I immediately repeated the dose, or if it did not operate within that time, (twelve hours,) I gave twenty grains of calomel additional, and in four or five hours a bottle of congress water, a seidlitz powder, or some other saline and magnesian aperient. As soon as the purgative action of the medicine ceases, which large doses will do, (for several hours,) after two or three large discharges, I commence the administration of calomel and quinine, in doses of two grains of the former and three grains of the latter, made into pills and given every two hours, and continue them until the purging recommences, at which time, if the discharges are such as to give evidence of the action of the medicine upon the liver, and the general system is under the influence of quinine, further medication will be unnecessary, at least so far as any efforts to abort the disease are concerned, for by this time at least twenty-four hours will have gone by, and the case will either have been abort-
ed, or from the lapse of time will have become non-abortable. About this time, or twenty-four hours from the commencement of the attack, sometimes sooner, sometimes later, the fever begins to decline; at which time I have been in the habit of giving a few grains of quinine, and continue to give it at intervals, until the febrile stage has gone by. During the first twenty-four hours, and the first hours of the twenty-four, the condition of the skin requires particularly to be observed and attended to, for the reason that it is an index to the character of the disease, and is an important depurating organ, capable of performing vicarious offices for other more vital depurating organs. Hence, the proper action of the skin has the effect of keeping up a determination to the surface, and thus preventing the localization of the disease, (which in fact is but another term for aborting it,) by diminishing capillary irritation and engorgement, and perhaps, to some extent, by eliminating the active poison. I found no difficulty in exciting, or keeping up a perspirable condition of the skin, by the means which were necessary to establish the febrile reaction, by keeping the patient within blankets, and an occasional plain, or mustard foot-bath, (warm of course,) by the action of the calomel, Dover's powder, and quinine, by some warm agreeable beverage, as balm, sage or orange leaf tea, and by an occasional cool or cold and acidulated drink. Much is to be gained, in my opinion, in the abortive treatment of yellow fever, by inspiring the patient with confidence in the efficacy of the remedies, as he not only submits to them with greater alacrity, but their action is more certain and favorable under a cheerful and sprightly, than a sorrowful and dejected state of mind, which of itself has a tendency to localize the disease upon internal organs. I should have remarked before, with respect to the kidneys, that in the abortive treatment they seem to require little attention, for though they are the chief excreting and depurating organs in all acute febrile affections, so long as other organs can be kept in the performance of their work, the kidneys will perform theirs. The result of this abortive plan of treatment with me has been, that of fifty cases, as I have before stated, two only failed of being aborted. Two of the aborted cases had epistaxis, which I ascribed to idiosyncracy, which I knew they possessed, one of them being my son, and with these exceptions, in every case, upon the purgative action of the medicine, the headache, pain in the back and legs, and other nervous symptoms subsided,
or began to subside, and soon left no symptoms characteristic of
the disease, save a single paroxysm of fever prolonged beyond the lim-
its allotted to ordinary intermittent and remittent or periodic fever.

Yours, as usual,  
SAM'L D. HOLT.

ARTICLE XXX.

A Case of Cholera Infantum and Convulsions, Treated principally
by Water. By JNO. STAINBACK WILSON, M. D., of Muscogee
county, Ga., (near Columbus.)

On the 27th of June, my little boy, a delicate child, six months
old, and cutting his first two teeth, was attacked with diarrhoea. This
did not receive any attention until Tuesday, 1st July, when
the following symptoms presented themselves:—Frequent vomit-
ing of yellow bile, with very profuse serous evacuations from the
bowels, intense fever and great heat of head and abdomen. About
midnight he was attacked with violent general convulsions, with
opisthotonos, which continued at intervals of from three to six
hours, until the evening of the 2d. While the convulsions were
at their height, and for some moments immediately preceding the
muscular contractions, respiration seemed to be entirely suspended,
and the little fellow appeared to be in articulo mortis.

Treatment.—1st morning. A tepid bath; the temperature to be
gradually raised to a hot bath, after the excitement has been some-
what reduced by the tepid bath; the object being to stimulate the
whole skin, and to produce a strong determination to the cutane-
ous capillaries. Apply sinapism to epigastrium, to be followed
by a wet bandage wrung out of cold water, to the whole abdomen;
bandage to be renewed whenever it becomes dry or very warm;
cold cloths to head, to be changed frequently. Under this treat-
ment the nausea and vomiting subsided, and the intestinal dis-
charges were diminished in frequency, but they were still profuse
and watery.

Evening.—Fever has increased; restless—tossing from side to
side, and biting at the fingers. Scarified gums; used warm, or ra-
ther a tepid bath, and cold applications to head and abdomen as
before. No medicine yet.

After the bath, the restlessness and fever subsided, and he
seemed to be doing so well, that we ventured to retire to rest,
when we were aroused about midnight by his convulsive struggles. Tepid bath immediately, with copious cold affusions to head while in the bath. Cold applications to head and abdomen continued, and bath repeated whenever a convulsion comes on, or before the seizure, if there were sufficient premonition. By this treatment the convulsions were gradually diminished both in frequency and severity; and at five o'clock on the evening of the 2d, they took their final departure. The cold cloths were continued about twenty-four hours longer, when the fever also yielded. The only medicine given during the whole attack was, three or four doses of a powder, composed of two grains hyd. cum creta, and about the same quantity of chalk and ginger, with two half grains doses of quinine, on the mornings of 2d and 3d.

Remarks.—It is to be feared that physicians, like the Syrian captain,* in their desire to do "some great thing," too often overlook the simpler, safer, and even more effective remedies which can be so readily obtained at all times, and under all circumstances; my object, therefore, in publishing this case is, simply to call attention to the fact, that the most formidable diseases may be speedily subdued by water alone; for I am convinced that the medicine had but little, if any agency in bringing about a result so satisfactory.

ARTICLE XXXI.


On the 5th day of August, 1853, W. B. B., a strong able-bodied farmer, of Thomas county, aged about forty, presented himself at my office for the purpose of having a stone removed from his bladder. The patient's health being sufficiently good to authorize the operation, it was determined upon at once.

The bilateral opening was made into the bladder in about thirty seconds. The stone was seized and an effort made to extract, but without success. Finding the stone a large one, I enlarged the opening with a bistoury, and again attempted to extract. Considerable trouble was experienced in removing it, and the stone was finally extricated with a difficulty, and only after a considerable amount of labor.

* 2 Kings v. 1-14.
erable force was being used when the stone crumbled into fragments. At this I was a little disconcerted, for it was my first operation of the kind. With forceps, fingers and syringe, alternately, for more than two hours, I labored with two of my professional brothers in removing the fragments. At last, to my great gratification and to the infinite joy of my patient, I announced the operation over.

My patient did well until the 12th—some days after the operation—when he got up from his bed, shaved himself, walked over the room once or twice, and returned to bed. I called to see him soon after, and found him suffering with pain in the right testicle. It continued painful through the night and next day. By the 14th, it was swollen three times the ordinary size and still painful; patient had considerable fever. Treated him with calomel and opium, and cold local applications. On the 18th, the other testicle became involved in the inflammation; fever considerable. The urine, which had begun to pass the natural way, returned through the artificial opening again. Calomel and opium in small doses, with cold to the inflamed organs, was continued until the 23d, with no abatement of fever, nor of inflammation—pulse ranging from 95 to 110; tongue coated; great thirst. Having improved but little, if any, by the above treatment, I determined to put him upon the use of veratrum viride. The tincture was used sufficiently often to keep the pulse at about 75 to the minute. It caused vomiting but once or twice. The fever and inflammation gave way under its use, with a Dover's powder at night and cold applications; so that on the 27th, my patient was altogether comfortable, the urine passing the natural way, and the wound healing kindly. I discharged him two days afterwards, the wound having healed up to a scab, and his strength being greatly improved.

For two years after the operation he suffered occasionally from inflamed testicles, induced by wet or cold, but at this time I think he enjoys uninterrupted health.

The fragments of stone, (principally phos. lime,) weighed a fraction over three ounces.

I propose to treat, as briefly as I can, of the Remote and Proximate Causes of Deafness, understanding by the former, those conditions of the atmosphere, country, condition of parents and offspring, etc., etc., which predispose to deafness, and by the latter, those local affections which mechanically or otherwise cause deafness.

Several attempts have been made by different individuals, to collate statistics in relation to the causes of deafness, but from the ignorance of the guardians of the patients, these statistics have proved but very imperfect. An abstract of seven hundred and eighty-seven cases, collected from the institutions for mutes at Paris, Copenhagen, Leipzig, Prague, Cologne, St. Petersburg, Dresden, Hamburg, and Modena, in Europe; and Hartford, New York, Philadelphia and Columbus, in the United States, I will here insert. It is as correct as any that have as yet been published. It may be found in the Eighteenth Report of the New York Institution for the Deaf and Dumb.

### CAUSES OF ACCIDENTAL DEAFNESS:

<table>
<thead>
<tr>
<th>Condition</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scarlet Fever</td>
<td>44</td>
</tr>
<tr>
<td>Typhus Fever</td>
<td>3</td>
</tr>
<tr>
<td>Spotted Fever</td>
<td>33</td>
</tr>
<tr>
<td>Inflammatory Fever</td>
<td>7</td>
</tr>
<tr>
<td>Nervous Fever</td>
<td>5</td>
</tr>
<tr>
<td>Nervous Fever and gathering in ears</td>
<td>1</td>
</tr>
<tr>
<td>Brain Fever</td>
<td>4</td>
</tr>
<tr>
<td>Brain Fever, from dentition</td>
<td>1</td>
</tr>
<tr>
<td>Brain Fever, from coup de soleil</td>
<td>1</td>
</tr>
<tr>
<td>Fever and Fits</td>
<td>1</td>
</tr>
<tr>
<td>Convulsions</td>
<td>24</td>
</tr>
<tr>
<td>Epileptic Fits</td>
<td>6</td>
</tr>
<tr>
<td>Cold</td>
<td>26</td>
</tr>
<tr>
<td>Measles</td>
<td>35</td>
</tr>
<tr>
<td>Gatherings in the head</td>
<td>15</td>
</tr>
<tr>
<td>Inflammation in the head</td>
<td>20</td>
</tr>
<tr>
<td>Falls</td>
<td>19</td>
</tr>
<tr>
<td>Scrofula</td>
<td>12</td>
</tr>
<tr>
<td>Whooping cough</td>
<td>12</td>
</tr>
<tr>
<td>Hydrocephalus</td>
<td>9</td>
</tr>
<tr>
<td>Hydrocephalus and Whooping cough</td>
<td>1</td>
</tr>
<tr>
<td>Bilious Fever</td>
<td>1</td>
</tr>
<tr>
<td>Catarrhal Fever</td>
<td>1</td>
</tr>
<tr>
<td>Epidemic Fever</td>
<td>1</td>
</tr>
<tr>
<td>Intermittent Fever</td>
<td>1</td>
</tr>
<tr>
<td>Arthritic Fever</td>
<td>1</td>
</tr>
<tr>
<td>Fever (not named)</td>
<td>38</td>
</tr>
<tr>
<td>Foreign substances in the ear</td>
<td>2</td>
</tr>
<tr>
<td>Ith</td>
<td>2</td>
</tr>
<tr>
<td>Dentition</td>
<td>2</td>
</tr>
<tr>
<td>Humors in the head</td>
<td>2</td>
</tr>
<tr>
<td>Serofulous Ophthalmia</td>
<td>1</td>
</tr>
<tr>
<td><strong>Quinsy</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Peripneumonia</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>St. Vitus’ Dance</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Palsy</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Paralysis</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Syphilis</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Mumps</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Croup</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Measles and Mumps</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Small Pox</strong></td>
<td>8</td>
</tr>
<tr>
<td><strong>Injuries of the head</strong></td>
<td>9</td>
</tr>
<tr>
<td><strong>Disease in head (not named)</strong></td>
<td>4</td>
</tr>
<tr>
<td><strong>Disease in ears (not named)</strong></td>
<td>4</td>
</tr>
<tr>
<td><strong>Disease in throat and head (not named)</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Ulcers</strong></td>
<td>2</td>
</tr>
<tr>
<td><strong>Falling in the water</strong></td>
<td>3</td>
</tr>
<tr>
<td><strong>Use of calomel</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Report of a cannon</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Loss of hearing without manifest cause</strong></td>
<td>4</td>
</tr>
<tr>
<td><strong>Inflammation of a limb</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Swelling in neck and gathering in ear, with convulsions</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Injury of the ear</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Bite of a mad cat</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Swallowing tobacco</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Swallowing poison laurel</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Disease caused by vermin</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Injurious medical treatment</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Gradual decay of hearing</strong></td>
<td>2</td>
</tr>
<tr>
<td><strong>Diseases and accidents unknown</strong></td>
<td>398</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>787</td>
</tr>
</tbody>
</table>

This abstract shows the prominent causes to be fevers, the exanthemata, pertussis, convulsions, hydrocephalus, and inflammation

in the head. In regard to the ages at which deafness is most likely to commence, the same authority gives the following abstract of 284 cases:

<table>
<thead>
<tr>
<th>Age</th>
<th>Number of Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>From birth till 1 year of age</td>
<td>94 cases of deaf mutes</td>
</tr>
<tr>
<td>1 year</td>
<td>73</td>
</tr>
<tr>
<td>2 years</td>
<td>41</td>
</tr>
<tr>
<td>3 years</td>
<td>19</td>
</tr>
<tr>
<td>4 years</td>
<td>27</td>
</tr>
<tr>
<td>5 years and upward</td>
<td>30</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>284</strong></td>
</tr>
</tbody>
</table>

One singular fact, established by statistics, is, that there are more deaf males than females. This cannot arise from the fact, that they are more exposed, for at the age (under five) when they are most liable to become deaf, male children receive the same degree of care as female. The probability is, that more males survive the diseases of youth than females. Of congenital cases of deafness, however, there are more females than males, in the proportion of nine to seven.

There are not sufficient instances known on which to form definite conclusions as to the amount of the hereditary transmission of deafness when one or both of the parents are mutes. There can be no doubt that there is a certain degree of danger. I personally know of only two families, both the parents in each being mutes, in which there is any direct transmission. In each family there are seven deaf and dumb children. I have heard of several other instances, however. Marriages between deaf mutes are, however, not very uncommon occurrences, the children resulting from which possess perfect audition. There seems to be in some families, the heads of which are possessed of all their faculties, a marked predisposition to deafness. Sometimes this is owing to dissipation of one or both of the parents, at the time just preceding gestation, thereby debilitating the vital powers. In other cases, dissipation in youth has been the cause. But of all known causes intermarriage is the most prolific cause of predisposition to deafness. It has been settled beyond a shadow of doubt, that intermarriages of first cousins, and even some of second cousins, give rise to offspring which are generally either of small size, imperfect health, or of imperfect development in some part; they are either idiots, blind, club-footed, or deaf and dumb. And those offspring of first cousins who are not, are rather the exceptions than the rule.

A curious but not very frequent mode in which hereditary predisposition manifests itself is seen in alternation. A single case will suffice. In a family of fourteen children, the second, fourth, sixth, eighth, tenth, twelfth, and fourteenth born, were deaf mutes congenitally, while the others could hear and speak. Another case has been recorded, in which the line was only broken by the birth of twins, both deaf mutes. Among other facts shown by the
late census of the United States is, that deaf mutes are more frequently found among white than colored people, while blind persons are more common among the blacks than whites. Mulattoes are more subject to both blindness and deafness than the full-blooded individuals of either race.

That the scrofulous diathesis should be assigned as one of the predisposing causes of deafness, will cause no surprise to any one in the least acquainted with pathology. The deposition of tubercles being one of the results of *serofula*, the latter term has at length become, in the minds of many, so associated with the former, as to be understood as almost synonymous with tuberculosis. Tubercular matter may be deposited in different parts of the ear, it is true, but yet it is so unusual, that to regard it as a curiosity, would be strictly correct. The scrofulous diathesis, however, so affects the whole body that inflammation is easily excited in any organ; this inflammation is of an unhealthy kind, slow to heal, producing an abnormal pus, and exceedingly liable to take on a chronic subacute character.

When the ear of a strumous patient becomes inflamed, deafness is almost certain to result, unless proper medical treatment be at once resorted to. The mucous membrane becomes thickened, red, pulpy, a purulent effusion is poured forth, constituting what I shall hereafter speak of as strumous otitis, and, if the membrana tympani be at the same time perforated strumous otorrhoea. The mucous membrane of the membrana tympani is thickened, thus greatly impairing its functions, as is also that of the Eustachian tube, thus preventing the free access of air to the middle ear. When we examine the delicacy of the apparatus of hearing, it is truly wonderful that even in grave cases of inflammation, the hearing is not immediately and totally lost. And yet the mucous lining of the cavitas tympani is often so thickened, that it would seem impossible for the membranes of the fenestra ovalis and fenestra rotunda to be of the slightest use in conveying the vibrations to the internal ear, the degree of deafness resulting therefrom, being at the same time, by no means commensurate with what we should have good cause to expect. Serofula, as a predisposing cause of deafness, acts then, almost always, merely as a predisposing cause of inflammation in general, which inflammation, being excited in the ear, produces changes resulting in deafness. These strumous inflammations are not rare. They are very common among children, almost as much so as strumous affections of the eye. Those of the deaf and dumb who are scrofulous, form a large proportion of the whole number, and the proportion is not much less among those who are deaf, but who have lost their hearing so late in life as not materially to affect their speech. It is evident, then, that whatever is calculated to engender the scrofulous habit, is indirectly a cause of deafness. Among these causes may be mentioned, living in imperfectly ventilated, poorly lighted, and damp habitations; living in wet loca-
ties or in a climate subject to great or sudden variations of heat and cold, dryness and humidity. In mountainous countries, a great deal depends on the altitude of the habitation; thus in Switzerland it has been ascertained that those who live in the valleys are far less healthy than those who live high up on the mountains; the disproportion of cretins between the two mentioned classes of localities being exceedingly great. The number of deaf persons in Switzerland is much greater in proportion to the number of inhabitants than in any other country in the world where statistical knowledge has been obtained. In Belgium, Holland, and Saxony, the proportion is much less; these latter countries are level and dry. In the South of Europe, the number of deaf persons is less than in the colder countries of the North. A case has been recorded in the Paris Institution for the Deaf and Dumb, of a family of eight children, five of whom were congenitally deaf and dumb. These five had been born in a very damp dwelling. A family which previously had resided in the house, had three children, two of whom were deaf and dumb.

It has been a disputed question since the days of Hippocrates, whether the pregnant is able to transmit to her offspring peculiar traits of mind or conditions of body, as the result of a persistent melancholy mood, or mental anguish, or as the consequence of a sudden fright or disgust during any period of her pregnancy. The affirmation of this problem has been, and ever will be, considered by the vulgar of every nation as indubitable, no superstition or tenet being more universally believed; so much so, that Shakspeare, in many places, alludes to this belief. But whether, or no, deafness has ever been the child's misfortune through the mother's fright, I leave others to judge after the perusal of the following statements, which I have collected from files of "Questions to Parents and Guardians of Deaf Mutes." These questions were issued from the office of the Secretary of the State of New York, and are preserved in the New York Institution for the Instruction of the Deaf and Dumb. The facts I am about to state, are to be found in answer to the second of the "questions," which is as follows:—

"Was your child born deaf? If so, was there any cause which is supposed to have operated before birth?"

First Case.—A. M., the daughter of L. M., a physician in this state, is a fine, sprightly girl, in excellent health, having no bodily infirmity with the exception of deafness and the dumbness consequent on the loss of hearing. There has never been in any of the collateral branches of the family, a single case of deafness. She, however, is congenitally deaf, and her deafness is ascribed to the fact that her mother while pregnant with her, was frightened by a deaf and dumb man, who boarded in her family.

Second Case.—C. P. E., is a boy of perfect health, and no physical defect except his deafness. The cause of this deafness is ascribed by his parents to the fact, that a few months before the
mother was delivered, she saw a deaf and dumb child. It must be acknowledged, however, that this is not a sufficient cause of deafness, as the mother was afterwards delivered of a boy, who was also deaf and dumb, and who died at the age of ten. One of the great-aunts and great-uncles of this boy were deaf and dumb. The parents were second-cousins. That these additional facts establish the existence of other causes than the one assigned, sufficient of themselves, to account for the deafness, there is no question.

Third Case.—M. G., is the daugther of an intelligent tanner and currier, who gives the following statement:—"She was born deaf. I (the father) do not know of any other cause than the following: My wife is a Catholic, and while in pregnancy with Melissa, wished to go to confession; I refused to let her do so, at which she was offended, and would not speak to me for nearly a week, which time was about five or six months before the birth of Melissa. I was ignorant at the time of my wife's pregnancy, else I should have avoided any opposition to her wishes." There are two other children in the family, both of whom are in possession of all their faculties. The father has "tried to remove her deafness, by the use of refined sweet-oil, which caused extreme pain, without any apparent benefit to hearing." Dew-water was also tried, "which caused no pain, and seemed to relieve the head-ache she was formerly troubled with." The trial of refined sweet-oil, has thus added to medical lore the important fact, that the not going to confession, is apt to leave considerable inflammation in the ears of the progeny. Verily, the sins of the parent are visited upon the children, (unless confession is duly made,) as is abundantly shown by this instance of the hereditary transmission of moral turpitude.

Fourth Case.—S. A., is a healthy girl, of a family in which there is no hereditary taint. Her mother, sometime before the birth of the infant, saw a little foolish child, the vision of which is supposed by the parents to be the sole cause of deafness.

Fifth Case.—J. S., was born deaf, and there has been no apparent cause assigned, except that his mother while enciende "saw a deaf and dumb man acting." There is no other cause of deafness in any of the collateral branches of the family. There are seven other children, all of whom are perfect in body and mind.

Sixth Case.—E. S. Y., was deaf from birth. The family is free from any taint likely to produce deafness. None of the exanthema have attacked him, with the exception of the kine-pox. The mother, during the early part of her pregnancy, became very much excited, so as to be unable to speak, and ascribes the deafness of her child to this cause.

Seventh Case.—I. M. The only reason assigned for the deafness of this boy, is contained in the following account given by the mother:—"I lost a son three weeks previous to the birth of this deaf son. The dying child kept calling for me. The friends pre-
sent thought it not proper for me to witness its struggles. To prevent me from hearing the cries of the child, I put my fingers in my ears, and, so far as I could, stopped my hearing. Three weeks thereafter my child was born deaf and dumb, and has remained so ever since." This woman has had four children by her husband, (a convict in the state prison, and who has, since his release, deserted his wife,) and two by another man with whom she is at present living. All these children can hear and speak, and there is no other case of deafness known in any collateral branches of the family. There is no relationship between the parents.

Eighth Case.—This is a boy by the name of L. McK. H., who was born deaf and dumb. During the days allotted to his mother, one of the older children in the family hurt his shoulder, and it became necessary to lance it. The mother, fearing to see the operation, went some distance from the house, and in order that she might not hear the screams of her child, placed her fingers in her ears, and she says, "immediately experienced sensations which she could not describe." This is the cause assigned by the mother for her son's deafness. It may not be improper to add, however, that an uncle of the father of this lad was born deaf and dumb, and also a cousin of the mother, thus showing an hereditary disposition to deafness, which, much more likely than the above incident, was the cause of this infirmity. Six other children are in the family, none of whom are deaf and dumb.

Ninth Case.—J. W. P., was born deaf, and the mother assigns as a reason, that while with James, a child was placed in her arms to be fondled. The infant very suddenly expired, and she became so exceedingly frightened, that she believes the deafness of her child was induced. There are no other causes known by me for his deafness.

Tenth Case.—This is a case of congenital deafness in a bright, sprightly lass, perfect in all her faculties except hearing and speaking. The only cause for her deafness that I can find assigned, is contained in the following sad, yet interesting, narrative:—The father of this child had seduced the mother, under the promise of marriage. The situation of the mother being known, he promised to perform his duty, and legitimate the offspring. For some reason or other, the marriage was not immediately consummated, but the time for it was definitely settled a few weeks before the birth of the child. A few days before the wedding was to have taken place, the father went to work in a neighboring field, and while engaged in cutting down a tree, was instantly killed by the fall of it. The unfortunate mother on hearing the sad tidings, was rendered distracted with grief at the loss of her lover, and shame at her miserable condition. Hastening to the side of the dead man, she called upon him to speak to her once, if only once, more. This she did constantly in her frenzy, until torn away from him by her friends. Being confined shortly afterwards, she was de-
livered of a female infant, which has since its birth neither heard or spoken. And she ascribes its deafness to the efforts she made to hear the voice of her intended husband.

A case is mentioned in a report printed in the year 1837, of a boy, which at the time attracted considerable attention. The meatus auditorius externus was entirely wanting, and the auricle reduced to a mere projecting cartilage. The face and head were also deformed, but intellectually he did not appear to be deficient. The occasion of his deafness and deformity, "is supposed to have been fright on the part of the mother during the period of gestation, from a piercing shriek uttered by a servant. The distressing effect upon the ears of the parent, is believed to have caused those of the child to be closed up. This individual hears imperfectly, on opening his mouth, through the Eustachian tubes; and by this means he has, to a trifling extent, learned to articulate." The report suggests the practicability of opening the external orifice of the ear. I believe the operation was never performed.—[N. York Journal of Medicine.

On a new mode of Reducing Strangulated Hernia. By Baron Seutin.

Baron Seutin declares, that with his mode of reducing strangulated hernia, which he has now practiced for twenty years, he hardly ever in his large practice finds it necessary to have recourse to an operation.

The patient is laid upon his back, with the pelvis raised much higher than the shoulders, in order that the intestinal mass may exert traction upon the herniated portion. The knees are flexed, and the body is slightly turned to the opposite side to that on which the hernia exists. The surgeon ascertains that the hernia, habitually reducible, cannot be returned by continuous and moderate taxis. He next seeks with his index finger for the aperture that has given issue to the hernia, pushing up the skin sufficiently from below, in order not to be arrested by its resistance. The extremity of the finger is passed slowly in between the visera and the hernial orifice, depressing the intestine or omentum with the pulp of the finger. This stage of the procedure demands perseverance, for at first it seems impossible to succeed. The finger is next to be curved as a hook, and sufficient traction exerted on the ring to rupture some of the fibres, giving rise to a cracking very sensible to the finger, and sometimes to the ear. When this characteristic crack is not produced, the fibres must be submitted to a continuous forced extension, which, by extending them beyond the agency of their natural elasticity, generally terminates the strangulation. This mode of procedure is more applicable to Gimbernat's ligament, the hooking and tearing of which are more difficult than in the case of the inguinal ring. Considerable strength has sometimes to be exerted, and the index finger becomes much
fattigued. When, in consequence of the narrowness of the ring, the finger does not at once penetrate, it is to be pressed firmly against the fibrous edge, and inclined toward the hernia. After a time the fibres yield and the finger passes. When the finger becomes fattigued it is not to be withdrawn, but it should be supported by the fingers of an intelligent assistant, who seconds the action it is desired to produce. In inguinal hernia, the traction should not be exerted with the finger upon Poupart's ligament, but in a direction from within outwards, and from below upwards, by which the aponeurotic layers between the two ligamentous pillars constituting the inguinal aperture are easily torn through.

The ring is then enlarged by this tearing, just as if it had been divided by a cutting instrument, or largely dilated, and reduction takes place easily, by performing the taxis in a suitable direction. The mobility of the skin, its laxity in parts where hernia prevails, and its extensibility, greater in proportion to its thinness and to the absence of a lining of fatty cellular tissue—by allowing the sliding and thrusting of this membrane in front of the finger it cushions, affords protection to the intestine from all immediate contusion. When the strangulation is induced by the issue of a considerable mass of intestine, or an accumulation of faecal matters, it is desirable first to disengage one of the extremities of the noose, and to seek to expel the gas or faecal matters by moderate pressure, in order to facilitate the reduction of the tumor. In the few cases in which the finger cannot be introduced, a small incision may be practiced in the skin, and the handle of a spatula or any blunt instrument may be passed in by separating the cellular tissue. Pressing this against the border of the ring, while avoiding the intestine, this orifice may be eroded or dilated without danger. The greater the resistance offered by the aponeurotic fibres, the greater will be their tension, and the more easily will their laceration be produced.

As a general conclusion, it may be laid down, that the facility and promptitude of this procedure, and the immunity that attends it, ought to diminish the gravity of the prognosis of strangulated hernia, by rendering the circumstances under which recourse need be had to an operation quite exceptional. Such exceptional cases will be found (1) in old irreducible hernia. (2.) When the strangulation in inguinal hernia occurs at the internal ring. Generally the external ring and inguinal canal are large, and allow of the easy penetration of the finger: and then the new method is applicable, and the rupturing or dilatation of the internal ring should be attempted, and the manœuvre is rendered the easier by the fact, that in these cases the canal is much shortened, and the two rings much approximated. If, however, the external ring is too narrow to admit the finger, an operation is required. (3.) When there are general symptoms of a gangrenous state of the intestine.—[Bull. de Thérap. British and For. Med. Chir. Rev.]
Local Anaesthesia by Congelation.

Dr. H. L. Burpee, in the April number of the Dental Recorder, thinks that direct application of cold causes too much pain to a vital tooth or one in an inflamed condition, to be adopted into general use. He states that he has adopted into his practice an apparatus with which he extracts teeth without pain, but that it requires a longer time to effect the object than the one invented by Dr. Branch, "by commencing with warm water, and gradu-ating the cold at will, by which process the patient suffers nothing actually in the application, and seldom any pain is felt in removing the tooth." The time required is from one and a half to two and a half minutes. "This apparatus consists of a combination force pump, by which two fluids (warm and cold) can be thrown together or separately, through a flexible tube, into a mouth-piece covering the tooth and surrounding the gum, (the muscles of the face and tongue being protected by a non-conductor,) and passing off through a flexible tube leading to a vessel placed in a conven-ient position to receive the waste fluid." Dr. Burpee thinks that there are cases where different applications of cold may be used, to those teeth or roots which have lost their vitality. He remarks, that the danger to be incurred in anaesthesia by congelation, is as nothing compared to ether and chloroform, and that the results are quite as satisfactory, "and that it leaves none of the ill ef-fects," "that the patient is relieved from much dreaded pain and anxiety of mind."—[Am. Jour. of Dental Science.

On the Influence of Phosphate of Lime in the Production of Callus.
By M. A. Milne-Edwards.

The question of aiding the formation of callus by the adminis-tration of phosphate of lime has recently been revived in Paris, and the author of this paper alludes to some experiments tried by M. Gosselin at the Hôpital Cochin, especially in cases of fracture of the arm, which are sometimes so long in uniting. In the six cases observed by him the result seemed satisfactory, inasmuch as the apparatus could be removed in from twenty-seven to thirty days, the fracture appearing quite consolidated. As, however, in these cases, the condition of the callus could not be verified, M. Edwards undertook a series of comparative experiments on ani-mals. Fractures as nearly as possible alike were executed upon dogs and rabbits of the same size and strength, to some only of which the lime was administered. The phosphate employed was prepared by the calcination of bones, and consequently was com-bined with carbonate. The results were decidedly favorable; and the author believes that the phosphate may be usefully employed as an adjuvant, expediting the union in ordinary fractures, and tending to prevent the non-consolidation of others.

From another communication, (Gaz. des Hôp.,) it appears that
in one of M. Gosselin's cases of fracture of the lower third of the humerus, complete consolidation occurred in thirty days. He administers as a minimum dose half a gramme per diem.—[Comptes Rendus. British and For. Med. Chir. Rev.

New Operation for Paracentesis in Dropsy.

A new mode of "tapping," or performing the ordinary operation of paracentesis abdominis, recently adopted by Mr. Birkett, deserves a word of notice. Every surgical practitioner must be aware how commonplace and uninteresting this operation has become, and how very like the analogous process as regards a beer barrel; thus justifying in some measure the association of ideas with which the literal acceptation of the term, the process of "tapping," has come to be regarded by students and surgeons in operating theatres. Mr. Birkett proposes that the fluid should flow away by a piece of vulcanized India-rubber tube being slipped over a sort of flange on the canula, through which the trocar is passed; this piece of India-rubber tube fitted on to the further piece of tube of any convenient length, so as to carry the fluid away from the patient's bed. The finger and thumb are applied to the smaller piece of India-rubber tube, which is compressed firmly as the trocar is withdrawn, and this tube, then fitted on to the longer piece of tube. The very unpleasant sound of a flowing stream of fluid is thus done away with; and where patients are not able to sit up to have the operation performed, it suits most admirably. It prevents air also, as in paracentesis of the chest, entering into the cavity.—[N.Y. Jour. of Medicine.

Chorea.—Inhalation of Chloroform.

According to Dr. Géry, * chloroform inhalations have been used with advantage at the Hop. des Enfans in severe cases, where the violence of the movements have been beyond the control of opium or belladonna. It has been found at once to calm the movements and produce sleep, and in this way time has been gained for the employment of other remedies. On the first application of the vapour, the intensity of the movements is often greatly increased, but a calm succeeds as the inhalation is continued. Sound sleep thus induced lasts in children for ten or fifteen minutes, or even half an hour, and no ill effects have been observed to follow. The usual precautions, however, which are taken in the instance of adults, are necessary to be observed, such as ensuring that the stomach be empty, removing all obstacles to the respiratory movements, and watching the respiration and pulse, &c. The usual quantity administered has been ten to twenty grammes.

Dr. Bouchard† relates a case of a girl, in which severe chorea

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On the Use of the Oil of Turpentine, &c. [November, 1855]

had lasted twenty-one days. She was subjected to the influence of chloroform twenty seven times in fourteen days, at first twice, then three times, and lastly once a day, at the end of which time she was cured.

Chorea.—The gymnastic treatment of chorea has already been discussed in this journal, and we now subjoin the conclusions drawn from an extended experience of its use in the Hôpital des Enfants by M. Blache.* 1st. No other method of treatment applied to chorea has produced so large a number of cures as the gymnastic treatment either alone or associated with sulphurous baths. 2d. It may be employed in almost all cases, without being arrested by the various contra-indications which present themselves at each step in the use of the other remedies for the disease. 3d. The cure is obtained in a mean number of days about equal to that which the sulphurous baths require, but it seems to be more lasting, and the diminution of the affection is exhibited from the first. 4th. At the same time that the disorder of the movements disappears, the general health of the children sensibly improves, and the patients depart not only cured of the chorea, but also of the anaemia which most frequently accompanies it. 5th. The gymnastic exercises, which might be regarded as perilous, especially in the instance of the children who are submitted to them, present no danger at all, and may be put in practice without inconvenience in all seasons, an advantage which the baths do not possess. 6th. It is important to divide the exercises into two categories—a, the passive exercises, which can alone be employed in that period of the affection where the will has no influence over the muscular powers; and b, the active exercises, which the children execute themselves, either with or without the aid of apparatus.—[Brit. and For. Med. Review.

On the use of the Oil of Turpentine, with Cod-liver Oil in Ophthalmiae. (Translated from Rev. Thérapeutique by the Editor.)

Some years since, Holbert, in his department of the Hospital at Hambourg, tested the value of oil of turpentine in syphilitic iritis. M. Becker had already used it in rheumatic iritis, in which he found it exceedingly useful. Since then he has used it in other obstinate ophthalmias, and recently, in order to facilitate its use, he prescribes it in combination with cod-liver oil. He has given a spoonful dose every hour of the following mixture:—4 grammes of pure oil of turpentine (rectified) with 50 grammes of cod-liver oil, in a very bad case of catarrhal ophthalmia. He has used the same mixture for a contagious ophthalmia, which had resisted medical treatment for six weeks; afterwards, at the end of six days, he substituted camphine, which is made by distilling the oil of turpentine from the hydrate of lime. At the end of two weeks,

the left eye was clear, the conjunctiva slightly red, and at the right there was slight opacity of the cornea, with the granulations much diminished. After four weeks the eye was well. During this time the patient had taken 20 grammes of the essence of turpentine, and a mixture of 80 grammes of campnine, with 100 grammes of cod-liver oil.—[Annales d'Oculistique. Phila. Med. & Sur. Jour.

_Pneumonia, Asthenic or Passive form of; Treatment by Quinine._

Dr. Corrigan, in an interesting clinical lecture, (Dublin Hospital Gazette, July 15, 1856,) makes the following practical remarks:

I have two objects in view in this lecture; first, to impress on your minds, gentlemen, this position, which you ought never to forget, viz., that the name of a disease is not a sufficient guide either as to the nature or treatment of a case; and, secondly, to draw your attention to the treatment of certain forms and stages of pneumonia by quinine, both on account of the importance of this treatment, and of the cases before us forming a good illustration of the first point.

Medical students are very apt to fall into the same mistake as is occasionally fallen into by botanists, florists, and conchologists, viz., fancying that when they have acquired a knowledge of names they have acquired a knowledge of the nature of the objects of their studies; but the mere knowledge of the name of a plant, or a shell, or a flower, gives no more acquaintance with their respective natures than was possessed previously. You must avoid such a mistake in medicine, for its consequences would be too serious; and yet I am sorry to say that this error prevails very generally among our students, and it is because I see it prevail so generally that I feel myself called upon, even in the middle of a session, to notice it, and to warn you against it. I know it prevails, because I see the great tendency there is to substitute book-reading and knowledge of names of diseases merely, for the more troublesome task of reading disease in nature's book at the bed-side. The mere acquaintance with names, and the rules for treatment, will enable you to pass a very creditable examination, and even to win examination prizes, but it will not make you practitioners; and you should ever bear in mind that the passing of an examination with credit, and the obtaining a degree, are not to be your main objects. They are only the means to an end; that end is station in your profession, and its result competency; and believe me the only way to acquire both is to acquire a knowledge, not of the names, but of the intimate nature of the objects of your study.

Let us now proceed with the illustration of our first point, that the name of a disease is not an index to its nature or its treatment. With the name of "pneumonia" you generally and properly associate the ideas of sthenic vascular action of the capillaries, of throb-
Pneumonia.

[November,

Bing of the arteries, increased action in frequency and strength of the heart, and with the accompanying symptoms of flushed face, pink lips, hot breath, burning heat of skin, high-colored and scanty urine, and orange-colored viscid sputa. With these there will be naturally associated, as to treatment, bleeding and tartar emetic, those remedies that possess such power over high inflammatory action and over pneumonia, as we have sketched it; but if you were to imagine that the name "pneumonia" always indicated the same nature in the disease going under its name, you would fall into a very grievous error in knowledge and in practice. Pneumonia occasionally means a state of disease the very opposite in character to the picture first drawn, and requiring a very opposite treatment. It is this knowledge, so as to recognize the altered character of the disease, which you can only learn in clinical study.

To make my observations as simple and as easily intelligible as possible to you, I will confine my observations to what is usually called the first stage of pneumonia, that is the state in which, if a patient die, the lung will be found dark-colored, from the great quantity of blood contained in it, its capillaries congested, distended frequently beyond their natural calibre, its smaller air-tubes loaded with effused fluid, and the whole lung pitting on pressure and much heavier than natural. Bear in mind next, the peculiar structure of the lung, resembling, as it were, two large sponges, made up nearly altogether of a great congeries of vascular capillaries, the capillaries of the pulmonary artery, loaded with venous blood, and those of the pulmonary veins with arterial blood.

Now let me recall to your mind one of your earliest physiological lessons. If the capillary vessels of the web of a frog's foot be stimulated, the effect of the stimulation is very soon to cause a distension of the capillary, and a more rapid movement in the contained blood. This, along with the momentary preceding contraction is its sthenic state, for all that is necessary to enable it to return to its healthy state, is to withdraw the stimulant, and the capillary contracts of itself. But if the distension and stimulation be continued another phase occurs: the blood becomes darker, the circulation becomes slower, the capillary has lost its power of contracting, and, to enable it to return to its healthy contractile state, the application of some stimulant is required, when under its influence the capillary regains its lost power, and it again returns to its previously healthy state.

Now, this simple experiment is really the key to the sthenic and asthenic states of the vascular system, and is the foundation on which we rest our principles as to the treatment of pneumonia, which I bring before you in this lecture.

Carry your mind's eye from the experiment on the frog's foot to what goes on in some forms and types of pneumonia, and you can no more doubt of what is taking place in the lung within the interior of the chest, than you can doubt your ocular evidence of
what you see in the experiment. In the first stage of an attack of pneumonia, in a healthy constitution, with the whole capillary system, including, of course, that of the lungs in possession of its ordinary vigor, the capillaries become distended, but still preserve their sthenic state. In such a case the line of treatment is at once indicated: venesection, to relieve their over-distension, and tartar emetic, to act upon them and upon the whole vascular system, including heart and arterial and capillary system, are the great means of treatment upon which we rely. But if, from the state of constitution, or from the epidemic type of disease at the time, the capillaries do not retain their sthenic tone, they pass into the state exemplified in the experiment on the frog's foot, they lose their contractile power, and we have then to deal with quite a different state—with an immense mesh of pulmonic tissue, formed nearly altogether of capillaries that have lost their contractile power, and in which further depletion will be not only useless but injurious, for while its effect in lessening the distension would at best be doubtful, it would tend still further to aggravate that asthenic character which they now present; and extension of the disease, increasing debility, exhaustion, and death will follow. It is to meet the supervision of this second or asthenic stage that you have seen me exhibit quinine in large doses; the result has been satisfactory, and it is the more satisfactory to know that its employment has not been a mere empirical experiment, but has arisen from considering the physiological state of the capillaries in the lungs, as illustrated by a physiological experiment, and revealed to us by an analysis of the symptoms. I will now shortly notice some of the cases.

The first case that suggested the treatment occurred in private practice. The patient was a man of about thirty-five years of age. He was attacked by pneumonia of the right lung; he was a man of rather full habit, and flabby texture. The physical signs were the ordinary ones of the first stage. The constitutional symptoms did not indicate any very high degree of vascular action, and the treatment was of the usual kind, cupping, blistering, and calomel and opium. About the fifth day there was every symptom discouraging in this case. He became slightly jaundiced, or rather assumed a yellowish, sallow cast of countenance, the pulse became very full, very soft, and very yielding, and the expectoration presented the appearance of softened down dissolved blood. The lung had not passed into the second stage of the disease. He appeared now to be rapidly sinking, and it then occurred to me to administer quinine, guided by the principles that I have already explained. He got five grains of quinine every three hours, and the alteration in twenty-four hours was very marked indeed. The same treatment was continued for the next day, and within three days more he was out of danger. I never treated a case in which I was more satisfied of the efficacy of the medicine.
In this case the disease set in presenting a moderate degree of the asthenic form, but the capillaries speedily lost their contractile power, and then the asthenic form rapidly succeeded. Quinine appears to possess the same power in giving contractile action to the capillaries of the lungs, which we know it possesses in so marked a degree over the capillaries and venous radicles in the spleen, and it may further support this view to recollect that both in lungs and spleen the capillaries are in a very large proportion venous.

This asthenic form of pneumonia may, however, exist from the very commencement of the attack, that is, either from type of disease, from nature of constitution, or from long-continued action of depressing influence, the capillaries of the lungs may lose their sthenic power from the very onset, and thus we may have asthenic pneumonia either as the second stage of sthenic pneumonia, or we may have it as the primary disease.

James Hays, aet. 21, previously a healthy man, was admitted into the Hardwicke Hospital on the 24th of March, 1856, complaining of pain in the right side, and of great dyspnoea. On examination, double pneumonia was discovered, both lungs were extensively engaged, but the disease had not gone beyond the first stage; there was extensive crepitation with bronchial respiration. The pulse was extremely rapid and small. The debility was extreme, and the surface of the body was pale and rather cool. He presented very much the appearance of a dying man. He was a boatman, constantly exposed to wet and cold, and for four days had been suffering under his illness, and all this time had lain in a canal luggage boat, on its way to Dublin, in extremely inclement and cold weather.

In the night the dyspnoea became so urgent that he seemed on the point of suffocating; from this he was somewhat relieved by draughts of ether and by wine. A blister was applied to his chest. The next day he was ordered five grains of sulphate of quinine every three hours, and the quinine was continued. On the 29th he was so much improved that the quinine was diminished to a dose three times a day, and his convalescence then set in. I merely give you these cases in illustration of the disease and of its treatment; you have seen a great many cases of a similar kind treated here on the same principle during the past winter and spring, and I will now briefly sum up in propositions what I wish to impress on you in this lecture.

1. That the name of a disease is not an index to its treatment; but that on the contrary, under the one name, the pathological conditions of the organ affected may change so much, as to require the most varying or even opposite mode of treatment.

2. That pneumonia presents an illustration of this principle, as it may be of a sthenic or an asthenic form.

3. That the asthenic form may be consequent on, or be the se-
cond stage of the asthenic form; or that the primary attack of pneumonia may be of the asthenic form from the commencement.

4. That quinine in large doses is a remedy of great power over the asthenic form of pneumonia, whether it be primary or second-

ary.

I have only to add, that these observations as to the pathology and treatment of this form of pneumonia have reference to the disease in the stage of extreme congestion, or what is commonly called the first stage of pneumonia.—[Am. Jour. Med. Sciences.

On Gangrene from Arteritis. By Professor Porta.

The following are some of the conclusions arrived at by Professor Porta, from the observation of thirty-one cases of his own, and the consideration of those published by others:

Although the tunics of arteries consist of tissues little disposed to inflammation, yet they are not exempt from liability to it; and external violence, the extension of phlegmasia from other tissues, rheumatism or metastasis, may induce an arteritis that may lead to gangrene of subjacent parts. Among all these causes, metastasis is pre- eminent, so that eighteen out of the thirty-one cases are referable to it. Not infrequently on the decline or disappearance of some serious internal malady, a reverberation is directed to the arteries of the limbs, the original disease either then disappearing, or remaining as a complication of the newly developed arteritis. The large external arteries, such as the axillary, humeral, femoral, or popliteal, are usually the subjects of such reverberation, but it has not as yet been met with in the carotid. Exceptionally small-er arteries, are attacked, such as the radial, ulnar, or tibial.

The end to which arteritis tends is the closure of the artery, all the manifestations observed subsequent to the cessation of its pulsation being but the sequel of that. Strictly speaking, however, such cessation of pulsation is not pathognomonic of obliteration, as sometimes a minute stream continues to pass, which excites so feeble an oscillation of the vessel as not to be perceptible to the touch. The obstruction of the artery does not necessarily give rise to gangrene, for not only may it be incomplete, but even when complete it may have been formed with sufficient slowness to allow the development of the lateral anastomoses; the amount of the obliteration, indeed, exerting less influence than the rapidity with which the coagulum is formed. This local condition is not the sole cause of the gangrene, for the production of this may be favored by a disordered state of the general circulation, or a temporary enfeeblement of the cardiac impulse. There is, however, no lesion of the function of the capillaries operating, as the minute vessels are found healthy and empty in the midst of the gangrened parts, just as they are in mortifications that supervene upon ligature.
Gangrene from Arteritis. [November,

Gangrene from arteritis presents a great analogy to senile gangrene, which may take place slowly or rapidly, according to the amount of ossific deposit, and the other conditions of the subject.

There is nothing constant observed as regards the form, extension, or duration of this result of arteritis. Sometimes the patient dies during the prodromic stage, in consequence of the rapid exhaustion of his powers before the limb has mortified. In other cases there are eschars, limited to the skin; or the gangrene may attack only one or more toes. Frequently, however, it extends to the foot and leg, or the hand and fore-arm, until the power of the lateral circulation restores the equilibrium, if it succeed in so doing. If even it is arrested, there is a disposition to relapse; and a paresis, and temporary or permanent atrophy of the limb, remains. Danger to life, however, is not alone dependent upon the degree of extension of the gangrene, but also upon the general state; this allowing us sometimes to hope for recovery in even extensive gangrene, while at others it renders a limited gangrene a most grave circumstance. So dangerous an affection is it, that few succeed in escaping from its effects.

Besides the internal changes that may exist as the effects of the malady which has also caused the arteritis, we often find in the artery supposed to be affected but slight traces of lesions. In bad cases, however, a sero-gelatinous fluid is found external to the artery, the cellular coat is finely injected, and the proper tunics are adherent to each other, and fragile. Sometimes there is thickening of the cellular tunic, and exudation of puriform matter or plastic lymph, externally to the vessel, affixing it to neighboring parts. All these lesions are not of frequent occurrence in arteritis; and except in the case of violence, all the coats of the vessel may present a normal appearance, and they would be so pronounced, were it not for the obstruction caused by the product of inflammation. This consists of a solid coagulum of plastic lymph, varying in size, length, and degree of adhesion to the vessel. Sometimes small coagula are observed obstructing the artery at intervals; but more commonly it is a single coagulum, one or more inches in length, converting the vessel into a cord. Sometimes, however, the coagulum assumes the form of a canal, or presents here and there small lacunae, containing a milky or semi-fluid reddish matter, which may also cover the whole surface of the coagulum, or almost constitute its entire substance. Maisonneuve and Cruveilhier have found even the smallest vessels corresponding to the gangrened part obliterated; but, for the most part, the closure will be found only in the vessels above the gangrened part, those corresponding to this remaining open—showing that the coagulum has preceded the gangrene.

The principal veins of the limb sometimes participate in the inflammatory condition, and exhibit the signs of this more plainly than do the arteries. Their coats become thickened, and rich in
vasa vaserum: while their cavity is filled with lymph, or, oftener still, by puriform matter combined with crur. In ordinary cases, however, the principal veins remain free, contain a small quantity of blood, in part fluid, and in part coagulated, or, without exhibiting any signs of phlegmasia, are obstructed by a sanguineous coagulum.

As the arteritis is unpreceded by any prodrome, no prophylactic can be employed; but in order to prevent or circumscribe the formation of coagula, the arteritis itself must be actively combated by antiphlogistic means, general or local, according to the amount of reaction and the condition of the patient. These must, however, be employed with due caution; for while we combat the inflammatory action, we have to favor the lateral circulation. As soon as the more urgent symptoms are mitigated, aromatic fomentations or warm applications should be made to the part, improving the patient's diet, and even exhibiting stimuli, if not specially contraindicated. If the pain is violent, opium is here, too, of great use. These means are, however, often of no avail; for the arteritis, especially when metastatic, appears suddenly, gives rise to the exudation, and at once disappears; gangrene following if the lateral circulation cannot resist, and leaving to the practitioner only the office of administering palliatives. So, too, all attempts at dissipating the coagulum are useless, this remaining even in the case of recovery; and all that can be done is to endeavor to limit it by favoring the lateral circulation. Even in the case of recovery, until the circulation is completely re-established, there is great danger of relapse.—[Brit. & For. Med. Chir. Rev. and Omodei An. di Med.

On the Comparative Value of Amputation at the Knee-Joint and of the Thigh. By M. Baudens.

M. Baudens states, in a recent communication to the Académie des Sciences, that the above question is one of those that have engaged his attention during his directorship of the French army in the East. He found that the opinions of all the medical officers whom he consulted, whether in the Crimea, at Constantinople, or the military hospitals at Marseilles and Toulon, were in favor of disarticulation of the knee whenever the amputation of the extremity could not be performed below the patella. And, in fact, the disarticulation of the knee has succeeded in a given number of cases oftener than the amputation of the thigh, even when performed at the lower third. But the disarticulation is only to be preferred upon one express condition—viz., that it be performed immediately after the receipt of the injury. Consecutively, amputation of the thigh should be preferred. This second statement agrees in every respect with all that he has observed, written and taught during the ten years he has been at the head of the Val-de-Grâce. The excellent results of disarticulation of the knee, espe-
Citrate of Caffein in Neuralgia. By G. W. Arnett, of Bossier Parish, Louisiana.

I see in the May number of your Journal—p. 414—Muriate of Morphia and Coffee recommended in Neuralgia by M. Boileau. I have used in the same disease the Citrate of Caffein and the Sulphate of Morphia with more success than with all the remedies that I have seen tried. I have used the same remedy with more relief to my patients in nervous headache, hysteria, and a few other diseases of a similar character, than any other one remedy. My prescription varies in amount to suit the case; but the average would be about

grs. \(\frac{1}{2}\) sul. morphia, grs. iij caffein, grs. iij citric acid,
to be given in some warm coffee, or which is better, in a decoction of rad. senega. The caffein and citric acid will, in the majority of cases, relieve nervous irritation without the addition of the morphia; which is a desideratum when the bowels are constipated. It acts powerfully on the skin; equalizes the circulation, and thereby removes local congestion.—[Charleston Med. Journal.

On the Treatment of Ranula. By M. Gosselin.

M. Gosselin, after alluding to the various modes of treating ranula that have been adopted, and the relapses that are so common after them, describes the plan he has himself found beneficial. He first of all performs excision, as recommended by Boyer, and then cauterizes with the nitrate of silver. Next day he introduces a probe into the wound, owing to its tendency to close, and repeats the cauterization the day after that. On the third or fourth day he enlarges, by means of the scissors, the aperture, which has become too narrow, and on the following day cauterizes again. After ten or twelve days of this assiduous attention, if on the introduction
of a probe he finds the cavity is obliterated, he leaves the opening to itself. If, however, a track of a certain extent still exists, he again enlarges the orifice with the scissors. This attention to the case is rarely required beyond fifteen days, when the external opening becomes closed, and the cavity being obliterated, there is no fear of relapse. M. Gosselin has operated in this way in several cases, and in three of these, which he has watched for several years, no relapse has ensued, the opening remaining closed. This plan of procedure has also been extended to various analogous cases, in which there is a cavity with secreting walls, having no spontaneous tendency to approach each other.—[L'Union Méd. Brit. and For. Med. Chir. Rev.]

EDITORIAL AND MISCELLANEOUS.

BIBLIOGRAPHICAL.

A Treatise on Therapeutics and Pharmacology or Materia Medica. By George B. Wood, M. D., late President of the American Medical Association, &c., &c. Philadelphia: J. B. Lippincott & Co. 1856. 2 vols. 8vo. (For sale by T. Richards & Son.)

The work before us is from the pen of one who "for a period of about thirty years, before 1850, when he was transferred to the Professorship he now occupies, was engaged in teaching Materia Medica, first as a private lecturer, and afterwards, successively, in the Philadelphia College of Pharmacy, and the University of Pennsylvania;" one than whom no man in our country can be supposed better qualified in every respect for the production of a first-rate treatise on Therapeutics. These volumes, comprising upwards of 1700 pages, are divided into two parts, the 1st treating of General, and the 2d of Special Therapeutics and Pharmacology. In the first part we find chapters upon the operation, the effects, the application, and the classification of medicines. The second part comprehends the general remedies, as astringents, tonics, stimulants, sedatives, and alteratives; the local remedies, as emetics, cathartics, diuretics, diaphoretics, expectorants, cholagogues, emmenagogues, &c.; local remedies affecting the organization; local remedies acting mechanically; and lastly, the non-systemic remedies, as antacids and anthelmintics.

We have given the above synopsis of the contents of the work as better adapted to convey some idea of its scope than could be done in any other way with the space allotted us. We cheerfully commend this great American production to the profession, believing that no one will regret having bought it, after perusing it.

The author of this treatise is one of the most prolific and successful medical writers of Great Britain, and the American profession will doubtless appreciate the value of this enlarged edition. The first seventy pages are devoted to the management of infancy and childhood; after which the author passes to the consideration of special diseases under the heads of diseases of the Cerebro-spinal system, diseases of the Respiratory system, diseases of the Heart, diseases of the Digestive system, diseases of the Skin, febrile affections, &c. The book is fully posted up, and will be found a valuable addition to the practitioner's library.


We have here a work treating of poisoning, in general, and by particular agents; of wounds, infanticide, pregnancy, delivery, concealment of birth, criminal abortion, birth inheritance, legitimacy, paternity, hermaphrodism, impotency, sterility, rape, asphyxia, drowning, hanging, strangulation, suffocation, lightning, cold, starvation, and insanity.

Taylor's Medical Jurisprudence has long been a standard work of reference in England and in this country, and very deservedly so. The author is a clear, concise and judicious writer.

Human Physiology, Statical and Dynamical, or the conditions and course of the life of man. By John Wm. Draper, M.D., LL.D., Professor of Chemistry and Physiology in the University of New York. Illustrated with nearly 300 wood engravings. New York: Harper & brothers. 1856. 8vo., pp. 650. (For sale by T. Richards & Son.)

Prof. Draper has been long known to the profession as one of the most happy and successful teachers in our country. His finely cultivated mind and peculiar mode of treating physiological subjects, have given to his work a degree of freshness that will win for it the good will of the reader. Book 1st, on "Statistical Physiology" comprises the study of the various functions of the body, whilst the 2d Book, or that on "Dynamical Physiology," is devoted to the examination of the principle of organization, the influence of physical agents on the organic series, the organic cell, reproduction, growth, sleep, and death. The author dwells, lastly, upon the influence of physical agents on the aspect and form of man, and on his intellectual qualities, and upon what he styles "social mechanics," or the history of society, comparative and human. We regret that our limits do not at
present permit us to do more than simply to advise those who wish to read an interesting and instructive work on physiology to provide themselves with a copy of the one before us.


No one can be better qualified for giving a correct and full report of the present state of microscopy than the learned and indefatigable author of the work before us. After studying the history, construction, and management of the microscope, he directs the student to the microscopic structures of the various forms of vegetable and animal life, and finally to the animal kingdom. The appendix, by Prof. Smith, occupies about 75 pages, and will be found highly useful. The work as a whole is an exceedingly interesting contribution to medical literature, and will add to the well earned reputation of the author.

Human Physiology. By Robley Dunglison, M. D., LL. D., &c., &c.—With 532 illustrations. 8th edition; revised, modified and enlarged; in 2 vols., 8vo. Philadelphia: Blanchard & Lea. 1856. (For sale by T. Richards & Son.)

The call for an eighth edition of this work shows the high estimation in which it is held by the profession. Like Carpenter, of England, Professor Dunglison has done much and good service to the cause of science by his laborious and able compilations—diligently collecting and placing before the reader, in a happy style, the facts and opinions of others scattered over the broad expanse of medical literature. While neither the English nor the American author may lay much claim to originality of research, they are, we repeat, eminently entitled to the gratitude of the profession. The work before us is an excellent, well arranged, system of Physiology—an admirable text-book for students, and book of reference for practitioners.

An Introduction to Physiology, designed for the use of Students and of the general reader. By M. La Borde, M. D., Professor in the South Carolina College. New York: R. B. Collins. 1855. 8vo., pp. 400.

The author announces in his Preface that, "it is not his purpose to write a detailed and professional treatise on physiology, but to present the subject in such a manner as to engage the attention of the general reader." We fully agree with him with regard to the importance of familiarizing men with their own structure and functions; and the little volume before us is well calculated to please as well as to instruct. It is not adapted to the student of medicine, but cannot fail to be useful in our literary institutions.

This is another of Prof. Dunglison's excellent compilations of useful matter, which has reached a seventh edition. New articles are being continually brought to the notice of the profession through the periodical press which have not yet obtained a place in the systematic works on materia medica. This work, as its title implies, relates principally to agents of this class, and will save the practitioner the trouble of seeking in many places what he may here find collected for him.


This is one of the most generally approved assistants for the dissecting rooms of our medical colleges. It is well adapted to the purpose for which it is designed.


The object of this little work is an analysis of the facts and doctrines of those who differ from the author upon the interesting subject to which he has bestowed so much of his attention. His arguments are very plausible, but we still think him too much under the influence of one idea to be blindly followed. The uterine mania, if we may so call it, has done much good; but a vast deal of mischief also.


We have just received a new edition of the above work, making the fourth in the short space of fifteen months. It must be highly gratifying to the author to find his work so generally and favorably received. Having already repeatedly directed attention to it, we will now confine ourselves to this simple announcement.

Albinos.—Having seen it stated in the newspapers sometime ago that a negress in Alabama had given birth to three children, two of whom were white and the other black, we addressed a note to Dr. John H. Hundley, of Mooresville, the attending physician, requesting a statement of the facts.
We have been favored with a reply from the Doctor, who informs us that it has been ascertained by microscopic examination of the hair of these children that the two white ones were albinos, their hair presenting the negro peculiarity as strongly as that of the black child. Our informant adds, that both parents are full-blooded negroes—that the mother has had fourteen children, five albinos and nine blacks, and that the albinos are as white as any of the caucasian race.

The conjectures about double paternity and superfetation are therefore, in this case at least, set at rest. The advantages of the microscopic test are also here clearly set forth.

Professorial Changes.—Professorships appear to be at a discount, if we are to judge from the numerous resignations and changes that have taken place since the close of the last winter sessions. As all is not gold that glitters, so it is with medical colleges. Professorships are not necessarily profitable, nor is the sum of their remuneration always indicated by the "catalogue of students in attendance." The competition for numbers seems to be greater, in some places, than that for money, and two "dead-heads" are there preferred to one paying student. It is not to be wondered at that men of sense will get tired of such empty honors as are to be met in many of the colleges of our country.

Dr. H. W. Desaussure Ford, of this city, has been appointed Demon- strator of Anatomy in the Medical Department of Pennsylvania College, Philadelphia. Our young friend will, we feel assured, sustain himself creditably in the position thus assigned him.

The New York Medical Times has merged its identity in that of its cotemporary the New York Journal of Medicine. The editors of both will unite their exertions in behalf of the latter.

An Easy Mode of Constructing Bougies.—Dr. P. H. Cabell, of Selma, Ala., calls (Virginia Med. Journal, April, 1856) attention to an easy and rapid mode of constructing bougies, which he thinks presents some advantages, both as to the qualities possessed, and the facility and cheapness with which they may be made. Reflecting upon the advantages the bougies made of elm bark possessed, from the ease with which they are introduced, and the expansion they undergo while in the urethra; and then thinking of the danger of breaking, the difficulty of treating deep-seated strictures, and the grave accidents which sometimes occur, Dr. C. determined to seek some substitute, which would possess its good qualities, and be free from all risk.

"The substance I finally selected was untanned cowhide, which may be obtained sometimes of great thickness. It is first to be well soaked in water, then cut into strips of suitable length and width, and tacked by the
extremities over a block of wood of the proper curve. When wished straight, no form is necessary, they being merely stretched on a plane surface till dry. When dry, they are found very tough, unyielding, and of sufficient elasticity. They may be brought to the proper size by the knife, rasp, sandpaper, &c., and will be found to have a fine polish, which allows them to be introduced with ease; they are much more rigid than either the wax or gum instruments, but they are sufficiently yielding to be perfectly safe unless great violence is used, and even then I do not conceive that there could be much if any risk of making a false passage.

"There are two ways of preparing them for use—one by oiling as usual, and the other by dipping for a few moments in warm water. The point may be previously well softened by a longer immersion in water. It thus becomes almost jelly-like, and glides easily and painlessly along the urethra. If the surgeon does not wish to avail himself of their expansiveness in dilating the stricture, he may cover them with a solution of gutta percha, in chloroform, which will protect them from the action of the urethral mucus, and render them beautifully polished."—[Am. Jour. of Med. Sci.

Ergot and Borax, their special indications.—We take from the Union Médicale the following comparison of these two agents, in their effects upon the uterus, by Dr. Spengler, of Ems. Each promotes uterine contractions, but are indicated under different circumstances. Borax is preferable when the woman is laboring under an exaltation of sensation, or when there are spasmodic symptoms, cramps, and pain; or gastric symptoms, dyspepsia, acidity of the stomach, or a bilious condition. Ergot answers better with soft, leuco-phlegmatic women, whose fibres are relaxed. When the woman is greatly exhausted, physically and morally, when the pains are very severe and insupportable, the addition of ether to the ergot is the best means of procuring relief. Chloroform would probably answer equally well, since it is the anaesthetic effect which is desirable. M. Spengler prefers the infusion, made with two to four parts of ergot to one hundred of water. About two parts of ether may be added. The dose is a large spoonful every fifteen minutes. If there be gastric derangement, or constipation, castor oil is often sufficient to provoke uterine contractions.—[Boston Medical and Surgical Journal.

The Medical Association.—The American Medical Association, at its annual meeting in the year 1852, resolved to contribute a marble block to the Washington Monument. The following letter has been written by the Chairman of the Committee, announcing the gift and describing the block, which is said to be beautiful in design and execution:

To the President of the
Washington National Monument Society:

Sir—At the meeting of the "American Medical Association," in the city of Richmond, in May, 1852, the following preamble and resolution were unanimously adopted:

"Whereas it is the duty of patriotism to do homage to those who have been benefactors to their country; and whereas the medical profession in the United States, heretofore not wanting in patriotic feeling or action, desire to co-operate with the other public bodies and institutions of the coun-
try in rendering their profound reverence to the memory of him who was first in peace, first in war, and first in the hearts of his countrymen: Be it, therefore,    

"Resolved, That a committee of five be appointed, whose duty it shall be to solicit subscriptions from members of the American Medical Association for the purpose of procuring a suitable stone, with an appropriate inscription, for insertion, in the name of this association, into the national monument to the memory of Washington, now in progress of erection at Washington City.    

In compliance with the above resolution, the committee contracted with Mr. Lewis Haldy, marble mason of the city of Lancaster, to execute the work. A block of Vermont statuary marble was procured, and there was at that time in the employment of Mr. Haldy a young artist, Mr. J. Augustus Beck, a native of Litiz, Lancaster county, Pennsylvania, who, after seeing the design, undertook to execute it. The design, recommended to the committee by the lamented Dr. A. L. Pearson, of Salem, Massachusetts, represents the interview between Hippocrates, the father of medicine, and the ambassadors of Artaxerxes, King of Persia, who brought him costly presents and money to induce him to leave his native country and enter the king's service; and as in the act of saying, "tell your master that I am rich enough; that honor will not permit me to accept his gifts nor to go into Asia to succor the enemies of Greece."    

Animated by the same spirit of devotion to their country which influenced the greatest medical mind of Greece, the Physicians of the United States now tender to you this tribute of their love and veneration of him, who, whether possessed of civil or military power, had no other ambition than to serve well his country. In claiming this privilege they would point you to their country's history, which records among her purest patriots the names of such medical men as Warren, Rush, and a host of others who perilled their lives and fortunes in the cause of liberty. Whether in the field or in the council, they have ever manifested their devotion. And whenever perils from within or dangers from without threaten to weaken the strength, to mar the beauty, or to assail the integrity of our glorious Union, they offer this as a pledge through you to our common country that they will ever be ready to follow the example of their fathers in making a similar sacrifice.    

In behalf of the committee of the American Medical Association.    

JNO. L. AtLEE, Chairman.    

Lancaster, (Penn.) Sept. 8, 1856.    

Safety during Thunder Storms.—The records we are now making of the freaks of lightning in various sections of the country, both far and near, prompt this communication.    

First: Many persons suffer greatly from fear of lightning during the thunder storms. To such we say that thus far, since steamboats have been in use, no case of loss of life by lightning has occurred in a steamboat or ocean steamer in a period of fifty years or more; and since railroads have been in use, now about thirty or more years, no case of loss of life by lightning has been known in a railroad car. This wonderful exemption, when it is considered that tens of millions of passengers have been conveyed by these two facilities, is extraordinary, and should calm the feelings of the
timid during thunder storms, while in steamboats, ocean steamers or railroad cars.

Second: No case of loss of life by lightning has been known in an iron ship of iron building. This fact, with those stated in the next preceding paragraph, should effectually dispel the too prevalent belief that metals are dangerous, from an erroneously supposed attraction for lightning; metals attract lightning, but the attractive power probably does not extend over a great surface.

Third: Vessels provided with lightning conductors have never suffered injury from lightning, if the conductors were up and the continuity uninterupted to the water; nor has death by lightning been ever known on board of a vessel thus furnished.

Fourth: We have never known of but one death from lightning in a building furnished with metallic conductors, reared for the purpose of protection, and that occurred in the summer of 1855, at Little Prairie, Wis. In relation to this death we have had considerable correspondence with the person who put up the conductor.

Iron wire, costing less than one cent per foot, and less than one dollar per hundred feet, in one single piece, is sufficiently large for a lightning conductor. Any mechanic of ordinary capacity can put up a rod. Glass insulators with screw fastenings can be had of some of the hardware and glassware stores in New York for about twelve shillings per dozen. Persons who want ornamented rods can substitute copper wire of the same size.

One register of thirteen years states the deaths by lightning at 750 persons; the wounded we have not counted—they number many hundred.

Persons struck down by lightning should be freely drenched with cold water, and if necessary the drenching should be continued for hours.

We have no pecuniary interest, direct or indirect, in the furnishing or putting up lightning conductors; our only object in making this notice is to give information.

We have printed a sheet giving directions for putting up conductors that will be sent to any person, postage free, who may desire a copy.

Brooklyn Heights, June 9th, 1866. E. MERIAM.

Injection of Balsam Copaiba in Gonorrhæa. By M. DALLAS.—M. Dallas, of Odessa, states, in confirmation of the observations already published by Taddei, Marchal, and others, that the injection of the balsam of copaiba is the most efficacious mode of treating gonorrhœa. In sixteen cases he has so employed it, using no internal remedy, either in recent or old gonorrhœa, with complete success. His formula is copaib. five drachms; one yolk of egg; gummy extract of opium, one grain; water seven ounces. The injection should be used several times a day.—Brit. and For. Med. Chir. Review, from Gaz. des Hop.

Tincture of Iodine as a Collyrium in Hypopyon.—M. Rivaud-Laudran recommends (L'Union Médicale, April 6) the tincture of iodine, four or five drops to six drachms of water as a collyrium to produce absorption in hypopyon.—[American Jour. of Med. Sci.]