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TUBERCULOSIS NUMBER

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Original Articles

IMMUNITY—ITS APPLICATION IN THE THERAPY AND DIAG- NOSIS OF TUBERCULOSIS.

W. M. Babb, M. D., Keyser, West
Virginia.

*(Read before Grant - Hampshire - Hardy
Medical Society May 7, 1909.)*

The meaning of the term Immunity has in recent years assumed gigantic proportions. Formerly applied to the condition whereby the individual was, through previous attack or other causes, protected from the invasion of certain specific diseases, it would at present seem to embrace all those complex biologic processes whereby the individual is, through continuous adjustment or adaptation, brought into harmonious relationship with his surroundings.

The phase of the subject with which we are at present dealing has to do with the mechanism of cellular and tissue reaction in the presence of pathogenic microorganisms and their toxins. When pathogenic microorganisms or their toxins invade the tissues of an animal, they stimulate these tissues to produce certain substances which destroy or promote the destruction of the microorganisms, or which neutralize their toxins; these substances are effective in their action only for the particular microorganism or toxine which stimulates their production. These substances are spoken of collectively as antibodies, and the bacteria

or toxins which stimulate their production are collectively called antigens; a serum possessing such antibodies is said to be immune to the particular antigen producing the immunity.

It is well established that the deleterious effects of pathogenic microorganisms are due largely to the toxins which they liberate in the tissues of the host; certain microorganisms liberate their toxins during their life, and such toxins are called extracellular; certain other microorganisms liberate their toxins only when they die, or are disintegrated, and such poisons are referred to as endotoxins or intracellular.

The destructive action of toxins upon the body cell is generally conceded to be a chemical one, and is produced through the union of the toxine molecule and certain atoms of the body cell for which it has an affinity; this is in accordance with the celebrated side chain theory of Erlich, who assumed that the body cell is composed of two molecular groups, one group constituting the central, essential or intrinsic elements of the cell, and another group, which he termed the "side chain group," through the medium of which the cell receives its nourishment. Through the action of these intermediate bodies we have an explanation of the selective action of cells, the intermediate body taking up and transferring to the central cell body only those elements from the surrounding medium for which it has an especial affinity. These intermediate atoms or bodies are termed receptors. In addition to the receptors, which look after the nutrition of the cell, there are others which have apparently an affinity for toxic material. It is through these that the toxic destruction of the cell

is effected. The receptors of a cell are numerous. We can assume that there is at least one receptor among the toxic group for each variety of infection to which the cell is susceptible; in other words, the receptors are specific in their affinities. An individual whose body cells do not possess receptors for a certain microbial toxine is immune to that particular disease; this is a natural immunity and differs materially, as we shall see, from an acquired immunity.

When the receptors of a cell through union with toxins become exhausted or materially diminished in numbers, it becomes the business of the cell, provided it has not been too materially damaged, to produce new receptors to take the place of those whose affinities have been satisfied, and this it proceeds to do, and according to the well established law of over compensation, it produces receptors in numbers which exceed the immediate needs of the cell, and this excess of receptors is thrown off free in the circulating blood as antibodies and they have no further connection with the cell, and in this we have an explanation of the formation of antitoxines. The free cell receptors meet and combine in the circulating blood with the toxins, whose affinities are thus satisfied and they are rendered harmless. Erlich, after further experimentation, decided that the toxine molecule is composed of two groups or bodies; one is called the haptophore, which binds the molecule to the receptor, and the other the toxiphore, which unites with the central cell group after being bound to the cell by the receptor.

In making diphtheritic antitoxine through the kindly offices of the horse, we stimulate his cells by injecting diphtheritic toxine to the over-production of receptors, which are thrown free into his serum, this serum containing the receptors being transferred to the blood vessels of the diphtheria patient, where the receptors bind the toxine molecules in the patient's blood; supplied in this manner with the receptors of the horse the patient has an acquired passive toxic immunity; if the patient unaided recovers by making his own free receptors he has an active acquired toxic immunity. In this process we have dealt wholly with the toxins and not with the bacteria at all.

Unfortunately for the cause of antitoxic serum therapy, which promised so much at the time Von Behring first successfully used

diphtheritic antitoxines, most microbial infections belong to the group whose toxins are intracellular, and apparently it is not through the production of antitoxines, alone at least, that the animal body protects itself from this group. The processes which in this connection are at present best understood are bacteriolysis and phagocytosis. By bacteriolysis is meant the destructive disintegration of bacteria by substances in the blood serum known as bacteriolysins.

It has long been known that the serum of certain animals has a destructive effect upon the red blood cells of certain alien species. This destruction consists principally in the separation of the haemoglobin from the body of the cell. Blood serum possessing this property is said to be lytic for the corpuscles acted upon, and the process is spoken of as haemolysis. Bordet demonstrated that this property on the part of an animal could be acquired when it did not normally exist.

The blood serum of the guinea pig is not normally lytic for the red cells of the rabbit, or at least very slightly so. By injecting a few c. c. of the whipped blood of the rabbit containing red cells and serum into the peritoneal cavity of the guinea pig at intervals of a few days, Bordet was able eventually to obtain serum from the guinea pig which was lytic for the red cells of the rabbit. The guinea pig serum had become immune to the red cells of the rabbit; this newly acquired property of the guinea pig serum was specific for the red corpuscles of the rabbit and produced no effect upon the red cells of animals for which guinea pig serum was normally not lytic.

It was speedily found that the serum of an animal could thus be rendered immune to numerous cellular bodies of other species. By injecting spermatozoa a substance was obtained which, when brought in contact with similar spermatozoa, at once caused cessation of their movements; by injecting liver cells a serum was obtained which, when injected, caused destruction of the liver cells of the animal against whose cells the immunity had been produced.

Upon further experimentation the lytic properties of immunized serum was found to be due to two chemical bodies—one the newly formed specific body, called the amboceptor, and the other, called complement, which it has been found exists normally in blood serum. By heating the serum con-

taining the substances to 55° C. the complement is destroyed and the lytic property is lost, and the serum is said to be inactivated; by adding fresh normal serum to the inactivated serum its lytic properties are restored; this is taken as evidence that the complement is normally present in blood serum.

The explanation of the mechanism of cytolysis, as this phenomenon is in general terms called, is similar to that of the union of toxine and body cells, the amboceptor being the intermediate body which unites the complement to the cell to be destroyed, the complement being the real destructive agent.

It soon became known that cytolysis and bacteriolysis depend upon analogous factors and follow similar laws. Animals injected with bacteria and bacterial disintegration products and humans affected with bacterial disease produce a serum which in test tube and other experiments is proven to possess marked specific bacteriolytic properties.

The therapeutic application of such serum has, however, not met with extensive desired results, except possibly in dysentery, and more recently by Flexner in cerebro-spinal meningitis. On the other hand, an acquired active bacteriolytic immunity, obtained by injecting human beings with dead bacilli and their disintegration products, has met with a fair degree of success and is at present the method which is being extensively used in many infectious processes, both as a prophylactic and curative measure. Vaccination for the prevention of smallpox and the Pasteur treatment of hydrophobia are the only illustrations of the method of producing an active immunity in human beings by using the live germs. In both instances the virus is attenuated by first passing it through the blood of an animal.

The phagocytic action of the leucocytes has long been recognized and needs no exploitation here. It is probable that the ingestion of bacteria by these cells is often an accompaniment of bacteriolysis, and, in fact, possibly is a factor in all antibacterial processes. When leucocytes are removed from the blood serum, washed and placed in a normal salt solution, they take up bacteria in an indifferent manner or not at all. Wright and Douglass have shown quite definitely that their phagocytic action de-

pends largely upon a substance in the serum to which they have given the name opsonin. Opsonin in some way prepares the bacteria for ingestion by the leucocytes; if there is a relatively small amount of opsonin present in the blood the phagocytic destruction of bacteria is correspondingly decreased and vice versa.

Opsonins, like most antibodies, are specific in their actions. Normal human serum contains opsonin for staphylococci, streptococci, meningococci, typhoid bacilli, anthrax bacilli, tubercule bacilli, diphtheria bacilli and probably many other bacteria. Also, like other antibodies, opsonins are increased in a specific manner as a result of infections and experimental immunization.

From their observations, Wright and Douglass have reached the conclusion that the phagocytic powers of the blood serum furnish the best index to its general antibacterial properties.

By comparing the number of a given bacterium taken up by the leucocytes in the serum of an individual infected with the bacterium in question, with the number taken up by his leucocytes when in the serum of a normal individual, they establish a ratio which they term the opsonin index of the infected individual for the particular bacterium present. Under the influence of bacterial vaccine injections the index is found to vary; this variation is used as a guide in their treatment, their ultimate object being to permanently raise the index to or above the normal. Following an injection given for therapeutic purposes, it is usual for the index to fall; this is the negative phase which is followed by a rise to or above the original line, constituting the so-called positive phase. It is the rule of Drs. Wright and Douglass to give an injection during the positive phase only. An accentuated negative phase is an indication of too large dosage and is productive of more harm than good. They claim for this method their ability to control the size and interval of dosage more accurately than by observing the constitutional disturbances only.

In the application of immunizing substances to the treatment and prophylaxis of disease, there are two principal methods: First, what would seem to be the ideal method, that of passive immunity in which the antibodies are supplied through an anti-

toxic or antibacterial serum manufactured in the tissues of an animal, the best examples of which are diphtheria and tetanus antitoxines and the antibacterial sera of dysentery, plague, possibly also of typhoid, cerebro-spinal meningitis and cholera. Second, active immunization in which the tissues of the individual are stimulated through the action of specific antigens to produce their own antibodies. In a prophylactic way the two noted examples are vaccination for the prevention of smallpox and the Pasteur treatment of hydrophobia. Wright and his followers, using the opsonic index as a guide, have recently claimed excellent results in the treatment by this method of various staphylococcal infections, notably furunculosis and acne.

Immunization in the treatment and prophylaxis of human tuberculosis, particularly of the pulmonary variety, has so far gained a place of only subsidiary importance. Practically the only method in use at the present time consists in the use of vaccines for the purpose of stimulating an active immunity; these vaccines, usually called tuberculins, of which recently a most bewildering number have been produced, consist in the main of suspensions of dead bacteria or of their disintegration products.

The weight of opinion at the present time favors the theory that the beneficial effects obtained by the use of tuberculin consists in the production of a toxic immunity, which does not, however, reach the proportions of a cure, but it does relieve the patient from the damaging effects consequent to a general toxemia, and thus preserves his strength, aids in keeping up his nutrition, and paves the way for a final cure through the other defensive mechanisms of the organism.

It is universally conceded even by the warmest advocates of tuberculin that it is worthless or even productive of actual harm unless it is used with extreme care and only in connection with the more important general hygienic treatment.

It was early discovered by Koch that tuberculous animals are much more profoundly affected by the injection of tuberculin than are healthy animals. The reaction is most marked in and around the tuberculous area; there is also frequently a definite reaction at the point of injection. In addition, there is a constitutional reac-

tion manifested by a chill, elevation of temperature, general systemic pains and prostration, subsiding usually in the course of forty-eight hours. These reactions are produced in a tuberculous individual or animal by a much smaller dose than would normally affect them.

Koch, in his early work with tuberculin, believed that these reactions were essential to a cure; it was later found, however, that excessive reactions were followed by harmful effects and were in no way productive of the desired curative results. It is the aim of the majority of those who are at present using tuberculin to so adjust the dose that reaction, so far as possible, at least an excessive reaction, may be prevented. The method usually employed is to begin with an extremely small dose, closely observe the effects, and at intervals, usually once or twice a week, repeat the dose in very gradually increasing quantities until a decided tolerance for the tuberculin is established. The method is most successful in early pulmonary tuberculosis, unaccompanied by fever, and as an aid in the treatment of surgical tuberculosis, tubercular laryngitis and lupus.

Wright and his followers claim most excellent results by following the opsonic index as a guide to treatment. The technical difficulties and sources of error connected with the method have, however, led most of those using tuberculin to abandon the opsonic method as being of doubtful practical value.

Von Behring has successfully produced a protective immunity in cattle by injecting living human tubercle bacilli, his theory being that the human and bovine bacillus are originally the same, the human by its passage through the tissues of man becoming attenuated for cattle.

The reports of attempts to obtain passive immunity by using antitoxic and antibacterial serum in tuberculosis have not been, as a whole, favorable. Since Koch's first observations upon the reaction of tuberculous individuals to tuberculin, it has been used as a diagnostic aid. The severe and sometimes fatal reactions following the early applications of the method, however, prevented its extensive use, except in cattle. As different investigators became more familiar with its actions, and learned the value of smaller doses than had at first been

used, its application both as a diagnostic and therapeutic agent came into more general use. Within the past year or two the use of tuberculin for diagnostic purposes has been very greatly augmented by the discovery, by Wolff-Eisner and Calmette, of the conjunctival reaction and by Von Pierquet of the cutaneous reaction. Both of these methods are easy of application, requiring only a few moments, can be done in the office of any physician and are practically without danger. Anywhere from a $\frac{1}{2}$ to 4% solution of tuberculin is used for the conjunctival test, and a stronger, about 25%, for the cutaneous.

In using the conjunctival test the tuberculin is placed in the lower conjunctival cul de sac, and in the cutaneous reaction it is scarified into the skin of the arm, much as in the method of vaccination for smallpox. In cases which react a characteristic localized inflammation follows in from twenty to thirty-six hours. It varies in intensity in different cases. In the ophthalmic test a few cases of serious permanent damage to the eye have been reported. It is strenuously claimed by its advocates, however, that this complication is easily avoidable by exercising care in excluding cases from the test which have any tendency to inflammatory eye trouble. So far no ill effects have been reported from the use of the Von Pierquet method. It is probably yet too early to draw conclusions as to which of these two methods is the most reliable. Statistics of different experimenters, using one or both methods, differ greatly. In each method it is apparent that the stage of the disease and the nature of the tuberculous process affect very materially the outcome of the test. It is generally conceded that in latent cases the percentage of reactions is smaller. When a positive result is obtained in an active pulmonary tuberculosis, it is considered an indication of good reactive powers on the part of the individual, and the prognosis, other things being equal, is correspondingly good. In favorable cases a positive reaction is obtained with either method in from 80 to 90% of the cases; in late unfavorable cases it is obtained in from 30 to 40%.

A positive reaction in cases clinically nontuberculous is obtained in a certain proportion of cases with both tests. Upon this point statistics differ greatly. It is evi-

dent that tuberculosis may be often present when clinical signs are absent.

In a series of cases reported by Dr. Mary Lincoln at the Tuberculosis Congress at Washington last autumn the skin test was positive in 1.3 per cent of non-tuberculous cases, and the ophthalmic test positive in 3 per cent of such cases.

Wolff-Eisner claims for his method that a positive reaction is indicative always of an active tuberculous process, and that a negative reaction in those manifestly tuberculous justifies a bad prognosis.

In tuberculous individuals the opsonic index for the tubercle bacillus has been observed to follow one of three courses; it remains constantly low, or constantly high, or it shows a continued tendency to vary from the positive to the negative phase, and back again. These variations in the index have also been utilized for diagnostic and prognostic purposes.

Time forbids discussion of the various interesting experiments and of the theories evolved therefrom pertaining to the cause of the above reactions. It is probable that they bear a close relationship to the phenomena of anaphylaxis, a subject toward which investigators are at present turning their attention, and of which the indications are we shall hear more in the future.

Preparations of tuberculin for therapeutic and diagnostic purposes, both for the ophthalmic and skin tests, are being furnished conveniently in sealed tubes in proper quantities and strength for application by many of the pharmaceutical manufacturers at the present time. It is interesting to hear their merits and mode of action discussed by the detail men who so often exhibit to the practitioner the vast amount of therapeutic knowledge they possess.

No one is ever beaten unless he is discouraged. To think a thing is impossible is to make it so. You may not be so fortunately situated as some other men are, but play the game. No tyranny of circumstances can permanently imprison a determined will. The man with backbone plays the game with the cards he has; he does not ask for a new deal, but plays the game.—*Backbone.*

TUBERCULOSIS.

Opening the Eyes of the Layman.

Jas. T. Carskadon, Esq., of Keyser, West Virginia.

Address to the Grant-Hampshire-Hardy-Mineral Medical Society, at Keyser, W. Va., May 7th, 1909.

It may seem a little incongruous that a layman should be invited to address a Medical Society, and when I have finished, both the laity and the doctors may agree that the invitation was a mistake. However, you are all in for it and I will proceed.

When I was a boy I had two young friends, brothers, bright, strong, genial fellows, who had at that time every prospect of reasonably long, useful and happy lives. They often visited us on the farm, and we enjoyed to the full our innocent, boyish sports. I would not like to say just how long ago this was, but those happy days are still fragrant in my memory. When the eldest of these boyhood friends was approaching manhood he was stricken with that dreadful disease which we then only knew as consumption. The doctors, as well as we, conceded that it was a hopeless case. When the younger brother arrived at about the same age he was attacked in the same way, and within two years we had laid them both to rest forever in the quiet grave.

I was sadly and profoundly impressed; many, many times this thought went through my mind: surely the medical profession should be able to find a remedy for such cases.

Years went by and little advancement had been made in the arrest of consumption, and no remedy had been found, and it was still generally conceded that if a person were attacked with consumption his days were numbered, and, of course, I agreed with the general conclusion.

My father had been a subscriber to the New York Christian Advocate, the official organ of the Methodist Episcopal Church, from a time probably before I was born, and at that time valuable and educational reading matter was not so plentiful and easily obtainable as today, and I read this paper eagerly, and I want to say here that

in those days the greater part of the literature in reach of the country boy was valuable to the young mind, but in these later days it is a reflection upon our boasted progress to have to confess that probably the majority is the other way, perhaps injurious rather than beneficial.

About the time I became of age Dr. Jas. M. Buckley was elected editor of the Advocate, a man, by the way, who, in my opinion, never wrote a line that was not worth reading and remembering. He soon began the publication of the history of his own case; how he was attacked with consumption; what he did to arrest the progress of the disease; how he took to the mountains and outdoor life, and how, in a few years, he became practically a well man; and Dr. Buckley lives today and continues to edit the same paper, and I believe is doing as much real good in the world today as any man living. I continue to read everything he writes, so far as I can get it, much to my own pleasure and profit.

The history of his case was of great interest to me, and I am sure of great benefit to all of his readers who may have been so afflicted, and to the public generally.

Just a few years ago, when the great benefit of outdoor life to consumptives was being demonstrated, Dr. Buckley published in this same paper an account of two women, one young and the other past middle life, who, after becoming seriously affected with tuberculosis, went to the Vermont mountains; he told of how they lived there, sleeping on an open porch through the winter with the thermometer often at night 15 to 20 degrees below zero, and of how they came out in the spring very much alive and much benefited and improved in health. That two delicate women would or could go through this was to me startling, to say the least. This story was a pretty big one to swallow without further proof, but as Dr. Buckley had written it and approved it I took it in without a struggle.

Today we find that the greatest experts in the treatment of tuberculosis advise and urge that this kind of living is the one and only remedy, and if followed in the incipiency of the case is a practical cure.

Right here I hope I may be pardoned if I repeat what may probably be to some of you a stale story, but it has a point.

Once upon a time a pair of engaged

lovers were trying to fix the wedding day; progress was very slow; a pall as of impending doom seemed to hang over them. Finally, this situation could be endured no longer and the girl, as is usual, braver than the man, said: "My dear, before we go farther I must make a confession which I fear may part us forever." He replied: "My darling, my heart has been heavy for the same reason; I also have a confession to make, and if you will forgive you shall be forgiven, whatever it may be, so out with it."

She timidly began: "When I was a little girl my father was accused of stealing sheep." "My darling," he replied, "you could not be blamed for that, even if he had been convicted; you are forgiven."

My case is much worse, for I did the act myself and when I could have avoided it; my confession is that when I was a younger man I served a term as a member of the State Legislature; I hope you will forgive me. Please do not throw any eggs; I plead guilty. But if I did nothing of benefit to any one else while serving my term, I learned something more about tuberculosis.

This subject was frequently before both the Senate and House with the object of having the State provide a sanitarium for the care and treatment of this malady, as it does for unfortunates along other lines. I favored this, and took such part as I could in advocating the measure. Little was done until near the close of the session, when a resolution was passed making a small appropriation for expenses and providing for the appointment of a commission of five members, three of whom must be physicians, to investigate the subject and report to the next session. I was very glad to have the honor to be appointed a member of this board. We were instructed, among other things, to visit such institutions in other States and observe as to the practical benefits of treatment, care and discipline. The first place we visited was one supported by charitable donations and such State aid as they might secure. This is located near Baltimore and is called "Eudowood." The grand old forest trees standing around the buildings, bright and happy boys and girls playing beneath them, made a beautiful picture, never to be forgotten, as we drove up one cold October afternoon. The newer and weaker patients we saw lying on cots

on the wide, open porches, taking in God's pure air and bright sunshine.

We were most graciously received by the physician in charge; he proved himself so interesting, so capable and well up in his profession that I asked him this question: "Doctor, you say this is largely a charitable institution and your salaries must be small; how can you, with your evident ability, afford to stay here?"

"My dear sir, when I came here three years ago I was said to be a hopeless consumptive." This reply was amazing; he appeared as strong and as robust as any of us. The bookkeepers, matrons, dining-room girls and cooks, all bright, active, young people, appeared to me to be in good health, so I ventured another question.

"Doctor, are not these young people afraid to stay here and assist you?" His reply again startled me. "Why, these are all our most improved cases, and they are glad to stay here for further benefit."

They have a good farm and garden, splendid dairy, poultry yards, &c., and produce there a large part of their every-day necessities.

I saw no fire, except in the kitchen, and I confess I would not have minded sticking my toes up to a nice grate, but none of the residents seemed to want fire. The work they are doing in this small sanitarium is wonderful, and proves beyond question that the progress of this dread disease can be arrested and in many cases practically cured. We next visited the "Phipps Free Dispensaries" in Baltimore and Philadelphia, where those too poor to buy may get without money and without price such supplies as they may need for outdoor living, and medicines if they need them. There are a number of these in the several cities of the East, and all supported and kept up by Mr. Henry Phipps, of Pittsburg.

All honor to such men, who give of their abundance, while they live, for the benefit and relief of their unfortunate brothers. They surely have their reward in this life, in the grateful hearts of those relieved and in the many useful lives saved from certain early graves. We next visited the great Johns Hopkins University and Hospitals, and I was surprised to find that here was a large department for the treatment and care of tubercular patients, in charge of most competent professors. These great

men, when they learned the mission of our committee, were most gracious, giving us all the information possible. I said to one of them: "Professor, what proportion of the human race are affected." He replied: "It is conceded by our profession that 95% of our whole population have at some time, in some part of the body, been attacked by tuberculosis." Of course, in many cases nature has been able to wall in the disease, but indisputable signs are there.

Now listen; don't strain at this gnat, for I have a camel for you to swallow. Some time afterward we attended the great World's Congress on Tuberculosis in Washington. While there we had the honor to meet some of the world's greatest experts along this line; I had the presumption to ask one of them a question; I was still a little doubtful about that gnat; I said: "Professor, one of the professors in Johns Hopkins told me that 95% of humanity had at some time and in some way been infected by tuberculosis; can that be possible?"

He very kindly replied: "My friend, the only amendment I would make to his statement is, I would add the other 5 and make it the even 100 per cent."

That great World's Congress in Washington in 1908 shows that the world is aroused to the possibility and probability of stamping out this greatest foe to human life.

Our commission made its report to the Legislature of 1909 and requested a small appropriation to establish a State Sanitarium which would educate our people along these lines and demonstrate the great beneficial results of proper care and treatment. The appropriation was not made. I interviewed a number of our State officials to find out why a matter of such great moment should be so coldly turned down. I was on every hand informed that the State is too poor. We have the Virginia vs. West Virginia State debt suit on our hands. I felt very much like saying: yes, you always have something on your hands, or, if not, your hands on something.

I came home disappointed, but not discouraged, for I surely think the time is near when the State will establish one or more institutions for this great purpose. In the meantime let us all arouse ourselves and do

what we can, beginning in a small way if necessary.

We already have a well organized State Anti-Tuberculosis League. Let each county and town organize an auxiliary league, and ask and urge our county courts to establish and maintain sanatoria in a limited way, and give such patients a chance to get well and at the same time save money, for if you send one such patient to your alms house you in a very few years have dozens of cases of tuberculosis on your hands. The needs of these unfortunates are the most simple, and the cost of maintenance would probably be less than at your alms houses.

My observations convince me that with education and aroused interest in this matter it is possible to stamp out this great white plague.

My only excuse for inflicting this rambling talk upon you tonight is the hope of arousing a deep interest in this subject in the every-day citizen, like myself, and that it may lead to practical and beneficial results. The doctors know enough about it, but they can do little alone. We must all work together to accomplish this great object.

Every parent, every citizen should understand the simple principles involved in prevention, and work for the wonderful blessings to our homes and the progress of our race.

May the day soon come when consumption shall be no more.

The one great lesson which our work teaches, and which we would all do well to learn young, is that happiness and success consist in serving others: in giving, not getting. He is the best physician and the happiest and most useful man who renders the most service. Hard work, plain living, high thinking, a sympathetic pity for the follies of men, a chivalric charity for the weaknesses of women, a buoyant, helpful, hopeful, cheerful, clean personality—these will go far toward inspiring in the minds of others that biologic ethics which we call right living, and will make us a factor in bringing about a healthy conception of life and further the cause of the moral evolution of the race.—Dr. Peyton in Indiana Association Journal.

THE TUBERCULOSIS EXHIBIT IN WHEELING.

Harriet B. Jones M.D., Wheeling, W. Va.

A campaign of education has been inaugurated in this State for the study and prevention of tuberculosis, and it is the hope of those interested that many towns in every county in the State will take advantage of the travelling exhibit prepared by the State Anti-Tuberculosis League. There is no more effective means of educating the people in regard to the causes, prevention and cure of tuberculosis.

For one month this exhibit was in Wheeling, and I can safely say that there has never been anything that has excited more interest among so large a number of people; already it is evident that a great amount of good was done. The people were aroused as never before to the dangers of the "White Plague," and the necessity of keeping the body in good health that there may be no predisposing cause. More people are sleeping with their windows open at night than ever before in the history of Wheeling. Those with the disease are more ready to live as directed by their physicians with less interference from friends. Physicians are more ready to tell their patients that they have the disease, and to give the patient with the incipient case some hope of recovery, and give him instructions that he may take precautions so as not to infect others.

The people were impressed undoubtedly, as to prevention and curability.

To be helpful to those who may have the exhibit I will tell you how we did it. In the first place hundreds of letters were sent out asking for contributions to pay the expenses of bringing the exhibit to the city and keeping it here. The response was immediate and generous.

The Young Women's Christian Association gave free of rent the house they had occupied but recently vacated. Gases, electricity, telephone and numerous necessary things were given by the companies, by the city and generous people. A week before the exhibit was opened a card was placed in store windows and all public places which had on it the words, "WATCH FOR" and a large double red cross.

This card excited great curiosity, and it

was followed by another as soon as the exhibit was open. The second card had the large double red cross with time and place of exhibit. Small cards having the same were distributed by thousands in every factory or place of business where large numbers of people were found.

Cards with subjects and lecturers were distributed also in large numbers.

Suitable literature was given to all visitors. All advertising matter and literature had the double red cross. The exhibit was well advertised and it paid. In front of the building was a double red cross of glass lighted by electricity. Lectures were given almost every night for three weeks in a near-by church by a number of the physicians of the city. The lectures were all on some phases of tuberculosis, and were well attended, the people showing a great deal of interest. The first night, when Dr. Hupp lectured, we provided a hundred chairs, thinking this ample provision, but the crowd had to be taken to the Board of Trade rooms, and after that to a church.

I can tell of the exhibit in no better way than to invite you to go through it with me. As each person entered he was given literature brief and to the point. The first room contained the exhibit of the Wheeling Health Department, which was prepared by Drs. McLain, Wilson and Hupp, assisted by others. The walls were covered by pictures and mottoes pertaining to tuberculosis, its cause and prevention, showing the danger of flies, the ages when the disease is most liable to attack a person, pictures of diseased lungs, rules of the health department regarding milk, pictures of undesirable houses and localities in Wheeling where the disease would have a fine opportunity of spreading, and, most important of all, a large blue print map of Wheeling with a red headed pin stuck in wherever a death had occurred from tuberculosis within the last ten years. There was nothing in the exhibit that impressed the people more than this map, and it also showed the very great importance of statistics in regard to the cause of death, for without such statistics such a map would have been impossible, and in no other way could the prevalence of the disease have been brought so forcibly to the notice of the people.

In this room were four microscopes with slides showing the tubercle bacilli in the

sputum in increasing numbers. There were organs of animals with the tubercles very much in evidence. The milk exhibit aroused a wonderful amount of interest. Dirty and clean milk were shown under a magnifying glass with electric light. Above this was a list of the milkmen, showing their standing. The people eagerly sought out their own milkman, and woe betide him if he did not stand where he ought.

The success of this particular branch of the exhibit was due to the untiring interest of Dr. McLain, city health officer, and Dr. Andrew Wilson, city bacteriologist, who spent a great deal of time demonstrating, and I am sure that the people of Wheeling realized the importance of having good milk as never before, and with the aid of Dr. Hildreth, of the Certified Milk Commission, they came to an understanding of what certified milk means and its importance for babies and sick people. They were also made to understand the importance of having the sputum examined in every case where tuberculosis is suspected.

Passing into the hall, the walls were found covered with mottoes and pictures all referring to tuberculosis, which were an education to read and see. There was a red electric light going off and on at intervals showing how frequently a death from tuberculosis takes place in the world, and statistics in picture form showing how many more deaths occur from tuberculosis than from yellow fever. In a room beyond, the contrast was shown between a dirty room where germs would abound and a clean room where they could not thrive.

Upstairs were a phonograph which gave telling talks on tuberculosis, large pictures showing causes, prevention and cure, statistics of deaths in different occupations, danger of drinking from a common cup, how to get proper ventilation from a properly opened window and the death rate between blacks and whites. Also a room with a window tent, sleeping bags and a shack for out-door sleeping. The exhibit was held in the upper part of the city for three weeks, with an attendance of 10,000. On one day the attendance reached 1,000. It was then moved to South Wheeling for one week, with an attendance of 5,000.

By this time we had a very interesting addition to the exhibit; a number of path-

ological specimens from the Phipps Institute, some being entire human lungs in different stages of the disease. These were viewed with the greatest interest and were demonstrated by Dr. Thurman Gillespie.

We also had literature in Polish and Slavish, as there were quite a number of these people whom we desired to reach. Dr. Gaydosh, who talks both languages, came at times to talk to these people.

An Anti-Tuberculosis League has been organized, and in the fall it is hoped that sufficient means may be raised to do some effective work.

An opportunity should be given to every person in this State to see this exhibit, and every town of 1,000 inhabitants or even less ought to have it for a week or more. The expense is \$5.00 a day for the exhibit and the man in charge, who demonstrates and looks after the exhibit. There will be local expenses for room, printing, lights, etc., which may be given.

The success depends greatly on the interest of the local doctors and the lectures given and upon some energetic women to help. The exhibit can be made a success by any town that may have a few interested persons to arouse public sentiment, and it will do more to create sentiment in favor of sanatoria than anything else possibly can, and the league formed will greatly help in the relief, prevention and cure of tuberculosis.

THE TUBERCULOSIS EXHIBIT IN CLARKSBURG.

C. N. Slater, M.D., Clarksburg, W. Va.

The exhibit of the West Virginia Anti-Tuberculosis League was in Clarksburg, Harrison county, two weeks, and did excellent work for so short a time in educating the three thousand people who attended same, about the most destructive of diseases to human life, tuberculosis.

It has emphasized most strongly the importance of fresh air, sun light, and sanitation to good health and longevity.

The exhibit consists of charts covering the cause, extent, cure and prevention of tuberculosis; and these facts are emphasized more strongly by figures, pictures, and placards, describing the various phases of the disease. Two fully furnished bed-rooms

are shown, one in which there is no regard for sanitation and cleanliness, and the other where cleanliness, neatness and proper ventilation are very apparent, illustrating the right and wrong way of living.

A model shack for out-of-door treatment, window tents, sleeping bags, sleeping rugs, paper cuspidors, and aseptic drinking cups are on exhibition.

The pathological specimens are interesting and instructive, to the profession and to the general public, in as much as they show the course of the disease and its destructive progress. Besides the specimens taken from man, three sections from a cow having tuberculosis are shown, and from these are drawn the lesson that all milk and meat must be inspected, and the possible effects of taking into the system infected meat and food are illustrated by specimens of intestinal ulcers, infected glands, etc.

This valuable section of the exhibit was loaned by the Henry Phipps Institute of Philadelphia, Pennsylvania, to the Anti-Tuberculosis State League for West Virginia.

The exhibit is in charge of Mr. John H. Gilliespy, a very capable man, who acts as demonstrator, and is the only person connected with the work who is paid for services rendered.

The exhibit was brought here under the auspices of the Civic Club, assisted by the Harrison County Medical Society. The local Ministerial Association and many prominent business men were interested, and a temporary organization was formed. Subscriptions were solicited, and a fee of one dollar was charged for membership for one year.

The following course of lectures was given:

"The Conquest of Tuberculosis," Dr. Fleming Howell.

"Cause of Tuberculosis," Dr. F. R. Dew.

"The Necessity of Early Diagnosis," Dr. B. Shuttleworth.

"Different Forms of Tuberculosis," Dr. S. M. Mason.

"The Source of Tuberculosis," Dr. D. C. Louchery.

"How the Germ Destroys Man," Dr. C. W. Halterman.

"How Man Destroys the Germ," Dr. D. P. Morgan.

"How to Disinfect a House," Dr. L. F. Kornman.

"Tuberculosis, Hereditary or Contagious," Dr. E. N. Flowers.

"Tuberculosis in Childhood," Dr. G. L. Howells.

"Comparative Frequency of Tuberculosis," Dr. A. O. Flowers.

"The Local Tuberculosis League," Rev. J. E. Bird.

Later the temporary organization was made permanent, same consisting of about seventy-five members, and the colored citizens of the town were organized with a membership of about nineteen, who desired to co-operate with the whites for the purpose of fighting the disease. The permanent organization for Harrison county is as follows:

Dr. Fleming Howell, president; Mrs. John W. Stuart, first vice president; C. A. Lawson, second vice president; Rev. John E. Ewell, secretary; Union National Bank, treasurer; John Reynolds, chairman of membership committee; Rev. John E. Ewell, chairman of printing committee.

The president of the organization will have charge of the clinics to be held at the local hospitals, and a committee on clinics was chosen as follows: Dr. C. W. Halterman, Dr. T. M. Hood, Dr. S. M. Mason, Mrs. C. E. Crane, Mrs. John Stuart.

The League desires to establish a dispensary, in conjunction with which will be relief work among persons having tuberculosis who cannot afford medical attention and the expense of a liberal diet. Classes will be formed and instructions given as to the proper care of themselves, and the precautions for the protection of others.

The practice of covering a patient's face with a towel after operation while he, still unconscious, is being taken on a stretcher to his room, is to be condemned. So is anesthetizing a man in a poorly illuminated room. It is risky to send the etherizer away from an unconscious patient to begin anesthetizing another case, unless some attentive and experienced assistant is specifically notified to watch the patient's gradual recovery from anesthesia.—*Roberts.*

Selections

THE EARLY DIAGNOSIS OF TUBERCULOSIS.

(Abstract of Paper by Dr. N. P. Boston, Adjunct Professor of Medicine, Medico-Chirurgical College, Philadelphia, in Pennsylvania Medical Journal).

Where tuberculosis is suspected it is of the greatest importance to get the family history by closely questioning the patient as to whether or not any relative has had the disease; also to ascertain whether or not the patient has been closely associated with any who may have had tuberculosis. Occupation must also be considered, since some occupations lead to the disease.

The author places much stress on the repugnance to fats that so often exists in those who are prone to this disease, even before the first symptom is present. The exceptions are rare. If the patient is fond of meats and especially of fats, the disease is apt to develop slowly. Impaired appetite and digestion are among the earliest symptoms to be noted. The morning meal is not relished. Some nausea may exist, leading the patient to think he has indigestion simply. The later meals may be relished, although a sense of fullness may be experienced, and may be quite annoying. When the disease is beginning in the lung the patient is apt to have what he thinks are acute colds, several attacks during the year, which may be mild or accompanied by laryngitis or pharyngitis. Grip-like colds are common precursors of tuberculosis. Tuberculosis should be suspected in those cases of grip that do not go on to complete recovery, but are left with a cough or an apparent bronchitis. The absence of the tubercular bacilli is encouraging, but not a positive evidence of the absence of the disease. When we do find them in a case of grip we may be sure that there is tuberculosis in the case, although active disease may not develop for some months. Sometimes tuberculosis begins with a pneumonia, which is probably tuberculous from the beginning. In these cases the early symptoms are less pronounced than in the ordinary type of lobar pneumonia. The disease is of the catarrhal form and deeply seated in the lung, so that the lesions are difficult to

recognize. We must hence closely watch these cases until able to make a correct diagnosis. The fever does not fall by crisis as in lobar cases, nor does it have the ordinary curve; and it is apt to continue longer, rising in the evenings. Always suspect tuberculosis when a case of pneumonia does not progress in convalescence in the usual way.

The author places some stress on "the usual phthisical chest; that is, the long, flat chest." We have always regarded the "chicken breast" to indicate a tendency to consumption. The finding of the bacilli in such cases makes the diagnosis positive. Sometimes these are present, as practically the only sign leading to a definite diagnosis.

A limited expansion of the chest is indicative of danger, although some tubercular patients have a very free expansion, perhaps as a result of practice. The expansion of the two sides of the chest should be carefully compared with the chest fully uncovered. Progressive loss of weight, unless dependent on some other definite cause, is very significant.

Tuberculosis may commence as an acute pleurisy, with a moderate fever, a chill, lancinating pain. At first of the plastic variety, it may later be sero-fibrinous with a large exudation on one side.

The author does not regard a chronic cough as an early sign of tuberculosis, since it does not develop until there is an associated bronchitis or laryngitis. A mere clearing of the throat is more common. It is well to remember that the tubercular bacilli are absent from the sputum unless the tuberculous process communicates with a bronchus. Therefore the lesion may be rather extensive in the lung and yet an examination be negative. The author has had cases where the greater portion of one lobe was involved with a subacute tuberculous process and still no bacilli were present in the sputum. Where the diagnosis is practically impossible, it is advised to dry the sputum in the air on a glass slide, pulverize it, mix with potatoes or grain and feed to two or more guinea pigs. Weigh the animals before feeding. If tuberculosis develop loss of weight will occur in four or five weeks, and from the sixth to tenth week they will die from the disease. The lungs from such animals will be filled with tubercles. A diagnosis may be positive in

this way when the disease may not actively develop for months after. The feeding process is practicable for those who have no laboratory.

In many cases, whether the tuberculosis attacks the lung or intestine, the bacilli may be found in the feces. Dr. Rosenberg has shown that tubercle bacilli are common in the feces of patients who show no other evidence of tuberculosis, in some of these the disease developing later.

Except in cases where a clear syphilitic history is obtainable, all chronic suppurative processes should be regarded as tubercular. The bacilli are hard to demonstrate in the pus from tuberculous lesions of the bones. In such cases the tuberculin test may be used. The ophthalmic-reaction of Calmette consists of dropping in the eye of the suspect one drop of a one per cent solution of dried tuberculin. If the patient is tubercular, within three hours the conjunctiva becomes reddened, the congestion increasing until in several hours there is an acute mucopurulent inflammation of the conjunctiva, the maximum being in six to ten hours. All traces of inflammation disappear in two or three days, no serious discomfort having been experienced. If no tuberculosis be present there is no reaction in the eye, unless some eye inflammation has previously existed. A negative result, however, is not positive proof of the absence of tuberculosis.

Von Pierquet's reaction is obtained by injecting hypodermically a solution of tuberculin. 1. The focal reaction results, i. e., an increase of inflammation in tuberculous lesions. 2. Pyrexia. 3. The needle track reaction. By introducing the tuberculin very superficially, the first two reactions are almost nil. The application may be made to the denuded skin as in vaccination.

It may be assumed at present that tuberculin in carefully graduated doses in the hands of a skilled clinician is entirely harmless, the only danger resulting is from indiscriminate and careless administration. It is possessed of but little clinical significance if administered in the presence of slight elevations of temperature, a fever of over 99 degrees Fahrenheit being sufficient in many cases to preclude diagnostic interpretations. The temperature of the patient should be taken at least twice daily (morning and evening) for a period of not less than three

days before applying the tuberculin test, and whenever possible observation of the temperature for a longer period is desired.

The intelligent use of tuberculin demands the utmost care in adjusting the size of the dose. It is well to dilute at the time of administration, as the product may become inert after dilution for more than forty-eight hours. A recognized method of dilution is the use of 0.5 per cent. of phenol in distilled water. All the appliances used in its administration, the syringe, tubes, pipets, etc., should be sterilized by boiling, preceding each injection.

In employing the tuberculin test the first injection should approximate one-tenth of a milligram, although certain investigators employ initial doses as high as three milligrams.

Should no reaction follow the initial administration, a second dose may be given after a lapse of several days, during which time the temperature should be observed. In case of failure to react to smaller doses the dose may be gradually increased to five or even seven milligrams.

The skin should be thoroughly cleansed with alcohol or ether, rendered aseptic, and a sterile pad should cover the point of injection for at least twenty-four hours. Clinicians differ, although the majority prefer injecting deeply into the muscle, instead of subcutaneous inoculation.

The reaction will be attended by fever ranging from one to four degrees. This occurs in about ten hours, but may not occur until the second day, and it may last for two days, in exceptional cases. Chill, headache, malaise, restlessness, pain in back, limbs and joints, nausea and vomiting are at times experienced. Usually the symptoms of the reaction subside within a few hours.

After considering the value of the X-ray in diagnosis, the author concludes that it "must be recognized as one of the valuable methods for the early recognition of tuberculosis."

Finally the author gives excellent directions for the physical examination of a patient suspected of having tuberculosis of the lungs. We give these:

In inspecting a case where we are suspicious that tuberculosis may exist, the patient should be bared as low as the hips and we should analyze the variety of chest

movements with special reference, first, as to whether or not the two sides of the chest expand and contract simultaneously; again, whether the apices and bases show a correspondingly well marked expansion; and, third, whether there is an abnormality of the general conformation of the chest. The tendency is to inspect only the front of the chest, but I am inclined to believe that almost as much information is to be obtained by careful inspection of the scapular and axillary regions.

In inspection of the face, head and neck, it is of vital importance to know the size of the nostrils, whether or not they are equal and whether they expand equally with respiration. Whenever there is an appreciable playing at angles of the nose, pulmonary disease should be suspected.

Early during the course of tuberculosis and before definite physical signs are present with reference to consolidation, it may be seen that at the angles of the mouth there is a small portion of saliva and that while the patient is talking the saliva appears to connect the upper and lower lips. This has been the earliest sign to attract my attention to disease of the lung in many young subjects, although it is comparatively uncommon after the age of thirty. The supra- and infra-clavicular regions are not appreciably depressed until the disease is well advanced, yet in selected cases this portion of the chest is not developed for years antedating the initial focus of tuberculosis; consequently we are not always suspicious nor do we regard those displaying such chests as at least susceptible individuals.

S. L. J.

THE SANATORIUM IN ITS APPLICATION TO TUBERCULOSIS.

S. G. Bonney, M. D., Denver, Colorado.

(In the *Alabama Medical Journal* for May is the complete article from which we here present extracts. Our omissions somewhat impair the continuity of this excellent paper, but we hope our readers may learn something of value, in view of the probable establishment of a Sanatorium in the State at no distant day.—Editor.)

It is clear that institutions for the care of various classes of tuberculous invalids are absolutely demanded to satisfy indi-

vidual and social requirements. In full recognition of the vast good accomplished, it is nevertheless desirable to institute a careful scrutiny of sanatorium methods and results.

A discussion of so important a subject should be inspired primarily by a desire for rigid inquiry. Professional enthusiasm attending the sanatorium movement has already attained such proportions in the United States as to render it exceedingly difficult to conduct a non-partisan study as to its value and limitations. While presenting its many manifest advantages I wish, nevertheless, to submit a few suggestions relative to its apparent defects. Thus*in considering jointly the several affirmative and negative phases it is hoped to disclose more clearly its legitimate scope.

The true mission of the sanatorium is found chiefly in its philanthropic value and economic efficiency. These primary considerations are properly included under the following subdivisions:

1. The practical utility of the sanatorium in the cause of *prevention*.
2. Its *educational* influence.
3. Its availability as an important factor in the *therapeutic* management.

The Practical Utility of the Sanatorium in the Cause of Prevention.

There can be no greater obligation imposed upon society than to grant institutional aid to a large number of pulmonary invalids. A pertinent question arises as to the peculiar class for whom sanatorium provision is justly demanded. During recent years the organized work in the campaign against tuberculosis has been chiefly devoted to an awakening of public interest, popular enlightenment as to the causes of infection as well as to effective means of prevention, and perhaps above all, to the adoption of measures tending to promote the interests of *incipient* cases. Invalids of this character have been offered admission to institutions of a non-charitable nature as well as to those supported by private or public benevolence. It is clear that upon the merits of their condition, patients of this class demand the constant presence of a resident physician far less than the advanced cases.

From the combined aspect of public benevolence and systematic prophylaxis, substantial assistance should be rendered to un-

fortunates suffering from advanced pulmonary infection, and to those incapable of self-support, representing definite sources of danger to other members of the family and the community. Wisely directed aid of this kind will result in the frequent saving of life, an enormous alleviation of suffering, added protection to communities and the preservation of vast economic values represented in the restored health and usefulness of innumerable citizens. The sanatorium becomes especially beneficial and useful as a prophylactic agent, therefore, when its privileges are bestowed upon three fairly distinct classes of pulmonary invalids, viz: (a) indigent patients with advanced disease; (b) ignorant and vicious consumptives; (c) impoverished patients with incipient or moderate infection, who, under systematic control and with proper assistance, present reasonable prospects of recovery.

Indigent Patients With Advanced Disease.

Such individuals undoubtedly represent the chief source of further bacillary distribution, and above all others should be subjected to rigid disciplinary supervision. They not only constitute an oppressive burden to their families, but through their inability to observe hygienic precautions become a constant menace to society. They are almost always denied admission to municipal hospitals. Tuberculosis sanatoria possessing facilities for their care are exceedingly few. Adequate accommodations should be provided in the form of segregation establishments where all possible comforts may be administered through judicious nursing and medical attention. Aside from humanitarian grounds it is precisely by virtue of their ignorance, destitution and occasional obstinacy that some form of institutional care is demanded. As to its practical beneficence for this group of patients there can surely be no room for difference of opinion.

Ignorant and Vicious Consumptives.

Unteachable consumptives belong to an entirely different category from those embraced in the preceding class. While the indigent patient with advanced infection jeopardizes the safety of others through the almost unavoidable failure to comply with hygienic instructions, the roving, shiftless and dissipated invalids represent added

sources of danger. Reckless expectoration and a wanton disregard for other sanitary precautions result in a wide-spread distribution of bacilli. It should be incumbent upon health authorities acting with proper discretion to insist upon the forcible removal of such individuals to detention institutions. These establishments should provide facilities for the care, instruction and discipline of irresponsible persons who have been notoriously negligent concerning the rights of their fellows. The responsibility for their management and control can be assumed by local communities at a comparatively slight expense. The financial burden for housing may be quite insignificant, and this in many instances partly offset by the performance of light work. A wilful and continuous infringement of sanitary laws by homeless, intemperate consumptives surely justifies a somewhat arbitrary effort toward restraint and punishment. On account of their physical infirmities it is clear that jails, reformatories and prisons are not the proper repositories of such offenders. Incarceration in ordinary penal institutions has already been followed by a striking development of tuberculosis among violators of criminal law. Provision for the temporary detention of this highly undesirable class is perfectly feasible either upon county farms or in special wards of other public institutions. In this way practical prophylactic results of far-reaching importance may be accomplished.

Impoverished Patients With Incipient or Moderate Infection, Who, With Proper Assistance, Present Reasonable Prospects of Recovery.

Sanatorium aid is eminently practical for this class of indigent consumptives, many of whom as a result of substantial assistance can resume their former positions as wage earners. At the same time individuals, who, in their ordinary environment are unable to observe precautionary rules, are prevented from becoming new centers of infection in the community.

To render needed assistance to incipient cases of tuberculosis among the poor is indeed a most important function of the sanatorium. It is possible that this represents its chief value, for it bestows undoubted blessings upon a class of people otherwise unable in many instances to withstand the advance of the disease. Climatic change or

rational management in the home are usually quite out of the question, and the only alternative short of despair is admission to these truly charitable institutions, especially in the absence of day camps and tuberculosis dispensaries. Through the philanthropic purpose and economic utility of sanatoria the unfortunate but worthy consumptive is enabled to resume the role of bread winner and the state to preserve one of its most valuable commodities, the earning power of labor.

A single sanatorium in each State must be quite insufficient to provide proper accommodations for the many unfortunate people worthy of admission. It is far better to create, if possible, so advanced a public sentiment as will inspire the construction of many institutions of this nature in different sections.

Neither elaborate details of construction nor superfluous equipment represent added facilities for the successful management of tuberculous patients. It is manifest folly to expend extravagant sums of money for imposing buildings, the occupants of which are admonished to remain constantly out of doors. From an economic standpoint it is apparent that more practical benefits may be derived from the erection of numerous not necessarily expensive buildings, or by the construction of a greater number of tuberculosis dispensaries.

The very incipient cases should be educated and cared for as far as possible in the tuberculosis dispensaries or admitted to working farm colonies in various portions of the State. It is possible with increasing experience and more definite knowledge as to the true scope of State sanatoria, that these institutions may be devoted exclusively to patients in the moderate and advanced stages of the disease.

An important consideration is the extent to which industrial facilities should be offered to the inmates of State sanatoria. While it is improbable that such institutions may become self-sustaining after the manner of farm colonies, it is likely that the cost of maintenance can be somewhat reduced by the performance of light outdoor work either in the fields or garden, and of handiwork of various kinds upon the porches. Indoor work should be deprecated under all circumstances. Compulsory employment of any kind is not likely to be

received with the greatest enthusiasm even by individuals participating in the bounties of state or private philanthropy. It is essential that in each instance the character and extent of employment should be carefully graduated to the physical condition.

Useful labor in the open air possesses the advantage of preparing the invalid for a more complete assumption of responsibility in the so-called "after stage." The recreation derived from such a source may be less keenly enjoyed than a game of cards or the reading of an interesting novel. Amusement, however, does not always represent a necessary feature of therapeutic management. Wholesome diversion may often be secured by the pursuit during a few hours of some useful vocation. This may be of greater advantage than breathing exercises, long walks and mountain climbing. It is impossible to over-estimate the value of the psychic element, especially when this relates to the knowledge of one's ability to cope with future problems.

Generally speaking, provision for industrial pursuits may not be expected to furnish financial assistance to public institutions of this character. As a source of income, pure and simple, any scheme of organized work is not to be recommended, as this feature cannot be expected to yield a financial return at all commensurate with the expenditure. Assuredly one of the important objects of sanatoria will be defeated, unless the inmates are constantly subjected to the closest surveillance in order to forestall the possibility of over-exertion. It is questionable also if patients capable of performing any considerable amount of work, particularly those classed in the category of arrested cases, should be permitted to remain in institutions supported entirely by the State. This thought is emphasized by the fact that the total number of consumptives worthy of public aid greatly exceeds the capacity of existing institutions. From this it would appear that sanatorium provision should be accorded to the greatest possible number in actual need of such assistance, rather than to preclude their admission by the retention of a corps of semi-efficient invalid employees.

The Educational Influence of the Sanatorium.

Irrespective of the particular class of patients admitted, each institution for the re-

ception of pulmonary invalids is capable of augmenting the cause of education as applied to tuberculosis in three distinct ways. These relate to the influence exerted upon the inmates, the effect upon the resident physician and assistants, and the instruction indirectly imparted to neighboring communities.

For the individual patients the question of success or failure is often largely determined by the degree of adaptation to new surroundings. Given an environment truly appropriate for selected cases, favorable results may still be retarded if the mental attitude is not in harmony with the opportunities presented. To induce a ready conformity to rational principles of management is often extremely difficult, but is made conspicuously more simple by the fortunate example offered by others. Faithful adherence to suitable methods of living as witnessed in well conducted sanatoria is usually followed without delay by an unconscious adoption of the same routine by newcomers. Hygienic regulations are thus more willingly adopted, dietetic instructions more conscientiously observed and sanitary precautions more definitely obeyed. Physical indiscretions, undue frivolity and dissipation are less frequent, while other excesses are comparatively rare. Patients thus become more steadily amenable to disciplinary control and yield submission to mandatory measures of regime without apparent remonstrance. More important still is the gradual inculcation of a belief in the hopefulness of the issue and an intelligent appreciation of individual responsibility. It is impossible to over-estimate the value of a few months residence in these institutions in establishing proper methods of living.

In the midst of the immature conclusions occasionally presented and the considerable diversity of therapeutic methods in vogue, attention is called to the possible role of sanatoria as centers of exact clinical observation and scientific research. A proper utilization of the material at hand in such institutions is of signal benefit in substantiating important facts with reference to the management of a disease demanding the exercise of the utmost conservatism and stability of judgment.

The educational influence accruing from properly managed sanatoria is not confined solely within the walls of the institution,

but is frequently capable of diffusion throughout a wide domain. A distinct enlightenment in communities is often produced as a result of the practical lessons pertaining to hygienic and dietetic living. The importance of measures tending to restrict the spread of the disease is emphasized through the force of actual example. There usually results among neighboring inhabitants an appreciable diminution of the unreasoning phthisiophobia so unfortunately prevalent in recent years. The material lessening in the tuberculosis mortality rate among the resident population of towns harboring closed institutions for consumptives, speaks volumes concerning the dissemination of knowledge relative to measures of prevention. The evidence is quite conclusive that the presence of modern tuberculosis hospitals serves as an added element of protection rather than a menace to the public. A broad educational effect is exerted, not only through the medium of the medical attendants, nurses, waitresses, other employees and visitors, but to a remarkable degree by the patients themselves. This is particularly noticeable when upon returning to their homes they are brought into intimate personal association with others.

The Availability of the Sanatorium as a Feature of Therapeutics.

For the sake of clearness this phase of the subject should be considered without reference to humanitarian, prophylactic, economic or educational features. Thus a discussion concerning the scope of the sanatorium as a therapeutic factor is necessarily limited to institutions designed for non-indigent, non-hopeless consumptives regardless of climatic location. In other words, it is proposed to discuss merely the usefulness of sanatoria for well-to-do incipient patients in any locality. Are the advantages of sanatorium life proportionate to the claims presented by enthusiastic advocates? Have these institutions justly fulfilled the extravagant assumptions that have been made in recent years?

I dissent from the somewhat frequent assertion that sanatoria are always necessary for the maintenance of systematic control. Residence within a closed sanatorium admittedly offers to a certain class of patients the greatest possible advantage to be attained, but an arbitrary recourse to this is sometimes prejudicial to the best interests

of others. Determining features in many instances are temperamental peculiarities, domestic conditions, the stubbornness or delusions of accompanying relatives and other factors inimical to successful management. Not infrequently the influence of home life is responsible for unfortunate laxity of discipline. The possibility of negligence, perversions of judgment on the part of the family, unwarranted petting, condolence and indulgence is assuredly not to be ignored. It is often difficult in such abodes to elaborate a proper regime, the hours of rest in the open air being frequently disturbed by social interruptions. It is sometimes possible, however, to secure an atmosphere of repose and contentment in private dwellings provided with proper porch accommodations and offering facilities for the preparation of suitable food in accordance with individual tastes. This attainment of appropriate conditions and surroundings is permitted only through the interested effort of physicians appreciating the value of such details.

Especial importance has been attached to the maintenance of autocratic control in sanatoria through the continuous presence of medical attendants. Experience has shown that in health resorts physicians are often enabled to devote ample supervisory attention to patients outside of such establishments, avoiding at the same time much of the ennui, nostalgia and general depression so frequently observed in institutions of this character.

An important requisite for the successful management of pulmonary invalids is a careful investigation not only of all phases of the disease, but also of all factors pertaining to the patient, temperamental, financial, domestic and social. Only through a painstaking regard for the minutest detail, either within or without a sanatorium, may the physician hope to apply the general principles of treatment to the best possible advantage.

This critical analysis of the various features relating to the invalid necessitates much personal effort and intuitive perception on the part of the physician. It is essential throughout the entire period of observation to surround the patient with such influences as are definitely appropriate to changing conditions. Comprehensive attention to the special requirements in each in-

stance is almost purely a question of personal equation, the vital consideration in securing a proper disciplinary control being the physician rather than the institution. A hearty reciprocal response on the part of the invalid may be readily secured outside of closed institutions, provided the medical attendant, in addition to a ripe experience, possesses a certain aptitude and devotion for the work in which he is engaged.

For many years I have found that the selection of a residence meeting all requirements as regards location, sunshine, porch-room and outdoor sleeping accommodations, the careful selection of a few patients with reference to congeniality, disposition, tastes, stage of the disease and financial status, the presence of a competent housekeeper, form a combination capable of producing most gratifying results. For many cases the advantages of such an arrangement over the sanatorium sojourn are very apparent. Suitable accommodations are thus offered for patients of varying classes, and opportunity is afforded for change of surroundings and environment at different seasons of the year. As a rule the constant attendance of an efficient nurse, in connection with the directing influence of the physician, has sufficed for the maintenance of a suitable regime.

This plan obviates many of the disadvantages incident to the aggregation of consumptives, and is particularly advantageous for people of refinement who object to the personal contact with a large number of invalids, which is almost unavoidable in sanatoria.

It is eminently desirable that sanatorium buildings should be properly located and constructed. Institutions designed for the exclusive accommodation of consumptives should be so situated as to afford the greatest possible conformity to recognized hygienic principles. Thus densely populated districts should be avoided, and preference given to the mountainous regions rather than the lowlands. It is important to avoid all unnecessary exposure to severe winds and to the intense heat of the sun during the summer months. For these reasons a location upon the extreme crest of an elevated region or upon the unprotected plains is quite inappropriate. Deep valleys are also unsuitable for this purpose, as it is important to provide as many hours of sunshine

as possible with a minimum of dampness. An ideal site may frequently be obtained upon the southern slope of a hill or moderately high mountain. A dry, sandy soil or even a rock formation is quite superior to moist clay earth, although precluding the possibility of landscape ornamentation.

The buildings should be so designed and equipped as to permit rest in the open air almost at all times upon verandas and solaria. Private sleeping balconies should communicate directly with spacious, sunny, well-ventilated chambers, thus insuring protection in extremes of weather from the summer heat and the winter storms. The essential consideration is the opportunity afforded for maintaining an outdoor existence during the entire twenty-four hours.

An important consideration relates to the management of sanatoria and the jurisdiction under which they are operated. The actual usefulness of institutions endowed with vast possibilities for good, is sometimes materially diminished as a result of incompetent direction. It is absolutely essential that the medical supervision of sanatoria should be consigned to physicians of sufficient skill, experience and adaptability to enable them to discharge satisfactorily the imposed trust. The practical utility of public institutions is frequently limited through the pernicious influence of politics. For the accomplishment of the best results the board of control should represent the training and special knowledge of earnest students engaged in medical and sociological work. The qualifications necessary for entirely satisfactory management are manifold and most exacting. Bearing in mind the peculiar class of individuals occupying these establishments, and the fact that it is the patient rather than the disease demanding especial study and attention, it is at once clear that far more is required of medical incumbents than diagnostic ability, approximate accuracy of prognosis or rational ideas of management. While broad generalizations with reference to the mental characteristics of consumptives are quite unwarranted, the fact remains that such invalids are to a great extent creatures of their environment and represent a class decidedly unique. To discharge with composure and confidence the many anxious obligations incident to the care of consumptives, the physician must possess an unusual endowment of

patience, vigilance, sympathy, firmness and sincerity. In addition to these qualities the successful management of sanatoria is possible only by the exercise of such further versatile gifts as executive ability and skill of organization.

Medical superintendents are frequently compelled to govern the finances of the institution thus imposing inevitable limitations upon their greatest medical efficiency. The desire for a successful financial administration may sometimes sadly interfere with such substantial considerations as the quality of food and character of service. Without ample funds it is extremely difficult to combine satisfactorily the problem of medical care and executive management. It is readily apparent that truly successful superintendents must possess such a rare combination of qualities as to constitute a form of genius for this particular work. A natural or acquired adaptation for this is possessed by comparatively few people. In occasional instances the prolonged exercise of autocratic control may beget an unfortunate arrogance or misconception of the true spirit inspiring the establishment of such institutions. The investment of supreme authority in a single individual as regards matters of discipline is not unlikely to produce an unconscious indifference to the bonds of sympathy and higher humanitarian instincts. Observation is not wanting to confirm the belief that in some instances this tendency may develop from the very nature of the responsibilities assumed by sanatorium authorities.

In England the local government board authorized Dr. Bulstrode to visit the public institutions of that country and report upon the various aspects of the sanatorium question. His report has been recently rendered and embraces the results of five years studious investigation. He finds room for decided encouragement in the immediate results of sanatorium treatment as most patients display a satisfactory response to the enforced rest, fresh air and improved food. He hesitates, however, to express an opinion as to its remote or ultimate value. He insists upon the extreme unreliability of statistics and states that it is difficult, if not impossible, to determine by such evidence the actual value of sanatoria.

Such a conclusion as a result of his painstaking observations suggests that a correct

estimate as to the usefulness of sanatoria in this country is quite out of the question upon the basis alone of statistical reports. This being the case, the futility of attempting to decide between the advantages of sanatorium life and climatic change is very apparent. As a matter of fact there is no common ground for comparison.

Clinical experience has amply demonstrated that by far the most favorable opportunities are offered in climates appropriate for the invalid in question. It is not designed to exploit the advantages of any single climate as applicable to all cases of consumption, but it may be submitted with propriety that unfortunate results of climatic change may be expected *only* by reason of fatal procrastination, an injudicious selection or an entire non-conformity to a suitable regime. In the interests of consumptives it seems eminently fitting to reiterate the value of climate for properly selected cases with conjoined attention to rational methods of living.

The possibility of securing an arrest of the infection at home or within local institutions is freely admitted, but can it be also asserted that this procedure is the one *most likely* to effect a complete and enduring recovery? If not is it justifiable regardless of climatic location, to extol the virtues of sanatorium management to a point above their legitimate plane?

In the midst of the present professional and popular enthusiasm regarding the advantages of the sanatorium, is it not possible that the swing of the pendulum may recede too far from the acceptance of climatic change and result not infrequently in unnecessary delay with its well-known deplorable consequences?

With no derogation of the enormous practical good accomplished by local sanatoria, and urging their continued construction throughout various localities, the plea is entered for rational conservatism in their contemplated scope.

It is believed that the sanatorium represents an important factor in the general problem of tuberculosis, but that its practical usefulness may be greatly augmented by a reduction of cost, by a more thorough appreciation of its limitations, and by its co-ordinated relation to other valuable measures of prevention.

BENEFITS OF A TUBERCULOSIS SANATORIUM.

Property Increased in Value and Health Conditions Better by It.

On account of the present agitation concerning the possible danger and detriment of locating a tuberculosis sanatorium or camp near an inhabited dwelling or valuable property, the National Association for the Study and Prevention of Tuberculosis issues a statement today, which shows that in the great majority of cases such an institution has a beneficial effect, not only upon the sale of property, but also upon the health of the community.

In a recent investigation conducted by the National Association, 37 institutions located in 22 different States in all parts of the country were considered. According to information received from sanatorium superintendents, real estate dealers, and various disinterested parties, 67.5 per cent. of these tuberculosis sanatoria have had a favorable influence upon surrounding property, and have been a benefit to the community in which they were located.

In the case of 23, or 62.2 per cent, of the institutions, the presence of the sanatorium helped to increase the assessed valuation of surrounding property. In only one instance has property decreased in value, and there it was due to ignorance of the facts. In 22 out of the 37 cases, the presence of a sanatorium has even been helpful in the recent sale of land, and in only four places has any detrimental effect on sales been shown. In 51.3 per cent. of the cases, residents have been attracted to the community by the sanatorium, and in only three localities have residents been repelled.

Some examples show the increase in the value of surrounding property. In the vicinity of a sanatorium in Portland, Oregon, land has more than doubled in value in three years, and is in demand close to the sanatorium. At Aiken, S. C., property in the neighborhood of the local sanatorium has increased 400 per cent. since the institution was built. At Hebron, Maine, surrounding property has increased 20 per cent. as a direct result of the presence of a tuberculosis sanatorium. A similar effect upon land values has taken place in other towns, such as Luzerne, Pa.; Liberty, N. Y.; Saranac

Lake, N. Y.; Pittsford, Vt.; Mt. Vernon, Mo., and Silver City, N. M. At Asheville, N. C., vacant lots near one of the sanatoria in that city, sell at four times their price in 1900, and those farther from the institution but nearer the city are less valuable. Not a single instance was reported where the presence of a tuberculosis sanatorium, camp, or dispensary in a large city has had a detrimental effect on the value of surrounding property.

The Courts of Massachusetts, North Carolina and Virginia have decided that a tuberculosis sanatorium is not a menace to the health of a community, and that it does not decrease the value of land in its immediate neighborhood.

The presence of a tuberculosis sanatorium has been a benefit also to the farmers in its vicinity from the fact that it affords a market for their produce, and gives more work to the unemployed. The merchants, too, have testified that the sanatorium is a stimulus and help to trade.

The tuberculosis sanatorium has been of value to the community in the raising of health standards. In almost every city or town where such an institution has been opened, public spitting has decreased, more windows have been opened, and greater cleanliness in life has resulted.

For these reasons, the National Association for the Study and Prevention of Tuberculosis declares that instead of being a menace, a tuberculosis sanatorium may be regarded as a benefit to any community in which it is located, whether city or country. —*National Association for Study and Prevention of Tuberculosis.*

TUBERCULOSIS AND SCHOOL CHILDREN.

Dr. James J. Minot, Boston.

It is found in autopsies on children that the frequency of tubercular lesions increases with the age. Statistics made by combining all statistics available show in children two years old 44 per cent. and an increasing per cent. up to fifteen years, when 67 per cent. are found to be tuberculous. A very large number of children recover from their tuberculous process, so that the real number affected is greater than that indicated by the figures above. Tubercu-

culosis in children is much harder to diagnose than in the adult. The use of modern methods of diagnosis has shown many children to be tuberculous who were not supposed to be so. In the first thousand children examined at the Boston Consumptives' Hospital Out-Patient Department, 67 per cent. were tuberculous, 36 per cent. showing definite lung affection. These were largely the children of families where one or more members were suffering with tuberculosis. Tuberculosis is probably the cause in very many sickly, poorly developed, and backward children. Tuberculosis may be roughly divided into two classes, the closed and the open. By "closed tuberculosis" is meant those cases in which the tubercle bacilli are not thrown off from the body, and these cases are not to be considered as dangerous to others in the sense of being infecting foci. In this group are most of the bone, glandular, meningeal, spinal, and intestinal tuberculosis, hip disease, scrofula, and in many cases where the lung is involved, but the process is not active or not advanced enough to give rise to expectoration. "Open tuberculosis" includes all cases of consumption where the tubercle bacilli are thrown off in the expectoration and such cases of tuberculosis elsewhere as give off bacilli in the discharged matter. These open cases are sources of dangers to others. Many of these early cases advance to the later stages, infect others and die, and all are in such poor health that they do not derive proper benefit in school from the money expended on them. This economic loss to the community is in itself a strong reason why some means should be adopted whereby these children may be cured and make it possible and probable that they grow up well and strong, and so eventually be an economic asset and not a loss to the community. In Illinois it has been shown that yearly \$1,187,000 are spent in educating children who die of tuberculosis before the twentieth year. (Thomas.)

The treatment of children with tuberculosis is the same as that of adults—out-of-door life day and night, abundant food, avoidance of overwork. Children respond more rapidly than adults to such curative treatment. It is vastly cheaper to cure the child than to permit him to drag along at school and eventually to die or grow up an

invalid and become a public charge. The Boston Association for the Relief and Control of Tuberculosis opened last July a day camp for tuberculous children. In September the camp was converted into an outdoor school in conjunction with the Boston School Committee. The number at any one time was limited to twenty. Of the 31 children, all of whom showed signs in their lungs, who have been at the school and camp a month or more, 16 have been sent back to the public schools with their disease arrested, 6 have been discharged as non-residents, etc., the remaining 9 are progressing favorably towards health. In view of the frequency of tuberculosis in children, and the far-reaching results of it, it would seem desirable that energetic methods be adopted to arrest it in early life. The first step toward this is to find every tuberculous child, making a systematic examination of all school children if necessary, certainly of all those from tuberculous families or who seem in any way sick. "Every doubtful case is to be considered as tuberculosis until proved otherwise." However slight the evidence of tubercular disease, the child should be treated. Those cases that are already far advanced do not belong in the schools at all but in the hospitals. In the less advanced, both open and closed, it is believed that an outdoor school can restore the child to health while he gains some education at the same time. The outdoor school means a life in the open air, and the feeding and clothing of such children introduces a serious problem for school authorities. This part of the outdoor school work can, however, be undertaken by the health authorities or a hospital which can properly and without criticism provide for them as for any other patient. In connection with the school there must be a most careful and constant supervision of the children's home by specially trained nurses to see and insist that the child leads a proper hygienic life while at home. There will necessarily probably still remain a large number of children with a less definite tubercular process, the "sickly" child, the "scrofulous" child, etc., who cannot be accommodated in the outdoor school. These cases can be cared for by having in every school building one room where the windows are wide open all the time and where health is given as much or more attention than that given to learn-

ing. And in all parts of the school building more consideration should be given to securing an abundant supply of fresh air and at not too high a temperature. A child spends a large part of his life in school. Strong and healthy children are those who spend the most time in the open air. Life in the open is the best investment one who is not strong can make. The nearer the school room can be made to approximate to out-of-doors, the larger will be the return to the community on its investment in schools. Open-air schools have been used in Germany and England for some years with most gratifying results. Providence had the first one in this country last year. Now there are several. The Boston School Committee has under consideration the organizing of outdoor schools on a much larger scale for next year.—*School Hygiene*.

ANTI-TUBERCULOSIS CAMPAIGN METHODS.

The International Congress on Tuberculosis, convened at Washington last October, was effective (1) as a face-to-face meeting of the foremost of the world's workers in this field; (2) in its critical review of the several methods of operation for the prevention and cure of tuberculosis that have proven valuable; (3) in showing by comparison, to a fair degree, the proper field and natural limitations of each method and, finally (4) in enlisting new talent in every State in the Union and abroad.

The hum of actual campaigning that now arises from all over the country is that of fort-building, field drilling, ordnance testing and the spying out of the enemy's country. In other words, it is mainly educational; and it must needs be to the end, if the desired goal is to be reached. The farther the work progresses the larger the demand for education—education of doctors and laymen, of the afflicted and exposed. There are things to learn and things to unlearn. The common people must be taught how to protect against themselves, others, and quack medicines.

The value of prevention as compared with cures; the merits of our treatment when applied early, as compared with late application; the gravity of open cases of the disease as compared with all other forms;

the menace and actual danger of an expectorating patient in any house, and the imperative demand for rigid personal and domiciliary hygiene, are a few of the leading subjects in the Anti-Tuberculosis Campaign Primer.

From the Journal of the Outdoor Life (*International Congress* number) we excerpt the following contributions, made by men of international reputation:

PREVENTIVE STEPS.

The spread of infection by means of human expectoration is already being prevented by legislative means, and still more by the education of the public. Notification of the disease, whether on voluntary or compulsory lines, is a necessity if consumptives are to be prevented from infecting others either directly or indirectly by first infecting the rooms in which they live. The fact that any one is found to be suffering from tuberculosis should automatically be followed by (1) the education of the individual in the best methods of avoiding the possibility of infecting others; (2) the medical examination of those with whom he lives, in order that, if any of them have already been infected, they may be treated at once; for it is by this means that cases among the working classes are detected in a sufficiently early state for treatment to be effectual; (3) the periodical disinfection of the premises in which he lives.—Arthur Latham, M.D., London.

DISPENSARY.

The dispensary should be a central institution, concerning itself in every possible way with the treatment and relief of the tuberculous poor, to which persons of this class, suffering from cold or chronic ill health, should be directed.

The dispensary should constitute at once (a) an "information bureau," (b) a "clearing house" in respect of all kinds of tuberculous patients, and (c) a center for the supervision and treatment of such patients as may safely be treated at their own homes. It should be the connecting link or nodus of the entire system of anti-tuberculosis operations.—R. W. Philip, M.D., Edinburgh.

DIET IN TREATMENT.

In a large majority of cases of tuberculosis it is desirable to increase the amount of energy-giving foods; this is especially so

in the case of patients who have much fever, or who are considerably below their proper body weight. Fat is a less bulky form of energy-giving food than carbo-hydrate, and for this reason it is much more readily taken; the patient with anorexia will take a considerable amount more nourishment in the form of fat than in the form of carbo-hydrate. Fat, too, we have found to be extremely well absorbed, even by patients with high fever and acute constitutional symptoms. An increase of energy-giving foods beyond a certain point is prejudicial.—N. S. Bardswell, M.D., King Edward VII Sanatorium, England.

REGISTRATION OF CASES.

Only very recently have sanitary authorities come to recognize tuberculosis as one of the infectious and communicable diseases which properly come within their surveillance. The authorities in a number of cities in this country have adopted regulations declaring tuberculosis dangerous to the public health, and requiring reports of all cases (at least of *pulmonary* tuberculosis), and in a few instances some provision has been made to deal more or less effectively with reported cases.

While there has been in the past much opposition to such regulations, especially from the medical profession, this opposition is rapidly giving away, and where they have been put into effect the opposition soon disappeared. Such has been the experience in New York. The real objections to compulsory notification and registration are much more imaginary than real.—Hermann M. Biggs, M.D., General Officer New York City Board of Health.

EDUCATIONAL DEMANDS.

Hospitals which are not participating in this work will lose to a very great extent the advantages which go with the work in the training of medical men and nurses. The growth of medical knowledge in tuberculosis is very rapid, and medical science as a whole is greatly stimulated by this growth. The medical man who is not in touch with tuberculosis work not only loses the increment of knowledge about tuberculosis but also the increment of knowledge of medicine generally which comes to the profession through activity along these lines. The nurse also is falling behind who has not the opportunity of qualifying her-

self for nursing tuberculosis in accordance with modern ideas. The mere fact that most general nurses are afraid of tuberculosis shows how far the general trained nurse is behind the times in matters of this kind.—Lawrence F. Flick, M.D., Philadelphia.—*Medical Council.*

THE SOCIOLOGICAL SIDE OF THE TUBERCULOSIS PROBLEM.

At the present time the medical profession and the philanthropically inclined are paying a vast amount of attention to the prevention and cure of tuberculosis. The various exhibits which have been going the rounds of the cities of the State have attracted large crowds of interested spectators, and to the poor the gospel of cleanliness and right living has certainly been preached. The people have been told that the contagion of consumption is in the sputum, that it is a germ disease and can only be conveyed to others by the sputum. The dweller in the tenement has also been told that there is no medicine which is a cure for the disease, that this, however, lies in hygienic methods of life, proper and sufficient food and ventilation. He has been shown examples of unsanitary dwellings and maps of the over-crowded east-side with its plague spots thickly disseminated through its closely populated area, have been graphically displayed. He has also been introduced to delightful little miniatures of model tenements with small and attractive suites of rooms and ample central court yard, with grass plots and a fountain. This is to be his ideal, he is taught.

This instruction is all, no doubt, very useful. We have no wish to deride so fine and promising an exhibit. If a man can find tenements like those displayed, if he has the price, he will doubtless leave his close and illy-ventilated and expensive rooms in a tenement house which barely escapes the law, and exchange them for better quarters. If he is, unfortunately, the subject of tuberculosis, he will perhaps realize the dangers of carelessness, and if he loves his neighbor he will spit in the street no longer, if he can help it. His children and other members of his family will no doubt be relieved of a certain amount of peril, and the public also. If he happens to live in a tenement where he can open the windows in

winter weather without freezing the other members of his family, he will doubtless strive to obey the mandate which dictates that so far as possible he should sleep in the open air. He will get as liberal a supply of good food, including milk and eggs, as his means will permit. How much milk he will take at 8 cents per quart and how many eggs he will eat when eggs are 50 cents a dozen need not be left to the imagination.

A poor man who is also tubercular is not as a rule a prolific wage-earner. Disease forbids. He has lost his immunity to tuberculosis because of insufficient feeding, and the necessity which has compelled him to live in a dog kennel, and eat meat perhaps once a week, if he is lucky. When our sanitarians tell these poor victims that the cure of consumption consists in a change of their method of life they really offer them a stone instead of bread. Of what use are all these instructions to the man who is trying to bring up a family on \$10 per week, and who lives in a tenement, the landlord of which wrings from him a rental which represents 10 per cent. on the investment, perhaps more. Moreover, he pays for everything else in proportion. Coal by the bucket means coal at the rate of \$25 per ton. Many of these families scarcely see meat from one week's end to the other. W. A. Russell, who did the computation for the congestion exhibit, states that there are 12,000 women in New York City who are unable to nurse their babies because of semi-starvation and overwork. What these people need, if we are really to solve the problem, is an economic change and the sanitary change will not lag far behind. To preach the doctrines of hygienic living and the value of proper nutriment to people who have not the wherewithal to carry the instructions of the sanitarian and dietitian into effect is little short of mockery. "We asked for bread and have received stones." Stones for bread! Stones for bread! That is what society has been giving these poor victims of its own malpractices and congratulated itself on its virtuous and abundant charity.

The problem of tuberculosis is really only in part medical and sanitary. It is primarily an economic, a sociological question. It is but the simulacrum of charity, and a measure of hypocrisy for society, first to destroy the immunity of the individual by exploiting him as a wage earner, pitting him in

competition against his fellow sufferer, buying its labor at the cheapest possible rate, a starvation wage, and then to congratulate itself on its tuberculosis exhibit. The tubercular poor lose their immunity, because of the dreadful conditions in which they live. They live in these conditions, not from choice, but because they are compelled to by a harsh and selfish civilization, which is willing to fatten on the bodies of men, women and little children.

This is the real problem of tuberculosis. What our cities need most of all, from the standpoint of the tuberculosis problem, is not the libraries, which a generous millionaire scatters with liberal hand, nor even vast hospitals, which have been planned lavishly, nor great and highly endowed universities. It is not mere theory nor the fancy of an idle dreamer to say that a dozen millionaires of New York could do more to solve the tuberculosis problem by providing proper and sanitary tenement house construction for the wage earner, than can be accomplished in twenty years of exhibits. It is much more scientific, much easier and less expensive to prevent tuberculosis by preserving the immunity of the individual and the race than to continue our present methods. Proper tenement house construction will yield 3 per cent. on the investment, so that a proposition of this sort by no means involves the giving away of large sums of money, but rather a reasonable investment and an intelligent use of funds, which would remove a great peril from the community, enable the poor to live in decent and sanitary homes and yet provide an income for the investor. This is not a dream but a possibility. This is a land of huge fortunes, and our millionaires are generously inclined. Is it not possible to show them how great a benefaction they can confer on their cities, not by sacrificing their fortunes or giving them to uses in the future whose destiny they cannot foresee, but by transforming the so-called tenement house district into abodes of light and heat and fresh air and cleanliness? The deeper and sadder and more far-reaching problem of a living wage for a day's work which shall mean not a wage sufficient merely to keep soul and body together is a problem of the future. It will be solved, though not in our day, but it is part and parcel of the same problem. The profession of medi-

cine is doing what can be done under present conditions, as it always has done, to save men from the consequences of their own selfishness and folly. Teachers indeed are we, often prophets crying aloud in the wilderness. Sometimes the people listen. Sometimes, alas, they turn a deaf ear to our exhortations and jeer and laugh us to scorn. Still we can only be faithful to our trust now and ever.

The tuberculosis exhibit is the plaster which medicine offers to society to cover a sore. Until, however, the economic and social conditions which have brought about the grievous wound be changed, it will not heal but will continually fester, a reproach not to medicine but to government, to the national conscience and to society.—*Editorial in New York State Journal of Medicine.*

TUBERCULOSIS NOTES.

The most prominent tuberculosis specialists in the country agree that alcohol will not cure consumption. Dr. S. A. Knopf says: "Alcohol has never cured and never will cure tuberculosis. It will either prevent or retard recovery." Dr. Frank Billings, of Chicago, and Dr. Vincent Y. Bowditch, ex-president of the National Association for the Study and Prevention of Tuberculosis; Dr. Lawrence F. Flick, of Philadelphia, and Dr. Edward L. Trudeau, of Saranac Lake, the founder of the anti-tuberculosis movement in this country, are all of the same opinion.

There are in the United States 298 sanatoria, 222 dispensaries and 290 associations for the treatment or prevention of tuberculosis, while there are 600,000 cases of this disease in the country. It is estimated by the United States Conservation Commission that this country loses annually \$1,000,000,000 from preventable tuberculosis.

For the past three years a persistent crusade has been waged against consumption amongst postoffice employes in France. Under these efforts, the number of cases has diminished 50%, having been in 1906, 1,048 cases; in 1907, 808 cases, and last year the number fell to 505.

Dr. William Osler says, "Whether tuberculosis will be finally eradicated is even an open question. It is a foe that is very deeply entrenched in the human race. Very hard it will be to eradicate completely, but when we think of what has been done in one generation, how the mortality in many places has been reduced more than 50%—indeed, in some places 100%—it is a battle of hope, and so long as we are fighting with hope, the victory is in sight."

In England, in addition to other efforts, to combat tuberculosis, a unique project is being placed on foot, to put into commission a sailing ship sanatorium for persons suffering with tuberculosis.

The West Virginia Medical Journal.

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Editorial

If the Journal fails to reach you by the 10th of any month, drop us a postal card. Don't wait until the supply of Journals is exhausted.

TO THE SECRETARIES.

In our last issue we requested you to send us the names of all physicians in your counties still outside your societies. This request was made with a view to aiding you by sending copies of the Journal. You indicated your appreciation of our good intention by not heeding the request. Dr. S. W. Varner, Sec'y of Preston Co. Society, was the notable exception. We sent the Journal to every non-member in that county, accompanied by a personal note to each. This cost us some time, labor and money, which we were willing to give for the general good. Why can't you, Mr. Secretary, contribute your share. If the State Association is

to be a permanent success, we must all pull together, and never stop pulling. Send along the names. **DO IT TODAY. THERE IS NO TOMORROW.**

If your JOURNAL does not come to you next month, ask yourself whether or not your dues are paid. Last year's dues entitled you to the JOURNAL only until last January. If you fail to pay dues for this year, you owe us for seven issues of the JOURNAL. The editor has paid for these. His money ought to be replaced. No more copies will be sent to any except those who are reported by the State Ass'n Secretary as having paid for 1909.

THE WAR ON TUBERCULOSIS.

Although a little late in entering actively into this campaign, West Virginia is now in the midst of the fight. Much credit is due the good people of Charleston, where the State League was organized, and where the Tuberculosis Exhibit was first shown. After some attempts that failed of success, this Exhibit was brought to Wheeling, chiefly by the efforts of a determined woman, Dr. Harriet B. Jones, whose reputation for activity in many fields of charitable and altruistic work is state-wide. Without hesitation she ordered the Exhibit to be sent to this city, and then proceeded to collect the money which she felt the benevolent people of the city would willingly contribute when the cause was properly presented to them.

No movement for the public good was ever more immediately and abundantly successful than was this exhibit, with the instructive lectures so willingly given by a number of our physicians in connection with it. A full account of these is given on another page. The exhibit in Clarksburg also, as will be seen from the report in this issue, was attended with marked success, and the medical profession in both cities deserve credit for the unselfish efforts put forth in behalf of the public health. Parkersburg, Morgantown, Mannington and Moundsville have already made requests for the exhibit, and no doubt other places will fall into line in promoting the good work of educating the people especially in the best methods of caring for tubercular patients, and in the means for limiting the spread of the dread disease.

In this connection we presume to express some of our views touching the tuberculosis question. 1. Tuberculosis cannot be easily or quickly conquered. No living child will see the end of it, which seems even further off since, as demonstrated by Rosenberger, it is a bacteremia, and, as shown by this writer and Wilson, the bacilli are present in the feces and urine as well as in the blood. (See "Outlook" dep't). These facts seem to render the eradication of the disease a more difficult problem than when the bacilli were believed to exist in the sputa only.

2. In lectures to the laity we think too much stress can be put upon the statement that the disease is not hereditary. It is a well known fact that it has been found in infants so young that the conclusion that it was inherited was inevitable. Rosenberger and Wilson, after extensive investigation, concluded that "intrauterine tuberculous infection of the ovum through the semen is probably a frequent event." In addition, the child certainly frequently inherits a constitution that is liable to become infected. So we may safely teach the people that the children of tubercular parents—one or both—are more prone to the disease than are those of robust parentage, and hence they must take greater care to observe the laws of health.

3. We think people are sometimes alarmed by too great stress being put upon the infectiousness of tuberculosis. They should be made to understand that it is not infectious to anything like the same degree as are scarlatina and measles, and that it is little short of cruel to avoid and neglect the tuberculous patient, who becomes a menace only when he grossly neglects the laws of health and decent living. So long as he leads a strictly hygienic life he is not a source of danger to his most intimate associates. To quote the London *Lancet*: "Given the most simple precautions as to the disposal of the sputum by the consumptive, the danger of infection is almost non-existent." Careless habits of living, personal filthiness, and close and repeated contact make him a menace especially to those who have inherited or acquired a feeble constitution.

4. The results of the modern treatment of this disease are encouraging, and patients should be taught to take an optimistic view of their own cases, unless too far advanced

for encouragement. Although excellent results have been reached from the sanatorium treatment in various parts of the country, and no doubt the great majority of patients must from necessity be treated near their own homes, yet we believe that the better climate of the west and southwest should induce all those who are financially able, to seek its benefits. Other things being equal, the best results will be reached by the sanatorium treatment, and this in the west.

5. The greatest good from the tuberculosis exhibits in our state, as elsewhere, will come from the education of the people, especially patients and their friends, in the best methods of living. They are being taught the danger from the sputum and from promiscuous spitting, and hence of the necessity for the immediate destruction of all expectorated matter. They are being taught that there are no dangers in God's free air that can be avoided by shutting it out of the sleeping room, and therefore that this room must be widely open, as far as weather conditions will permit. They are being taught that light as well as air is essential to good health. Light is a foe to filth, and filth is a breeder of disease germs.

But since ignorance abounds, and the ignorant are ever heedless, and bad hygiene is a constant attendant of ignorance, a long, hard war must be waged before a great impression is made upon the prevalence of the great white plague.

S. L. J.

TRANSMISSION OF TUBERCULOSIS.

From the public address recently delivered at Keyser by Dr. Lind, and which the doctor modestly says is too long for publication, we make the following quotations which represent some of the practical points which physicians should emphasize in their instructions to the laity.

"How is tuberculosis contagious, or in other words how may we contract the disease? It has been taught that we get the germs into our systems mainly by breathing the air containing dust from dried expectorated matter from a consumptive patient. Good authorities are now nearly unanimous in the opinion that this is only one way and probably one of least importance. There are many avenues that lead the destroyer to the citadel of life.

It must be remembered that a good portion of the dust which enters the nose and mouth is caught by the secretions and swallowed into the stomach. A man in 24 hours swallows nearly a pint of saliva and fluid from the mouth, nose and throat. So, while we doubtless do inhale directly germs into the lungs, we probably swallow more than we inhale.

We may become infected in any or all of the following ways:

1. Through the lungs by direct inhalation.

2. Through the stomach and bowels by swallowing secretions and contaminated food and drink.

3. Through the tonsils which are often diseased.

4. Through wounds and sores in the skin. There are at least five ways in which food may be contaminated:

1. The dust containing germs may fall on the food. It is a well known fact that the atmosphere where people move about is constantly depositing dust. The more people there are in a given space, the greater the number of germs in the dust.

2. A consumptive may handle our food and the expectorated matter may come from his hands or clothing and contaminate the food.

3. A consumptive may cough, sneeze or expectorate near the food and particles fly into the air and drop on the food.

4. Flies and other insects are great conveyors of infection. They can carry the germs from the fresh or dried sputum on the consumptive's person, or from the floor, or spittoon to the food. A fly has six hairy feet and his body is covered with hair and at every step he is capable of depositing germs.

5. Germs are thrown off from the tuberculous cow through the excretions from the bowels. The dried excretions adhering to the cow's body drop into the milk. All milk, unless proper care is taken, contains cow manure, disgusting as the thought may be.

The flesh of tuberculous cattle may contain germs, but as the meat is generally eaten cooked, the danger from this source is small. The germs may be in the milk as it comes from the cow, but most likely from carelessness in handling the milk."

Our warm congratulations are extended to our associate editor, Dr. C. A. Wingerter,

who has just been honored with the degree of LL.D. by the trustees of Fordham University, N. Y. We believe that this is the first time this degree has been conferred upon a West Virginia physician.

Correspondence

ATLANTIC CITY SESSION—A. M. A.

For the fourth time within the last nine years, the American Medical Association has just held its annual meeting—the sixtieth—at this most attractive seaside city. No other testimony could be adduced, so convincing as this single fact, to its unrivalled advantages for the purposes of these meetings. Halls, hotels and fine sea air in abundant profusion, and most approved quality, form a combination that cannot be offered by any other city on our map. No matter how great the attendance, there is no crowding of halls or jam in hotels, or hustling for places to eat and sleep. As for facilities for social features, the supply is inexhaustible both as to amount and variety. There is no direction in which the spirit of entertainment might wish to display itself, that would be hampered by lack of means or methods. And to crown all, these advantages are available within a reasonable compass. No fatiguing distances separate them, and the disturbing noises of street traffic are not to be reckoned with. Nothing harsher than the soothing murmur of the surf, or the hum of the boardwalk promenade wafts itself in at the windows of the meeting halls.

Increase of facilities stimulates development, and this was noticeably exemplified in the unusual activity of the spirit of comradeship and fraternal feeling shown by the numerous class and college reunions and banquets. An entire evening was given over to these, and in number greater than ever before, the leading institutions were honored and extolled by their enthusiastic and loyal alumni.

The general meeting, held Tuesday morning, in the auditorium of Young's new steel pier, was opened in the absence of the president, Dr. Burrell, by vice president, Dr. Murray, of Montana, who introduced the president-elect, Dr. Gorgas, chief sani-

tary officer of the Isthmian Canal Commission. Dr. Gorgas's address was an inspiring account of what has been accomplished by medical and sanitary science toward The Conquest of the Tropics for the White Race. The section meetings were fully up to the average in the quality of the papers and discussions presented. The total registration was considerably less than the highest previous record, the number being 3,273. In the House of Delegates, the work was largely of a routine nature, consisting of reports of various committees, and action thereon, and the reports of the general secretary, treasurer and board of trustees. The general secretary, Dr. Geo. H. Simmons, gave the net gain in membership for the year ending May 1st, 1909, as 2,592, making the total membership 33,935. This meeting closed the tenth year of his service as general secretary, and a retrospect of the period disclosed some interesting facts. The membership of the Association ten years ago was 7,997. Then, the membership in the various State Societies approximated 34,000. Now it is 67,362. Then, not a single State Association owned and published a journal. Now nineteen states do, and eight others have designated certain journals as their "official organs." Ten years ago, the average weekly issue of the Association *Journal* was 13,672. Now it is 53,978. Of this aggregate 31,999 go to members, and 18,983 go to subscribers who are not members, the remainder going to exchanges, advertisers, libraries, etc.

The assets of the Association at the close of the year 1907, were \$309,306. At the close of the year 1908, \$355,814. The total revenue for the year 1908 was \$430,279, of which advertising produced \$132,993, subscriptions \$100,883, dues \$134,509. The expense account for the year was \$372,034, of which amount \$308,647 was for publication expense. The total net revenue for the year was \$58,205. What an exhibit of growth, organization and power! No wonder that the delegates broke out in a storm of applause when these figures and facts were presented to them. No wonder that they proclaimed with enthusiastic pride, their approval of the work of that genius for organization, whose hand had marshalled and moulded its various elements into this marvellous success. Nor does this complete the

record of achievement accomplished in these years. Now, there are permanent committees constantly working for the solution of matters of weighty importance to the profession and people as well. Such as: instruction of the people in public and domiciliary sanitation; pure food and pure drug legislation and regulation; uniform laws in the different states, in matters pertaining to the profession; higher standards of medical training; thorough organization of the profession; and an official directory of the profession. These activities have so far outgrown the facilities afforded by the present building and equipment, that, to provide for them, the board of trustees was authorized to begin at once the erection of a new six-story building upon the ground already owned by the Association, at a cost of \$200,000.

In the face of all this, then, it is not surprising that the persistent and labored efforts of a few to foster a schism in our ranks, and to discredit the chief organizer of this work, should meet with such signal and mortifying failure. Criticism seemed to have lost its breath, and the meditated attack, to have suffered a stroke of paralysis agitans. As if to give clinching evidence of the state of their feelings, the members of the House of Delegates, at the close of the session, presented to the secretary-editor a \$500 watch, and to his wife a silver loving cup.

It is gratifying to know that West Virginia's part in this great movement is well borne. The *A. M. A. Journal* goes to 355 members and 158 subscribers, making a total circulation in the state of 513. She is one of the nineteen states publishing their own journal. She is one of the eight states that have increased their representation for the next three years in the House of Delegates, she being now entitled to two delegates instead of one. By the time of the next triennial apportionment, she should, and we believe will be entitled to three. The other states showing increase are Illinois 2, Kentucky 1, Missouri 1, Ohio 1, Pennsylvania 1, Tennessee 1, Washington 1. All the rest are stationary except Kansas, Michigan and North Carolina, which lose one each.

The Association made a most happy selection when it chose as its next president Dr. Wm. H. Welch, of Baltimore. Dr.

Welch would shed honor upon any association that might have the good fortune to number him among its membership. The choice of St. Louis as the next place of meeting, is an assurance of a phenomenal attendance and a most hospitable reception.

L. D. W.

State News

W. W. Irwin, of Wheeling, was elected President of the West Virginia Pharmaceutical Association, which met in annual session at Morgantown early in June. We congratulate the new president, and the association as well. Mr. Irwin will fill the office with credit to himself and the Association.

Married—James W. Hill, of Scottsdale, Pa., to Miss Ethel, daughter of Dr. L. L. Edgell, of Keyser, on June 2nd.

Dr. Harriet B. Jones, of Wheeling, was one of the delegates appointed by Gov. Glascock to the National Conference of Charities and Corrections that met in Buffalo on June 9th.

Married.—In Pittsburg, on Wednesday, June 2nd, Dr. R. M. Pettieord, of Elm Grove, Ohio Co., to Miss Bessie Noel, of Benwood. The young couple will reside at Elm Grove, where the doctor is in practice.

We regret exceedingly to have to announce the death, early in June, of the youngest child of Dr. Moore, Sec'y of the State Association. He and his good wife will certainly have the sympathies of the whole Association, of which he has for several years been the very faithful and efficient secretary.

We note the following as among the West Virginia doctors who attended the recent meeting of the American Medical Association at Atlantic City: G. H. Benton, Chester; V. T. Churchman, G. C. Schoolfield, John E. Cannaday, W. A. McMillen, Charleston; S. M. Mason, D. C. Louchery, T. M. Hood, C. C. Jarvis, C. R. Ogden, Clarksburg; M. B. Kelly, S. L. S. Spragg, L. D. Wilson, Andrew Wilson, W. S. Fulton, A. J. Noome, Robt. J. Reed, A. J. Quimby, Wheeling; O. F. Covert, Moundsville; A. J. Woofter, Weston; W. G. Drinkwater, Gorman; J. F. Fox, Bluefield; E. B. LeFever, Inwood; Virginia McCune, T. Q. Oates, Martinsburg; J. H. Anderson, Marytown; W. W. Golden, Elkins; Percival Lantz, Alaska; J. W. Mankin, Thurmond; H. E. Oesterlin, Wheeling.

Dr. Horgan, of Washington, has located at Jenningston.

Dr. Shillenberger, of Dobbin, is assisting Dr. Werner, of Thomas.

Dr. Harmon, who has been in Florida for a few years, is assisting Dr. Johnson, of Laneyville.

Dr. Frank Thompson, of Oklahoma, is looking for a location in West Virginia.

Dr. Miller, of Thomas, has just returned from his vacation.

Dr. Keim, of Elk Garden, will spend his vacation in visiting friends in Pennsylvania, traveling in his auto.

On May 28th were graduated from the City Hospital Training School, Wheeling, the follow-

ing class of nurses: Ruth Holdren, Nellie B. Orum, Grace Mae Dunning, Eva H. Woodruff, Wilhelmina L. Kochert, Katherine O. Byrd, Ruth M. Scott, Clyda F. Wells and Emma L. Gatrell. The graduating exercises were held in the Elks' Hall. A fine address was delivered to the nurses by Dr. Schwinn of the surgical staff of the hospital. He pictured the necessary qualifications of the ideal nurse. The exercises were attended by a large audience. Hon. H. M. Russell presented the diplomas to the nurses, after which Rev. Dr. T. W. Lane delivered a short address. The exercises were interspersed with some excellent music.

Dr. Frank L. Hupp and wife, and also Dr. Harriet B. Jones left the last of June for a two months tour of Europe.

The organization of an anti-tuberculosis league was completed at a meeting held at the Board of Trade assembly rooms, Wheeling.

The constitution was read and adopted. It provides that the official name of the organization shall be "The Anti-Tuberculosis League of Ohio County, West Virginia." The objects are set forth to be, the acquisition and dissemination of knowledge pertaining to the prevention and control of the disease, the securing of legislation toward the same ends, the co-operation with the public authorities and with other associations for the advocacy and execution of measures for the prevention and control of the disease, the promotion of the organization and work of societies of a similar nature within the county, the encouragement of efforts to make adequate provision for consumptives by the establishment of a sanatorium, hospitals, dispensaries and otherwise, and in general to do whatsoever is necessary to promote and effect the objects of the society.

The constitution also provides for three classes of members: The first class or yearly members will pay one dollar per year; the second to be life members, twenty-five dollars; the third to be known as patrons, one hundred dollars; all persons interested in the work are eligible to membership.

The following twenty persons were elected as a board of directors: Miss Elizabeth Cummins, Henry M. Russell, Sr., Edward Simms, Mayor C. C. Schmidt, H. C. Ogden, Louis Buehwald, Harry V. Arkle, Mrs. H. C. Franzheim, Dr. E. A. Hildreth II., W. B. Hilton, C. H. Brues, Rev. Jacob Brittingham, Dr. H. B. Jones, Hon. J. G. Hearne, Hon. C. W. Bente, B. S. Allison, Rabbi Harry Levi, Bishop Donahue, Rev. Dr. William A. Cook and Jesse A. Bloeh. This board of directors will consist of four classes to be determined by lot, the first to serve one year, the second two years, the third three years and the fourth four years. They will have power to make rules for the governing of the society and to expend the funds.

After an operation for extensive carbuncle of the neck, a comforting support may be supplied by placing under the bandage a piece of heavy manila cardboard (bookbinders' board), wetted and shaped to the back of the head and neck.—*American Journal of Surgery.*

Society Proceedings

THE CABELL COUNTY SOCIETY.

Huntington, W. Va., June 11th, 1909.

The Cabell Co. Med. Society met in the Hotel Frederick the evening of June 10th with a fair attendance. The evening was spent in a discussion of Typhoid Fever and its dissemination, and the Sanitary Condition of the Dairies. A committee consisting of Drs. Lovett (chairman), Rader, Buffington and Bloss, was appointed to confer with the board of health of the city as to the best plan to adopt for a campaign of education of the people along these lines, and to report at the July meeting what progress had been made.

Fraternally yours,

JAS. R. BLOSS, Sec'y.

PRESTON COUNTY SOCIETY.

Kingwood, June 20, 1909.

I send you report of the last meeting of the Preston County Medical Society.

At a meeting of the Preston County Medical Society held at Rowlesburg, on the 5th day of June, 1909, the following officers were elected: President, Dr. J. S. Nedrow, of Bruceton; Vice President, Dr. W. H. Post, of Masontown; Secretary, Dr. S. W. Varner, of Kingwood.

The Board of Censors are Drs. E. W. Strickler, W. F. Dailey and W. H. Post.

Delegate to the State Medical Association, Dr. W. F. Dailey; alternate, Dr. W. H. Post.

The next meeting will be held in Kingwood on the 9th day of September, and we expect to have a good one.

The program as it is now arranged will be as follows:

Address of welcome by the mayor of Kingwood.

Lecture, "Medical Jurisprudence," by Hon. Neil J. Fortney.

Papers to be read by the following: Drs. E. W. Strickler, W. F. Dailey, M. H. Proudfoot, H. H. Lott.

We expect more of the physicians of the county to come into the society before the meeting of the State Association.

Yours very truly

S. W. VARNER, Sec'y.

OHIO COUNTY SOCIETY.

February 15th, 1909.

(27 present). Dr. Wingarter continued his lecture on "Angina Pectoris," treating of the theories offered to account for the syndrome, and the treatment for the condition. Dr. Ackermann said that ischemia of the heart would be relieved by the nitrates because of their property of dilating the arterioles. Syncope should not be treated in these cases; it, like pain, is a beneficent process. Dr. Osburn cannot see how puncture of the heart, as suggested, could be better than opening a vein. Dr. Walden said that we can have inflammation of the liver, heart, spleen, and kidney without pain; why, then, should we attribute the pain in angina to the heart muscle? He is inclined to deem it a neuralgia, and does not believe the trouble is in the heart muscle itself. Dr. Noome said that in angina we must have the proper concep-

tion of the pain; we cannot attribute it to a simple neuritis. We must always remember that the experimental physiologists are working with smaller animals and with single organs. He thinks that when the heart is ischemic, pain is caused by irritation of the cardiac nerves and the irritation of all the intercostals at once. In all cases of cardiac pain we find the pulse rate increased. Dr. Gaydosh thinks the theory of cardiac flooding is plausible, yet the ischemic theory appeals to the judgment also. He reported a case of angina relieved by the use of aconite. Dr. Schwinn thinks the fact is that almost every case of angina would show atheroma of the coronary arteries, yet the syndrome is rare. Every case where there has been heart pain during life should be brought to autopsy. Angina pectoris is only the climax to preceding conditions of a less intense character. Only by a careful post-mortem examination of a great number of cases, and a study of them, will the truth about angina be reached. Dr. Ackermann said the value of the Thebesian canals to which the lecturer had given such attention can be established only if a capillary circulation can be shown to exist. The heart can adapt itself to slow changes, but angina is sudden. If an artery of the heart is tied, the heart stops but begins action again on release of the vessel; unless the test is too often repeated, when the stoppage remains permanent. There are numerous anastomoses between the coronary arteries.

CHAS. A. WINGERTER, Sec'y.

February 22nd, 1909.

(24 present). Dr. Jepson exhibited a sample of green urine and discussed the possible cause of it. Dr. Noome lectured on the "Morbid anatomy and etiology of myocarditis." He also reported a case of lobar pneumonia that had been diagnosed as angina pectoris by a physician in another city. The discussion on the lecture was opened by Dr. Wingarter, who called attention to some points of peculiarity in the cardiac circulation, and emphasized the importance of studying the peripheral circulation in all cases of cardiac disease. Dr. Ackermann thinks the pathology of the heart is found in the heart muscle. The heart must make compensation for valvular lesions; the average compensation for mitral disease lasts for 16 years, that for aortic disease, 8 years. Loss of compensation means a change in the heart muscle. He described a case of fibroid heart. Dr. Benton—visitor—desired to emphasize the fact that arterio-sclerosis can be found before the age of 40 years. He reported a case of early arterio-sclerosis due mainly to gastro-intestinal auto-toxicosis. He thinks that many such cases will be found even under 30 years if sought for.

Dr. Taylor reported two cases of spina bifida, in both of which instances the children were club-footed. In both cases there was excessive liquor amnii, in one instance five gallons; the cord was only five inches long in one of the cases. He asked why there is always abundant amniotic fluid, and often club-feet, in cases of spina bifida. The children are short-lived. Dr. Ackermann said that club-feet may be due to pressure of the uterine walls where there is very little liquor amnii. There is also a paralytic form. In many

cases of spina bifida there is involvement of the spinal nerves. Most cases of acephalus are primarily cases of hydrocephalus. Dr. Fulton reported a case where there was protrusion of intestine through a congenital opening in the abdominal wall; operation was done one hour after birth, and 14 inches of bowel resected with end-to-end anastomosis; the child lived four days. Dr. Armbrrecht reported a case of arrested development, in which there was no cord, the placenta being immediately attached; there was no abdominal covering, the viscera being exposed; there were present also cleft palate, hare-lip and club-foot. The mother has since borne a normal child. Dr. Osburn reported a successful obstetrical case in which it was impossible to deliver with the forceps; he turned the child and delivered by the feet; he emphasized the value of firm pressure supra-pubically in these cases, with profound narcosis. Dr. Wingerter thought that nature might have helped more in this case if more opportunity had been given for the head to engage before the forceps were used or version begun. Dr. Ackermann explained the difficulty of delivery with forceps in such a case as that described. Dr. Jepson said that it is impossible adequately to describe to others the actual conditions in some obstetrical cases. When a successful result is attained, criticism is condemned to silence. Dr. McMillen said that in cases where the anterior wall of the womb remains thick there is apt to be edema of the anterior lip, but thinks that perhaps with more time nature might have been able to deliver. Dr. Noome thinks there was a mechanical obstruction, and that with a little time this might have disappeared. Moreover, if the fore-coming head would not engage, what reason was there to expect the after-coming head to engage? Dr. Wilson thinks there was in this case an abnormally-shaped pelvis and after forceps were applied the head would not engage in the proper diameter, a thing quite apt to occur in the upper strait. Dr. Osburn said that those who did not actually see this case could not appreciate the extreme obstruction caused by the edematous cervix. After the uterus was practically emptied by the turning, retraction of the os followed and permitted delivery. Dr. Armbrrecht thinks that if there had not been an abnormal pelvis, delivery might have followed after more delay. He reported a somewhat similar case. Dr. Osburn is inclined to believe that in all cases of after-coming head, profound anesthesia, allowing proper pressure on the head, would be proper procedure. Dr. Taylor thinks that if there is not too profound anesthesia on applying forceps, the pains help very much. There is an advantage in using short forceps in many cases of delay in the upper strait. Cases of round pelvis are most difficult ones. Turning is not an easy task after the amniotic fluid has almost all escaped. Dr. McMillen does not favor complete anesthesia in breech presentations.

CHAS. A. WINGERTER, Sec'y.

Deformities of the septum, enlarged turbinates, etc., should receive operative treatment only when they cause obstruction.—*American Journal of Surgery.*

Reviews

MEDICAL AND MINOR SURGICAL DISEASES OF WOMEN—By SAMUEL LILE, M.D.
Southern Medical Publishing Co., Balt., Md.

In the opinion of Dr. Lile there is a field for this work, because the writers of text-books on diseases of women fail to treat of the minor operations and minor details in their works, giving their attention to the major surgical gynecology. So he essays to make up the deficiency in this work. We do not think that he does so satisfactorily. In his attempt to treat of all diseases of women many of the chapters are very brief epitomes of the symptoms and treatment, so brief as to be of little use to the student or general practitioner, for whom he says he has written the work. The chapters relating to the medical side are fairly instructive; those relating to displacements and their treatment by pessaries the most satisfactory in the book. On disorders of menstruation there is unnecessary refinement in describing varieties and causes. The subject of minor surgical treatment is very meagre. The author evidently feels that the general practitioner has no business in attempting any operation; that as soon as that necessity arises, he should send for a surgeon.

He assumes an ignorance on the part of his readers that is amusing. For instance, he advises the use of the bi-valve or tri-valve speculum and then cautions the reader to always close it when introducing it! He does not tell us what the patient would say if he tried to use it open. Again, in his chapter on anatomy he cautions us to always remember, "that a woman has all the organs found in a man or their analogies, besides which she has a vagina, uterus and Fallopian tubes, which are not found in man; while man has a prostate gland, the only gland she has not." She, having no ejaculation, needs none! Wonderful facts to impress on the minds of the advanced student or general practitioner.

Of course, the work is illustrated. This is a strong point! There are 17 pages of illustrations. We can divide these pages as follows: Eight full-page studies of the nude female figure in various attractive positions for examination, three pages of instruments, and eight of illustrations proper, showing the manner of making diagnosis, applying pessaries, etc. The studies in the nude are unique. One, a handsome female, has one foot elevated on a stool, limb flexed. She is looking with downcast eyes at a visible hand coming out of nowhere, like a hand at a *spiritual seance*. Fingers are about to enter the vagina or examine the external genitals. Another is a nude female lying on her back on an examining table, one knee drawn up ready for examination. The lines are graceful, but the position awkward for digital examination.

These things are better explained in the text, but perhaps would not be so attractive to the student, who, the author tells us, "has not in his early examinations of women, his mind on his business."

In conclusion, there does not seem to us any *raison d'être* for this work to have been written

or published; especially when there are so many other and better text-books offered to us; and the medical student and general practitioner can invest to greater advantage in one of these, in which he will get all that is valuable in this and very much more—and have illustrations which teach something in connection with the text, written by men who are teachers, and know how to teach.

W. H. S.

THE INTERNATIONAL MEDICAL ANNUAL—A Year Book of Treatment and Practitioners' Index. 27th year. 1909. E. B. Treat and Co., Publishers. Cloth, \$3.00.

This annual has now been before the profession for twenty-seven years, evidence in itself that it is a most useful book. Eighteen of the volumes are in the reviewer's library, a proof that we regard it as a work of very high value. Were we to purchase a single medical book annually, it would be this. Were a young practitioner too short of means to supply himself with Journals yet purchase and closely study this Annual, he would be well informed, and get all the good new things that are presented to the profession during the preceding year. If you, young men, think of binding your Journals, don't, except your own State Association Journal, which has a local as well as a professional interest.

The first 100 pages of the Annual are taken up with a review of Therapeutics, in which all new remedies and forms of treatment are considered, as new medicines, serum therapy, opotherapy (animal extracts), Beranek's tuberculin, opsonins and vaccines, radiotherapeutics, electrotherapeutics, and phototherapy. The remainder of the book is taken up with treatment, medical and surgical, of all forms of disease. A short chapter is devoted to sanitary medicine. Buy this year's Annual, and then buy all its successors, and then make a daily study of them, and thus make of yourself a well-informed practitioner.

THE POPES AND SCIENCE—The story of the Papal Relations to Science during the middle ages and down to our own time. By JAS. J. WALSH, M.D., PH.D., LL.D., *Prof. of History of Medicine, etc. at Fordham University School of Medicine, N. Y.*

A prevailing opinion for the long past has been that the Popes have always been opposed to the advance of learning and especially to scientific advance. The purpose of this book is to combat this idea; and, after reading almost the entire volume, an octavo of over 400 pages, we see no reason to doubt that the author has accomplished his purpose. He sets forth much evidence tending to show that the Popes, instead of being the foes to science, really in many ways aided its advance. They are shown to have been the advocates of higher learning, and the friends and advocates of some of the earliest of the Medical Schools, the Universities having been the "outgrowth of cathedral schools." The author has gathered a mass of information, much of which shows the advanced state of medicine in the 13th and 14th centuries. Prof. Allbutt is quoted as showing that William of Salicet—13th century—taught that dropsy was due to hardening of the kidneys, that wounds of the neck are very dangerous, that nerves may be

sutured successfully, and other facts in medicine supposed to be recent discoveries. Lanfranc, a pupil, suggested the digital compression of arteries to stop hemorrhage, and their ligation if necessary. Both of these men seem to have been clerics, having taken their minor orders. Dr. Walsh shows that the Papal physicians were the most learned of men, deep students of and writers on medical topics, always receiving from the Popes encouragement in their investigations. The author admits that "Galileo was prosecuted by the Roman inquisition on account of his astronomical teaching," and that "this was a deplorable mistake. * * * The fact that this was practically the only time that this was done serves to show that it was an unfortunate incident, but not a policy." To this error the author attributes much of the modern prejudice as to the true position of the Popes touching the advance of science. He insists that "there was no bull against anatomy or dissection, no bull against chemistry; the Popes were the patrons of the great medical scientists and surgeons, the Papal Medical School was one of the best in the world and was sedulously fostered; the great scientists of the middle ages were clergymen, and many of them at death were declared saints by the Church."

We regret that we can not spare further space to this highly entertaining and instructive work. It is written in a vigorous style, and the author evidently believes what he has written, and apparently has written from a fullness of information. We await with interest the reply from President A. D. White, of Cornell, whose previous writings are vigorously attacked.

PRACTICAL DIETETICS—By A. F. PATTEE, *Late Instructor in Dietetics in Bellevue Training School for Nurses, Bellevue Hospital, N. Y., etc.*

This book is the result of large experience in hospital work. It has been adopted as a guide in the New York Training Schools, as a text book in the public schools of New York, and by the U. S. and Canadian governments in the army and militia. While intended primarily for the sick, it is a most useful book for the home, and we can cordially recommend it. Many large books on diet stand in our libraries unopened for years. This is one that can be used daily with advantage to our patients. One doctor who has used it for years said to us: "It is splendid." We have a few copies at \$1.00. A. F. Patee, Mt. Vernon, N. Y., will send it to you for \$1.10.

ERADICATING PLAGUE FROM SAN FRANCISCO—Report of the Citizens' Health Committee and an account of its work. Prepared by FRANK MORTON TODD, *Committee's Historian.*

This octavo volume of 300 pages contains a description of the measures taken for the suppression of the plague, together with ordinances in aid of sanitation, articles by competent sanitarians on the nature of the plague and the best means to get rid of it. The committee learned that the plague is a rat disease, transmitted to man through the flea. Five thousand bacilli of the plague could harbor in the gizzard of a single flea, we are told, and yet the flea continue quite

athletic. The extermination of the rat, therefore, is the first principle upon which to base a campaign against an epidemic of the plague. This is a highly interesting and suggestive report. It shows the excellent work done under the direction and with the active aid of the officers of U. S. Public Health and M. H. Service, who are especially trained in public health work. The time has arrived for the obliteration of state lines, and for speedy action by this efficient national service in time of the prevalence of epidemic disease. In view of the possibility of the spread of the plague to any of our cities, it would be well for all of our health authorities to procure and carefully study this very valuable report. C. A. Murdock & Co., Pubrs., San Francisco.

Medical Outlook

IS THE USE OF IODIDE OF POTASSIUM ADMISSIBLE IN PULMONARY TUBERCULOSIS?—H. P. M. Landes, M.D., (*Therapeutic Gazette*), concludes from the observation of a case or two in which the drug was used, that potassium iodide is very apt to aggravate a quiescent form of pulmonary tuberculosis. He cites a case in which some indefinite signs being present in one apex, five grains of potassium iodide were given every three hours for five days, with the result that the physical findings and amount of sputum were increased, while tubercle bacilli, which were previously absent, appeared in the sputum.

IODO-FORMIC ACID IN PHTHISIS.—H. Stern, New York City (*Journal A. M. A.*, February 1), describes his method of using iodo-formic acid in chronic ulcerative phthisis. He employs two solutions: a 1 per cent. solution for hypodermic use (from 10 to 30 drops, beginning with smaller dose and gradually increasing to the higher dose, or even to 40 drops in some cases) and a weaker solution made from this (1 part in 150 for internal use. Of the latter, one tablespoonful representing one c.c. of stronger solution is an average dose. Some stomachs will not bear this and it should then be given still further diluted. In other cases sometimes larger doses can be tolerated; the behavior of the stomach can be taken as a guide. The solution may be given from two to five times daily, after breakfast but before the other meals. It should never be combined with other drugs, but should be taken at least an hour apart from any other medicine. The intramuscular injections are, however, the most rational method and the only one by which we can directly influence the phthical process in the lungs, and he usually injects into the thickest portion of the intrascapular muscles. Full directions are given as to details, antiseptic precautions, etc. Stern's theory that the formic acid is the more effective or more important component, and that the action of the iodine is that of a catalyzer, and in many ways analogous to that of a ferment. The specific effects of iodine are never observed from the ingestion or the injections. The primary therapeutic effect seems to be a local one, relieving pain, lessening cough and expectoration and improving the character of the latter, and checking ulceration and caseation. Constitutionally it

appears to affect assimilation in a rather direct way and the patient begins to gain in weight before any appreciable local changes have been produced. The accessory treatment with drugs, diet, fresh air, etc., is described, the yolk cure in particular. A case history is appended.

THE PRESENCE OF TUBERCLE BACILLI IN THE BLOOD.—Rosenberger (*The American Journal of Medical Sciences*, February, 1909) states it as his belief that tuberculous disease in all its forms is a bacteremia, and offers as proof the fact that in every one of 50 cases tested he has been able to demonstrate the bacillus in the circulating blood. In only one instance was any other pathogenic organism found; consequently he considers that mixed infections are much less common than most of us have hitherto believed. Of his cases 5 have been diagnosed as acute miliary tuberculosis, 2 as fibroid tuberculosis, 1 as pneumothorax, 15 as incipient tuberculosis, 23 as moderately advanced tuberculosis and 3 as laryngeal tuberculosis. In all these patients the bacillus was demonstrated; sometimes but few were seen, but usually large numbers were found; clumps of 30 to 40 bacilli were not unusual.

The technique is as follows: Under aseptic precautions 5 c.c. of blood are taken from a vein of the arm. This is at once placed in an equal amount of 2 per cent. sodium citrate in normal (0.9 per cent.) salt solution. The mixture is well shaken and placed in a refrigerator for 24 hours. At the end of this time a quantity of the sediment is pipetted off and a rather thick smear is made on a glass slide. This is dried by moderate heat and the slide is placed in distilled water until complete laking of the blood is resulted. The slide is then stained by the usual technique for tubercle bacilli. The organisms as a rule were found in the first slide, but in several cases three slides were thoroughly searched before any were demonstrated.

It would seem that if the author's results are confirmed by other competent observers, we might have in this method a distinct advance in the diagnosis of incipient tuberculosis.—*Med. R. of R.*

TUBERCULOSIS OF THE HIP-JOINT.—Waldstrom (*Ciribltt. fur Chirurgie*, No. 7, 1909). The author treated 60 cases of tuberculosis in and around the hip-joint. In 18 of these cases the X-ray examination showed the presence of an isolated focus in the femoral neck, within the region of the capsule. Based upon careful X-ray examinations, the author believes the coxitis in these 18 cases to have originated from these isolated foci in the femoral neck. In three cases only did the patient come under treatment before the focus had gone on to coxitis or destruction of the femoral head. Two of the patients were entirely cured by operation, and one recovered with a slight coxa vara and good function. Among the remaining cases 10 patients could certainly have been freed from the tuberculous disease in the same manner if they had come under treatment at an early stage. The author points out the importance of evacuating every known focus in the femoral neck without damaging the joint, for the following reasons: (1) There is no method to ascertain within a short time whether the tuberculosis is stationary or progressive in character. (2) The focus in the femoral neck is

situated so as to have only a short distance to travel before reaching the joint when progressing in any direction but toward the trochanter major. (3) After the focus has penetrated into the joint very extensive destruction follows.

It is essential to save as much bone material as possible at the time of the operation. The author therefore makes use of Rydygier's incision, with temporary detachment of the trochanter major. The focus is then located and carefully removed, under very accurate aseptic precautions. The operation is terminated by reattachment of the trochanter after injection of iodoform glycerin and primary suture.

The same method is utilized by the author for foci in the femoral neck, with otherwise purely synovial tuberculosis of the hip-joint. Iodoform glycerin injections are made into the hip-joint during the operation. The after treatment is carried out with the assistance of plaster bandages or extension dressings.—*Med. R. of R.*

TWO CASES OF TUBERCULOUS ABSCESS OF THE TONGUE.—Sinibaldi (*Gazzetta degli Ospedali*, May 3, 1908). The first patient was a girl between five and six years of age, who came of a tuberculous family. There was no other localization of the disease besides the abscess of the tongue. This had probably been caused by a small abrasion which the child had sustained in falling down with a bread-crust in her mouth in the room of a consumptive relation. Ablation of the focus was followed by healing by first intention.

There was nothing suggestive of tuberculosis in the history of the second patient, a woman 25 years of age, whose attention was called to the trouble through the difficulty experienced in talking. An operation was performed, and healing took place by second intention. The patient subsequently presented bone and joint symptoms of a tuberculous character.

The microscopical examination served to show that in the case of the child, the disease had originated in the superficial muscular layers, or, possibly, in the sub-mucous tissue, through direct inoculation with the tuberculous virus. The direct etiology of the lingual abscess in the second case remained obscure.—*Med. R. of R.*

THE DIGESTIVE TRACT IN TUBERCULOSIS.—The dietetic and hygienic treatment of pulmonary tuberculosis will remain as a factor of permanent value. Scientific investigation may modify, in some degree, its relative importance to other methods. What has already been accomplished by specific treatment inspires the hope that an unquestioned specific will yet be demonstrated. Diet and hygiene have accomplished so much while waiting for such time that they cannot be disregarded. The four great cornerstones of this method are diet, out-of-door life, regime and rest. Diet involves the study of the digestive tract and its functions. Increase in weight and an improvement in general physical condition is an early result of a generous diet. Faulty digestion is as much the result of imperfect elimination as it is of imperfect metabolism and both functions must be stimulated. A diminution in amount of the enzymes results from the general toxemia. It is desirable to increase the functioning power of a gland rather than to furnish glandular pro-

ducts direct. Digestion, assimilation, and elimination are interdependent functions. The blood condition is improved under a state of good nutrition. The digestive tract may be trained to care for progressively larger amounts of food. Possibilities of the digestive tract vary with the individual, consequently we must individualize our patients rather than classify them. A diversified diet is the most acceptable to the alimentary tract. Appetite and digestion have a psychical as well as physiological basis. The patient should be taught to prevent toxic products from entering the digestive tract. The breakfast hour, the dinner hour, the supper hour should be the most cheerful and restful hours of the day. The good story and humorous anecdote at the table have a digestive value. The attention to another's comfort frees us from our own worry. The prolonged and cheerful table service better prepares the food for digestion and increases the flow of the digestive ferments.—*Dr. I. J. Archer in Old Dominion Jour. of Med. & Surg.*

TUBERCULOSIS; INFLUENCE OF CLIMATE.—In a somewhat lengthy article, E. S. Bullock and C. T. Sands, Silver City, N. M. (*Jour. A. M. A.*, June 19), review the evidence for the climatic cure of tuberculosis, illustrating their argument by tables joining the comparison of results of sanatorium treatment at high altitudes with those in institutions nearer the sea level. They find in their tabulations that, in spite of the generally inferior and more advanced class of cases treated, the government military and naval sanatoria at Fort Bayard and Fort Stanton show better results than some of the best institutions in the east, viz., the Adirondack Cottage Sanatorium, the Massachusetts and the Rhode Island State Sanatoria. The difference is not great but it is in favor of the high altitude sanatoria in the west, and the difference is most marked in the advanced cases which, in the two government institutions, comprise 60 per cent. of the whole. The authors have also made a comparison between their own institution, the New Mexico Cottage Sanatorium, and the Loomis Sanatorium at Liberty, N. Y., as presenting the most favorable results under their respective climatic conditions. They have taken pains to eliminate the personal equation so far as possible, and offer their statistics as impartially and conscientiously compiled. At the Loomis, in the incipient class, they obtain 62 per cent. of apparent cures; in the moderately advanced class, 16 per cent.; and in the far advanced class, 3 per cent. At the New Mexico Cottage Sanatorium, the authors report in the incipient class, 83 per cent. of apparent cures, in the moderately advanced class, 50 per cent., and in the far advanced class 13 per cent. Combining the statistics of the three western sanatoria, there are of apparent cures, in the incipient class, 56 per cent.; in the moderately advanced, 24 per cent.; and in the far advanced 6 per cent. Against this there are in the five lower level eastern sanatoria percentages of 47, 7, and 0.6 respectively. There is nothing but climate and altitude to which can be attributed these striking differences. The financial question here intervenes, however, and it is no use to send any patient to a high climate unless he can have sanatorium treatment and control, or can at least have as favor-

able conditions as he could have at home. The authors find that the blood pressure as tested in 350 of their patients averaged 130 mm. of mercury, as against 100 mm. found by Dr. Thayer, of Baltimore, and suggest that this may be one of the reasons why high altitudes are beneficial. They are not enthusiastic in regard to the tuberculin treatment, which they have seen followed by disastrous results. If used at all, it should be used only by those trained to its use and never by general practitioners of medicine. No one can insure positively against unfavorable reaction from its employment. There may be cases in which it alone will effect a cure, but an examination of statistics of Bullock's experience and of those of the Adirondack Sanatorium has not shown better results with its use than without. The more favorable post-discharge figures in tuberculin treated patients, he thinks may be due to the fact that patients who take tuberculin best are those who are naturally most resistant to tuberculosis. He speaks highly of the hypodermic use of citrate of iron for the secondary anemia of tuberculosis, and calls attention to the striking results obtained in their sanatorium in the treatment of laryngeal tuberculosis. By direct application of and spraying with a 2 to 10 per cent. formalin solution thrice a day, they have obtained apparent cure in 18 per cent. of cases of combined pulmonary and laryngeal lesions, and 35 per cent. of apparent laryngeal cures. The recently published work of Lockard of Denver ("Tuberculosis of the Nose and Throat," St. Louis, 1909, C. V. Mosby Co.), will give those desiring them, the details of the treatment.

TUBERCULOSIS INFECTION.—R. N. Wilson and R. C. Rosenberger of Philadelphia report the results of a study of the secretions and excretions of tuberculous individuals to determine: 1. The possibility of transmitting the disease in its earliest stages. 2. By what means and through what media infection of human beings by other individuals may and does occur. 3. How far, under ordinary conditions, nature provides for the destruction of infectious tuberculous material after its excretion from the human body. They believe in the possibility of parental transmission of tuberculosis to the unborn child, and have demonstrated the existence of tubercle bacilli in the semen extracted immediately or very soon after death. They have also examined the urine and feces, the spinal fluid, the fluid from thoracic lesions and ascitic fluid, and remark especially the duration of the virulence of the bacilli in the urine, sputum and feces under natural conditions, favorable and unfavorable. Their findings throw doubt on the destruction of the bacillus by air and sunlight, and the most dangerous feature is the discovery of the persistence of the organisms in a form that resists ordinary tests.

Their conclusions are summed up as follows:

1. Intrauterine tuberculous infection of the ovum through the semen is probably a frequent event.
2. Tubercle bacilli are present in the feces and in the urine of many, and probably all, cases of active local and systemic tuberculosis of the human being.
3. Tubercle bacilli appear in the feces and urine

of tuberculous subjects within the first few days following an acute infection, and in certain instances long prior to the appearance of physical signs.

4. The only likely means of rendering tuberculous excreta (sputum, feces, urine) innocuous is the direct and effectual application of heat. They can not be expected certainly to overgrow or die out or surely to succumb to sunlight or drying.

5. Excreta from which formerly demonstrable tubercle have apparently disappeared may still prove destructive to animal life, and the bacilli again be recovered from the test animals in a demonstrable form, both by culture and by tinctorial methods of examination of the excreta.

6. The routine examination of the stools for tubercle bacilli should be more invariable even than that of the sputum. It more often yields a positive result. In occasional instances the microscopic field is as thickly spread with the bacilli as any sputum. Often the search must be painstaking and extended until a few scattered bacilli have been detected.

7. The examination of the urinary sediment for tubercle bacilli is not adapted to the use of the general practitioner. It should be resorted to whenever necessary to a thorough confirmation of suspected and doubtful or local (genito-urinary) infection. The inoculation of guinea-pigs with the urinary sediment is a surer though slower method of demonstrating the bacillus, provided the test animal escape early death from mixed infection.

8. Probably all infections will open up to similar methods of study their causal organism when once we have determined on specific stains and differential methods. There appears to us to be little doubt that every bacterial infection is a bacteriemia, and it seems not improbable that in every bacteriemia the causal organism is excreted through the urine and feces.

The authors are not altogether hopeful of the ultimate extinction of tuberculosis. They say: "Without the slightest desire of uttering a pessimistic word, and with the knowledge that in the clearest understanding of the truth lies its best hope of accomplishment, on the basis of this study we feel dubious as to the ultimate extinction of the disease by human means."—*Jour. A. M. A.*, Feb. 6, 1909.

Germany has 82 sanatoria for tuberculosis, which hold over 20,000 poor consumptives; the cost of each sanatorium is about \$100,000. Through organized effective methods, Germany has reduced the death rate from consumption by one-half throughout the nation. In the German army, tuberculosis has diminished 42% during the past 20 years (from 3.3% per thousand to 1.9% per thousand of the effective force).

That consumption can be permanently cured is demonstrated by some figures published by Dr. A. Van Breden, of Belgium, who says that 75.8% of the patients treated in the Bourgoumont Sanatorium in 1903-4 have continued, four years after treatment, to improve, and are in a condition to return to their regular occupations.

The number of deaths during the four years of the Civil War was 205,070. During the past four years 800,000 deaths have resulted from tuberculosis alone in the United States.

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Original Articles

RHEUMATISM IN CHILDREN.

S. L. Jepson, A.M., M.D., Wheeling,
W. Va.

(Read at annual meeting of State Medical Association, Clarksburg, May, 1908.)

The rheumatism of twenty years ago is not the rheumatism of today. We are learning to differentiate joint diseases that are in many respects similar, so that we no longer call all diseases rheumatism that present a co-existence of arthritis affecting one or several joints with general febrile symptoms. In 1904 there appeared in the *Boston Medical and Surgical Journal* several notable papers touching joint affections which seemed to shed considerable light, based, as they were, upon a number of years of close study of joint inflammations in the Boston hospitals. Dr. Goldthwait classified these as follows: 1. Chronic villous arthritis. 2. Atrophic or rheumatoid arthritis. 3. Hypertrophic arthritis (or osteo-arthritis). 4. Infectious arthritis (due to some infectious organism or its toxin, as the gonococcus, pneumococcus, streptococcus, staphylococcus, or the typhoid bacillus). 5. Chronic gout. None of these should be classified as rheumatic, and only those in the fourth class very closely resemble acute rheumatism. In 1896 Still described a disease that has been called by his name, and which he defined as "a

chronic, progressive enlargement of joints, associated with general enlargement of glands and the spleen." But this has not yet been accorded the position of a new disease, and certainly cannot be classified with acute rheumatism.

The etiology of rheumatic fever has long been a vexed question. The lactic acid theory of Prout, the uric acid theory which has been kept to the front by the ardent advocacy of Haig, the various modifications of the nerve theory, and recently the infectious or germ theory have each attracted much attention from the profession and received serious investigation.

As to uric acid, Hare has recently said: "It is a normal product of the body, and even when injected into the blood in considerable quantities is incapable of producing any deleterious effect or grave symptoms." A recent reviewer of Haig's work says: "With the prevailing uncertainty as to the normal metabolism, the more careful investigators have been unable to find any evidence of the pathogenic action of uric acid except in gout."

At present the infectious theory has the stage, and most recent authorities classify acute rheumatic fever with the **infections**. As long ago as 1891 Achalme described an anaerobic bacillus resembling that of anthrax which he regarded as the specific agent in the causation of rheumatism; and by the inoculation of guinea pigs with this germ he succeeded in causing serous inflammations. Other observers confirmed these findings, the investigations of Poynton and Peck being especially well known. In the *London Lancet* of September, 1900, they

gave the results of their studies, and claimed to have demonstrated "the diplococcus rheumaticus" in eight cases of rheumatism, in the blood of living patients, in the pericardial fluid and granulations from the valves removed post mortem, in the throat of patients with rheumatic tonsillitis, in a rheumatic nodule and in the pleural exudate of a rheumatic patient, as well as in other processes. They caused polyarthritides, bursitis, teno-synovitis, valvulitis, pericarditis and other conditions often associated with acute rheumatism, by the inoculations of animals with a culture of this bacillus. More recently they have isolated and cultivated the diplococcus from the cerebro-spinal fluid in four cases of fatal rheumatism, in three of which there was chorea at death. While they regard this germ as identical with those discovered by Triboulet in 1897 and Wassermann in 1899, they do not claim that it is the only cause of rheumatism, but insist that it is one cause.

In the *Lancet* of this month Poynton states that after an investigation of 40 cases of rheumatism he still regards it as infectious. P. and Payne "were the first to reproduce experimentally and repeatedly pericarditis and endocarditis. * * * The micrococcus can be isolated in pure culture from the cardinal lesions of rheumatism, can by injection into animals cause similar lesions, and can be again isolated from those lesions in pure culture."

In 1908 Thiroloix, in a French journal, states as a result of his studies that Achalmé and a number of others have determined the same germ as the infectious agent in rheumatism, a number isolating it from the blood of patients *intra vitam*, and by culture inoculation of young rabbits, have produced the most striking symptoms of acute rheumatism in those animals. Thiroloix concludes that the pathogenic causal role of this diplococcus of Achalmé in acute articular rheumatism is probable, if not certain. But it probably only acquires its specific influence in certain persons and under certain conditions that have not yet been accurately determined. Up to this time, however, the profession has not accepted this or any other single germ as the true and only one capable of producing the disease under consideration, which

leaves us in doubt as to whether the symptoms of this disease may not be excited by any one of a number of organisms. The view that the disease is infectious, however, is favored by its occasional epidemic prevalence, its variability of type, the frequency with which it attacks the young, the concurrence of endocarditis, of pericarditis, of pleurisy, of pneumonia, of erythematous eruptions, all met with in connection with other infections; the rapid anemia, the tendency to purpuric capillary hemorrhages, the implication of joints, the nervous disturbance, and the specific influence of one drug, namely, salicylic acid. (Cheadle). Woods Hutchinson, after presenting arguments against this germ theory, says: "It seems the most probable working hypothesis yet offered, and I think most of us feel toward it much as the country justice did toward a certain case which had been tried before him, when he announced that he should take it under consideration until Monday, but when he did decide it would be in favor of the plaintiff."

Among predisposing causes heredity is the most potent. Cheadle found a rheumatic family history in 173 out of 492 cases; Holt, and also Fischer, claims that two-thirds of the patients who are children belong to rheumatic families. Other estimates range from twenty to sixty per cent. One rheumatic mother had twelve children, eleven of whom developed rheumatism before the age of twenty years. It is claimed that statistics demonstrate that a child with rheumatic antecedents is five times more apt to contract rheumatism than one free from such a history. That there is, therefore, in the rheumatic child a favoring diathesis is generally conceded.

The disease prevails in the temperate zones where, and in the Spring months when, weather changes are most common. From 15 to 35 years of age is the period of most frequent occurrence, due largely to the fact that within these years is the period of greatest activity and exposure. Of 270 cases at Johns Hopkins Hospital, 37 per cent were under 20 and 60 per cent from 11 to 30 years of age. Many cases occur below 15 years, and but few under five years. A few have been reported as occurring in the first year of life, several in the first month, one on the 23rd day.

Rotch's earliest case was at two weeks, Guthrie's at 11 days; Jaccoud reports one at three days and one at 12 hours after birth. The mothers in these cases were at the time ill with rheumatism, or it is not likely the diagnosis would have been made.

Impaired health and unhygienic living have very considerable predisposing influence, sex little or none, except that males are more active and more exposed to weather changes, for which reason also some occupations have an etiological influence.

Acute rheumatism in children differs in a number of particulars from that in the adult. As a rule it sets in more gradually and runs a milder course, the patients often not wishing to remain in bed. There is absence of the free perspiration present in adults.

Skin eruptions are not unfrequently present, chiefly the erythematous group—erythema multiforme, erythema nodosum, urticaria, purpura. Schamberg does not regard E. nodosum as "a genuine rheumatic process." It is well to remember that any of these eruptions may occur in connection with a number of infectious diseases, another evidence of the germ origin of rheumatic fever. Purpura is said to be more common in this disease than in any other infection. This is by some ascribed to thrombosis of small skin vessels, a process favored by the hyperfibrinous state of the blood.

Nodules on the fascia or tendons are another rheumatic manifestation almost peculiar to children. In size these nodules vary from that of a pea to that of an almond; may be few or many; are often felt when they cannot be seen, or seen only when the skin is made tense over them. They are most common on the hands, wrists, elbows, patellae, malleoli, and over the vertebral spines. They may appear late, even during convalescence, and may disappear early or remain for many weeks. As a rule they are free from pain, tenderness or other evidence of inflammation. They are said to be commonly present when endocarditis exists, some writers regarding them as of embolic origin. Microscopically they exhibit all the characteristics of newly developed fibrous connective tissues.

Early and serious *anemia* is another

peculiarity of rheumatism in the young, a point too often overlooked in the management of the disease. Mildness or entire absence of joint involvement is notable in the young, and hence there is less pain and a lower temperature, which may remain below 102 degrees even in serious cases. Of 800 cases in two public clinics, arthritis was absent in 70 per cent. Dr. C. H. Dunn of Boston (J. A. M. A. Feb. 9, '07) reported 300 cases of rheumatic fever in children, of whom but 102 had arthritis on admission to the hospital. Among these 300 were 140 cases of endocarditis and 58 of pericarditis. The more frequent cardiac involvement in children is a matter of common observation. Friedlaender has well said that in children "arthritis is at the minimum and endocarditis at the maximum." The following figures show the relative frequency of cardiac complications at different ages:

St. Bartholomew's.	Johns Hopkins.
Under 10 in 80 per cent.	64 per cent.
10 to 20 in 69 per cent.	40 per cent.
20 to 30 in 51 per cent.	18 per cent.
30 to 40 in 30 per cent.	12 per cent.

English collective investigation statistics show 72 per cent of cardiac involvement in children and 46 per cent in adults. Fischer says that 75 per cent of his rheumatic out-patients (children) show evidence of heart disease.

Cardiac disease bears no relation to the arthritis. It may precede the latter, accompany it or follow it, generally within ten days. Or it may occur in the entire absence of joint inflammation. Few cases of arthritis, however, escape a cardiac complication.

Endocarditis is the most common form, occurring in 25 to 60 per cent of cases of rheumatism in children. The mitral valve is the most frequently affected, the aortic next. This inflammation may set in without any symptom, or there may be increase of fever, rapid heart action, palpitation, soreness, local pain or distress, dyspnea or orthopnea. A murmur, which is to be expected, does not always mean endocarditis. It may be due to dilatation or anemia even when heard at the apex. (Tyson.)

Pericarditis is less common, less severe, may occur with endocarditis or alone. It may also set in before, during, after, or independent of arthritis. It may exist late,

and in children is apt to recur, if not carefully guarded against. The resulting effusion is sero-fibrinous, rarely purulent or bloody. Adhesions may occur during recovery. In children the pericarditis is apt to extend to the connective tissue of the anterior mediastinum, resulting in "the matting together and enormous thickening of these parts, which become converted into a dense fibrous mass under the sternum. Dullness along the mid-sternum, and cardiac distress, are present." (Cheadle).

Myocarditis may be present to a limited extent, with other cardiac inflammations. Some writers claim that it is quite common. If at all general it is always a serious condition and apt to be fatal. This condition is difficult to recognize *intra vitam*. A recent writer says: "The physical signs of acute myocarditis are, first, the deepening and dulling of the muscle tone, reduplication of the heart sounds, and, if dilatation occurs, a still further loss of muscle tone, and the sounds become slappy and valvular. The reduplication often goes on into the galloping rhythm, often best heard in the fourth or fifth interspace, near the sternum or out toward the apex. The triple sound at the apex, according to Lambert's observation, means myocardial change, and a triple sound at the base a pericardial infection. * * * The pulse may range near normal or slightly above. In the subacute form of myocarditis, where the muscle degeneration is more common than in the acute, and in the chronic form, it may be distinctly subnormal." We may expect also epigastric or precordial pain, short breath or embarrassed respiration, cyanosis, disturbed cardiac rhythm, increased cardiac dullness, accentuated second-pulmonary sound, which may be doubled from dilatation of both ventricles.

Pleurisy may be met with in children, but is rare under seven years of age. Pneumonia also, at times encountered, is not a necessary part of rheumatism. Kerley regards repeated bronchitis and asthma "as respiratory indications of rheumatism," but as complications they are rare.

Tonsillitis in children is conceded to bear a close relation to rheumatism. One author says: "It is the most common and often the only manifestation in patients of a rheumatic diathesis." Of 500 rheumatic pa-

tients at the Vanderbilt Clinic, 35 per cent had tonsillitis. Kerley attributes to a rheumatic infection the majority of throat affections of children. Foreign statistics show that in 25 per cent of cases of rheumatism in children tonsillitis is early present, and in 10 per cent more other forms of sore throat. St. Clair Thompson says that from 30 to 80 per cent of rheumatic cases are preceded by some form of angina. Ingalls, when skeptical as to the relation between these diseases, studied his own records carefully and comes to this conclusion: "Forty-five per cent of all cases of acute tonsillitis were in some way associated with rheumatism." Major Kieffer of our army found that the hospital records of Fort Russell, Wyoming, for 38 years, show 21.3 per cent of cases of tonsillitis followed by rheumatism. These were adults. The rate is always higher in children. Other evidences of the rheumatic nature of tonsillitis are, that it is sometimes followed by cardiac disease, that the diplococcus rheumaticus has been isolated from the tonsil in tonsillitis, and the salicylates are universally conceded to be our best remedy in this acute infection, as they are in rheumatism. It is now believed that the tonsils serve as ports of entry for the infection of rheumatism, even when no local infection exists or results.

Chorea. What is the relation of this disease to rheumatism? Of 500 rheumatic cases at the Vanderbilt Clinic, 14.5 per cent had chorea. Dercum reports a rheumatic history in 20 per cent of his cases of chorea; Fischer in 25 per cent; Kerley in over 50 per cent; Holt 37 per cent of prior rheumatism, 24 per cent of concurrent rheumatism, 15 per cent of subsequent rheumatism, making a total of 50.7 per cent with a rheumatic history; See of France, 50 per cent; Swartz and Luntz of Moscow, 62 per cent. Of Osler's 554 cases of chorea, 88 were associated with rheumatism. Rösch says: "A close connection exists in possibly 50 per cent of cases. Collins and Abrahamson in 100 studied cases of chorea found tonsillar rheumatism in 23, articular in 16, and cardiac in 32 per cent, a total of 71 per cent rheumatic. Townsend's 148 cases showed a rheumatic history in 21 per cent, and a heart murmur in 30 per cent. Crandall's 88 cases showed

acute rheumatism in 16 cases, subacute in 12, and "growing pains" in 34, a total of 31.8 per cent. Allan Starr had 18 per cent of acute articular rheumatism in 385 cases of chorea. Sinkler, in 279 cases of chorea, met with 37 cases of rheumatism; and Crandall and Holt had 63 cases of rheumatism in 146 cases of chorea. Tylden says there is a rheumatic history in 50 per cent of chorea cases, and the British Medical Association collective investigation statistics put the percentage at 25. Baxter found it to be 32 per cent in 115 cases seen by him; and after three years' observation of the cases this increased to 43.5, and in six years to 53 per cent. Sir Dyce Duckworth, who gave to chorea the name of "cerebral rheumatism," claims that in these patients there is a family or personal history of rheumatism in 78 per cent of the cases. Lees, another English authority, says: "In most cases chorea may be regarded as cerebral rheumatism;" and he again remarks: "If a child in the rheumatic state is exposed to a chill or wetting of the limbs, arthritis will follow; but if to a cerebral shock, chorea." Poynton and Payne say that "rheumatic chorea is probably the outcome of an infection of the brain and its membranes with the diplococcus rheumaticus." These authors in 1900 demonstrated a diplococcus in the pia mater and brain of a chorea case, and with it caused incoordination of muscular movement in an animal. In 1905 they added other cases of diplococcus in chorea, and in 1906 Poynton and Holmes reported three cases where the diplococcus was found in the pia mater of patients deceased from chorea. These were seen by five observers. These writers say: "The bulk of evidence strongly favors the view that chorea is mostly rheumatic, and that when chorea occurs without any history of rheumatism, it is presumably the primary rheumatic symptom; and in practical medicine it is best looked upon as a stamp of rheumatism." It is proper to add that Wassermann in 1899 isolated a diplococcus from the cerebro-spinal fluid of a patient deceased from chorea and rheumatism, and with it caused polyarthritis in a rabbit. Duckworth (1906) says: "The clinical evidence in favor of the rheumatic nature of chorea is stronger than the bacteriological." From all this evidence—and much more

could be presented—it is difficult to avoid the conclusion that chorea is a manifestation of rheumatism, but other causes cooperate in the production of the disease, and it probably develops only in those who have inherited a neurotic constitution.

Treatment. The old Latin proverb, "obsta principiis!" (resist the beginnings)—is peculiarly applicable in the management of rheumatic children. The child in a rheumatic family, and especially if he has shown a rheumatic taint, should be watched with extreme care. His environment should be made the best possible. His room should be dry, well lighted and well ventilated. Special attention should be given to clothing, which should be of wool or silk, to bathing, the condition of bowels and kidneys, so that proper elimination of waste products is secured. Elimination may be aided by the free drinking of water. The throat should be kept in good condition, and if enlarged tonsils or adenoids be present they should be removed. Undue exposure to bad weather, to overheating or to fatigue should be guarded against. The skin should be dried and rubbed after a wetting or free perspiration. The diet should be simple and nutritious, the carbohydrates being cut down and candy and other sweets cut out. Fats, oils, milk, cereals, acid fruits, as oranges, lemons, grapes, and green vegetables may be taken; rice also and potatoes, especially with the skins on, the latter containing soda phosphate, are said to be useful. Do not wait for active manifestations of the disease before adopting precautionary measures. If tonsillitis, myalgia or slight joint pains occur, put the patient to bed and enjoin rest. During the existence of an acute attack, the diet should be still more limited than above.

Rest. Of all remedies, complete rest is of the first importance in acute rheumatism, in children especially, in view of their greater liability to cardiac involvement. We should keep in mind the fact that this is a disease of the motor apparatus, and prone to attack the fibrous and serious tissues of the moving parts, as joints, heart, pleura, etc. Rest of joints and muscles we can pretty well secure, and the heart movements are less active in bed than out. Therefore rest, not only of body, but of

mind, should be enjoined. What this implies with a growing boy not very ill the fathers present will best appreciate; but our best efforts should be put forth to have the rest absolute if we would have healthy hearts in our rheumatic children.

Clothing. The old method of putting the patient between blankets I believe to be a good one. These need not be heavy unless the weather requires it. The body clothing should be changed sufficiently often to secure proper cleanliness, but the change must be made with extreme care, so as to disturb the patient as little as possible.

Medicines. I cannot free my mind from the opinion that auto-intoxication, the result of faulty metabolism and the defective elimination of suboxidation products, plays a not unimportant part in the causation of rheumatism. The first medication, therefore, should be directed to the cleansing of the bowels, and for this nothing is better than calomel, because of its well-known antiseptic and other properties. For any further needed cathartic effects, the alkaline salts are efficient and valuable.

Among the antirheumatic remedies salicylic acid and the drugs containing it are still the favorites. These are sodium salicylate, salicin, oleum gaultheriae, phenylis salicylate (salol)—all official—and aspirin (acetyl-salicylic acid) novaspirin and salophen, which are proprietaries, but approved by the Council on Pharmacy and Chemistry. These act as analgesics more effectively than any other remedies. Some authors are inclined to regard this as their only action, but many more believe that they possess other valuable properties not well understood, but possibly due to some antiseptic action in the intestines or in the blood, decreasing the intensity of the infection, or that they cause an elimination of waste products through their action on the liver or otherwise. When properly administered they certainly shorten the attacks of the disease.

A. Plehn of Berlin thinks salicylic acid is more certain in its action than its compounds, and advises one gram (15 gr.), every two hours until marked improvement sets in. For children Osler prefers salicin, as does Beverly Robinson, who says it is not only antirheumatic but tonic and digestive; also that it causes no harm

to the heart, and may be used in large doses for many days with impunity. Sodium salicylate, and recently, in Germany especially, aspirin have been the favorites. Whichever be used should be given early, frequently and freely until its usual effects are fully shown, in the hope of making a prompt and decided impression, or cutting short the attack, as is sometimes possible. (One year after this was written we are glad to have it supported by Hare in this country, and Stockman of Glasgow and Lees of London, quoted in the *Therapeutic Gazette* of May, 1909. Hare says:

"It is our own custom to give from 100 to 150 grains of salicylate of strontium in each twenty-four hours for the first four or five days, administering simultaneously an equal or greater quantity of bicarbonate of sodium. With these the patient receives copious draughts of pure water to flush the kidneys and to dilute the medicine in the stomach. These doses seldom cause difficulty with the digestion, and should the cerebral symptoms become annoying they can be in large part controlled by the use of the bromides, care being taken, of course, that the bowels are kept freely moving without the patient being purged to such an extent as to weaken him."

Hare quotes Stockman as relying on the specific action of the salicylates in free doses, and believing that when they fail to have decided influence the disease is not genuine rheumatism. Lees also uses salicylate in very large doses, with twice the amount of sodium bicarbonate. He "recommends for adults 150 grains daily; for a child of from 7 to 12, from 10 to 100 grains daily; and for a child under 7 from 5 to 50 grains daily with twice the amount of sodium bicarbonate." When large doses are given to children "they must be carefully watched for the development of drowsiness or an acetone odor of the breath or disturbance of the respiration—in other words, for symptoms of diabetic coma with acetonuria." Hare.) I thoroughly believe in large doses of the salicylates given as early as possible and that much is lost in time of cure by late medication and inefficient dosage. The warning of Jacobi may be well remembered: "When a patient has had rheumatic polyarthritis once, he will probably have it again. Such a patient must never be without his sodium salicylate on hand, ready to be taken without delay. He must take a few doses as soon as he feels the slightest sensitiveness in a joint, and stay in bed perhaps a single day

only. This is the way to escape three or six weeks in bed and a new endocarditis; also to avoid the misuse of an honest drug."

But this drug will not relieve every case, and if it fails to do so in a reasonable time and in free doses, antipyrine, acetphenetidin or phenocoll may be tried with some confidence in their power at least to mitigate the pain. Their use, however, should not be continued long, because of their depressing effects.

If the salicylates effect anything in the prevention of cardiac disease, it is probably chiefly by shortening the rheumatic attack, although Plehn of Berlin regards them as "our most reliable prophylactic against pleural and cardiac complications." Alkalies, therefore, which are generally conceded to have a direct prophylactic influence, should always be given in quantities sufficient to render the urine alkaline and keep it so. We may here remark that Haig, the chief advocate of the uric acid theory of rheumatism, claims that the salicylates "act best in cases in which the alkalinity of the blood is diminished. * * * In these cases it is the salicylic acid which acts, and its power is diminished by associating it with an alkali." We believe the common experience is against this view. Sogliano, an Italian, uses potassium iodide in very large doses. On the first day he gives six grammes, on the second, five; on the third, four; then three, and two for ten days. Pain and fever are said to promptly disappear, and no injurious effects from the iodide are perceived. Muscariello, another Italian physician, claims equally good results from this treatment, but we have seen no account of others having used the remedy in acute cases, except during convalescence as a resolvent in endocarditis. Some form of iron, preferably the tincture, should be given early in convalescence. It has a beneficial effect on the disease, and is an aid in combating the anemia which so often sets in early in children. Other tonics also may be indicated.

Much may be done locally to aid the other treatment. Small blisters over inflamed joints are strongly advocated by some, and I believe them to be useful. Methyl salicylate covered by oiled silk, mesotan and oil, salicyl-vasogen, ichthyol

solutions or ointments, soda and laudanum, and lead and laudanum have all been advocated, and some of these should be used as adjuvants. Fuller's lotion has long been in use, as follows:

R Sodii Bicarb	ʒi
Tincturae Opii	ʒiiss
Glycerini	ʒiiss
Aquae q. s. ad	Oi

Wrapping the inflamed joints in cotton, without or with splinting to secure protection and absolute rest, may be necessary in bad cases. Should cardiac complications arise, make the rest even more absolute, if possible. The ice coil over the heart is a favorite treatment with some. Others prefer small blisters, repeated as needed. I believe either to be useful.

Not enough importance, I fear, is generally attached to efforts to prevent cardiac inflammation, especially endocarditis, from leaving permanent damage. Many recent writers teach that an endocarditis does not necessarily result in a chronic valvular disease. Beverly Robinson believes the prolonged use of salicin will aid in warding off this danger. We feel like insisting that the iodide of potassium be used and continued for a long time, not only for its absorptive effects but also to lessen blood pressure within the circulatory system. Dr. Caton, a recent English writer, believes also that by applying small blisters over "the first four dorsal nerves in their distribution between the clavicle and the nipple, we can stimulate the vasomotor nerves of the heart without exciting the muscle fibers, and thus its curative activity is stimulated." Prolonged rest, without which the above remedies will fail of their purpose, must be insisted upon, even long after all fever, pain and arthritis are gone.

In conclusion I may simply mention some unusual forms of treatment. Mendel has employed with benefit in many cases the intra-venous injection of sodium salicylate every 12 to 72 hours. Menzes in 1902 reported the use of an anti-streptococcus serum from cultures made from the throat in tonsillitis. Schmidt and Schaeffer have also used the same, with alleged good results. Sherman of Detroit has been using a serum of his own production, and says that the results thus far obtained are, the material shortening of the rheumatic at-

tack, no relapse into the chronic state, decrease in heart complications, and a distinct tendency to complete recovery. He gives an initial dose of 20 c.c. of the serum, followed by 10 c.c. daily until the inflammatory condition subsides.

Finally, I may refer to the Bier hyperemic treatment secured by constriction of the limb above the affected joint. It is claimed that this relieves the pain almost invariably, and that recovery occurs as quickly as from other methods of treatment. Steinmetz has employed it in 175 cases, and thinks that complications are less frequent and severe than under exclusively salicylic medication, but he advises the latter if improvement fails to set in by the fifth day.

INFANT FEEDING.

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(Read before Ohio County Medical Society.)

Just as the highest aim of medical art should be directed to the province of preventive medicine, so the highest and most practical branch of preventive medicine should consist of the study of the best means for starting young human beings in life. They should be given strength and vigor to resist the attacks which must inevitably be made on their vitality, and which are greater and more dangerous in inverse proportion to their age.

With this object in view, the preventive medicine of early life becomes preeminently the intelligent management of the nutriment which enables young human beings to breathe and grow and live. In fact, it is a proper or an improper nutriment which makes or mars the perfection of the coming generations.

The subject of infant feeding is a broad one and should be taken up carefully. In the status of feeding, as it has existed up to the last few years, the average human breast-fed infant was more likely to live, other conditions being the same, than the infant which was fed by other methods. But later investigations show very clearly that it is not human milk as a whole which is preeminently good, but that it is a varied

combination of the different elements of the milk which makes it the best food during the first year of life. It is our province to study and make use of the elements of the food.

The problem of infant feeding is one which is hedged about with many difficulties on account of the great diversity of individual circumstances and idiosyncrasies. Certain infants thrive on peculiar mixtures which are not adapted to infants as a class. Many will not thrive on that food which Nature has provided for them, and the well-being of an infant will depend much upon the circumstances by which it is surrounded, such as riches or poverty, country or city life.

The constituents of the nutriment which nature has provided for the offspring of all mammals in the early period of their existence is essentially animal and never vegetable. Human beings in the first twelve months of life are carnivora. It is evident therefore that animal food, entirely and freshly derived from animal and not vegetable sources, is the nutriment on which the greatest number of infants thrive.

It may be well to consider briefly the mammary gland as to its secretion and excretion. The breast is a compound racemose gland, lined with glandular epithelium, which forms sugar, fat and proteids, and these are mixed with water and salts from the blood. When in equilibrium it represents the highest type of a living machine adapted for a special purpose—mechanically, physiologically and economically.

The epithelial cells are finely organized, and so sensitive with their minute nerve connections, that changes of atmosphere, changes in food, the emotions, fatigue, sickness, the catamenia, pregnancy and many other influences throw their mechanism out of equilibrium most readily, and change essentially the proportions of their finished product.

Then again this delicate mechanism adapts itself to the quantity of its product, elaborating a smaller or a greater supply, according to the demands made upon it by the consumer. Again the gland is regulated as to the time which it takes to produce the average food required for the

different ages,—a shorter interval of feeding being needed for the younger infant and a longer one for the older. This fact is made evident by the decided qualitative changes which result when the gland is called upon to produce its product at improper intervals. A prolonged interval lessens the solid constituents in their proportion to the water, while a shorter interval, by exciting the epithelial cells to a frequent work, over-stimulates them, with the result of increasing the solids in their proportion to the water. In fact, too long intervals produce a product too dilute, while too short intervals produce a product too concentrated. This shows very readily the necessity of a well regulated and systematic procedure in the method of nursing.

Maternal nursing is the natural and ideal method of infant feeding. Every mother should nurse her infant unless there are some very weighty reasons to the contrary. The physician should do all in his power to encourage maternal nursing and to promote its success. This may be furthered by proper care of the nipples before delivery, so that they may be prepared for their work: by attention to them during the early days to prevent fissures and mastitis which so often interrupt otherwise successful nursing; and by careful regulation of the diet and habits of the nursing mother to secure the simple, natural life in which lactation is easiest.

Maternal nursing sometimes proves a failure on account of irregularities as to time of nursing, and the quantity consumed at each nursing period.

In spite of all efforts to the contrary, the capacity for maternal nursing is steadily diminishing in this country, chiefly in the cities, but to a degree in the country districts as well. Among the well-to-do classes in our cities, those who have earnestly and intelligently attempted to nurse, not more than 25% in Holt's experience have been able to continue satisfactorily for more than three months, while an appreciable decline is recorded even among the poorer classes.

Many authorities agree that no form of feeding is so good as maternal, yet no method of feeding gives much worse results than poor nursing. The following are some of the conditions under which

maternal nursing should not be attempted:

(1) No mother who is the subject of tuberculosis in any form, whether latent or active, should nurse her infant.

(2) Nursing should not be allowed when serious complications have been connected with parturition, such as severe hemorrhage, puerperal convulsions, nephritis or puerperal septicemia.

(3) If the mother is suffering from any serious chronic disease or is very delicate, since great harm may be done to her without any corresponding benefit to the child.

(4) If the mother is choreic or epileptic.

(5) Where experience on two previous occasions under favorable conditions has shown her inability to nurse her child.

(6) When no milk is secreted.

(7) Where some malformation of the nipple is present.

(8) Where the mother is suffering with some of the acute infectious or contagious diseases.

Some of these conditions may not always warrant the establishment of artificial feeding, but when one begins with healthy digestive organs, artificial feeding is very simple and almost invariably successful; while if you continue maternal feeding under improper conditions until the infant's digestion is disturbed, artificial feeding becomes complicated.

When maternal nursing is impossible or undesirable, the milk of another mother would seem to be the most natural and best substitute. While this may be theoretically true, the practical obstacles are so many as to put wet-nursing out of the question as a general method of feeding. The expense, the danger of transmitting contagious diseases, the change in the mode of living and diet, and the difficulty of obtaining proper care of her own infant by the wet nurse, are all very serious objections to wet-nursing.

There are, however, some conditions in which this form of feeding is necessary, even indispensable. Some young infants, usually those who have been badly started, cannot be made to thrive upon any form of artificial feeding. There are also many premature infants and some very delicate ones whose powers of assimilation are so feeble that they are reared under any circumstances only with the greatest difficulty,

but those chances are increased by a good wet-nurse.

Again, in young infants who have been suffering for some time from chronic indigestion and failing nutrition, the symptoms of acute inanition sometimes develop with great rapidity and severity. From such a condition infants in an apparently hopeless condition may sometimes be rescued by the timely assistance of a good wet-nurse.

One should not hastily wean a child on account of symptoms which may have no connection with the food, nor should weaning be advised when the indigestion from which the infant is suffering is due to causes which are temporary and remediable. Nor should nursing be allowed to continue simply because a conscientious mother desires it, when every indication points to failure.

The physician should be as familiar with the symptoms of inadequate nursing as with those of any disease of infancy. As a rule a child who gets a proper amount from the breasts has a normal temperature. Very many who get little or nothing during the first few days have a temperature of 101° or 102° and in extreme cases 104° and even 106° . If no obvious symptoms of illness are present, such a temperature from the second to the fourth day may be considered evidence of insufficient nourishment or even starvation.

The child is habitually uncomfortable and does not thrive. This discomfort is shown in that sleep is restless, easily disturbed, and much less than normal; and when awake the child is fretful, irritable, and cries much of the time. All infants, and particularly those when nutrition is the subject of special difficulty, should be weighed twice a week during the early months. Nothing so well indicates that a child is thriving as a steady increase in weight, which should be approximately four ounces per week.

In some cases there may be symptoms indicating serious indigestion. Sometimes these relate chiefly to the stomach, in most such cases there being habitual vomiting. More often the derangement is intestinal, and there is habitual colic, with constipation and dry, hard, white stools; or there

is diarrhea, with thin, green discharges usually containing curds; if continued, after a time mucus in considerable quantities is present.

Often when the milk is very scanty something may be learned from the manner in which the child takes the breast. When the milk is abundant, five or six minutes are often sufficient to satisfy the babe. If the milk is very scanty, an infant will frequently nurse a half or three-quarters of an hour, and then stop more because it is exhausted than because it is satisfied. Often the child will seize the nipple and nurse for a few moments, then drop it in apparent disgust on account of an insufficient supply. When we see a combination of the above symptoms persistent beyond the mother's three or four weeks of convalescence, we are justified in taking the child from the breast at once.

A milk examination at this time usually discloses one of three conditions:

- (1) An over-rich milk, quantity usually abundant.
- (2) Milk poor in quality and scanty.
- (3) Quantity abundant, quality poor.

These conditions in the milk supply may be remediable to a degree by proper attention to the mother, but experience has taught us that artificial feeding in competent hands brings better results.

In considering artificial feeding there are several fundamental principles on which all writers on dietetics agree:

- (1) Woman's milk is not only the best, it is the ideal infant food.
- (2) Any substitute should furnish the same constituents: fat, sugar, proteids, salts and water; furthermore, they should be in about the same proportion as in a good sample of woman's milk.
- (3) As nearly as possible the different constituents should resemble those of woman's milk both in chemical composition and in their behavior toward the digestive fluids.
- (4) These conditions are fulfilled only by milk from other animals.

Under these conditions, cow's milk is selected as being the only milk available for general use. It furnishes all the constituents required, but not present in the proportions suited to young infants. Cow's

milk cannot, therefore, be fed to most infants without some modification.

In considering the modification of cow's milk for infant feeding, it is desirable to consider separately the changes required by healthy infants with normal digestion and those required by infants with feeble digestion, or those suffering from more or less indigestion.

A failure to note these changes may defeat this method of feeding.

The digestion of all healthy infants is very much alike, and they can all be fed in much the same way; while on the contrary, the variations afforded by unhealthy infants are almost endless, and each case must be considered separately.

The following is the most reliable analyses of human and cow's milk:

	Human.	Cows.
Sp. Gr	1.028—1.034	1.027—1.033
Reaction	Alkaline	Slightly acid
Fat	4.00	4.00
Sugar	7.00	4.50
Proteids	1.50	3.50
Salts	0.20	0.75
Water	87.30	87.25
	100.00	100.00

As you will observe, we have in cow's milk an excess of proteids and salts, too little sugar, and about the quantity of fat required. Other conditions which must be considered are the presence of bacteria in cow's milk, its acid reaction, and the fact that its proteids, and possibly the fat, are more difficult of digestion. Reasoning from this, it would seem that all cow's milk should be subjected to a temperature of 12° for an hour, or Pasteurized. But this sterilization makes the casein more firm, and certain changes occur in the fat which tend to constipation. However, in the summer, when diarrheal diseases are prevalent, it may be of advantage to resort to sterilization.

The average amount of the fat of cow's milk which a healthy infant can digest varies from 2 to 4 per cent. Beginning with 1 per cent on the second day it may usually be increased to 2 per cent at the end of one week, to 3 per cent at three or four weeks; and to 4 per cent at four or five months. It is seldom necessary to increase it above this point. And the modification of the element fat is possible only as to its amount, and not its quality.

In human milk the percentage of sugar is remarkably constant, between 6 and 7 per cent. This is the simplest part of the modification. As the sugar in milk is simply lactose in solution, it is only necessary to calculate the amount required to bring this up to 5, 6 or 7 per cent, and then add.

It is understood that the sugar added is not to sweeten the milk, but to furnish the proper proportion of soluble carbohydrates necessary for the infant's nutrition. If milk sugar cannot be had, cane sugar may be added in one-half the proportion, but this is not so good, as it is more liable to undergo fermentation in the stomach.

The modification of the proteids is the most important element, as this causes most of the trouble to the infant's digestion. Of the other elements considered, only the amount has required consideration; but in the proteids there are other differences. Human milk contains more lactalbumin than casein, while cow's milk contains about five times as much casein as lactalbumin. Beside this difference in quality is that of coagulability in the infant's stomach.

Four different methods have been proposed for modifying the proteids of cow's milk:

- (1) Reducing the proportion.
- (2) Partially predigesting them by peptonizing.
- (3) Separating them, by removing the casein by coagulation with rennet.
- (4) Using as a diluent, instead of water, gruels made of different cereals—oatmeal, barley, arrowroot, etc.—for their mechanical effect upon the coagulation of the casein.

For healthy infants with average digestion, reduction in the quantity of the proteids is all that is necessary.

At the beginning of artificial feeding the proteids should be not more than 0.50 and as the stomach becomes accustomed to cow's milk it may be increased.

The acidity of cow's milk may be overcome by the addition either of lime water ʒj to the ʒxx of milk, or bicarbonate of soda gr i to the ʒj.

In the larger cities we have what is termed "milk laboratories" where the prescription written by the attending physician may be taken and properly compounded, just as our pharmacist would fill a prescrip-

tion in this city. But this is not applicable in all communities and therefore we must resort to other forms for our modification.

Dr. Winters presents a very accurate and simple formula which is given in Edgar's work on obstetrics.

Formula No. 1. For the first, second and third days:

Upper ounce from a quart of milk 16 hours after milking.

Milk sugar, 0.8 ounce; lime water, 1½ ounces; sterile water, 9 ounces. Composition: Fat, 2.00 per cent; milk sugar, 7.00 per cent; proteids, 0.25 per cent. Quantity at each feeding, ¾ ounce; ten feedings per day.

Formula No. 5. For the fourth to eighth week.

Upper 9 ounces from a quart of 16 hours' standing.

Milk sugar, 2 ounces; lime water, 4 ounces; sterile water, 1 quart. Composition: Fat, 4.00 per cent; milk sugar, 1.00 per cent; proteids, 1.00 per cent. 2½ ounces at each feeding and ten feedings as above.

DIPHTHERIA.

G. D. Jeffers, M.D., Parkersburg, W. Va.

(Read before the Little Kanawha and Ohio Valley Medical Society.)

Diphtheria is a disease of antiquity, and was known by a great many names in different countries and at different periods. It is impossible to state or form a possible conjecture in regard to the time when diphtheria originated, but its origin probably antedates the Christian era.

Diphtheria is an acute, specific blood poison, epidemic and contagious, beginning with great prostration of the vital powers, chill, fever, affection of throat, anorexia, glandular enlargement, albuminuria, and often having for its sequelæ various paralyses. The cause is due to a specific germ, the Klebs-Loeffler bacillus. The bacillus in its growth produces a potent toxic substance, a tox-albumin, the absorption of which produces the disease, not the organism itself. The diphtheria bacillus is associated with other pathogenic bacteria, the most active of which is the streptococcus pyogenes. It is usually a disease of child-

hood. It may occur in those who have been previously affected. All conditions of bad hygiene increase its virulence and diffusion, although the chief cause of its spread is contagion. In most large cities it is endemic, occasional cases occurring through the year, with periods in which outbreaks of considerable severity are observed. In the country it prevails chiefly as an epidemic. The disease is often introduced into remote districts in some inexplicable manner. I remember having one case in 1891 that occurred in this way. Every case has its origin in a previous case, either directly or remotely.

The bacilli may enter the body through the inspired air, or may be taken into the mouth with toys or other articles upon which they have lodged, or by kissing, and sometimes by accidental inoculation.

Local conditions in the throat influence very largely the occurrence of diphtheria. An important predisposing cause is the existence of a chronic catarrhal inflammation of the mucous membrane of nose and throat. Also adenoid growths, enlarged tonsils, cavities in decayed teeth, scarlatina, measles and typhoid fever.

The incubation of diphtheria is short, in most cases two to five days. The membrane is most frequently seen upon the mucous membrane of the tonsils, soft palate, uvula, pharynx, nose, larynx, trachea and bronchi; less frequently upon the mouth, lips, oesophagus, conjunctivæ, middle ear, stomach and genital organs. It may also affect fresh wounds, notably a trachetomy wound or any abraded cutaneous surface.

The appearance of the membrane varies greatly. It may be gray, dirty gray, greenish yellow or a muddy black. Its thickness varies according to the different elements composing it, as the membrane contains fibrin, cells, granular matter and bacteria. When composed chiefly of fibrin it may be a complete cast of the nose, larynx and trachea. The tonsils are the most frequent and usually the earliest seat of the diphtheritic membrane or the disease may affect only the tonsillar crypts. At the beginning there is usually only moderate swelling, but it may be so great that the tonsils are in contact. The membrane covering the pharynx and uvula is also very adherent and

intimately blended with the mucous membrane.

The uvula is swollen and an oedematous membrane may be seen only upon the fauces and uvula, or the posterior and lateral pharyngeal walls may be covered down to the level of the cricoid cartilage, but generally not below this point. If the posterior pharyngeal wall is covered, the membrane is apt to extend into the rhinopharynx and may fill the entire pharyngeal vault, covering the posterior portion of the velum and extending into the posterior nares. The adenoid tissue of the vault is a favorite seat and is frequently the first affected. The amount of infiltration of the submucous tissue varies very much in the different cases.

Following the law of contagious diseases, the symptoms vary in intensity in different cases, the prominent symptoms being often disproportionate to the gravity of the attack.

The invasion may be mild with rigors, succeeded by moderate fever, headache, languor, loss of appetite, stiffness of the neck, tenderness about the angles of the jaw, or slight soreness of the throat. In other cases the invasion is more abrupt and severe, with chilliness, followed by great febrile reaction, 103° to 105° , pain in the ear, aching of the limbs, loss of strength, painful deglutition, and swelling of the neck. Tongue coated, bowels usually regular and urine scant. I desire to refer to four cases that occurred during my early practice in Kansas.

January, 1890, I was called to Mr. B.'s, who lived on a ranch four miles in the country. In the Brown family were husband, wife and four children—girl 12, boy 10, girl 6 and one aged 2 years. The three older children were suffering from la grippe; the boy's case was followed by double pneumonia. They all made a good recovery and everything went well until the following October, when I was called to see Lottie, aged 6.

I found the child in bed and she was complaining of her throat, pain in head, back and legs, her mother stating that she had been feverish for 36 hours. Temperature about 103 , pulse 130 to 140, anorexia, bowels regular, urine scant, skin dry and hot, swelling under both ears. On examination of the throat I found the tonsils and uvula swollen and covered with dirty gray membrane; the odor from the mouth very offensive. Diag-

nosis probably malignant diphtheria. Had the child isolated, gave her mild chloride of mercury purge, antiseptic spray for the throat, and stimulants. At 10 p. m., same day, the child was much worse. All the symptoms were aggravated, with anxious expression from the eyes. By this time the urine had become very scant and contained albumen.

Positive diagnosis, malignant diphtheria.

The child was urged to drink milk and whiskey, 1-32 gr. hydrarg. bichloride given every four hours. Elixir ferri, quinae and strych. every four hours. Antiseptic spray continued as often as possible without exhausting the patient; other remedies were used as the case demanded, coal tar burned in the room at intervals. A kettle of lime and water boiled continually in room. Each day the patient grew worse. The nose became full of muco-purulent membrane and was discharging freely. The larynx, pharynx and buccal cavity became involved, large chunks of membrane and tissue were expelled during irregular intervals. The odor from nose and mouth was something fearful. Exhaustion of vital powers more marked from day to day. Stenosis set in, the case winding up by death on the 6th day.

Case No. 2—Bertha, aged 12 years, developed diphtheria 36 hours before the death of Lottie. Symptoms identical with case one. The girl seemed to have more resistance than the other patient, and was able to take more nourishment. We were more successful in using spray in nose and throat, and internal treatment. The patient grew worse from day to day, as in case No. 1 and died the 8th day. Up to this time no other cases having developed in the family, they were placed in an out building and the house thoroughly fumigated and disinfected, and at the end of four days the family moved back and everything moved along as usual for six weeks. About this time at 3 a. m. Mr. B. again called, and asked me to see the little girl, as she was complaining. On examination I found the same conditions existing as in the other cases of diphtheria, but in a milder form. The treatment was followed up faithfully. The case proved to be a milder type of diphtheria and at times we had slight hopes of recovery. However, such was not to be realized, as the child died the 12th day.

The house was again fumigated and everything disinfected. No other cases made their appearance. I may add just here that the boy was a delicate, frail chap, while the girls were strong and robust. The sources of infection are as follows:

In March, 1890, a family living near Mr. Brown's moved to Oklahoma and lived in a "dugout." In May diphtheria broke out in the family and several children died with the disease. They soon after locked up the underground shack and moved further south to spend the summer. In September two young men of the family started in a covered wagon for the States, coming by way of their "dugout" and supplying

themselves with cooking utensils and bedding. On arriving at Mr. B.'s they were given employment and the Brown children given the privilege of using their blankets for a playhouse.

Case No. 4.—During the autumn of 1891 I had treated James D., age 8, for continuous fever; he lived on a ranch 8 miles from town. Hygienic conditions and water supply excellent. The boy made a good recovery and in about six weeks he had gained several pounds in weight, was quite strong and was playing around as usual. Sunday morning a message came stating James was very ill and to come at once. When I arrived the father stated the boy had been sick but 48 hours. The boy was almost exhausted, pulse 140 and very weak. Had not passed any urine for 15 hours, and very scant then. Temperature slightly above normal. The boy was cyanosed and there was marked stenosis. Alae of nose very much distended on inspiration, and followed by a copious muco-purulent discharge on expiration. Glands under ear greatly enlarged. On examining the throat I found the tonsils, uvula and the entire vault greatly swollen and covered with a sloughing, grayish, muddy, brown membrane with an odor very offensive.

Diagnosis—malignant diphtheria.

The boy was at once isolated. Gave him stimulants and did what we could for him in the remaining short time, for he lived but 10 hours. The house was fumigated and no other cases made their appearance. Unable to locate the source of contagion.

We may have this mixed infection in addition to the constitutional symptoms of diphtheritic toxemia, and the local conditions which usually attend them are marked evidence of a general septicaemia usually due to the streptococcus.

The most frequent complications and sequelae are broncho-pneumonia in the very young, nephritis, endocarditis and pharyngeal paralysis. Otitis, multiple neuritis, or post diphtheritic paralysis, while not so frequent, are very grave complications. The diagnosis of diphtheria rests upon two kinds of evidence, clinical and bacteriological; while the latter is more exact, it should not be depended upon to the exclusion of the clinical diagnosis. As has been said by Welch, the mere presence of the diphtheria bacilli in the throat of a patient no more proves that he has diphtheria than the presence of the pneumococcus in saliva establishes the fact that he has pneumonia. In tonsillitis, a history of repeated attacks is of some value. In measles and scarlet fever the time of their development is of much importance.

In pure diphtheria there is a notable absence of oedema of the faucial pillars and uvula so common in throat inflammations due to cocci; in fact, whenever there is seen in the throat evidence of a very high degree of inflammation, it points to either mixed infection or to false diphtheria. The same is true of a very friable membrane, yellow in color, from the presence of the pus cells. When there are deep sloughing of the tonsils or the pillars of the fauces and primary membranous inflammation of the larynx, the case may always be safely regarded as diphtheria, but if there is no visible membrane the diagnosis is rendered positive only by a bacteriological examination. This may be true of many nasal cases where the only symptom is a discharge of the character previously described. Such cases may continue for weeks with no symptom other than the discharge. Some of these are examples of catarrhal diphtheria, in others membrane is present in the post-nasal space or in the nose itself. A great many cases of so-called diphtheria are nothing more than pseudo-diphtheria, and in such cases the Loeffler bacilli are not found. The inflammation in these attacks is usually short and rarely serious.

Bacteriological diagnosis should be made as soon as possible, as the diphtheria bacilli sometimes disappear early. In many cases an immediate diagnosis may be reached by using some of the sputa and not waiting for the culture.

In the treatment of diphtheria plenty of fresh air should be secured throughout the attack. Even in mild cases the patient should be kept in bed throughout the disease, and in severe cases several weeks after convalescence, if there be cardiac depression. The introduction of antitoxin serum has changed the prognosis of this malady. The injections are made where the skin is loose and at points that will not interfere with the comfort of the patient.

The dose must be estimated in antitoxin units and not by the unit of the serum. The concentrated is much to be preferred, and the dose runs from 1000 to 4000, according to the age of the patient and the severity of the attack. If the dose is sufficient, evidence of improvement is seen within a few hours. The serum must be repeated in such doses as the case demands. The

greatest success obtained in the administration of antitoxin is by its use in the first few hours of the attack and in full doses. It not only prevents the spread and hastens the dissolving of the membrane, but it has a favorable influence over the kidneys in lessening the chances of a severe nephritis. With the serum must be associated constitutional treatment, as it is a disease of great debility, and the blood being more or less altered, it follows that sustaining measures should be resorted to in all cases.

Milk should be relied upon as the sustaining food, and it should be modified to suit the individual. Whiskey should be given freely as soon as the slightest symptoms of depression are shown upon the pulse and general condition of the patient.

If the child be unable to retain alcohol, or if this interferes with proper nourishment, other stimulants such as strychnine, camphor, ammonia carbonate should be given, or morphine hypodermically in threatened heart paralysis.

The iodide and sulphide of calcium in full doses every four hours should be given throughout the attack and continued until convalescence is established. Hydrarg. bichloride in 1-32 gr. doses every four hours is of great value. Elixir ferri., quiniæ and strychn. is beneficial and a good reliable tonic.

In the local treatment nothing equals the warm spray of some antiseptic alkaline solution. I prefer GlycoThymoline to all others. It is non-irritating, a germicide, and has a favorable influence over dissolution of the membrane. It should be used in the nose and throat as frequently as possible without exhausting the patient. A swab should never be used in a child's throat. No attempt should be made to remove the membrane by force, as it opens up new channels for absorbing the infection. Hot and cold applications may be applied to the neck to relieve pain, but should not be continued. The patient should be examined occasionally for several months after a severe attack, to ascertain if there be any existing endocarditis.

THE CHILD AND THE PUBLIC SCHOOL.

Prof. Otis G. Wilson, Supt. Elkins Public Schools.

(Read Before the Barbour-Randolph-Tucker Med. Soc.)

(While the following paper deals with educational problems only, the mental pressure on children has so direct a bearing on health that we make no apology for its publication, especially since the position taken so exactly agrees with that of the editor, who has had 14 years experience as a member of a School Board. The paper is exceptionally well prepared, and well deserves careful perusal.—Editor.)

I want, if I may in this very short paper, to discuss this topic, not from the standpoint of the physical welfare of the child, nor from the moral, but from the mental. On the one hand, I desire to place the child, on the other, the foodstuff he is to receive at school. That is, the child and the course of study.

Even in America the curriculum once consisted in the "three R's." But our people were anxious that their children should know about the world into which they had come, hence geography was added. It was held, too, that children should know the history, not only of their own, but of other countries, hence this subject finds itself in the schools. It was characteristic of good citizens to know the laws under which they lived, hence there came a demand for civil government in the schools. Just as these subjects were introduced because of the demands of the age, so were all subjects introduced for like reason—physiology and hygiene, spelling, grammar, etc.

For many years these subjects supplied the nutriment for the child's growing mind. From this curriculum he was supposed to get nourishment that would make him whole mentally as his daily bread made him whole physically.

But new generations brought new conditions, and as a result the schools had to heed the knocking at the door and admit these newcomers—music, nature study, home geography, art, literature in the grades. As a consequence the elementary curriculum, especially in the upper grades, has become overcrowded. Such an enormous number of unrelated subjects is pre-

sented to the child that organization into a unified whole is almost impossible by any mind, much less the untrained mind of the child.

But the story is not yet told. This present age, apparently against the wishes of many school people, is forcing into the course of study—and in many places has succeeded in its attempt—domestic science, domestic art, manual training, agriculture.

As we have been adding to the curriculum we have done no subtracting. We have about twenty-four subjects now against three a few generations ago. While the number of subjects has increased eight-fold, the length of term but two-fold, that is as one to four. And yet we have the same kind of a child as we ever had. He is no more capable now than ages ago. If the boy was properly nourished by the "three R's," what about his nourishment today? If he had enough then, what about now? To illustrate: Little Willie was a favorite, particularly with the women. One day his Sunday School was given a picnic in the woods. Of course, at dinner time every woman took special pains to see that Willie had all he wanted to eat. They insisted that he take one more sandwich, one more banana, etc. As a result he ate more than he should have had. Shortly after dinner one of the good women saw Willie sitting in the shade of a tree, with his hands over his stomach making a very wry face. "Why, Willie," she said, "what is the matter? Haven't you had enough to eat?" "Yes'm," sobbed Willie, "I've had enough; more than enough. I don't feel as if I could keep all I've got." Let me ask you a question about this course of study. Have we enough? The reply comes back, yes, more than enough; we don't feel that we can keep all we've got. There is no reason for supposing that a boy can digest an overdose of mental food any more than he can of physical food.

The fact is, this elementary program is little less than a heterogeneous mixture, a kind of stew, a hodge-podge of many ingredients. We hear a constant cry against the multiplicity of subjects the child has to study. But what is to be done? How provide a rational mental diet for him? Let us see. Our belief in utility demands that we retain the "three R's" as well as spell-

ing, grammar and the like. We must keep these subjects. Our belief in culture demands that we keep music, history, literature, art and the like. Our belief in efficiency has permanently established commercial and industrial studies, our belief in health, physiology and hygiene. Thus hurriedly passing let me say, we cannot do without a single subject. The problem before the school is not wholesale elimination, not a problem of getting rid of this or that subject, but one of interpreting and organizing relative values of materials and studies, in the light of the new aim in education. It is no longer a problem of enrichment, but of arriving at essentials, and fixing upon fundamentals and potentials in every subject taught.

You say you want your child to learn to spell. But are you concerned about what he learns to spell? Do you see that it will be worth while to have him spell such words as *ricochet*, *legerdemain*, *pot pourri* and *debonair*, so long as he spells *city* with two t's or *separate* with an e, privilege with an a, etc.?

Do you want your child in arithmetic to be able to tell just how long a fish is if the tail is twice the length of the head plus two inches, and the length of the body equals the length of the head and tail minus four inches, and to tell how long it will take a hound to catch a jack rabbit if the rabbit is so many leaps ahead and takes two leaps to the hound's one, etc.? Or do you prefer that he can tell you how much it will cost to carpet a room 15 x 20 at \$1.75 per square yard, or to be able to go to the grocer with \$5.00, buy some articles and know when he is given the right amount of change?

In physiology and hygiene, is it better that the child know the names of the bones in the ear, the membranes of the skull, the coats of the stomach, and the like, or to know some simple common sense hygiene?

What the program of studies needs is simplification. This in arithmetic may mean the elimination of compound proportion, apothecaries' weight, troy weight, compound partnership; it may mean emphasis put upon the fundamental rules, upon measurements, simple commercial calculations. It may mean in grammar the abolition of all guess work and fine dis-

crimination in parsing, in sentence analysis. In writing it may mean less wrangling over uniform slant of letters and more consideration for the development of an individual, intelligent hand on the part of the child. In history it may mean greater emphasis on peace history and less on war history. In geography more attention to the life and activities of mankind and less to memorizing isolated useless facts.

A former teacher of mine, who, believing more in tradition and piety than common sense as guides to right teaching, once kept in at noon times for one whole week a class of boys who could not or would not get the metric system in all its minute details.

It would have been far better to ignore the metric system than to deprive the boys of wholesome exercise and sunshine. But this teacher put the same emphasis on the metric system as he did on denominate numbers. And what use has the ordinary country boy for the metric system? The fault of this teacher is the same fault seen so often now—not knowing where to put the emphasis—not being a judge of educational values.

I know a girl. She dresses well. Entertains beautifully. She is pretty. She can make fine fudge, delicious sea foam, and angels' food. But she can't make bread. Now to be able to make good fudge, sea foam and angels' food is a fine accomplishment, but surely it is more important to know how to make bread. At least it would be for the girl I have in mind. This is a case of putting the emphasis in the wrong place.

Again and finally: The subject of compound business partnership is in many arithmetics to-day. This subject originated in the sixteenth century. The joint stock company at that time had not been invented, and as large commerce with the Indies and America grew up, it was necessary to have accumulation of capital with which to handle it. One man said, "I will put in this amount of money for six months," and another "so much for two years," and so on. Thus by joining together they got money enough to float their enterprises. Naturally, then, compound partnership was taught in our schools. The joint stock company was invented; the compound partner-

ship disappeared, but the problems relating to it stayed in the arithmetics for two hundred years. They were kept after they ceased to have practical utility, for the sake of "mental discipline." There are other parts of arithmetic not as obsolete but quite as useless as that of compound partnership. And when it is pointed out that business is not now done that way we hear the argument again, "mental discipline." Let me dismiss this phase of the paper by asking the adherents of the mental discipline doctrine, could not the same results be had from problems relating to life? The child should study his commercial arithmetic and geography, not as isolated things, but in their reference to social environment. The child should become acquainted with the bank as a factor in modern life, with what it does and how it does it.

The utilization of the environment of the child is recognized in modern pedagogy as an indispensable means to effective education. That is, today modern pedagogy argues for an education related to life. This can only be made intelligible when translated into specific terms. It means that what is expended in the way of educational effort must somehow function in increased social or individual usefulness; and it is the business of the educational administration to see that all that is taught by teacher and learned by pupil must so function. Subjects and parts of subjects may not remain in the curriculum, methods may not be employed, simply because tradition has it so. The modern educator is under obligation to present evidence, or at least satisfactory hypothesis as to what service this or that effort results in.

In this American democracy it becomes the duty of all parents, of all citizens to guard the sanctity of our civilization and preserve the certainty of our liberty. As one evidence of this, we need only to refer to compulsory education. The State maintains that it provides for free education so as best to preserve its inheritance and foster its mission; parents must educate their children whether they wish to do so or not. The argument is that the State knows better what should be done in these matters than the individuals concerned. Now it stands to reason that if we Americans force people to take

education, we ought to give large freedom in the way of educational opportunity. If we believe in *universal* education, in the education of *all* the boys and girls, we ought to provide for universal education. That might mean less attention to the formal studies of grammar, arithmetic, geography, history, and more attention to domestic science, domestic art, manual training, mechanical and free hand drawing, music. This might mean, too, the establishment of night schools, vocational schools. In other words it means the provision of whatever will best contribute to social efficiency and civic righteousness.

The child should get, therefore, from the public school, that which will make him master of his environment, rational in thought and action, self-supporting, obedient, altruistic, honorable.

To this end it becomes the duty of all school officials to provide curricula that will meet these purposes. The child must have subject matter which attracts and interests him, not which repels and surfeits him. The life of the child at school must not result in mental confusion, mental stagnation, or arrested development, but in increased efficiency, mental power, mental accuracy. What we want is to have the child come to school with a whole mind and a whole body, and leave the school with a fuller mind and even a healthier body.

DEFECTIVE EYESIGHT IN OUR PUBLIC SCHOOL CHILDREN

E. R. McIntosh, M. D., Elkins, W. Va.

(Lecture delivered before Barbour-Randolph-Tucker Society, April 7, 1909.)

Normal vision requires the focusing of light upon the retina, and the transmission of nervous impulses caused by the focused light, through the optic nerve and tract to the normally related centres in the brain. Disturbance of any part of this series of actions causes impairment of vision. The character of the impairment often indicates the seat of disturbance. Acuteness of vision is tested, as the acuteness of touch, by the ability to recognize the separateness of impression. Ten years ago the question of

refractive troubles in children of the public schools was hardly considered. Today states, counties and municipalities throughout the length and breadth of the country are legislating and advocating the passage of adequate laws to protect the eyesight of our children.

New York, California and a majority of the New England states have passed laws during the past three years making it compulsory for every child in the public schools to have their vision tested at least once a year, and if any defect exists the parents are notified and are obliged by law to take the child to some reputable oculist and have the defect remedied.

What will be the ultimate result of this new legislation? Within the next two generations, where these laws are in force, there will be no defective vision. You may well ask why? Primarily, the time to correct all errors in refraction is in childhood between the ages of 5 and 14 years, as the lens of the eye is more elastic at this period than in later life when the lens has lost to a greater or lesser extent the power of expansion and contraction. The sight of every school child in this state should be examined at least once a year, and this examination can be made by the teachers in the various sections. In Massachusetts the following test is used by the teachers. A Snellen Test Card is used. The first letter seen on the card should be recognized at a distance of 200 feet, the next two letters should be seen at 100 feet; the next three letters at 70 feet; the next four letters at 50 feet; the next five letters at 40 feet; the next six letters at 30 feet; the last seven letters should be seen and recognized at a distance of 20 feet.

In young children the object test is employed, a series of animals, butterflies, birds, etc., being supplied and these are graduated in the same manner as the Snellen test letters.

A child with normal vision should read distinctly the last row of letters on the card-board, and should recognize each individual letter at a distance of 20 feet.

The test made by the teacher is as follows. Twenty feet is measured from a chalk line on the floor, and the Snellen test card is either suspended on the wall or placed on a chair, the centre of the card

being on a level with the child's head. The child with both eyes open is now asked to identify the different letters, beginning with the larger ones on top and reading down until the smaller letters are recognized. The teacher now covers one eye with a book or piece of pasteboard and the same process is repeated, one eye alone doing the work. The other eye is now tested in the same manner. A child may have apparently normal vision using both eyes, but one eye may be doing all the work, the other lagging behind; but by testing each individual eye that organ's strength is tested absolutely. For instance, a child only sees at 20 feet the letters which should be recognized at 100 feet; the child then has only 20-100 vision, or otherwise the vision of both eyes is not normal by 80%. The individual eye is now tested and it only recognizes the letters that should be seen at 80 feet. The vision is now expressed as follows: Right or left 20-70. You must all recognize how important this subject has become from a scientific and hygienic standpoint.

Our children should be protected from errors of refraction while in childhood, so that when manhood or womanhood is reached they may have God's greatest gift, perfect eyesight.

Outside of age and disease, hygiene and habit play a strong factor in producing myopia. If you observe a child holding a book or paper within four or five inches of the face, you may make up your mind that there is an error in refraction and strongly advise correction.

Astigmatism in Children.

Astigmatism is an irregularity in the normal curves of the cornea, and affects the child practically in the same way as in the adult. The vision of both eyes may be normal, but yet astigmatism may exist, causing a chain of symptoms such as headache frontal in character, tired feeling throughout eyes and an inflammation of the lids. The patient is unable to apply himself for any great length of time to close work without a feeling of pain in eyes, burning lids, and dull headache. This chain of symptoms may be expressed in a mild form or it may be quite aggravated. Why does astigmatism produce this chain of symptoms? Where the object seen by an astigmatic eye is reflected into the irregular

curves of the cornea, an imperfect picture of the object seen is flashed from the brain to the retina, hence an extra concentration effort of the individual to overcome this irregularity and hence an eye strain. This condition is readily overcome by having the error in refraction corrected, and the wearing of astigmatic cylinders.

Outside of the acute exanthemata in children, habit and hygiene play a most important role as causative factors of errors in refraction. At one examination in the New York public schools, 85% of the children examined were found suffering with defective vision, astigmatism 65%, myopia and hypermetropia 20%. From a hygienic standpoint a great many of our schools are improperly ventilated and lighted, and the mural decorations are entirely lacking. Neither the seats nor the scholars' desks are adjusted in a manner conducive to comfort or health.

Proper Lighting of Our School Houses.

Windows should always be located in such a manner as to deliver the light from the rear and the left hand side of the pupils. The top of the windows should not be more than one foot from the ceiling. The sills should not be less than three feet from the floor. There should be no large piers between windows to project shadows across desks. The light area of windows should in all cases equal fifty per cent in square feet of lighting surface to the cubic contents of room.

Adjustability of Chairs and Desks Used in Our Public Schools.

Desks should in all cases be adjustable or at least adjusted to such a height as not to require the scholars to lean forward in studying or writing, but to enable them to retain the natural upright position. The desk seats for children should be so adjusted as to enable the occupants to comfortably rest their feet upon the floor while at the same time maintaining a natural and comfortable position at their desks. This will enable them to place their books and papers the proper distance from the eyes, thus preventing any strain either in position or sight. Another important consideration pertaining to defective sight in school children is the proper coloring and tinting of the walls and ceilings in the school rooms. The

tints or colors used to decorate the walls and ceilings should be of such a nature as to reproduce as nearly as possible the natural tints of the air under normal conditions. Experience has taught us that the tint most preferable is a soft light gray, either of a bluish cast or one containing a small mixture of yellow. These tints will be found to produce a beautiful soft light, beneficial and restful to the eyes without producing a harsh reflection.

Before closing I would like to impress upon the members of this association the great importance of early searching for the errors in refraction of the children in our public schools.

Their early detection means early correction. The civil service, railroad companies, the army, navy and marine services all insist today that every candidate must have normal vision. And remember that the time to correct all errors in refraction properly is in childhood.

LARYNGISMUS STRIDULUS — REPORT OF A FATAL CASE.

Henry Beates, Jr., M.D., Philadelphia, Pa.

Prior to birth of the child, the mother had been subjected to much mental depression and anxiety. At birth, which was normal, the child was small of stature, but well developed and plump, and, apparently, perfectly healthy, weighing seven and one-quarter pounds. Being present at the birth, which was a normal L. O. A., I was impressed with a peculiarity of its cry, consisting of an inspiratory high pitched sound, resembling crowing (stridor). With this exception, everything was apparently normal.

Because of insurmountable difficulty and pain occasioned, the child could not be nursed. It was, therefore, fed upon modified milk. For one week it apparently thrived, but the peculiarity of the cry continued. When a week old, a severe ptomaine poisoning was precipitated, notwithstanding every care being exerted, by milk which had been transported nearly one hundred miles, under apparently proper refrigeration, etc. The symptoms were, hic-cough which lasted an hour, and at the rate

of seventy per minute, followed with profuse watery alvine discharges, accompanied with tenesmus. Within one day there was excoriation of the peri-anal region. The discharges were fluid, watery and green, and of alkaline reaction, but did not contain undigested casein or curds. Accompanying this, was the appearance of a typical toxic erythema multiforme upon the exterior surface of the arms and legs. The papular type predominated, and there was no vesiculation. On the face there were large areas of erythema, with sharp borders and perfectly healthy skin between. The palms and soles were perfectly free. The epiphyses and diaphyses were perfectly normal, and there were no evidences of rhachitis. The attending physician under these conditions, ordered two teaspoonfuls of Philip's milk of magnesia! The resulting catharsis, added to that already exhaustingly active, resulted in profound collapse, and induced the physician in attendance to call a consultant. A diagnosis of pemphigus was made, notwithstanding the absence of vesicles or blebs, and the conclusion was reached that the child was suffering from hereditary syphilis! The mother and father were thus subjected to insult through inexcusable ignorance; especially as, when considered from the point of professional etiquette, the subject was freely discussed *in the presence of the nurse!*

I was summoned, and upon reaching the residence, saw before me an infant in the above described condition, and apparently dying. The diagnosis of pemphigus which had been given, was corrected and the specific character intimated, disproven and refuted. The child being placed upon a proper diet, it promptly responded, and in seventy-two hours had recovered an almost perfectly healthy skin, assimilating its food and gaining in weight. One feature remained, and that, the peculiar crowing sound at the end of crying. It was noticed that, occasionally, the child would hold its breath, and become cyanosed over forehead and around the mouth, but as soon as breathing was resumed, this would rapidly disappear, and a good healthy color return.

At the end of two weeks, the child presented the appearance of a well nourished and, apparently, healthy infant, but opisthotonos and a general rigidity of the entire

muscular system suddenly occurred, accompanied with cessation of breathing for nearly three minutes, and a degree of cyanosis that was very alarming. A physician was summoned, and I also, and diagnosed laryngismus stridulus of a serious type. Upon my arrival, the child was in a condition of general muscular contraction. A warm bath made no impression. As soon as respiration re-established itself, the intestinal tract was thoroughly washed out with normal salt solution, and, notwithstanding the probable danger of aggravating the laryngospasm, lavage was resorted to. The object was to rid the prima via of any toxic bacterial product. After a few minutes the muscles were relaxed, and breathing was resumed, but with inspiratory stridor characterizing every breath. The laryngismus rapidly intensified, and after consultation, it was decided to etherize. This, apparently, overcame the stridor, but after an hour the general muscular contraction reappeared while under profound anesthesia, as did also an increase of the laryngospasm. It was then decided to hypodermically administer the 50th of a grain of morphia, with the 400th of a grain of hyoscine hydrobromate, and an enema containing 20 grains potassium bromide. The 25th of a grain of morphia was administered in addition to above, about an hour later. For three hours the laryngeal spasm became more severe, when tracheotomy was performed. Tube not inserted, but trachea fixed to wound, thus avoiding irritation of a foreign body and inflammatory reaction. This secured quiet breathing for about four hours; the child being, apparently, perfectly normal, when opisthotonos and general rigidity, *not involving jaw*, and lasting for nearly three minutes, demonstrated the ominous prognosis. For two additional days and nights there were steadily increasing paroxysms of toxic spasm, and once breathing was impossible for eight (8) minutes by the watch. The child was supposed to have died, and the cyanosis was dreadful to look upon, when, to the astonishment of physicians and attendants, respiration re-established itself. During the succeeding five hours, there were two severe general muscular contractions, which, however, were follow-

ed with relaxation and restoration of respiration in from three to four minutes. By inserting a soft catheter into the trachea and forcibly blowing into the lungs, the respiration would be immediately established. Finally, a severe opisthotonos and general contraction took place, from which relaxation did not occur until after life was extinct.

The child died from asphyxiation, thirty-one days after birth. Rectal alimentation had been carefully carried out; whey and stimulants were retained and assimilated, as increasing weight proved.

During the exceptionally long paroxysms of spasm and asphyxiation, the heart continued to beat, and it was only this phenomenon, persisting during minutes of total respiratory cessation, that enabled the physicians to feel assured that death had not supervened.

When it seemed as though the heart was about to fail, twice, during the course, the physicians hypodermically administered the 100th of a grain of Merck's Germanic Digitaline, with 1-1000 of a grain of atropine and the 400th of a grain of strychnine, to which response promptly occurred, and the circulatory crisis was overcome.

The early stridor, so slight as to have been scarcely recognized, and accompanying the cry from birth, constituted a symptom pathognomonic of the laryngospasm. Early recognition of the significance of this symptom, and the institution of proper treatment, might avert fatal results, provided milk poisoning under such circumstances be most sedulously guarded against. Laryngismus stridulus is so commonly a sequel to milk ptomaine poisoning, that we know, at least, that it may be symptomatic of its consequent gastro-intestinal irritation. Early washing of this tract and proper feeding, constitute the best means of tiding over the spasmodic period. Analyses of alvine and gastric discharges, and bacterial studies, should be invariably made and treatment instituted in accord with the findings; a course seldom observed.

A careful "biologic study" involving such work, might render it practicable to convert this type of otherwise fatal laryngismus stridulus into curable cases.

260 South 16th St.

Correspondence

LETTER FROM HOLLAND AND UPPER GERMANY.

HAMBURG, July 19, 1909.

My Dear Dr. Jepson:

It is difficult for the American tourist to sit still long enough to collect his thoughts: so many concepts have been pigeon-holed away in the course of a three or four days tramp through picture galleries, museums and hospitals, that when night comes one's brain positively refuses to functionate. Yet in obedience to my promise I shall endeavor to tell the readers of our JOURNAL something of medical interest from the Netherlands and this great city of Hamburg. We crossed the Atlantic on the palatial steamer Rotterdam, the latest creation of the Holland-America line, with a displacement of upwards of 30,000 tons. The hospital equipment of this floating hotel, with passenger capacity of 4,000 souls, is complete in every detail. There are some ten rooms or small wards, each containing four white enameled beds, covered with immaculate linen and equipped with every article that might be needed for the care of the sick.

The small operating room contains every modern convenience for dealing with emergencies.

Dr. Kelly, an American graduate in medicine and in charge of this department of our ship, told me he had performed successfully two operations for strangulated hernia, one umbilical, on the last passage over. I saw but one patient in the ship's hospital, a well developed case of measles, needless to say well isolated.

Rotterdam was reached July 8th, and the first hospital visited on the continent was the Ziekenhuis aan den Coolingsel. One could not but be impressed with the magnitude of this up-to-date institution with its 800 beds. It is built on the pavilion plan, with avenues winding between the various buildings, with the moist soil yielding the most luxuriant foliage, especially the water-loving trees, the pollard-willows so characteristic of the Dutch landscape with a beauty all their own. These, with elms and oaks and lime trees, and the grassy expanses and small lakes, offer a pleasant promenade and a quiet retreat for the gingham uniformed convalescents. My guide, the house surgeon

at this hospital, could speak neither English nor German, hence his explanations which were valuable cannot be translated here, yet I listened politely, however, to all that he had to say. The well ventilated wards contained 30 beds each. In this, the most energetic seaport of Holland, with the many-voiced hooting steam syrens, the booming of heavy ores tumbling into the ship's holds, the rattling of railway trains, and the rumbling of the traffic, resounding night and day, it is not to be wondered at that the beds of its hospitals are filled for the most part with accident cases. I saw in one ward six thigh fractures in a row. The treatment of these femoral fractures greatly interested me; it was called the "ship dressing", the patient occupied the sitting position. The injured member was snugly bandaged with flannel, incorporated in the folds of which along the anterior aspect was a series of brass harness rings, distributed equi distant, and eight in number, from the upper thigh to the ankle. Laced through these rings was a strong cord passing through similar rings, on the under surface of a rigid oak strip, the latter being suspended from an iron pipe standard crossing the bed laterally. The usual extension apparatus averaging about 50 kilos completed the dressing. These patients looked most comfortable and the interne assured me that hundreds of such patients were annually treated with success in this hospital. Contagious and phlegmonous cases of all sorts were treated in isolated "barracks." The department of pathology was very complete. A number of assistants were busy with their microscopes and three autopsies were in progress during my visit.

The proverbial Dutch cleanliness is everywhere apparent in the hospitals I visited in this city as well as in The Hague, Amsterdam and the smaller city of Delft. A word with regard to this cleanliness is apropos: the home, the public institutions, the farmyard are kept so immaculate, that the bare floors could be used as tables. We are told that this characteristic is a consequence of the low situation and the marshy soil; for if there were not so much scrubbing, scouring, polishing and rinsing in Holland to keep everything clean, shining and bright, the dampness would destroy house and furniture far too soon.

The thrifty good-natured Dutchmen, especially the peasants, therefore possess the

inexhaustible patience to endure the chronic cleaning mania of their wives and servants. Hospitals in both Amsterdam and The Hague were visited. The former city contains two well known institutions, the Wilhelmina Hospital, named for Holland's young queen, containing about 700 beds, and the large new Catholic Hospital with 600 beds, a model, up-to-date institution complete in every detail, with a new private patient pavilion for 250 pay patients, which will be occupied in September. I spent one morning in the operating room of this hospital and was impressed with the thoroughness of the technique of the operators.

Now one word, in closing these random lines about the Netherlands. Any American who knows this country by the many-colored picture-postcards, depicting peasants, male and female, dancing around an orange tinted windmill, or as I read the other day, of a "creamy Edam cheese", floating in the Zuider Zee, had better change his mind. The Queen of Holland does not wear the peasant woman's cap made of lace, with the gold ear plates—however charming this picturesque head dress would adorn the golden locks of her youthful majesty. The ministers of the crown, and the professors in the hospitals and universities do not execute dances in richly carved wooden shoes, nor do they wear the short velvet jackets, and baggy knickerbockers of Volendam with a blue Delft bottle of Schiedam gin protruding from their pockets. No, the United Netherlands is a beautiful and an important country, and the Hollanders are an earnest, honest and energetic people, quite at ease with the times medically and every other way.

HAMBURG.

We arrived at this German city July 15th from Amsterdam. It is the chief seat of commerce of the European continent and next to Berlin the largest city of Germany. This Hanseatic city is noted for its charitable institutions, existing here probably in greater number than any place in Europe. There are three hospitals, each containing more than a thousand beds, but one of these, however, will concern us, The Allgemeines Krankenhaus Eppendorf, under the superintendency of Prof. Dr. Lenhartz and the institution made famous by the great work in surgery of both Kuenmel and Hoffman. This hospital was begun in 1885 and com-

pleted in 1889, and is considered one of the best modern hospitals in the world. It has accommodation for 2500 patients and comprises about 90 detached buildings, which do not include the buildings for tubercular patients, which are a part of the plant but remote from it in the suburbs. These many buildings are surrounded by long winding avenues, beautiful gardens and lawns.

The architectural beauty, the landscape gardening and the horticulture combined, have created here something difficult for the pen to describe. Upon entering the grounds one is not impressed in the least as being surrounded by sickness and suffering; on all sides the beautiful avenues flanked by firs, shrubs, and flowers, certainly constitute an Elysian field where every woe is comforted and the sharpest sting of sickness mitigated.

On presenting my card as an American physician to the directeur, a guide attended me to the surgical pavilion, as I had expressed a desire to be taken to that department; I was required to register my name, home address, Hamburg hotel, and specialty in two different books before I entered the department of surgery. An Austrian physician was with me, and we were escorted to a room where we removed our coats and put on long frock linen dusters fastened like a minstrel's outfit with large nickel-plated buttons. We were then taken to the room of the house surgeon, where we were presented to Prof. Hoffman and five members of the house staff, a handsome and polite lot of German gentlemen with multi-scarred faces.

I was interested in the method of administering the anesthetic and found my way into the room marked "Narkosen Zimmer." The instrument employed is a complicated affair, mounted on a white enameled iron carriage, about the size of the ward carriage used in our country for carrying dressings. It is called the Dr. Roth-Draeger apparatus. It is surmounted with three dials, one for ether, one for chloroform and a third for oxygen. By turning an arrow on the ether dial the number of drops of ether can be regulated from one up to two hundred per minute; the same equipment obtains for the giving of chloroform.

The vapor from the anesthetic used, and here a mixture of ether, chloroform and oxygen are always employed, is carried to a

rubber bag, with a capacity of two liters. This carriage contains a clock, a slate for recording the vital signs, and all of the usual paraphernalia for meeting any emergency. Three to four minutes is all that was required in establishing complete narcosis.

The work done by Prof. Hoffman was rapid and thorough, and the aseptic detail was as perfect as could be possible without rubber gloves.

In the removal of the appendix, the old cuff operation was done, first crushing the stump with an angiotribe of Prof. Kuemmel's creation. The uncovered stump was ligated with fine braided silk and the same material was used for covering the stump.

In opening the abdomen for the appendix operation, a large crescent incision was made in the skin, exposing well the external rectus muscle, which was well retracted toward the median line. Tier sutures of chromicized catgut were used in closing the abdominal wall, with the metal clips for the skin.

An interesting method for the obliteration of varicose veins of the leg was done. It consisted in exposing a vein below the knee, ligating the proximal end, and injecting into the distal open end a solution of

Iodine	1.0 part
Iodine of potash.....	1.6 parts
Distilled water.....	96 parts

Where the veins are large and tortuous, a deep spiral incision is made beginning below the knee and winding around the affected leg to a few inches above the ankle, extending through the skin and fat to the muscle, very much after the fashion of an amputation incision and with equally as much hemorrhage; then ligating every open vein, and applying a clean dressing and allowing this large spiral incision to granulate. Should I develop either appendicitis or varicose veins, I would much prefer to have them remedied according to the American methods.

Yesterday I saw Prof. Hoffman operate according to a new method, for chronic puerperal infection. I cannot give the patient's history, but know that she came to the table with a quick pulse and a temperature of 103°. An abdominal section was done in the exaggerated Trendelenburg position. The spermatic and common iliac veins were

ligated on the left side, and the spermatic and the internal iliac veins were tied on the right side. The pelvic viscera were congested, but no pus was found, yet the streptococcus bacillus had been repeatedly found in this patient's blood and the operator hoped to eliminate the infection from the systemic circulation.

Spinal anesthesia is extensively employed in this institution in operations below the umbilicus. The most satisfactory results are reported without pain or post anesthetic effects. Tropococain is used in doses of .06 c. gm. without the suprarenin, suggested by Bier, the pioneer worker along this line.

The fourth lumbar spine is located here as elsewhere by stretching a towel between the iliac crests, and the sterile needle introduced into the third lumbar interspace, to the left of the median line about one-third of an inch. Instead of allowing the spinal fluid to escape, it was made to fill the syringe, thus diluting the prepared tropococain.

Hoffman knew of the one death in 1000 cases reported by Bier (*Deutsch Zeitschrift für Chirurgie*), but had not heard of the unhappy ending of one of Reynold's cases reported in the July number of the *American Journal of Obstetrics*.

We leave Northern Germany to-morrow, July 20, for Denmark, Norway and Sweden, where I hope to see the methods of handling the tubercular and the leper, as both diseases have existed in the Scandinavian peninsula since the time of the Vikings.

Very sincerely,
FRANK LEMOYNE HUPP.

Selections

INFANT FEEDING.

Wm. H. Jordan, M.D., Providence, R. I.

Milks of all species of animals, including human milk, have certain characteristics in common. They all contain fat, sugar, proteids, mineral salts and water, each of which plays an important part and is necessary for the well being of the child. Fat is necessary for the proper formation of the osseous and nervous systems and sugar when necessary is transformed and stored up in the body as fat. Both fat and sugar, however, have more common functions to per-

form, inasmuch as they are the heat and energy producing elements which keep the young alive and furnish motive power to the body, while proteids are the only milk constituents containing nitrogen and are therefore the real constructive elements which build the body, making blood, repairing waste and forming new cells in growth. Fat and sugar are in the various milks much the same. This is not so with the proteids, for in human milk the soluble proteids or lact-albumen is about three times greater than that of cow's milk, while in cow's milk the insoluble proteids or casein is about three times greater than in mother's milk, so that when breast milk enters the child's stomach and comes in contact with the milk-curdling ferment and acids, it coagulates in small flocculi, the fat cannot become entangled in its meshes and digestion is normal. Whereas in cow's milk the proteids, on entering the stomach and encountering the ferments and acids, coagulate in large curds, at the same time catching the fat in its meshes and forming a large, tough curd, which acts as a foreign body and sets up gastro-intestinal disorders.

The normal child fed on breast milk may occasionally spit up a small amount of food after nursing, but as a rule it is happy, bright and cheerful, requiring only the ordinary amount of care and sleeping a great deal between feedings. It may, occasionally, have slight colicky pains, but as a rule its nursing life is happy, its stools are one to four a day in number, of a soft, smooth consistency and a bright yellow color. The artificially fed child may, and often does, simulate the normal breast-fed child, providing he is receiving a food suitable to his needs. The first disturbance usually noticeable is spitting up large or small amounts after feeding. This, at times, is a clear watery fluid, at times sour smelling and often having no odor whatever. Again it may spit up curds. This is soon followed by vomiting of entire feeding, colicky pains, restlessness, anxious expression, drawing up and spasmodic kicking of legs. There may be constipation or diarrhoea, and if this condition is not soon corrected, you may have an alternating diarrhoea and constipation, which is soon followed by infectious diarrhoea, marasmus, rickets and at times scurvy.

If a child is fed too high a percentage of fat, one of the first things noticed is vomiting of sour curds about 15 to 30 minutes after nursing. This is accompanied by pain, which is relieved for a time after vomiting. If no notice is taken of this and the same food is persistently administered the child becomes constipated, the stools are of a hard, brittle, grayish-white, dried-putty appearance. They do not adhere to and as a rule do not soil the diaper. There is a gradual loss of weight. This condition goes on gradually until infection takes place, and you have the same condition as described earlier. With too great an amount of proteids in a mixture containing fat, the first symptoms noticed are pain, distress, gas, loose stools, which may be yellow or yellowish green, and containing some curds of a true proteid character and later on mucus. Proteid curds are solid masses of quite good size, easily recognized by the eye. Curds caused by fat or fatty acids are very small, minute particles and are found when the stool is smoothed out and are usually more abundant in center of stool. The stools of a child fed on too high a percentage of sugar may be yellow, yellowish green or deep green, but this variety of stool may also be caused by any other form of digestive disturbance. The one thing most characteristic of too much sugar is irritation of the buttocks. Mucus may be caused by any one or any combination of ingredients. Care must be taken to properly examine mucous stools, for I have often seen stools which were characterized as mucous which were only starch caused by the child taking barley or oatmeal water.

The treatment of the various conditions resolves itself into removing the cause. This is done by castor oil if the child is not vomiting, otherwise fractional doses of calomel until one grain is taken, then a small dose of rochelle salts, placing on a plain water or barley water diet for twenty-four hours and gradually adjusting food to requirements of the case. Many times condensed milk and the proprietary foods are here used and occasionally give good results. The same results can be obtained if cane sugar in proper solution is used instead of condensed milk. The same is true of the malted foods if maltose were used in their place. The starchy foods can be replaced by barley, oatmeal, rice and wheat

flour soups. It is almost never necessary to resort to proprietary foods.

In percentage feeding combined with the caloric estimation of the food, we have the only true solution of the infant feeding problem. It has been my experience that babies have been more often overfed than underfed, that the fat percentages are usually too high and the proteids too low, and that too great a quantity is given. When the caloric value is kept down to about 100 to 110 in the first three months, 90 to 100 the second three months and about 70 to 90 calories to the kilogram the third three months, and the fat and proteid percentages are kept closer together, much better results are obtained.

Home modification of milk can be carried out in the most humble home if proper instructions are given and if the physician would take the time to see that his instructions are carried out in the most minute detail, for after all it is little things in modifying milk, as in other things, that count.

In order to get proper modification the first important thing to look to is the milk supply. You must not be satisfied to know that the milk looks good, for it is a very hard thing to tell if milk is good merely by looking at it. In the first place, it must be absolutely fresh, it must be obtained from a dealer who either produces his own supply or receives it direct from the dairy, put up in original bottles without further handling. It must contain from 12 to 14½ per cent. of total solids, its fat content must be from 3.50 to 4.50, the proteids from 3.20 to 3.60, its sugar from 4 to 5 per cent. and should not contain over 20,000 bacteria to the cubic centimeter. Such milk is the first essential step in the preparation of a modified milk. The next step is to know exactly just what percentage of fat, sugar and proteids the milk actually contains. When this is known, then an accurate modification can be made. This milk must be set on ice from six to eight hours. By this time the cream has risen to the top of the jar. The skim milk is removed from the bottom by syphoning. We then have our cream and skim milk separated and ready to put together to make whatever strength of milk is necessary for each individual case. This is done by adding a definite amount of cream and skim milk, milk sugar or cane sugar, which does

as well, and sterile water. If it is desired, and you wish to make a malted milk, it can be done by the addition of maltose. If some other form of carbohydrate is desired it can be obtained by the addition of whatever form is desired. Mixed feeding may be accomplished in the same way; if split proteids are desired, the required results may be obtained by adding whey.

Buttermilk feeding at times is very useful and in some cases gives good results. The same may be said of koumiss. In this form of feeding the fresh milk is replaced, in the former by a sour milk containing lactic acid germs, in the latter by a fermented lactic acid milk, and should not be used for any great length of time, but should be replaced by fresh cow's milk as soon as possible.

Skim milk is also useful in infant feeding. This, like buttermilk and koumiss, should not be continued, but should be replaced by a proper mixture of modified milk as soon as possible.

Cereal dilutents when added to food are at times valuable, not so much for their food values, for that amounts to very little, but for their mechanical action on the proteids, causing them to curd in small flocculi and by so doing make digestion more easy. The addition of alkalies to the food is for the purpose of delaying stomach digestion and to prevent the formation of large curds in the stomach.

The examination of the stools is very important. The physician must not be afraid to soil his hands, neither must he be too sensitive about odors, for to successfully feed infants he must examine the stools at close range and be able to place the proper interpretation on what he finds.

In conclusion I would say that the following general rules are very important:

First. The physician should impress upon every mother the importance of nursing her child unless contra-indications exist.

Second. Before allowing a healthy mother to take her child from the breast an examination of the breast milk should be made to determine the quality and quantity of milk secreted.

Third. If it is found necessary to resort to artificial feeding modified cow's milk should be used.

Fourth. Be careful not to overfeed. Keep the fat and proteid percentages close

together and do not give too great a quantity at a feeding.

Fifth. Feed in percentages, as it is the only method by which the amount of different food properties can be estimated and the proper changes intelligently made.—*Providence Medical Journal*.

ENTERO-COLITIS IN YOUNG CHILDREN.

From a symposium in the *British Med. Jour.* the *J. A. M. A.* has the following:

The first paper, by Dr. Charles G. Kerley, New York, was on the prevention of this disease.

As the best prevention, viz., removal to a cool, healthy climate, can not often be inaugurated, the prevention at home with poor environment must be discussed. He says that the predisposing causes are a disordered gastrointestinal tract, infected food, faulty feeding methods, and an absence of appreciation on the part of the parents and even physicians of the fact that an attack of diarrhea or vomiting, or even a green, undigested stool occurring in an infant under eighteen months of age during the hot summer should be looked on as a serious matter requiring prompt relief. As the diet of the artificially fed child is milk, which so readily becomes infected, the best safeguard against accidental imperfections in the milk is a healthy resistant intestine. The child's intestine becomes unhealthy and susceptible to infections or to toxins taken in by the mouth from the foolishness and ignorance of mothers who feed their children a little of all sorts of foodstuffs. The resistance power of such children having been reduced, an unclean milk during the heated term starts the enterocolitis, and the prognosis is serious.

As the ability is developed in different communities for mothers to obtain pure milk for their young children, the frequency of this disease will diminish. Kerley also advises the proper instruction of every mother whom the physician sees (and especially in dispensary practice, and best by printed pamphlets), in the way to prepare the baby's food. She should be taught that her own hands must be thoroughly cleansed as well as the utensils used in preparing the baby's food. She should be

taught to have the milk as pure and clean as can be obtained. She should next be told that at the first sign of intestinal derangement, regardless of the season of the year, the milk should be stopped at once and the baby sustained for a day or so on some "cereal water, such as barley or rice, together with the administration of a dose of castor oil."

Kerley particularly emphasizes the necessity for the prevention of little inflammations of the intestinal canal during other seasons of the year, as babies having had such infections are more susceptible to the more serious intestinal disturbances of the hot weather. He emphasizes the seriousness of the greenish stool, and that it should be an indication to the mother that the child needs medical advice.

Dr. John L. Morse, Boston, discusses the dietetic treatment of this disease, and states that the object aimed at is "such an arrangement of the food as will starve the bacteria without starving the baby." In other words, the baby must receive a reasonable amount of nourishment of such a food as will be a poor culture medium for bacteria.

In the beginning of the treatment total abstinence should be ordered, the length of time depending on the condition of the patient; all the babies can stand twenty-four hours without nutriment, most of them standing forty-eight, this provided that they are given a sufficient amount of water. They must receive as much water in twenty-four hours as they normally would get in their food, and the amount of water must be carefully prescribed. If the baby takes the water willingly by the stomach and it is retained, that method of administration is sufficient. If it is not retained, it must be injected into the colon by means of a long tube, and if it is not retained by the colon he advises administration of physiologic salt solution subcutaneously, the amount thus injected being from two to six ounces, depending on the age and size of the infant. It is useless to repeat such an injection until the previous one has been thoroughly absorbed. The administration of water in one of the above methods is absolutely necessary for the life of the patient. The amount of water lost by vomiting and purging if not replaced, so depletes the blood as to cause the retention of toxins, the inhibition

of kidney function, and paralysis of the circulation.

The first food given after from twenty-four to forty-eight hours should be a weak, diluted nutriment. Morse believes that it is not generally recognized how little nutrition is contained in barley water, which "as usually prepared contains only about 0.05 per cent. of fat, 0.25 per cent. of proteid and 1.5 per cent. of starch, and thus contains only one-tenth as much nutriment as milk. The white of one egg is equal in nutritive value to only three-fifths of an ounce of milk, while beef juice contains 0.6 per cent. of fat, and 2.9 per cent. of proteid, giving a nutritive value, bulk for bulk, of only one-fourth as great as milk. Broths contain only about 1 per cent. of proteid, and hence have a minimum nutritive value." Therefore, many times a very much diluted milk will be as valuable for nutrition, and may not cause any more disturbance of digestion than do these substitutes.

In selecting a substitute for milk one should endeavor to select one in which the germs present do not readily thrive. While a scientific examination can not often be made, "a clinical rule of some value is that sour stools mean bacteria which thrive on sugars and starches, and foul stools those which thrive on proteids." Morse finds that in these conditions of foul stools the babies do better on starches and sugars than on proteid foods, and he generally selects barley water and milk sugar. When proteids are indicated, the white of egg in the form of albumin water, beef juice, and broth may be used. He cautions that whatever substitute for milk is used, the amount of liquid must be kept up to the required limit, just as during the starvation period.

It is seldom wise to return to a milk diet until the temperature and the movements have become normal. However, after the baby has been sick a week it may be necessary to give some form of modified and pasteurized milk, even if the disease has not stopped. Too much alkali should not be given either medicinally or in the food, as it will retard the formation of the chyme for nutrition and healthy intestinal digestion. In the beginning of the return to a milk diet he finds milk whey often valuable. "It contains about 1 per cent. of proteids and 5 per cent of sugar." He also has lately found

that pasteurized buttermilk is a good initial milk food. Buttermilk contains very little fat, a moderate amount of sugar, a considerable amount of proteids, and lactic acid, and also contains lactic acid bacteria. He has pasteurized this milk, but is not even sure that pasteurization is necessary, as the advantages of buttermilk as a bowel anti-septic have lately been lauded.

When the baby shows no signs of improvement and is gradually failing in spite of all medicinal, dietetic and hygienic treatment, a wet nurse should be considered, as patients have been saved by such natural nutrition.

HYGIENIC VALUE OF SINGING.—When one considers how many thousands of young men and women are studying the art of singing, and how very few of them ever learn it well enough to earn their living by it, or to give anybody much pleasure, one feels inclined to look on the vast amount of time spent on vocal exercises as so many hours wasted. But there is another point of view which is not often enough emphasized. In a recent number of a German journal devoted to laryngology Dr. Barth has an article discussing with German thoroughness the utility of singing from a hygienic point of view. Every bodily organ is strengthened by exercise; singers exercise their lungs more than other people; therefore, he says, we find that singers have the strongest and soundest lungs. The average German takes into his lungs 3,200 cubic centimetres of air at a breath, while professional singers take in 4,000 to 5,000. The tenor Gunz was able to fill his lungs at one gasp with air enough to suffice for the singing of the whole of Schumann's song, "The Rose, the Lily," and one of the old Italian sopranists was able to trill up and down the chromatic scale two octaves in one breath.

A singer not only supplies his lungs with more vitalizing oxygen than other persons do, but he subjects the muscles of his breathing apparatus for several hours a day to a course of most beneficial gymnastics. Almost all the muscles of the neck and chest are directly or indirectly involved in these gymnastics. The habit of deep breathing cultivated by singers enlarges the chest capacity and gives to singers that erect and imposing attitude which is so desirable and so much admired. The ribs, too, are rendered more elastic and singers do not, in old age, suffer from the breathing difficulties to which others are so much subject. By exercising so many muscles, singing furthermore improves the appetite, most vocalists being noted for their inclination to good meals. The nose of a singer is kept in a healthy condition by being imperatively and constantly needed for breathing purposes, the injurious mouth-breathing so much indulged in by others being impossible in this case. That the ear, too, is cultivated need not be added. In short, there is hardly any kind of gymnastics that exercises and benefits so many organs as singing does.

The West Virginia Medical Journal.

S. L. JEPSON, A.M., Sc.D., M.D., *Editor*.

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WHEELING, W. VA., AUGUST, 1909.

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All communications to this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notices of deaths, removals from the State, changes of location, etc., are requested.

Our readers are requested to send us marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

CONTRIBUTIONS TYPEWRITTEN.

It will be satisfactory to all concerned if authors will have their contributions typewritten before submitting them for publication. The expense is small to the author—the satisfaction is great to the editor and printer.

ADVERTISEMENTS.

Advertising forms will go to press not later than the 20th of each month.

Advertisements of proprietary medicines must be accompanied with formulæ. Rate cards sent on application.

REMITTANCES

Should be made by check, draft, money or express order or registered letter to Dr. S. L. Jepson, Ch'n of Pub. Com., 81 Twelfth Street, Wheeling, W. Va.

Editorial

PROFESSIONAL LOYALTY.

Out of the ancient heart of Britain has come a flash of primal elemental loyalty that should be a flame in our heart and eyes.

Two medical practitioners of Cardiff, Wales, Mr. Lynn Thomas and Dr. Skyrme, in their attendance upon a patient, had given to that patient the benefit of the most advanced knowledge, even though it meant leaving the beaten track of practice. The results were good, but the fact remained that these courageous men were innovators. The ungrateful recipient of their enlightened courage took advantage of this fact, and brought action for damages, and after two trials was awarded \$500 damages. The total expenses of the defendants, however, were more than \$20,000. Six days after the trial 100 practitioners, the largest number of medical men ever foregathered in Cardiff, met to take steps to provide a fund to meet these expenses.

A document known as "The Appeal," signed by over ninety leading men of the profession throughout the Kingdom of Great Britain, including the President of the British Medical Association, the representative medical societies all over the country, and of the hospitals, was published, and the response to this appeal was inspiring. In a few months two thousand physicians had contributed a larger sum than had ever before been gathered together for such a purpose. The expenses of the trial were paid, and the balance presented to Mr. Thomas and Dr. Skyrme at the meeting of the Cardiff Medical Society on June 3d last. The presentation was made by Dr. Lucas-Champoniere, President of the International Society of Surgery, who came across the channel to be present. The recipients of the fund walked arm in arm amidst a scene of great enthusiasm and heard Dr. Lucas-Champoniere say that he was "proud to be present on the occasion and to have the honor of making the presentation," adding, "The event is not merely British, but has an international character."

Here was a thing of which any profession might well be proud. The professional spirit is a purely spiritual product, a product of the human soul. On occasion, two thousand men or twenty thousand should become one man, with the same primal fire flashing from the souls of all. We need more of this spiritual welding of medical men in this great land of ours and in our own state. In an affair where a man's brain and heart and honor and conscience are concerned, we must deserve to have the verdict of the profession; and having so deserved, we should feel assured of it no matter what the verdict of the courts, with their antiquated tests and standards.

There may be communities in West Virginia that have not yet produced medical groups fired with this elemental cohesion of loyalty; if so let this example from the olden city of Wales be a light to their pathway. Happily, nearer home the same fire of loyalty burns not less truly even though less fiercely. A few months ago in Wheeling a patient made the rounds of the law offices to attempt a suit for alleged malpractice, but gave up discouraged. She reported to her friends that the lawyers

had said that the doctors who had waited on her were so well known for conscientious work that she could not win her suit; and one attorney had recounted to her the the past hundred years, and shown her that not a single one had ever been gained because "the doctors are either too good, or too loyal to each other." There is a very high tribute to the profession of the first city of the state to be read between the lines here. No medical community in our state is either too young or too small to earn a like tribute from a sister profession.

The readiest test of this much desired professional loyalty is the degree of active life in the local medical society in any community. This loyalty is the life-blood of organization. Let each local society in our state look to itself. Is yours anemic? Count the red corpuscles in the vessels of your professional organization. If they are found to be deficient, a little stimulation may be needed. Could you match the spirit of the practitioners of Cardiff? C. A. W.

ROLL OF HONOR.

The following members have kindly sent us the names of eligible non-members in their respective counties:

Dr. O. F. Covert, Moundsville.
 Dr. Jas. R. Bloss, Huntington.
 Dr. S. W. Varner, Kingwood.
 Dr. J. W. Shull, Romney.
 Dr. Joseph Palmer, Wellsburg.
 Dr. J. W. Kidd, Burnsville.
 Dr. H. C. Skaggs, Kaymoor.

The *Journal* has been sent to each person whose name we have received, with an urgent letter impressing the importance of joining the local Medical Society. If this is followed up by personal solicitation, we hope that an increase in the membership will result. We are willing to continue our part of the work, if the names of eligible physicians are sent us. We do not want the names of any who might be a disturbing element in the societies, but men are usually not as black as they are painted, and we should exercise the largest charity in our estimate of men whom we do not know intimately. All men improve as they come into close relation with those in the same calling. Send in the names, and then hustle for new members.

HEAT APOPLEXY.

NEW YORK, June 28.

Dear Dr. Jepson.

On the day of our arrival in New York the thermometer registered 92° in the shade, and the humidity mark was about 88 or near saturation. There were upward of 200 heat prostrations and a number of fatalities. Ambulances were flying in every direction on their errands of mercy. Apropos this blistering wave and the consequent deaths, one of the lay journals has attempted to explain just what sunstroke means, and it has occurred to me that it might be of interest to your readers:

"The commonly used term sunstroke is something of a popular misconception—a misnomer that has existed for these many years. It would be much more accurate, if less convenient, to speak of these prostrations by the heat as "heat apoplexy."

The public generally has been led to suppose that these attacks are invariably attributable to exposure to the direct rays of the sun, but such is not the case. Many sufferers are found in houses, tents and barracks, and not a few are stricken in the night, which goes to show that prostration is not always due to exposure to the direct rays of the sun.

"Physicians agree that heat prostration, whether in the sun or indoors, attacks those whose health is debilitated by dissipation, disease, or overfatigue. They say with reason that exposure to intense sun rays is less to be feared in dry climates than in countries where there is much lower temperatures, but a large percentage of moisture in the atmosphere, causing retardation of perspiration.

"Medical scientists are authority for the statement that there is more suffering from a temperature of 87 degrees in Brussels, where the air is laden with moisture, than a temperature of 122 degrees at Cairo can entail, the air in the latter place being extremely dry.

"In a report on climatic conditions, Gen. Greeley once said:

"The inhabitants of the eastern coast of the United States hear with amazement of temperatures from 118 degrees to 128 degrees being tolerated without harm in the dry region of Arizona and South Colorado, and that the ordinary avocation of farm and factory are pursued without inconvenience."

"He explained that this fact was due to the cooling effect of rapid evaporation from the surface of the body, and hence ill-effects from exposure to the sun's rays are almost unknown.

"In the City of New York high temperatures are not considered dangerous to human life unless accompanied with a considerable percentage of humidity."

We sail on the new steamer Rotterdam on Tuesday morning and I hope to visit some of the important hospitals of Norway and Sweden, and I shall endeavor to give you a letter from the Scandinavian country some time in July.

Very sincerely,

FRANK LeMOYNE HUPP.

THE MODERN TREATMENT OF HAY FEVER.

Whatever be the accepted views as to the pathology and etiology of hay fever, there is little difference of opinion concerning its importance and the severity of its symptoms. An agent that is capable of controlling the catarrhal inflammation, allaying the violent paroxysms of sneezing and the abundant lacrymation, cutting short the asthmatic attack when it becomes a part of the clinical ensemble, and, finally, sustaining the heart and thus preventing the great depression that usually accompanies or follows the attack—in short, an agent that is capable of meeting the principal indications—must prove invaluable in the treatment of this by no means tractable disease.

In the opinion of many physicians, the most serviceable agent is adrenalin. While not a specific in the strict meaning of the word, adrenalin meets the condition very effectually and secures for the patient a positive degree of comfort. It controls catarrhal inflammations as perhaps no other astringent can. It allays violent paroxysms of sneezing and profuse lacrymation by blanching the turbinal tissues and soothing the irritation of the nasal mucosa which gives rise to those symptoms. It reduces the severity of the asthmatic seizure, in many instances affording complete and lasting relief.

There are four forms in which adrenalin is very successfully used in the treatment of hay fever: Solution adrenalin chloride, Adrenalin Inhalent, Adrenalin Ointment, and Adrenalin and Chlorotone Ointment. The solution, first mentioned, should be diluted with four or ten times its volume of physiological salt solution and sprayed into the nares and pharynx. The inhalent is used in the same manner, except that it requires no dilution. The ointments are supplied in collapsible tubes with elongated nozzles, which render administration very simple and easy.

(It is perhaps pertinent to mention in this connection that Messrs. Parke, Davis & Co. have issued a very useful booklet on the subject of hay fever, containing practical chapters on the disease, indications for treatment, preventive measures, etc. Physicians will do well to write for this pamphlet, addressing the company at its numerous branches.)

State News

BURNSVILLE, W. VA., July 20, 1909.

Editor *West Virginia Medical Journal*:

A few years ago I gave a Bible to a man who lived in the country near this town. Sometime afterwards I met him and asked how he liked the book. He replied: "I like it real well; there are some right good pieces in it. There are some things in it that will do for most anybody to read."

This man's opinion is somewhat like mine of the *West Virginia Medical Journal*. There are things in it that will do for any doctor to read. This is especially true of the tuberculosis number.

Braxton county is one of the great central counties of West Virginia and is making progress in every way. The medical profession here is

keeping up with the procession. I know of no county that has a greater number of young, energetic and sober physicians.

We have a good county society which meets six times a year. Generally speaking we meet three times a year at Sutton, twice at Burnsville and once at Gassaway.

Our official secretary, Dr. M. T. Morrison, has been quite sick for some time, but I am informed that he is improving and hope that he will soon be able to give your readers something about our society.

The present officers are, President, Dr. G. G. Lovett, Bulltown; Vice President, Wm. H. McCauley, Sutton; Secretary and treasurer, Dr. M. T. Morrison, Sutton; delegate, Dr. L. L. McKinney, Burnsville.

Dr. W. F. Leech, late of Marion county, has located in Burnsville.

Dr. L. L. McKinney and J. R. Hughart, both of Burnsville, have recently taken post graduate courses, the former in Louisville and the latter in Baltimore.

We are glad to know that our little friend, Dr. S. W. Varner, is appreciated in his new home, Preston county. The doctor is a product of our Little Kanawha valley and will make good anywhere he may be placed.

Yours truly,

J. W. KIDD.

* * *

The following are the new members of the State Board of Health:

Dr. M. V. Godbey, Charleston, in place of Dr. T. L. Barber.

Dr. L. S. Brock, of Morgantown, in place of Dr. M. H. Proudfoot.

Dr. C. W. Halterman, of Clarksburg, in place of Dr. D. P. Morgan.

Dr. H. M. Rymer in place of Dr. S. W. Varner.

So far as we know the men are all excellent appointments. We hope soon to see the name of Dr. Rymer enrolled among the members of the State Medical Association. The others are all members.

* * *

Dr. Joseph E. Rader, of Huntington has announced that hereafter he will limit his practice to Gynecology, medical and surgical. He can furnish hospital accommodation to those needing it. We wish for the doctor abundant success in his chosen field, for which we believe him well qualified.

* * *

Dr. O. F. Covert has been appointed Chief Surgeon of the Reynolds Memorial Hospital, located at Glendale, Marshall county. He expects to spend the mornings at this institution, which is beautifully located and in all respects well appointed. The hospital is under the supervision of Archdeacon B. M. Spurr, whose business ability is well known. Dr. Covert is well fitted for the work before him, and will no doubt be successful. His constant interest in medical society work attests his progressive spirit. Whenever a

physician loses interest in medical organizations he may be put down among the "has beens."

* * *

Dr. Mary Baron Monroe, of Wheeling, is off for a few weeks' rest and recreation.

* * *

Dr. J. C. Archer, formerly a practitioner of Belmont county, Ohio, has opened an office in the Schmulbach building, Wheeling, for the practice of a new specialty. See advertisement on another page. The doctor is a perfectly reliable man, and we believe there is room for him and his proposed work in this city.

* * *

Dr. D. B. Best, of Wheeling, is off on a short vacation. Dr. Fulton has returned to his work after a few weeks spent with his family at Atlantic City.

Society Proceedings

EASTERN PANHANDLE SOCIETY.

The regular quarterly meeting of the Eastern Panhandle Medical Society was held July 7th in Rippon, Jefferson county, at the beautiful home of Dr. Howard Osbourn, and was one of the most successful and pleasant meetings ever held by the association.

The attendance was large, and the papers read and discussed were of a high character. The physicians were entertained by Dr. Osbourn, and the meeting held on the beautiful lawn surrounding his fine home.

The following excellent program was carried out:

"Retro-Displacement of the Uterus."

Dr. Newton Lewis, Roanoke, Va.

"Tuberculin, Moro's Reaction."

Dr. F. M. Phillips, Charles Town, W. Va.

"Management of Labor in Contracted Pelves."

Dr. L. M. Allen, Baltimore, Md.

"Medical Supervision of School Children."

Dr. R. W. Miller, Martinsburg, W. Va.

"The Eye—Some Practical Points."

Dr. M. Griffith, Washington, D. C.

"The Dilating Heart."

Dr. C. Gamble, Baltimore, Md.

The members and visiting physicians present were: Dr. J. W. Bovee, Dr. M. Griffith, Washington, D. C.; Dr. J. N. Lewis, Roanoke, Va.; Dr. C. Gamble, Baltimore, Md.; Dr. M. L. Allen, Baltimore, Md.; Dr. Wagner, Hagerstown, Md.; Dr. W. S. Lovc, Dr. Latine, Winchester, Va.; Dr. R. E. Venning, Dr. A. O. Albin, Dr. Wm. Neil, Dr. Skinner, Dr. F. N. Phillips, Dr. Marshall, Charles Town, W. Va.; Dr. E. B. LeFevre, Inwood; Dr. J. H. Shipper, Gerrardstown; Dr. J. M. Miller, Dr. Perry, Halltown; Dr. Hodges, Harpers Ferry; Dr. Frank Burden, Paw Paw; Dr. Knott, Summit Point; Dr. Howard Osbourn, Dr. Nelson Osbourn, Rippon; Dr. Harris, Berryville, Va.; Dr. J. M. Sites, Dr. A. B. Eagle, Dr. T. K. Oates, Dr. G. J. E. Sponsellar, Dr. Clifford Sperow, Dr. E. H. Bitner, Dr. C. Tonkin, Dr. Wm. Minghini, Dr. J. W. McSherry, Dr. M.

V. McCune, Dr. Florence Evers, Martinsburg, and Dr. Burrell, Shepherdstown.

The next meeting of the society will be held in Charles Town, in October.

Our society is in fine shape and growing in strength. We have had a struggle to get out of long dresses, but we are on our feet now, and have had about all the infantile diseases, and are now ready for growth and more efficient work.

J. W. S.

ELKINS ACADEMY OF MEDICINE.

ELKINS, W. Va., July 19, 1909.

Editor W. Va. Medical Journal:

The last meeting for the season of the Elkins Academy of Medicine took place July 1st, at the residence of Dr. W. W. Golden. The feature of this meeting was a series of talks on the lives and works of Hippocrates, Galen, Harvey, Malpighi, Von Haller, John Hunter and O. W. Holmes, by Drs. J. C. Irons, H. K. Owens, C. H. Hall, T. M. Wilson, E. R. McIntosh, W. W. Golden and O. L. Perry.

The program proved to be exceedingly instructive and entertaining, as well as inspiring. Medical societies should devote at least one meeting of the year to subjects of an historical character. They will find it a great stimulus and help in many ways. A number of physicians from out of town were present and participated in the discussions. For the benefit of the visitors, a brief review of the work and aims of the Academy was given. A large part of its work is the pursuit of the post-graduate studies, following the program of the American Medical Association. This work the Academy has maintained throughout the year, the meetings being weekly. But very few meetings have been missed. In addition, through its committees, the Academy has kept close touch with the several problems of the public health of Elkins in particular and of the state in general. Much good work has been accomplished. It has been instrumental in improving the condition of the water supply of the town. It has given considerable help to the board of education in the betterment of the sanitary and other conditions of the public schools. It has thrown its weight on the side of moral and political cleanliness in the annual municipal election, and is now already engaged in leading the anti-tuberculosis movement in this section of the state.

Delightful refreshments were served by the host, and by unanimous vote the Academy adjourned its regular weekly meeting for the summer vacation. R. R. M'INTOSH, Recorder.

HANCOCK COUNTY SOCIETY.

CHESTER, W. Va., May 5, 1909.

Meeting called to order by the President, Dr. G. H. Davis. Minutes of last meeting read and approved. Members present, Drs. Davis, Lewis, Spillman and Benton. Visitors, Dr. J. W. Abercrombie, of Wheeling; Drs. W. R. Clark, W. N. Bailey and W. A. Hobbs, of East Liverpool.

The order of the program was suspended by request and Dr. Abercrombie was invited to read a paper on "Diseases of the Pericardium," in

which Dr. Abercrombie reviewed the literature on diseases of the pericardium, and drawing special conclusions from his experience in which he noted the susceptibility to diseases of the pericardium in children, and also inflammatory conditions of the pericardium following or concomitant with attacks of rheumatism. Dr. Abercrombie believes pericarditis is much more frequent than is ordinarily discovered, and perhaps well so, as frequently these conditions are overtreated if treated at all. Prophylaxis and elimination and careful nursing are the more advisable therapeutic measures in these cases. The doctor's experience has demonstrated that nature will do much to repair the damage done in cases of pericarditis when given the proper opportunity. The drug therapy, especially digitalis and its combinations, are frequently harmful, as they overtax the already embarrassed cardiac muscle.

The paper was discussed by Drs. Hobbs, Bailey, Clark, Spillman and Benton.

Dr. Hobbs emphasizes the frequent harm done by too liberal drug therapy in cases of pericarditis.

Dr. Bailey reviews the fact of the frequent overlooking of a mild inflammatory condition of the pericardium, and remarks on the advantage of its being frequently overlooked. He agrees with the writer and the former discussants on the points of prophylaxis and drug therapy.

Dr. Clark emphasizes the excessive range of inflammatory involvements of the pericardium, especially in diseases of children, and their significance points largely to the infectious and overtaxed systemic condition.

Dr. Spillman believes that in diseases of children and the aged especial care should be exercised in watching and detecting inflammatory conditions of the pericardium, which are so frequent and sometimes so difficult to detect.

Dr. Benton points out the close connection between auto-toxicosis and inflammatory conditions of the fibro-serous membranes, of which the pericardium is the most thoroughly exposed and most easily effected through its continual activity, and its absorption of poisons circulating in the blood supply renders it most susceptible to accident and injury. A careful study of auto-toxicosis shows that the process is almost concomitant with daily life from the cradle to the grave, and exposes the tissues which are most active in the processes of the physical economy to these poisons, the entire amount of which they are unable to eliminate, hence acute infections and inflammations or chronic degenerations accrue.

Dr. Spillman requested that his paper be not presented until the next meeting, and an impromptu discussion on Incipient Tuberculosis was indulged in by the members present and the visiting members.

Dr. Benton reports the work done by the Board of Health of Wheeling in assisting the physicians to detect the presence of tuberculosis among their patients by making sputum examinations free of charge. Also calls attention to the fact that the Texas State Board of Health has requested no tubercular patients be sent into the

state, with a view later on of taking measures to prohibit tubercular patients from entering the state.

After which adjournment was taken.

G. H. BENTON, M. D., Secretary.

OHIO COUNTY SOCIETY.

May 24, 1909 (24 present). Dr. Earl F. Glass lectured on "Infant Feeding." Dr. Jepson said that there is as great difference in the milk of women as there is in the milk of cows. The modification of milk is quite an art, and some authors have complicated matters very much by their figures. Dr. Osburn said that the fever of **in-anition** can be seen in babies up to a year old. His most troublesome cases have been nursed babies up to one year of age who have never learned to eat anything. The tendency in modifying milk is to make it too strong. It is well in some cases to give the infant simple warm water by the bottle about twice a day. Dr. Hupp desired to call attention to the immunizing quality of mothers' milk. In entero-colitis refusing to yield to the usual remedies, mothers' milk fed to the child will often be of great help towards recovery. In case of new-born infants it is our duty to give children water in abundance, if for no other reason, it should be done to prevent uric acid infarcts. Dr. Wingerter called attention that recent researches had shown that the milk from the mother's breast contained an antitoxin that was not only efficient in entero-colitis, but in all infectious diseases, even in pneumonia. The reason why nursing infants are not prone to take variola, scarlet fever, measles, and other infections is found in this fact of the antitoxic character of the mother's milk. He noted the reasons for preferring herd milk to the milk from one single cow. Dr. Noome said the fact that mother's milk is an immunizing factor is a most valuable one in this matter. Concerning cow's milk it is the fat and not the proteids that cause the trouble in infant feeding. Wet-nursing is impracticable in modern practice. Before the child is taken away from the breast, the deficiency must be known, and we must be prepared to meet it; we must not be too ready to advise weaning of infants. Calcium citrate has been used successfully to soften the curd in cow's milk. Pasteurization and sterilization of milk is radically wrong. Examination of feces has been productive of much of the advance in this field. We must individualize; every case is a law in itself. Dr. Fulton said that there is a wide field open to some one in the community who will take up seriously the work of infant feeding, studying it in a scientific and up-to-date manner. Dr. Campbell said that common-sense is a most valuable factor in the feeding of infants. He has seen entero-colitis many times in nursing babies. We must remember that the percentage of fats in mother's milk and in cow's milk is the same, and therefore the fats are not the cause of the trouble. Our trouble comes from the proteids. The secret of proper modification of cow's milk is in the reduction of the proteids; it is the excess of proteids and not of fats that causes constipation. Cow's milk is acid and must be rendered alkaline. He favors pasteurization

of cow's milk. After the return of menstruation the mother's milk is changed; and after six months, a child should be weaned if menstruation has returned. The preparing of formulae is easy in the modification of cow's milk; the difficulty is to get the mother to follow the orders of the doctor. Dr. McLain said that the percentage of fat varies depending upon various factors. Within two months in Wheeling we will have certified milk; this will make infant feeding much simpler. With the milk we are getting here today, pasteurization is not necessary. Dr. Taylor said that he has often used toast-water while waiting for the breast milk to come. He does not think breast milk is good for babies after the mother's menses have been re-established. He thinks it is better to feed from herd milk than from the milk from a single cow. We are in need of a good reliable galactagogue. Dr. Alexander said that it is often advisable to wean infants at an early date. Many of the prepared foods are very practical; certified milk is a great desideratum. Dr. Reed said that fifty per cent of the cows in the United States are tubercular. Many of the fatal cases of enterocolitis may be tubercular though not so recognized. Dr. Jepson noted that there is a difference in the digestive powers of babies. We will still have sick babies even after certified milk has arrived. Twelve months is a good average time for weaning, if the weather is favorable. He deems the proteids the disturbing element generally in artificial feeding, although recently the tendency has been to add too much fat in milk modification. In many cases the addition of a starchy product is to be favorably considered. Dr. H. E. Wilson believes that pasteurization will continue to be necessary among the poor. Dr. L. D. Wilson said that it is not a hard matter to modify milk, but it is hard sometimes to find the proper food for a sick child. Milk is almost as variable as any food product can be, but the human infant can stand a variation especially when it is taking a living tissue, as mother's milk is. He does not think that the fats give us trouble; but the casein is the disturbing element. There is an immense amount of variation both in the milk and in the children. Digestive ferments have their uses, though their action may be different from that usually suggested by the theoretical laboratory worker. Give attention both to the child and to the milk.

CHAS. A. WINGERTER, Secretary.

Reviews

LEGAL MEDICAL AND TOXICOLOGY.

By R. L. Emerson, A. B. M. D. (Harvard), member of the Massachusetts Medico-Legal Society; former instructor in Physiological Chemistry Harvard University Medical School, and Assistant in Clinical Pathology, Boston City Hospital.

(New York and London, D. Appleton & Co., 1909.)

It is an undisputed fact that the average physician knows very little of the legal aspect of

his profession, and the natural consequences are that he sometimes plays a rather ridiculous role as a witness in court, and furthermore justice would often be better served if the medical testimony were stricken out.

One need only to be present at some of the so-called legal post-mortems, in order to convince himself of the shortcomings of some of those called on to perform the task, where the cause of death is difficult to determine. While it may be possible for a physician to shirk the responsibilities of giving expert testimony, he is at any time liable to be called as a witness in any criminal or civil proceeding providing he has previously been connected with the case; and once on the witness stand, the lawyers will endeavor to draw out an expert opinion when it is possible. Therefore, it behooves every physician, for his own protection, if not for any other reason, to fortify himself in this special field of our calling.

Legal Medicine, while covering practically the sphere of action of the general practitioner, deserves special attention, from the fact that a great many questions arise in court, touching on matters not generally thought to be of special importance by the average physician. For instance, the determination of the age of a bruise from the extent and character of the discoloration, may become of vital importance in a criminal case; whether a wound was inflicted before or after death; whether a new-born child had made effectual attempts at respiration; or whether a person has been drowned or thrown into the water after death. These and a hundred other questions may be asked the witness, and the better he is prepared for an answer, the better he will serve the ends of justice, and the more he will gain the respect of those who are investigating the case.

Now, there is no better opportunity for the physician to prepare himself for these questions, sometimes quite puzzling, than by close observation, during his daily practice. How easy, for instance, to study the daily changes of a bruise from its very beginning to its termination, and opinions gathered in this manner, being authoritative, are not apt to be shaken by the diplomatic maneuvers of the shrewdest lawyer.

The book under review, calculated to give a general idea of legal medicine, such as every up-to-date physician should have, while for extensive study is too brief, yet for the busy practitioner is a welcome guide, containing in concise chapters the gist of the matter under discussion.

The volume is divided into three parts, dealing respectively with the legal aspects of medicine in general, with the effect of the different poisons and finally with the laws governing the practice of medicine in the different states.

After some introductory remarks, the natural causes of sudden death are discussed, followed by an enumeration of the signs of death, and the post-mortem changes from rigor to putrefaction. Then follows a chapter on the technique of legal post-mortem examinations which is worth careful perusal, especially by those called on to perform such autopsies.

There is a special chapter on the different kinds

of wounds, their appearance and character, when inflicted, before or after death, and their great medico-legal importance.

The part dealing with poisons and their effects is brought fully up-to-date, and made still more valuable by the addition of the proper treatment of each form of poisoning.

The most reliable test for the detection of the more important poisons, in the tissues, body fluids, secretions and excretions, are also described sufficiently, in order to enable one to make at least a qualitative analysis.

Following the chapter on Toxicology and Ptomaine Poisoning, there is a very good article on the blood and its detection, by chemical, spectroscopical, microscopical and biological tests.

All in all the work is well worth a place in a physician's library, and may be consulted with advantage by the busy practitioner, who has no time to consult extensive special works on legal medicine.

SCHWINN.

TUBERCULOSIS A PREVENTABLE AND CURABLE DISEASE.

Modern methods for the solution of the tuberculosis problem. By S. Adolphus Knopf, M. D., Professor of Phthisio-therapy at the N. Y. Post-Graduate Medical School, etc. (New York, Moffatt, Yard & Co., publishers, 1909. By mail \$2.20.)

This book by our best-known specialist is intended primarily for the patient. The author hopes it "will aid him by giving him such insight into his affliction as will convince him of the curability of the disease * * provided he place himself under the careful guidance of a physician in his own hygienically arranged home, in a health resort, or in a special institution." We are glad that the author holds that "a conscientious consumptive who is careful in the disposal of his sputum and the prevention of droplet infection, is as safe an individual to associate with as anybody else," for the life of the consumptive should be made as bright as possible by companionship and cheer.

This book tells how the sanitarium treatment may be adapted to the home, gives full instruction as to proper method of living, instructs the people and municipalities as to the proper management of the tuberculous, and gives to factory managers advice as to the care of operatives. Instruction is also given to ministers, philanthropists and charity organizations as to how they may best do their holy work. We know of no work that so completely covers the information the laity should have touching this dread disease, and we do not know of any book in which the physician can learn so much of value that he should import to his tubercular patients, and those who may have the care of children born with the tubercular tendency.

THE AMERICAN POCKET MEDICAL DICTIONARY.—Edited by W. A. Newman Dorland, M. D., editor "The American Illustrated Medical Dictionary." Sixth revised edition. 32 mo. of 598 pages. Philadelphia and London: W. B. Saunders Company, 1909. Flexible Morocco, gold edges, \$1.00 net; thumb indexed, \$1.25 net.

This is a beautifully printed pocket dictionary, the words in bold faced type to catch the eye readily, the pronunciation given, the definitions brief but complete, and up-to-date. After using it on our desk for a few weeks, we can recommend it in the highest terms. New words are so constantly being introduced into medicine that we must have a new dictionary occasionally or "get left." All can afford to purchase this one, which will put him in touch with the latest words.

INTERNATIONAL CLINICS—A quarterly of illustrated clinical lectures and especially prepared original articles by leading physicians throughout the world. Vol. II, 19th series. The fact that this is the 19th year of publication of this excellent series is proof of its value and favor with the profession. Edited by Dr. W. T. Longcope, of Philadelphia, it has the aid of such men as Osler, Mayo, Musser, Rotch, Billings, of this country, and Ballantyne, of Edinburgh, Har- old, of London, and Kretz, of Vienna. The papers in this volume cover medicine, surgery, gynecology, obstetrics and several of the specialties. Several of the papers are finely illustrated. This volume maintains the high standard set by previous volumes.

TREATMENT OF THE DISEASES OF CHILDREN. By Charles Gilmore Kerley, M. D., Professor of Diseases of Children, New York Polyclinic Medical School and Hospital, etc. Second revised edition. Octavo of 629 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1909. Cloth, \$5.00 net; Half Morocco, \$6.50 net.

The first edition of this work was reviewed in this journal as recently as October, 1908, and a most favorable opinion was given. The favor with which the book has been since received by the profession confirms our good opinion of it, and we are not surprised that a new edition is so soon called for. We can add little to the favorable opinion we have before expressed. Limited as it is to the treatment of diseases of children, reference to it for therapeutic purposes is easy and devoid of the troublesome sifting process necessary in general treatises upon this branch of medicine. We can most cordially commend the book to both the general practitioner and the specialist. R. M. B.

HUMAN PHYSIOLOGY—An Elementary Text-Book of Anatomy, Physiology, and Hygiene. By John W. Ritchie, Professor of Biology, College of William and Mary, Virginia. World Book Company, Yonkers, N. Y., publishers.

Fresh from the press, beautifully printed on fine paper, well illustrated and well bound, is this school physiology. A somewhat careful examination has made a most favorable impression. An experience of many years in the city school board has given the reviewer some acquaintance with the ordinary physiology, and his verdict has been that it contains entirely too much matter that is useless. This book has but little matter of this kind. Its teaching is clear, and much of sanitary medicine is given that will be useful to the pupils. The teaching on alcohol, narcotics, vaccination, antitoxin, and the various infections is

sound. It is by all odds the most useful and practical of any school physiology of which we have any knowledge.

ANNALS OF SURGERY—A monthly review of surgical science and practice. Lewis S. Pilcher, M. D., LL. D., editor, J. B. Lippicott, Philadelphia, publisher.

The July issue of this excellent journal marks a new era in medical journalism. It is a volume of 366 pages, filled with papers by the most eminent men. The names of Nancrede, Mears, Ransohoff, Oschner, Prof. Friedrich, Vander Veer, Willy Meyer, Arbuthnot Lane, Bryant and Coley are enough to give distinction to any journal, and there are others of renown. The surgeon should read every article in this journal. 50 cents will bring it.

PAMPHLETS RECEIVED—Hygienic Laboratory—Bulletin—No. 46 Hepatozoon Perniciosum; Haemogregarine Pathogenic for White Rats. No. 47, Studies in Thyroid. I. The relation of iodine to the physiological activity of thyroid preparations. These are Bulletins issued by the U. S. P. H. and M. H. Service, the laboratory of which has been doing most excellent work in the past few years. It is deserving of the most cordial support of the profession.

Pellagra—A precis, by Passed Ass't Surg. C. H. Lavinder, U. S. P. H. and M. H. S. Colored Antituberculosis League—Proposed Plan of Organization, by C. P. Wertenbaker, Surg. U. S. P. H. and M. H. S.

Some remarks on Mucous Colitis—By Geo. M. Niles, Atlanta, Ga.

Blocking Stones in the End of the Ureter—By J. J. Buchanan, Pittsburg, Pa.

Analytical Description of the Eye as an End Organ—By J. E. Willets, Pittsburg, Pa.

A Study of the Urinary Acidity and Its Relations—By Henry R. Harrower, Chicago, Ill.

The Pupil in Extra-Ocular Disease—By H. C. Cornwell, New York.

Röntgen Therapy in Dermatology—by R. H. Boggs, Pittsburg, Pa.

Sacral Suspension of the Uterus—A new technique—By J. V. D. Young, New York.

Aesthetic Alimentation—By Geo. M. Niles, Atlanta, Ga.

Medical Outlook

CLEAN MILK.

John Spargo, in his work on "The Common Sense of the Milk Question," advocates the municipal pasteurization of milk, in order that the public may obtain clean milk. But there is a strongly growing feeling in the medical profession that pasteurization, even under the best of conditions, is only a make-shift, and that the way to solve the problem of clean milk is not through pasteurization, but by (1) improvements at the source of supply, (2) improvements in the methods of transportation, and (3) improvements in the care of the milk by the consumer.

It has been shown that germ-free milk may be obtained from the dairy if the well-known principles of aseptic surgical technique be followed.

As John T. Howell points out (Medical Record, 1908, 979), the stables and milkhouses should be models of construction, providing all necessary ventilation, cleanliness, sterilization and refrigeration; the cows should be well selected, and one and a half hours should be spent in the preparation of the cows and the milkers before beginning the operation of milking. As a result of such a procedure, sterile milk can be had. Howell reports on nine samples obtained at a farm run under such conditions; six plates contained no growths, and the other specimens contained but 100, 200 and 300 colonies per cubic centimeter. The average bacterial count for the years 1906 and 1907 was below 1,000 per cubic centimeter, while the average bacterial count for the year 1908 (eight months) was only 1261 colonies per cubic centimeter. An examination of seven specimens of foremilk from the teats showed three sterile plates. The keeping powers of the milk from this dairy were demonstrated by the fact that a bottle of the milk sent to Copenhagen, Denmark, was found sweet after fifteen days, and one sent to Panama was found sweet after eighteen days.

Equally important as the hygienic production of milk is its hygienic transportation, and its hygienic keeping after it has been received by the consumer. The solution of the difficulty of obtaining clean milk undoubtedly lies in these directions, and not in the direction of pasteurization, certainly not in commercial pasteurization.

As S. McC. Hamill (American Journal of the Medical Sciences, 1908, 588) states: "One of the most important arguments against pasteurization is the danger of commercially pasteurized milk. Even under the best conditions, including the Strauss laboratories, complete pasteurization is rarely accomplished. The pasteurization of milk disturbs the property which all uncooked milk possesses—of protecting itself to some extent against the development of the micro-organisms which it contains. If, therefore, these partially pasteurized milks are not properly kept, they are likely to become a source of danger to the consumer. Where the pasteurization is done on a wholesale basis, the possibility of re-infection of the milk is greatly enhanced, and it is questionable if, in the end, there could be brought about any reduction in the infant mortality by its use."

Pasteurization does not make clean milk cleaner, nor does it make dirty milk clean. It simply retards the decomposition of the milk, and leads to a false sense of security.

The key to the situation, in the campaign for clean milk, is to reorganize the working methods at the point of production. "The more enlightened dairymen," as Drug Topics points out, "have long since realized that model dairies mean a better price for their milk, and it is up to our Boards of Health either to teach or compel the farmer to protect his milk from contamination. In the end, it all comes down to a question of dollars and cents, and must work out just as did the agitation over pure food and drugs. The careless and ignorant farmer must follow in the footsteps of the old purveyor of 'embalmed beef.' It is a subject that might well secure the atten-

tion of the Board of Food and Drugs Inspection."

"But the clean milk movement is growing irrespective of official action. Business enterprise has shown the feasibility of clean milk, and will make clean milk a commercial possibility. As American Medicine (1908, 550) indicates, "With financial interest as the motive power, it is certain that the clean milk propaganda will be actively promoted, and the gain to all classes of people, especially the poorer, will be great. Once again, therefore, is shown the sociological value of honest commercialism. Those who are inclined to rail against the commercialeistic tendencies of our age want to be very sure that they are not condemning the forces that, after all, are the most effective of modern civilization. The milk problem, at least, is being safely and sanely solved as the result of commercial enterprise, and the lives thus saved, and the diseases thus prevented, furnish an unanswerable argument for the humanitarian possibilities of business."—*Dietetics*, April, 1909.

THE BACTERICIDAL PROPERTY OF MILK.

Drs. Evans and Cope, after a careful study of this subject (Un. of Pa. Medical Bulletin) conclude:

1. Freshly drawn milk possesses a bactericidal activity toward certain micro-organisms, and an inhibitory activity toward others.
2. This activity is destroyed at 68° C. and materially injured at 55° C. It varies in different cows and lasts from six to twelve hours.
3. Coagulation and acidity of milk do not depend solely upon the bacterial content. They are influenced by natural properties of milk, which are soon overshadowed by the metabolic products of bacteria.
4. Sterile cow's milk freshly drawn is acid to phenolphthalein and increased very slowly in acidity independent of bacterial metabolism, probably due to the destruction of colostrum cells.
5. Results obtained in testing milk with mixed bacterial flora are influenced by bacterial antagonism.

DIAGNOSIS OF URINARY TUBERCULOSIS IN CHILDREN.

Green (British Jour. Children's Diseases) says that urinary tuberculosis in children is exceedingly common and, when recognized early and the primary focus removed, of distinctly good prognosis. Recent investigations show that tuberculosis affecting the urinary tract almost invariably begins in one of the kidneys from whence it spreads to the bladder. The task of diagnosis in a suspected case of urinary tuberculosis is two-fold. (1) The definite proof that the disease is tubercular, and (2), the detection of the primary focus of the trouble and the extent to which the disease has spread. Kapsamer examined the post-mortem records for ten years of the Vienna General Hospital and found that of 191 cases of tuberculosis of the kidneys

only 2 had been rightly diagnosed during life, 4 wrongly so, and 185 not diagnosed at all. It is important that attention should be given to the slightest disturbance, be it discomfort or undue frequency of urination. The routine examination of the urine should include a bacteriological examination. The systematic examination of the urine of all patients affected with albuminuria, irrespective of the presence of blood or pus, will reveal the presence of tubercle bacilli in 80 per cent of the cases.

If in spite of repeated examinations no tubercle bacilli are found in the urine, resort should be taken to intraperitoneal injections of the urine into guinea pigs; to the estimation of the opsonic index of the blood, and to the conjunctival or cutaneous tuberculin reaction. Having found tubercle bacilli in the urine, or being otherwise satisfied that the suspicion of tuberculosis of the urinary organs is justified, the next step to be taken is the possible detection of the primary focus and the determination of the extent of the disease. It must now be determined (1) whether the bladder is involved and if so, to what extent, and (2) what is the condition of each kidney? The state of the ureters should also be determined. In tuberculosis of the kidneys the children usually complain of pain on pressure over the course of the ureter, especially at the hilum of the kidney and at the ureter's entrance into the bladder. If the ureter is tubercular, it is felt as a cord-like structure by a finger inserted into the rectum or vagina. The cystoscope offers the best method of examination and in children an instrument 14 or 15 French scale may be used. In advanced cases when the bladder is infected, ulcers may be seen on its wall. In the early stages, the bladder may be quite free, but the opening of the ureters shows hyperemia, edema, gaping or retraction. A valuable adjunct to the simple cystoscopic examination is the so-called chromo-cystoscopy, which consists in the observation (by means of a cystoscope) of the excretion through the ureters of a pigment injected subcutaneously. If there be any mechanical or functional interference with the excretion of the urine, then the coloring matter will not appear readily in the urine, or it will be diminished in amount or be absent altogether—*Charlotte Med. Jour.*

PROPHYLAXIS IN INFANTS.

The reduction in infant mortality, says Thomas S. Southworth, New York (*Journal A. M. E.*, July 3), in his chairman's address before the Section on Diseases of Children of the American Medical Association, has not been so great as we had supposed before the publication of the researches of Newman in England and Stowell in this country. This need not surprise us much if we consider the growth of the slums in great cities and the decreasing prevalence of maternal nursing. The improvement of antenatal conditions is a sociologic rather than a medical question, but much can be done by the profession toward decreasing the early mortality of children. A careful study of the problem has convinced Southworth that women do not of choice neglect their children, but have often prematurely

weaned their infants from bad advice. He shows how large a part ignorant midwives may play in this matter, but medical men are also partly to blame. Instead of weaning, the breast milk should be still utilized and supplemented by other methods under medical supervision. Turning our attention now to the exclusively bottle-fed babies, we find ourselves much better equipped to cope with a difficult case. He does not speak highly of the percentage system as practiced, but criticizes the tendency to employ a very limited number of inelastic formulas. The supervision of the growth and development of the bottle-fed infant, as practiced, leaves much to be desired. It should not be left to the mother or nurse between the seventh and twentieth months, and periodical and regular inspections are certainly advisable. Diet is not the only factor needing medical oversight. Next to a normal proportion of muscular tissue, the hemoglobin may be called the most important index of the child's resistance. Parents seldom notice any slight pallor, and fresh air in abundance and at all times is one of the most effective agents in producing good blood. A complete re-arrangement of the infant's hygiene may be even more effective than the administration of iron in bringing about improvement. Fresh air, however, alone, without attention to its unobstructed entrance to the lungs is not sufficient, and possibly no single factor recently employed has been more effective than the attention given to hypertrophied tonsils and adenoids. There is still much to be done as full inspection will show. Valid contraindications are rarely seen to early surgical attention to these matters, even before the expiration of the first year of life if symptoms of mouth breathing are present. The neglect of children's teeth is also mentioned by Southworth as not fully appreciated, and the eye also should receive attention, as it has of late years. In fact it has been much less neglected than the ear, which has only begun to receive prophylactic attention. The ear is especially implicated in many infectious diseases and the conscientious physician who wishes to do his full duty must carry with him in his pocket the means of examination of the ear. More cases of otherwise unexplainable temperature can be traced to the ear than to any other complication, and these cases can be relieved by paracentesis. This is the conservative operation, according to our modern ideals, as by relieving congestion in cases of effusion, it limits the process and aids recovery. There is less apparent glory in patient prophylaxis and conservative methods than by later successful intervention, but prophylaxis is and should be the ideal of our profession.

FOOD INTOXICATION IN CHILDREN.

J. Ruhrah, Baltimore (*Journal A. M. A.*, July 10), describes the dietetic disorders in children which constitute a considerable proportion of the cases which we are called on to treat. Leaving out the chronic gastric and intestinal disturbances, there are a large number that are due to over feeding. These may be caused by too much

food of all kinds and too little exercise, or by too much fat, protein, or carbohydrate, or too much of any combination of these. There are also individual idiosyncracies of children to any one of these, and it is well to remember also that disease of some organ may in a reflex way upset digestion or metabolism. We can not make a symptom-complex of each of these conditions, though it is to be hoped that it may be possible in the future. The most suggestive thing is a train of symptoms, occurring periodically, no matter in what combination. The next step in diagnosis is by careful physical examination to exclude any disease of any organ and then to study the child's habits as to food. Sometimes the fault is easily found. In other cases it requires careful investigation and sometimes trial diets. The following points are of use: Taking too much food of all kinds usually causes what are ordinarily known as bilious attacks, with recurring fever, coated tongue, foul breath, headache, malaise, often drowsiness; there is often vomiting or diarrhea and the liver may be enlarged and tender. A brisk purge and a limited diet is usually all that is needed. Too much protein causes, as a rule, much the same symptoms, sometimes one and sometimes another of the above symptoms being the most prominent. There may be acute indigestion or simply furred tongue and foul breath. Cases due to too much fat are characterized by attacks when the child is not well and has a pale muddy skin and large dark circles under the eyes; a coated tongue with exceedingly fetid breath is one of the most striking features. There may be gastric disturbance and vomiting and often diarrhea with undigested fat in the stools. The carbohydrate cases are the most numerous of all, owing to the indulgence of children in sweets. Many children have a very low capacity for utilizing sugar. The recurrence periodically is, as in the other cases, most characteristic. Perhaps the most common form of attack is recurrent vomiting, though this occurs also in protein disturbances. In some cases the attack consists merely of fever and sick headache, while in others there are attacks of asthma following indiscretions in diet. The most difficult cases are those in which there is a combination, such as an inability to utilize normal quantities of protein and carbohydrate, making it difficult to arrange the diet satisfactorily. If the co-operation of the family can be secured, after determining the food factor at fault, the results are remarkable. An effort should be made to determine just what quantity of the disturbing factor can be borne and then keep the child on a diet well within the limits of its assimilation. In addition the bowels must be kept regular, and it is well to use an active purge at least once a week. Outdoor life and plenty of exercise are exceedingly important. A number of illustrative cases are reported.

MALNUTRITION IN SCHOOL CHILDREN.

The results of a study of the nutrition of school children in New York by E. M. Sill, of that city, are published in the *Journal A. M. A.*,

July 19. The children were all from the laboring and tenement house classes, and mainly of foreign parentage. Each one after a careful physical examination, was weighed, a full history obtained from the mother through a trained nurse interpreter. Anything like syphilis, tuberculosis, or other diseases which would have a bearing on the question were carefully noted. Then the following questions were asked the mother: "What does the child have for breakfast, for dinner, for supper? How many rooms have you? How many in the family, including boarders? Do you keep your windows open at night to allow the circulation of fresh air, and air the house in the day time? When does the child go to bed? Does the child eat between meals—candy, etc.? How often does the child get a tub bath? Is the child in a grade with children of its own age at school?" From the answers to the questions it was found that 83 per cent of these children practically depended for their diet on tea or coffee and bread. In the 210 families examined the average number of rooms per family was 3, averaging 3,600 cubic feet and the average number in the family was 6, allowing only 600 cubic feet of air space for each person. Sixty-two per cent kept their windows closed; 50 per cent of the children ate between meals and none went to bed before 8 o'clock and 76 per cent at 9 or after. They were all under ten years of age and should have been to bed at 7, but 12 per cent remained up till 11. About half had a bath as often as once in three weeks, 22 per cent had a bath once in three months, and 4 per cent had one once a year. They were all decidedly under normal weight. One thousand other children in the Jewish quarter were also examined and 40 per cent were found poorly nourished; 86 per cent had dental caries, and 90 per cent adenoids. Of the 210 patients examined in his own clinic, Sill found 75 per cent had enlarged cervical glands and 55 per cent of those tested (101) with tuberculin gave a positive reaction. Practically all had other defects than those from malnutrition, to detail which would take too long a paper. It was noticed that many of the children were in a condition in which they had no desire for good nourishing food, and indeed could not retain it because their stomachs had become so accustomed to the bread and tea or coffee diet. The mother would say that the child could not take what she was told was best for it. Thus the two most prominent causes for the malnutrition are the insufficient and improper nourishment and the bad housing, and while poverty is an important factor in malnutrition of children, ignorance on the part of the parents is a still more important one. Education of the mothers is needed most; it gives the best results. Sill quotes other authors and statistics and calculates from these data that there are approximately 1,472,895 ill-nourished school children in the cities of the United States, and estimates that so-called stupidity or backwardness of many children is simply the result of neglect and underfeeding. He points out the necessary results of such a condition and suggests a dietary which he has found to be most useful in such

cases. A mixed diet is usually best taken, and it is surprising how rapidly these children improved and gained weight with no other medication than a simple iron tonic. A child, he says, is a valuable national asset, and it is a public duty to see that it is properly nourished and cared for.

RACHITIS.—T. S. Southworth, New York City (*Journal A. M. A.*, January 11), deplors the lack of attention by parents and physicians to the early symptoms of rachitis. It is a disease of the well-to-do as well as of the poor, and it is an error to assume that because some of the typical symptoms may be lacking the disease is not rachitis. The beading of the ribs comes nearest to being a constant sign, and the abnormal softness of the thoracic walls may be first apparent from the sinking in of the chest walls during inspiration in some acute respiratory affection. This is a serious handicap to the child, increasing the danger of pulmonary disease and crippling the respiratory function. This softened thorax and the nervous instability of the disease are the greatest dangers and make the prophylaxis most urgent. The disease may begin before the fifth month; just how much earlier is uncertain. After that it is recognizable with increasing frequency and may be most marked during the second year. It should be the physician's duty to detect the condition in its incipency, even in nursing infants, when he should endeavor to improve the hygienic conditions, especially by attention to the mother's diet, checking the tendency to prolonged lactation and other remedial measures. While in the earlier months prophylaxis and treatment are practically the same as that of malnutrition in general, after the fifth and sixth month certain measures begin to have a definite value. Fresh orange juice has a beneficial effect in rickets as in scurvy, and at this period or even earlier it is well to begin the use of pure cod liver oil, beginning with small doses and increasing with tolerance to half a dram three times a day. More attention should also be given to securing an adequate supply of proteid in the infant diet, and by the seventh month the administration of beef juice once daily or the white of one egg will be of assistance. In older children who have entered on their second year scraped rare meat pulp and soft boiled eggs are useful. The intelligent management of starch-containing foods is important, but it is not necessary to cut them off entirely when any considerable degree of intestinal indigestion and distension is not present. The value of cod liver oil given for long periods is incontestable. It is also one of the best mediums for the administration of phosphorus, which Southworth considers a valuable remedy to cut short the more acute symptoms and especially for the rachitic instability of the nervous system. Its effect on the occasion system is less promptly apparent, and this, he thinks, may account for its disuse. His combination of it with cod liver oil has been more effective than cod liver oil alone, and he can recall but two cases in which he suspected it was not well borne. He asks for a further consideration of

the special value of phosphorus in cutting short the acute and progressive stage of this disease.

URINARY INFECTION IN CHILDREN.

I. A. Abt, Chicago (*Journal A. M. A.*, December 14), describes the bladder and kidney infections in children which are almost always of bacterial origin. He states that the infection is most frequently an ascending one, though congenital malformations predispose to it. During the past few years 22 cases of cystopyelitis have come under his observation, mostly in infants under eighteen months and nearly all in private practice and in families in comfortable circumstances. The trouble usually began suddenly with restlessness and fever, anoxetia and sometimes persistent vomiting. Local pain seems to be sometimes present. In several of these cases casts were found in considerable quantities. The urine is usually cloudy and of low specific gravity. If the colon bacillus or that of tuberculosis is the cause the urine is usually acid; staphylococci and streptococci generally occur with alkaline urine. The blood shows a marked leucocytosis. Twenty of his patients recovered. In one of the fatal cases there was a malformation of the kidney. The other child died of a protracted and neglected cystopyelitis. The prognosis, if early recognized and properly treated, is favorable. The diagnosis can only be made by an examination of the urine, and it can not be too strongly emphasized that infants with a persistent irregular fever for a succession of days should have the benefit of both a chemical and microscopic urinary examination. Pus in an acid urine with epithelial cells and occasional casts and colon bacilli, is proof positive of a cystitis or pyelitis or both. As a prophylactic all who have the care of very young children should be instructed as to the importance of thorough cleanliness of the buttocks and genitalia. The treatment depends on the cause; if it is a stone or foreign body, surgery is indicated, but if an infection, the free administration of fluids, especially water, is advised. Medicinally hexamethylenamin (utotropin) is the most valuable remedy. To infants one to two years of age, it may be given in one-grain doses four times a day and increased, if it is well borne. Salol may be given either alone or in combination with utotropin to children of this age. In one rebellious case he found one drop doses of guaiacol of advantage. During fever the nourishment should be largely liquid and non-irritating. Irrigations are not usually necessary, except in the severe forms of streptococic or staphylococic infection. In other respects, the treatment is expectant and symptomatic.

THE TREATMENT OF CARBUNCLE AND KINDRED CONDITIONS.

When I find a case of carbuncle I investigate it just as I would any other ailment, correcting morbid conditions, both systemic and organic, by the use of proper remedies. Abbott's "Clean out, clean up, and keep clean" is the motto, and

Salithia to effect with the W-A Intestinal Antiseptic (Sulphocarbolates Comp. Abbott) q. s. are the remedies of choice. While doing this, saturate with Abbott's calcium sulphide, an unexcelled product, and apply to the carbuncle a saturated solution of Menthol Compound (Abbott)—at least 4 tablets to 1 pint of water. Patients compare it to pouring water on a fiery coal. The pain is relieved immediately and does not return, and that is the desideratum with the patient. That's all. Only keep it up till resolution is complete.—*Dr. Frazier, of Texas.*

Miscellany

CHILDREN LEARN HOW TO PREVENT CONSUMPTION.

Over 2,500,000 of the 17,000,000 school children enrolled in the United States have during the school year just closed, been systematically instructed concerning the dangers of consumption and the methods of its cure and prevention, according to a statement issued today by the National Association for the Study and Prevention of Tuberculosis.

Besides the 2,500,000 children thus regularly instructed in their schools, the National Association estimates that fully 1,000,000 more have received instruction at the various tuberculosis exhibits held in all parts of the country or in separate classes and organizations.

A number of investigations conducted in various parts of the world show that a large percentage of the children in the public schools have tuberculosis before they are eighteen. That a larger number of them do not die, is due to the fact that healthy children are able to resist the attack of the consumption germ. On account of the prevalence of the disease among children, the National Association considers their education to be of prime importance.

In Boston, a special commission which recently investigated the subject, found that over 5,000 school children in that city alone had positive cases of tuberculosis. In New York, a recent study showed over 25,000 tuberculous children in the schools. On the basis of these and other investigations, it is estimated by certain authorities that there are nearly 1,000,000 school children in the United States today, who will probably die of tuberculosis before they have reached the age of eighteen. This would mean that the public schools of the country are paying annually about \$7,500,000 for the education of children who will die before they reach the age of eighteen. At least one-half of this sickness, and possibly three-fourth of it, could be prevented, if the municipal and state governments would adopt better and more hygienic methods of controlling and teaching the children, and if the public in general were alive to the need for tuberculosis prevention.

The National Association declares that the best way to wipe out consumption among the children is to educate both them and their parents so that they will know that tuberculosis is a communicable disease, that it can be cured and that it must be prevented.

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Original Articles

NERVOUS DYSPEPSIA—MISAPPLI- CATION OF THE TERM.

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When a patient complains of inability to digest certain articles of food, and when the doctor finds no deficiency in gastric secretion and that the contents of the stomach pass through the pylorus without undue delay, he often resorts to the diagnosis of nervous dyspepsia or indigestion, even although pain and flatulence may be complained of as well.

The notion in his mind is usually very vague, as is shown by the nature of the treatment he gives; for among the drugs exhibited in such cases, the commonest are strychnine, which is given for its supposed action as a nerve tonic, bromides in order to quiet the nerves, aromatics, especially valerian, which are still more vaguely supposed to influence the nervous system in an "antispasmodic" manner. If the doctor believes himself "more advanced", he may use hydrotherapy in the form of cold douches, believing that in some occult way, it will give "tone" to a nervous system with which the doctor confesses himself nonconversant, but which will be restored to efficient action if stirred up by this means. Or if his bent has turned towards psychotherapy, or physiological therapeutics, as it is termed, he may meet mystery by mystery by applying electricity to one or more or all parts of his patient, perhaps con-

cealing the empiricism which is his real guide by a number of theories and terms of pretentious and portentous ponderosity.

The survival of such anachronistic absurdities must surely indicate that they possess some merit at least; and this will appear as the pathogenesis of the state benefited is considered. The practical empiricism which leads its adherents to believe the doctrines of each of these various means of therapy has eventuated, in extra-professional circles, in such doctrines as those of Christian Science, healing waters, pools (1) and relics, the efficacy of which is well established in certain cases, although the doctrines on which they generally depend need not here even be discussed, so much at variance are their foundations with all that we know of biology.

In general one does not hear much of the failures which accrue to each of the foregoing methods of treatment. As a matter of fact, by spending some years in trying one of these means after another, most cases eventually recover, perhaps spontaneously during a period when they are trying no treatment at all: "they just get well".

Now, it is inconceivable that a neuronically paralyser such as the bromides, can by its pharmacological action abolish the same perversion of neural activities as would be accomplished by strychnine, which on the contrary is a powerful excitant, to the lower neurones at least. Of the anti-spasmodics, the effect is more local and reflex, and is strictly temporary, and more often than not, entirely without permanent benefit in nervous indigestion, as the histories in a neurologist's case-books clearly show.

Indeed, in many cases, the gamut has

been run through drugs, hydrotherapy, electricity, restrictions and modifications of diet, and even change of habits of life and occupation, without any benefit, and indeed with progressive emaciation, asthenia and "nervousness", by which term the patient describes an inadequacy for the manifold reactions required in the adjustment to the innumerable exigencies of daily life, personal, social and professional.

Now, from the cases I shall cite, it will appear that the supposed cause, a direct disorder of the nerves regulating the secretions and movement of the viscera, the sympathetic or autonomic nervous system, cannot be incriminated. Though our knowledge of the functions of this system in health and disease is still imperfect, we do know some conditions in which it is perturbed; e. g., the gastric crises in locomotor ataxia are caused by the implication of the sympathetic nerve-fibres in the spinal roots, en route to the rami-communicantes. (2) They are not spared by the chronic meningeal inflammation which by compressing the radicular nerves (3) and blocking some of the nerve fibres produces the incapacity to control the muscles which is determined by the failure of nerve impulses to reach the higher nerve centres which regulate station and movement.

But the gastric neuroses present a very different picture to this, and are curable by a very different procedure (4); for they have nothing to do with the autonomic nervous system, except in so far as they are influenced cerebrospinally in the way demonstrated by Pawlow (5). It will be recollected that in dogs he determined at will a flow of gastric and salivary secretions, not only by giving a dog flesh to eat, but first by merely showing the flesh which the dog expected to have, and later by the mere ringing of a bell which the dog had learned by previous experience to be the signal for a meal. But not only that; for he could inhibit secretion by inducing fear, as by showing a whip to a dog who had experienced its use.

The *motor efficiency* of the stomach is shown by the experiments of Cannon (6) to be much more easily and gravely impaired by unpleasant emotions than even psychologists had suspected. For instance, peristalsis entirely ceased for the fifteen minutes after one of his cats had been perturbed, although she showed her agitation

only by a slight swishing of the tail and was quietly sitting on Cannon's knee. He also reports the case of a woman who, to the surprise of her physician, showed one hour after a test-meal, not only no digestion and no acid, but remains of the supper of the night before. Suspecting something unusual, the physician fortunately repeated the test the following morning, when abundant acid and good digestion were found. The patient confessed that she had been much agitated on the first night by her husband, who had employed his visit to town in becoming intoxicated.

These facts show the great importance of prescribing test-meals under conditions favorable to good digestion. Otherwise serious misinterpretations occur as to the patient's digestive power.

Cade and Latarget (7) have performed similar experiments on human beings; but have found contrary to the case of Pawlow's dogs that withholding of an appetizing morsel does not stimulate a flow of gastric juice, but often arrests it. The principle is not destroyed however; for the arrest in human beings is due to the overpowering of the anticipated pleasure by the irritable temper induced by withholding the morsel. I have noticed subjectively a similar effect from too long waiting between courses when very hungry at dinner.

Cannon used respiratory distress as the inhibitory agent in his experiments, and proved that this acted through the nervous system, and not through asphyxia, because it had no effect when both vagus and splanchnics are cut, after which motion too is without effect. When the vagus only is cut, the stomach movements can on the contrary, be impaired emotionally and by checking respiration.

Now, these reactions we call psychic (8), because they are due, not to a direct stimulus of a simple system of lower neurones, instinct in their disposition, which we call a reflex, but are due to a complicated series of reactions modifiable at will by environment and dependent upon acquired memories of sensory experience which are associated into what we call ideas. Thus the idea of the approaching meal caused gastric secretion; the idea of the whip caused fear which inhibited gastric secretion.

Now, exactly the same mechanism is at play in human beings, and the number of associational stimuli which they possess is

incomparably more numerous. Every one knows the simple watering of the mouth when palatable food is thought of during hunger. Most people now realize how the appetite fails and even the mouth becomes dry if they attempt to eat during distressing circumstances; but it is not so clearly realized that a *slow* fear, worry, or a spirit of unrest and hurry similarly interferes with digestive secretions by preventing the enjoyment which Pawlow discovered to be the most important essential in starting the flow of digestive fluids.

Food eaten in this way does not agree. An attack of acute indigestion begins after some kind of food eaten under unpleasant mental conditions. An apprehension about this particular article may occur on the next occasion it is partaken of; and this recurring each time, inhibits the gastric flow and the article is henceforth tabooed. The same process may be gone through with one kind of food after another.

But a much commoner source of the apprehension is an idea derived from others that a particular article may disagree. Food faddists are as loquacious as numerous; and a constant bombardment with pessimistic phrases about the indigestibility of anything from bananas to beef will inevitably create in most people a feeling of discomfort when such article is placed before them. Doubt prevents enjoyment, and the juice does not flow.

A still commoner source of pernicious ideas as to one's digestive powers is the medical one (9). Everyone has indigestion at one time or another; many consult doctors for this; and most patients are suggestible to a certain extent. The authority of the physician makes his words impressive in a way he does not always realize. His conviction expressed, if not by words at least by his giving drugs for the stomach, is a strong reinforcement to the patient's belief that that organ is diseased; and as the drugs he gives tend to modify the gastric secretions, instead of removing they only perpetuate the gastric discomfort. In fact, the physician's whole attitude is one huge "suggestion" that the stomach is the primary seat of the trouble.

Now the production of a symptom by suggestion, if it is also removable by the same means, brings it within the category of hysteria, as defined by Babinski (11), and fully explained elsewhere by the writer

(12). For modern diagnostic acumen has eliminated from the *olla podrida* in which was thrown every incomprehensible nervous symptom: (1) Cases of trickery simulation and mythomania (13); (2) modifications of the tendon, cutaneous and pupillary reflexes, (3) vaso-motor and trophic neuroses (14), such as erythromelalgia, idiopathic oedema, etc., (4) other psycho-neurotic states, like psychasthenia, (15), the main symptoms of which are the emotional and intellectual besetments'so distressing to the patient, (5) true neurasthenia (16), characterized by great fatiguability and due to metabolic intoxication, (6) cenesthopathia (17), which term designates a state we believe due to perverted sensations from the autonomic nerves in the viscera or their hypothetical centres, (7) mental debility, congenital or acquired, (8) the dreamlike states, seen in the early periods of dementia precox (18) and confusional psychoses, and very often miscalled hysteria on account of the bizarrerie of the patients' acts and words; and (9) lastly the emotional perversions of degenerates.

So that we conclude (19) (1) That all the symptoms which may legitimately be included under hysteria are imposed by suggestion. (2) That the state of suggestibility is derived from (a) faulty education, tending to perpetuate and fortify the natural suggestibility of the child; (b) cerebral modifications due to organic causes, the action of which necessarily varies among individuals in accordance with (c) the hereditary constitution.

The doctor then has created a hysteria taking the form of nervous dyspepsia.

The patient then should be curable by suggestion-persuasion; and this is indeed the case as the following examples will show.

Woman of 48, after a fright, shut up her ideas because "husband did not sympathize about it." She had metritis, appendicitis, abdominal algias, emaciation, weighing only ninety-five pounds, and was very melancholy. Very anxious for cure, but irritable, so that for three months she said daily, "I leave tomorrow;" only with great difficulty and the co-operation of the husband was she kept. She could not take milk until after a month; then she took five litres. Twenty-nine pounds were, however, gained and she began to change her morale at last. The patient took seven litres of milk eventually and was quite cured after only four months, gaining fifty-four pounds. It is now twenty months ago. She is cured; no relapse is possible for the mentality is changed.

Woman of fifty had a miscarriage at 41 fol-

lowed by menorrhagia. A fibroid developed, and hysterectomy was performed at forty-five. Later, occurred abdominal pains, diarrhoea alternating with constipation and muco-membranous colitis. When told of her condition by the doctors she was much moved, and became melancholic, so that in two years she lost ninety pounds. She suspected that she had an abdominal tumor and went to a hospital. No one there spoke of her "ideas;" and she became steadily worse. Three years ago she entered the Salle Pinel, weighing only 113 pounds, suffering great pain, slight tympanites and frequently passing membrane. She was very melancholic and despaired of cure, wishing to leave the hospital nearly every day, and was only kept by the urging of the husband. In spite of private interviews lasting sometimes for hours, she continued her skepticism for five months. Then by her gain in weight she convinced her husband that she was better, although she did not believe it; and he took her home for a month, when she again became seriously ill. She returned for two months, but left again rebellious and uncured. After long reflection at home that "Monsieur Dejerine was right," she fully recovered and has remained cured for three years.

A woman of thirty-nine, of neurotic stock, who is very emotional and takes events very heavily, but conceals her troubles so as not to give pain to her children and husband. She became dyspeptic at 28 and improved, but relapsed at 34 with mucocombranous colitis. Stayed in bed for two months, and further decreased her food, losing 38 lbs. additional. She remained recumbent nearly six years, all the time reproaching herself for being an invalid.

She entered the Salle Pinel one year ago; and after five days, succeeded in taking five litres of milk a day, until she had gained 22 lbs. in two months. The false idea about her stomach had disappeared, and she left the hospital; although still convinced that her intestines were diseased. She remained fairly well until the end of the winter, when she relapsed upon a doctor saying that her husband perhaps had arterio-sclerosis. This gave her a shock, which she felt in the intestines. Later the doctor confessed his mistake, but said that one of her children had a delicate lung. This anxiety again produced the "intestinal feeling." She is again being treated in the Salle Pinel, on the principle that when she is convinced of her error, she can leave. She has already reached the stage of saying "The things of the world are not bad, except as we think them so."

The foregoing cases were observed by the writer at the Salpêtrière in the years 1906-1907, where they were treated in a ward especially devoted to psychotherapy by Professor Dejerine, who has here shown the feasibility (20) of applying the psychic treatment to the neuroses in the ordinary hospital wards, in which the only modification is the separation of the beds by partitions or curtains. Over 200 cases of gastric neurosis are seen here each year; and the vast majority are cured by the persuasion

and re-education they undergo, the bad cases in the ward and the milder in the out-patient department. It is high time the same procedure be extensively employed in American cities to offset the pernicious activities of charlatans, and restore to health the large body of sufferers they exploit, who cannot afford the expense of sanitariums.

The stomach specialist who is not aware of the psychic factor in disease is responsible for the fixation of many a symptom; and it is only when he clearly realizes the mechanism just described, or when he will take advice of his neurological colleague, that the medical profession may hope to put an end to the pernicious activities of illicit practitioners who so frequently remove, by suggestive affirmations and procedures, symptoms which have long resisted treatment by regular physicians who have ignored the fact that man is a whole, and the mind merely the name that we give to the more complex of this somato-psychic and allo-psychic reactions of his organism.

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Desire to do things with a desire that sets every fiber in being aflame. Love everything that is being done with a love that is the living power of the soul itself; and give yourself, your largest self, your whole self, to your life and your work. And what you give, that will be your fate.—Larson.

FRACTURES.

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(Read at meeting of the Barbour-Randolph-Tucker Medical Society, Jan. 4th, 1907.)

The importance of this subject, both to surgeon and patient, can scarcely be over-estimated. We may have all kinds of mistakes in other lines of practice, and the chances are the public will never know the difference, but if we are so unfortunate as to get a bad result in a case of fracture every one knows it, and usually blames us for it. That this snap judgment is often wrong I know, and this will appear later. This attitude of the laity, coupled with the fact that every conscientious doctor, in a case resulting badly, must ask himself the question: "Did I by any act of omission or commission help to make this patient a cripple?" must ever serve to give it an importance second to none. The realization of this is, I think, the real reason why so many doctors shift this class of patients to the hospitals. In the beginning I must ask your indulgence in one thing; it may seem to you that some of the points to which I shall call your attention may be of such an elementary character that every doctor, no matter how inexperienced, must know them well. However, I have but to remember the many mistakes I have made and seen others make to know that this is not true.

Diagnosis.—For a rough guess I should say that the gross diagnosis is easy in perhaps 75% of all cases. The remaining 25% often taxes our diagnostic ability to the utmost. While the X-ray is very valuable, and I use it whenever it is possible, it will not in all cases make the diagnosis absolutely plain, and is not an unmixed blessing to the surgeon. I quote from the last issue of the *Journal American Medical Association* an editorial commenting on the fact of two English surgeons having to pay \$20,000 damages in a fracture case: "There is necessity of impressing on the public the fact that even the best X-ray pictures can be properly interpreted only by a skilled man." Many times I think it best to give a diagnosis of fracture even if not absolutely sure that one exists. Especially is this true when the injury is in the upper end of the femur or humerus where much harm might be done in an effort to make an exact diagnosis.

You will sometimes be accused of finding

fractures where none exist. I have had most trouble of this kind with fractures of the fibulæ. Comparatively recently I had two cases of this kind. Both patients disputed my diagnosis, removed the plaster and went limping around.

Sometimes it is well to manipulate the fracture sufficiently vigorously to remove any doubt the patient may have. Fissures are particularly hard to diagnose. There is usually nothing but fixed pain to guide you. In one case, after a prolonged and thorough examination, I gave it as my opinion that no fracture of the ulna existed. Nevertheless there was a considerable time during which the patient could not work, and there formed some callus, making it altogether probable that there had been a fracture. Never fail to first examine the opposite side thoroughly. By refreshing your memory as to the anatomy of the injured part many errors may be avoided. If the fracture is in a limb, never fail to bare it entirely and examine the neighboring joints. Failure to do this might have cost a doctor of my acquaintance considerable. He had been called to see a fracture of the forearm, had dressed it and told the family to call him in case it did not do well. After several weeks had elapsed the parents concluded something was wrong and sent for the doctor. At this time, a dislocation of the head of the radius was discovered which the doctor believes may have taken place after the fracture. Be this as it may, one visit to a case of fracture is not likely to be of much benefit either to patient or physician.

If the fracture is in the neighborhood of a joint, and I am unable to tell whether it is a fracture or a sprain, I call it a fracture; if away from a joint and there is nothing to go on but fixed pain and impaired function, and perhaps not much of these, I am usually candid with my patient and say to him that, as there is no displacement, I am unable to say positively whether or not there is a break. I then give him an illustration of how a bone may be broken and leave no visible signs.

Most mistakes are made by insufficient examination. Last winter a man was brought to my office who had been thrown from the top of a log train while crossing a trestle. I was asked to sew up a wound in his head. As he was about to leave the office I asked him if he was sure he was not

hurt elsewhere. He said his elbow pained him some but he did not think it amounted to much. I insisted upon examining it and found a fracture of the olecranon.

Important as is diagnosis it should not be pushed so far as to injure the patient. We should always remember that our business is to treat the patient, not the fracture. No doubt a number of you have known of cases where the patient died while the fracture was being reduced and dressed. To say the least this is very mortifying to the physician.

Some years ago, while I was away from home, a boy fell from a coal tippel. Dr. ——— was called. I reached there about two hours after Dr. ———. He had spent all of this time in an endeavor to get at the very minutia of the diagnosis. Seeing the patient was badly shocked I directed that he be put to bed and all the usual remedies for this condition applied. Notwithstanding this, he died from the shock in a few hours. It is not unlikely that he would have died no matter what had been done, but certainly too much time was spent on diagnosis. Having made a diagnosis of fracture, do not most of us stop at this? Do we do our best to find the kind of displacement and the amount and kind of associated injury?

Prognosis.—Prognosis is most important. The laity are of the opinion that a simple fracture, unless in an old person, should show a perfect result. There should be no shortening, no deviation from a straight line, no demonstrable callus. If any of these are present the doctor is blamed or the patient is supposed not to have carried out the doctor's directions. Thank a kind Providence, it is often the patient who is blamed. On this account, and having in mind our legal liabilities, it is, I think, wise to give a little worse prognosis than in our opinion the case justifies. If possible, do this in the presence of witnesses. As some one said recently in a discussion of this subject: "People are so apt to think because Dick's leg got well, Tom's, which is broken in the same place, should get well too."

What I have said as to the erroneous opinions held by the laity on prognosis will, I think, be disputed by no one. How about the generally accepted professional views as to prognosis? Are they correct? I think not. Does not the average doctor expect

far better results than carefully collected statistics justify? Let us look at Scudder's statistics taken from the Mass. General Hospital. These were collected from two to six years after the injury. In fractures of the hip the results were poor in 81%; in fractures of the thigh in adults 31% were perfect, 69% imperfect; in old age no perfect result. In fractures of the leg poor results were obtained in 60% of closed fractures and 79% of open. Limited knee joint movement, aching in the thigh, pain after exercise or in wet weather, weakness of the whole leg, slight lameness in walking, are some of the accompaniments. The question of prognosis is made doubly difficult because the personal equation of the doctor making it enters so largely.

One of an optimistic temperament, or one who is not a careful observer, or one who is not candid with himself, let alone with others, will have much better statistics to offer than one who is the reverse.

A committee from the American Surgical Association reports the following six requisites as necessary for a satisfactory result.

For the result to be a good one it must be established that firm bony union exists, that the long axis of the lower fragment is either directly continuous with that of the upper fragment, or is in nearly parallel lines, thus preventing angular deformity; that the anterior surface of the lower fragment maintains nearly its normal relation to the plane of the upper fragment, thus preventing undue deviation of the foot from its normal position; that the length of the limb is exactly equal to its fellow, or that the amount of shortening falls within that found to exist in 90% of healthy limbs—namely, from $\frac{1}{8}$ to one inch; that lameness, if present, is not due to more than one inch of shortening; that the conditions attending the treatment prevent other results than those obtained. Thus you see that though this committee gave a very considerable latitude, good results are not so common. In a discussion on this subject at a meeting of the American Medical Association one member, Dr. Moses Gunn, of Chicago, made the statement that no one could get a perfect result in a fractured femur. I very often find an erroneous opinion as to the time required for recovery. To the profession I think much of this is due. Doctors have a very com-

mendable desire to get their patients out as quickly as possible, but this should not lead them to make statements that will not bear the test of time.

Scudder says: "According to present methods a fracture of the leg would require from three to five months of treatment before restoration to normal function is completed." This agrees with my own experience. Tell your patient that you will do your best for him, but that the most you can do is to place the injured parts in proper position and keep them there, that nature must do the rest; that it will be a matter of months before he will entirely recover, and that a large percentage of fractures are followed by stiffness and neuralgia of neighboring joints. One of my patients was struck by a piece of a circular saw, producing a compound, comminuted fracture of the tibia very close to the knee joint. Wound healed up nicely, and today he has a straight leg with no trouble in the knee joint, but is lame from a neuralgia in the ankle joint, which was not injured at all.

Above all else never criticize a bad result which has occurred in the practice of another. If possible say something good. We do not know the circumstances surrounding the case, perhaps no one could have done better.

Treatment.—I believe the most potent reason for the failures I have observed lies in the fact that so many doctors have no special work on fractures. Many of them rely entirely on the American Text Book of Surgery. Unless late editions are an improvement on former ones, I do not believe any man, unless he be a genius in this particular line of work, can get good results with no help but the book I have mentioned. My advice is, that you can not have too many books on fractures, certainly you should have Stimson and Scudder.

Many of our patients have been injured in mines, saw mills or on railroads, and are badly shocked. If so, it is sometimes best to put the fractures up in a temporary dressing. The pillow dressing for fracture of the leg, as advised by Scudder, is very good. Simply lay the leg on a pillow, put a board on both sides and bind up. Dr. Knavel has devised a blanket splint which I think is excellent for an emergency or temporary dressing.

The great majority of fractures can be reduced and placed in permanent splints at

the first visit. When this is possible it should always be done. You have only to observe the relief of pain and suffering after replacing the fragments and applying a dressing, to have this advice impressed upon your mind. When it is possible to do so have the patient brought to your office. There are many things likely to be forgotten when the work is done in the home of the patient.

Let us suppose the fracture to be in the femur, middle third, adult. We suggest a few don'ts. Don't forget to wash the entire limb and powder it with talcum. Don't use cotton batten; use sheet wadding, which will stay in its place much better, looks better, and can be applied much more accurately. Don't put pads next the skin; place them outside the wadding and next the splint. Don't envelope the limb in a roller bandage unless you have some special reason for it. I almost never do it. Don't use bandages to hold the splints, use straps and buckles. They do the work much better and leave the limb in sight, which I regard as of immense advantage.

I show you the straps and buckles used in the Mass. General Hospital. I have thought a wider buckle would be better but have been unable to get one. The ones I show you are about one inch wide, the regular vest buckle. The straps can be made of heavy muslin or light canvas, and are about twenty-five inches long. If you have no buckles, use safety pins. Don't fail to "set" the bone, no matter whether there is a displacement or not. It makes the proper impression on the patient and friends. Don't fail to use anesthesia if there is the slightest difficulty in diagnosis or reduction. Don't use ready-made splints in any fracture. Do everything possible to make your patient comfortable. A rope attached to the splint and run through a pulley in the ceiling will allow the patient to move the leg slightly. This will, as a rule, do no harm and will be productive of much comfort to the patient. Nearly all patients with fractured leg or thigh are tormented with a burning pain or itching in the heel. Often this is the most annoying thing they have to contend with. I usually have to provide a hole in the splint through which the heel can be scratched. One patient could only be relieved by cold water applied to the heel.

Don't fail to say a word as to the dangers

of anesthesia beforehand. It will make you feel better if you should lose a patient as I came very near doing on one occasion. In applying extension to femur don't make the pull from the knee joint, make it from the condyles or above.

Have on hand straps and buckles, sheet wadding, talcum, and insect powder if your patient is at all likely to need it. Think of the agony caused by bed bugs, the wadding around the limb being filled with them, as I have more than once seen. The bed should have a good firm hair mattress. If this is not obtainable place boards under the mattress. This is necessary to prevent the hips from sinking in the bed. A special fracture bed is very desirable. I have used one made by a company in Indianapolis for some time, and am very well satisfied with it. By means of this bed the patient can defecate with no movement of the fracture whatever.

Recently in a journal was an illustration of a crane for lifting the patient, which should be very beneficial, I should think.

I show you a picture of the Lemon-Muel-ler Fracture Apparatus.

I have on one or two occasions tried the Hodgens splint but was unable to use it satisfactorily. In the May issue of "*Surgery, Gynecology and Obstetrics*" is a modification of this splint that I think sufficiently well of to try the next time I have an opportunity.

The writer, Dr. G. S. Brown, of Birmingham, Alabama, says it does away with the necessity of reduction, gives the patient plenty of room for motion, causes no bed sores, no stiff knees and the patient can sit up from the first. I advise every one to read this article.

Fractures in the upper third are often very difficult to handle correctly. In a personal communication Dr. Scudder says: "At times with a fracture below the trochanter minor abducting the limb and flexing it on the trunk is the only way, combined with powerful traction, that we can approximate the fragments. Most of such fractures are better sutured by open incision, I think."

In fracture of the leg, I am partial to Cabot's posterior wire splint. As I find very few doctors using it I take the liberty of exhibiting one. It is made of wire about the size of a lead pencil or larger. The side splints are made of some thin light wood.

I like bass wood best. Then with straps and buckles your work looks well and acts well in almost all cases. Nearly everything is in sight, on any part of the leg can be brought into view very readily.

All fractures of the leg will be treated by plaster sooner or later, but I have never liked putting any fracture in plaster until I felt tolerably sure that there was not much tendency to displacement. We can never feel sure that displacement has not taken place, while the plaster was being applied or while hardening. Many doctors split the plaster in a few days and reapply it by means of a bandage. I have almost never gotten it to stay in place satisfactorily. I almost always put on a new one. I usually incorporate in the plaster three or four strips of tin to make it firmer. In Pott's fracture I usually use Stimson's posterior and side splint, occasionally Cabot's wire splint.

Fractures of either condyle of femur are not so very common. I have had but one. This happened about one year ago. There was, as I understand there is in all cases of this fracture, a large effusion of blood in the knee joint. When it appeared to me that this was not being absorbed I aspirated. There was no recurrence. The leg was placed in a posterior and side splint in extension. Although the patient was old, he made what I regarded as a good recovery.

For approximation splints I have used very thin wood, sometimes the sides of banana crates. I think heavy tin would make an excellent splint for this purpose, but have never used it. While I have used other splints for fractured femur, such as Hodgens', Nathan R. Smith's anterior, and plaster of paris, I have never found anything to suit me as well as some form of Buck's extension. It is not by any means an ideal splint, but is, I think, the best we have at present. I always attach a heavy cross piece to the end of the long side splint. If a light piece is put on, the leg will have a tendency to rotate. Buck's extension is not applicable to fractures just above the condyles. Here probably a double inclined plane should be used. Some advise cutting the tendo Achillis.

In regard to the ankylosis we so often see in the knee joint after fractures of the femur I have nothing to advise. I have tried both rest and bending the knee under anesthesia and neither has been satisfactory.

Stimson says: "Forcible passive motion, with or without anesthesia, is always harmful before the second month, and even after that time it is far more likely to do harm than good. About the only condition it can really help is that of isolated cord-like adhesions within the joint. Such a condition we have every reason to believe to be very rare." Exuberance of callus is often a cause of diminution of function in a joint. Of this Stimson says: "These results are usually beyond the control of the surgeon, and are most common in the young. * * * The causes are varied and numerous, usually unavoidable, and sometimes irremovable."

Good results are not uncommon with bad methods. All the factors of the case may have been in our favor. I well remember a case of fractured femur I had soon after graduation, when I knew but little more about fractures than before that important event. The patient was a young negro. I put on a Buck's extension and never removed it for eight weeks. Result a most excellent one, although the case was badly treated. So if you have not had a goodly number of cases, do not congratulate yourself too highly on your methods of treating the same.

Last summer I had a case of fractured femur in a very strong healthy child of fourteen months. After the first day or so he seemed to suffer no pain and would try to crawl out of bed, tearing the bandages off in spite of anything we could do. We first tied him to his crib and vertically suspended his leg, sometimes had both of them up. Then we tied him to a Bradford frame, then took his leg down and strapped him to a Cabot's splint, finally wound up with a long board reaching from his axilla to his foot. A very good result was secured in spite of all his efforts. Vertical suspension in these cases of fractured femur in children will usually give very good results.

To be Continued.

Don't waste sympathy on yourself. If you are a gem, someone will find you. Don't whine. Tell people you are a failure and they will believe you. Talk and act like a winner, and in time you will become one.
—Stephen Harte.

EXOPHTHALMIC GOITRE.

J. A. Guthrie, M.D., Huntington, W. Va.

(Read before Cabell County Medical Society.)

Recognized by Perry in 1825, by Graves 1835, by Basedow 1840. Exophthalmic goitre is a malady characterized by protrusion of the eyeball, palpitation of the heart, rapid pulse, and a fine tremor of hands, arms and head. One in one thousand patients admitted to general hospital suffer from this disease. It occurs six times as often in women as men, usually from sixteen to forty years of age. Etiology is obscure. It may follow rheumatism or tonsillitis. The symptoms are due to a pathological secretion of the thyroid gland. Some suggest the possibility of an excessive stimulation of the sympathetic ganglion.

Pathology—The gland is not usually as large as in simple goitre. The veins and arteries of thyroid are dilated and tortuous, giving a thrill to touch and a distinct murmur on auscultation. The heart may be normal or in a dilated condition, with relaxed spincter of the mitral valve. The parenchyma of the gland is usually increased, there may be a desquamation of the epithelial cells with an overgrowth of connective tissue. Microscopically, there may be no change whatsoever.

Cardinal Symptoms—Large thyroid gland, exophthalmos, tachycardia, thrill.

The enlarged thyroid gland is obvious and does not need any discussion. Exophthalmos or protrusion of the eye-ball is due to the increased fat in orbit, and usually occurs bilaterally.

Von Graefe's sign—Patient looking towards the floor, the upper lid does not travel downward as rapidly as normal.

Stellwag's sign consists in a widening of the palpebral fissure, with retraction of the lids, showing the white sclerotic coat above and below the cornea of the eye. In pronounced cases the eyelids do not protect the eyes sufficiently, resulting in ulceration of the sclerotic coat. Convergence is often interfered with; vision is not usually impaired, but the patient often complains of pain and throbbing of the eye-ball.

Tachycardia—The pulse varies from 90 to 150, increased on exertion or excitement. Usually the rapidity of the pulse and the palpitation of the heart are the only abnor-

mal conditions. Occasionally one finds a dilated heart, with mitral insufficiency.

Tremor—A fine tremor, called railroad tremor, may be felt by placing the tips of the fingers against those of the patient. There is excessive nervousness, a slight noise may excite the patient almost to a stage of collapse. Feebleness and melancholia are usually present.

Dyspnoea is a marked symptom; patient is unable to go upstairs, may have to sit up in bed, with plenty of fresh air. Deaths from dyspnoea have been reported. Excessive and obstinate vomiting may complicate the case, and is considered a grave symptom. Diarrhoea may occur occasionally; the skin often shows pigmentation.

Physiological Chemistry of the Thyroid Gland—Physiological activity of the gland is due to iodine compounds. It is not known whether the iodine must be in proteid combination to exert its full physiological activity, or whether some cleavage product is equally active, or whether there is more than one iodine proteid in the gland. The secretion enters the blood or lymph without the intervention of digestion; on this account, and for this reason, serum is given hypodermically.

TREATMENT.

Medical—Forchheimer recommends quinine hydromate grs. five, ergot gr. one. He reports forty cases with five failures. He gives this treatment until all symptoms disappear. In case of recurrence the treatment is again instituted.

Surgical—Surgical treatment is indicated when the gland is large enough to cause pressure symptoms, when the patient grows rapidly worse, with loss of weight, constant fever, or excessive tachycardia. A part or all of the gland may be removed. Contra-indications are cardiac complications, or a lowered physical condition.

Serum Treatment—The object of this paper is to call your attention to the serum made at the Cornell Research Laboratory, under the direction of Dr. S. P. Beebe. The serum comes in small hermetically sealed tubes, containing about twenty minims. Dr. Beebe recommends this serum to be given hypodermically in the posterior surface of the arm, preferably given in the morning, and the patient required to stay in bed that

day. A slight reaction occurs, as a swelling of the arm, urticaria.

Types Favorable to Serum Treatment—Typical exophthalmic goitres early stages, mild or severe, incipient forms which develop rapidly, types in which goitre has existed some time, in subacute stages and occasional exacerbations. Types that require combined treatment, cases that develop after fifty years of age. Those cases that have borne goitre for years and late in life develop thyroidism. Atypical cases. By combined treatment we administer both anti-serum and thyroid-proteids. A combined treatment is also used in cases which show a violent reaction from the serum, say one-fiftieth of a gr. of thyroid-proteid, three doses per day, and five minims of the serum.

History of Cases—First, June, 1907, Miss N., age 35, trained nurse, had general breakdown from overwork. Pulse 140, regular, excessive palpitation could be felt over the entire body, unable to sleep, constipation, loss of appetite, irritable. Applied ice bag to the heart, used all known remedies, both stimulants and depressants, with no results. Removed the patient to the hospital, required absolute quiet. Patient remained in the hospital for three weeks, with no results. Returned home, and after a time took osteopathic treatment. Later she went to Charleston, where she was under the care of Dr. Thomas. From there she went to Richmond, Va. For a month the doctors there sent her to Dr. Thayer, Hopkins hospital, where a diagnosis of exophthalmic goitre was made. Here I feel justified in saying that the protrusion of the eye-ball, and the enlargement of the thyroid gland had begun to develop. The thyroid gland developed gradually, but did not reach a great size. The exophthalmos became marked. She returned home, was given the serum treatment by Dr. C. T. Taylor. One-half tube was given twice a week until 24 treatments were given. There was steady improvement and the symptoms gradually subsided, and the patient was able to resume her work in about three months. There is still some enlargement of the thyroid gland, and the protrusion of the eyes is still noticeable.

Case Two—February, 1908. Mrs. K., age 37, married, has two children, the youngest eight years of age. Had a mis-

carriage three months previous to the attack.

Symptoms—Nausea in the morning, loss of appetite, dyspnoea increased rapidly and patient struggled for breath. Extremely nervous and irritable, pulse increased rapidly, hard and wiry, ranging from 100, gradually increasing to 150. Periods of diarrhoea, rapid loss of strength and weight. Slight swelling of thyroid, wild, anxious facial expression. Feeling of impending death. Would see no specialist or allow serum to be used until all known remedies were exhausted. There were some periods during which the patient seemed to improve, but in reality she grew gradually worse, until about the 25th of June, when the serum treatment was instituted. At this time there was a slight exophthalmos and a noticeable enlargement of the thyroid. One-half tube of serum was given every second morning. Quite a little reaction developed, the arm swelling to the elbow. After four treatments were given improvement was marked. Dyspnoea and tachycardia were gradually relieved and the patient became comfortable. Treatment was gradually reduced to twice a week, and one tube was given to each treatment. Patient pronounced well at the end of three months. No recurrence to date.

A possible sequela is that the menstrual period never became normal; it is irregular about every third month, scanty, no pain; possibly menopause is near.

Case Three—(Dr. Baker and Dr. McNeal)—Mr. H., age 20, grocer, has had slight enlargement of thyroid gland, with some distension of the right eye, four months previous to an attack of pneumonia. March, 1909, developed an attack of double pneumonia, which lasted two weeks. During convalescence patient developed severe headache, followed by delirium (maniacal), sick stomach, temperature remained normal, gland gradually enlarged and exophthalmos increased. Pulse 120, tremor of muscles. Treatment began April 3, one tube every second day. No improvement until five treatments were given, when delirium was relieved. Gland began to reduce in size and exophthalmos to disappear. About the seventeenth day of treatment the patient had a slight relapse, which lasted about five days. All symptoms at present date have disappeared, except rapid pulse,

which remains at 100. Has had about twenty treatments; patient is improving rapidly and is on the road to recovery.

Prognosis of Exophthalmic Goitre.—It is hard to give a percentage of deaths or recoveries. The past three years show only a death rate of 10 per cent from serum treatment. A large number are still under treatment or are under observation of the physicians in charge. Expectation of life after the onset is estimated to be not more than ten years. Best results are found in severe and acute cases.

Material for this paper has been obtained through the kindness of S. P. Beebe.

CARDIAC ASTHMA, CHEYNE-STOKES RESPIRATION, BRADYCARDIA, ADAMS-STOKES SYNDROME.

L. D. Wilson, M. D., Wheeling, W. Va.

(Read before Ohio County Medical Society in Post-Graduate Course).

(Continued from June issue.)

BRADYCARDIA.

This term is applied to that condition in which there is abnormal slowness of the heart-beat. This is not always pathological. Certain individuals have an abnormally slow rate without seemingly being inconvenienced thereby. The rate in these cases is not extreme. Krehl (in Nothnagel's Ency.) states his belief that, in the prime of life, a heart-beat, during complete rest, as low as 56, should be regarded as normal. A rate falling much below this, unless there are positive indications to the contrary, must be regarded as pathological. The slowing may go to an extreme degree; rates of 30, and 20, being not uncommon, and rates as low as 12, and even 8, have been noted. A condition which may be mistaken for this trouble is not unusual. In such cases there is one pulse-beat that is distinct, and then one or two cardiac systoles that are too weak to be transmitted to, and are not to be felt in, the peripheral arteries. This is termed arhythmia or allorhythmia. It is necessary in all cases to guard against deception from this source.

Bradycardia is produced in three ways:

excitation of the pneumogastric center; irritation of the vagus anywhere along its course to its intra-cardiac ending; and by influences that act on the heart-muscle itself. These modes of production can be differentiated, especially the first two from the third. If the vagus is severed in the first group the bradycardia disappears. The injection of atropin, which paralyzes the vagi-nerve-endings, will also cause it to disappear. In the second group, section of the nerve is not effective, atropin being alone able to control it. The third group is not affected by either of the above procedures. This cardio-muscular group may arise from impairment of the automatic excitability of the heart-muscle from fatigue, exhaustion or from toxins, from diminished conductivity of the muscle from defective nutrition, excitation of the vagus, block at the atrio-ventricular junction, and from weakened contractility of heart-muscle due to anatomical lesions, as myocarditis, fatty degeneration, coronary sclerosis and destructive poisons.

The prognostic significance of bradycardia depends on its cause. It is extremely grave in infectious myocarditis; in coronary sclerosis it may be well borne for years; it, however, is always a sign that some grave process is going on. We shall now proceed to consider the numerous affections in which it is met.

First—Toxic bradycardia. *Nicotine* is one of the heart poisons that may produce this trouble. "Nicotine in small doses irritates the intra-cardiac vagus terminals, and if the effect is continued, paralyzes them. Retardation of the pulse appears as a symptom of those forms of tobacco poisoning which run the course of stenocardia, most probably caused by spasm of the coronary arteries and accompanied by retro-sternal pain, dyspnoea, tremor of the extremities, together with vertigo and fainting spells." (Neusser.) *Lead*. Chronic lead poisoning, especially in lead colic, and in the coma when the encephalon is affected, has the slow pulse. *Digitalis*, *strophanthus*, *physostigmin* and *muscarin* are also among the substances that can produce this symptom. Neusser speaks of chronic digitalis poisoning among military conscripts, who take the drug for a considerable time in order to be discharged from service. He also speaks of chromatopsia as

an important manifestation of digitalis poisoning, especially mentioning blindness for green, in which the landscape of summer appears as if covered with snow. Bradycardia is also a symptom in bile resorption, uremia, acetonuria, also in convalescence from acute infectious disease, as pneumonia, erysipelas, typhoid fever, rheumatism, measles, diphtheria and scarlet fever, influenza and in gonorrhoeal polyarthritides.

As stated before, these toxins developed in the organism either affect the heart substance directly, or exert their influence by vagus irritation. The diagnostic difference between the intra- and extra-cardial forms appears in their behavior toward atropin, the latter being controlled, while the former is uninfluenced by it. It has been shown (Engelman) "that regular cardiac activity consists of three principal functions of the heart-muscle cells: automatic irritability, conductivity, i. e., the power to transmit motor irritations from one muscle cell to another, and contractility of the muscle cells." The vagus and accelerans do not act upon the heart-muscle to cause independent contractions as the nerves to ordinary muscles do. But by their influence they either increase or decrease the conductivity or contractility of the muscle, the vagus irritation affecting at first the auricles.

The functional disturbances resulting from nervous influences are generally variable while those caused by diminished conductivity are usually constant. So that bradycardias which have persisted unchanged for several weeks or months are almost certainly of the cardiac form. Retardation of the pulse to half its normal rate which occurs in convalescence from infectious diseases, is caused by reduced conductivity of heart-muscle, which does not transmit as it should, the contractile irritation from the venous orifices. When the conduction at the atrio-ventricular junction meets with interference, bradycardia ensues from the fact that only every second or third irritation is transmitted to the ventricles, the auricles meanwhile pulsating regularly, as shown by radiography, and by the jugular veins pulsating more frequently than the apex-beat. This is the so-called heart-block, and in its relations to the Stokes-Adams syndrome will be noticed later. In the brady-

cardias due to fatty heart, coronary sclerosis and toxic myocarditis, there is direct impairment of the heart muscle. The most pronounced slowing of the pulse—down to 18 and 16 beats—is especially observed in thrombosis and embolism of the coronary arteries. Bradycardia, in the course of coronary angina, is a serious symptom, as it also is in the course of or after the crisis of pneumonia, when it usually indicates brain complication. Bradycardia occurs as a symptom of various cerebral affections, lesions of the oblongata, hyperemia of the vagus center, sudden ischemia of the medulla, chemical irritation of the vagus center, and reflex irritation of branches of the vagus from other nerves, as the trigeminus. Under these are grouped the slow pulse of meningeal inflammation and of tuberculous meningitis, of ear affections through reflex irritation from the auricular branch of the vagus, of concussion of the brain and cerebral hemorrhage. As a prognostic indication in cerebral hemorrhage, bradycardia is a much more favorable symptom than tachycardia. It would be tedious to mention the many sources of irritation to the vagus center. Gummata, tumors, thrombi, emboli are some of them. Bradycardia may also be present in carcinoma, ulcer and dilatation of the stomach, gall-stone and intestinal colic, and in some injuries of the spinal cord.

As to prognosis and treatment of this symptom but few general statements can be made. Each case must be analyzed and the indications met as they show themselves. In general, as was intimated previously, in the neurosis forms, atropin is probably the remedy. Where impairment of intra-cardiac conductivity exists, digitalis is contra-indicated. Under normal conditions of conductivity, but with increase of contractile irritation at the venous openings, with only every second or third contraction transmitted to the ventricles, digitalis with atropin may be of use. Oxygen inhalations may sometimes help. Where acute dilatation of the heart occurs, venesection may be required. If there is accompanying dyspnoea and scanty urinary secretion, morphia may produce sudden death. In cases where the dyspnoea is so extreme as to demand morphia at any hazard, caffeine or atropin should be combined with it.

(TO BE CONTINUED)

WHAT THE PHYSICIAN WHO HAS NO X-RAY SHOULD KNOW ABOUT IT.

By Noble M. Eberhart, A.M., M.S., M.D.,

Prof. and Head of Dept. of Electrotherapy,
Chicago College of Medicine and Surgery;
Prof. of High Frequency and Vibration,
Illinois School of Electro-therapeutics; Attending Surgeon and
Radiotherapist Frances Willard Hospital, etc.—Author
of "Practical X-Ray
Therapy", "Guide to
Vibratory Technique", etc.

It is important that the physician who does not do his own surgery should at least know when to call the surgeon and be able to tell the probable outcome.

It is equally desirable that the doctor who has no X-ray outfit should know the diseases in which it has proved useful and the percentage of successful results.

It is not necessary that every physician should possess and use an X-ray outfit. To do so requires considerable study and experience and the X-ray is a dangerous force in unskilled hands. It has, however, proved to be the best treatment known in some diseases; and in others too valuable not to be kept in mind and tried where other means fail; or used in conjunction with other measures.

The object then of this article is to give the probable results of the X-ray in those diseases most suited to its employment, so that the physician may know when to enlist the services of the X-ray and how to intelligently answer the first question which the patient will ask: "Will it cure?" The diagnostic value of the ray is well-known and is not considered in this paper, except that I cannot refrain from urging the importance of always having a radiograph taken in every case of dislocation or fracture, for the mutual protection and advantage of doctor and patient.

As the public is somewhat over-fearful of X ray burns, the doctor should also know what to answer concerning their frequency and danger.

The diseases in which the ray has proved of the greatest advantage are acne, sycosis, epithelioma, cancer, sarcoma, alopecia areata, chronic eczema, favus, leukemia and pseudo-leukemia, goiter, keloid, lupus psoriasis, trachoma, and tuberculosis of the glands, joints, testicles, etc.

In acne vulgaris (pimples) the percen-

tage of cures is over 90%, so that the ray is practically a specific in this disease.

In acne rosacea or red nose it is rather slow and successful in about 30% of the cases.

All cases of alopecia areata due to parasites or fungi may be expected to yield to the ray.

In carcinoma only 20 to 30% of cures is produced and in sarcoma still less (6 to 10%), but even these low figures will compare favorably with operative results, and by combining the X-ray with surgery a higher percentage of cures may be expected.

On the other hand, in epithelioma and rodent ulcer the ray accomplishes marvelous results (80 to 90% of cures), when applied before the glands have become involved. In epithelioma of the lower lip, however, operation is advised first, followed by the X-ray. This is due to the fact that the glands very quickly become involved, and once this occurs the chances of obtaining a cure are slight, no matter what method is employed.

The X-ray acts favorably in 90% of the cases of chronic eczema, in the form occurring in indurated patches.

The relief is quick and positive and the ray should always be employed when drugs have failed, and if circumstances permit the two methods may be used at the same time, being perfectly compatible.

Psoriasis yields to the ray in 70 to 80% of the cases, but relapses are frequent and the cure is not necessarily permanent.

In both eczema and psoriasis the high frequency current should be used with the X-ray to get the best and quickest results.

In favus the cures will average 80%.

Goiters are reduced in approximately one-half of the cases, but many of them tend to return.

All things considered, the X-ray is the best treatment we have for keloid.

In both leukemia and pseudo-leukemia positive results are obtained in a majority of cases, although late investigations would indicate that sooner or later the patient succumbs to the original disease. The results are so much better than those obtained by any other method, that the ray should always be resorted to.

90% of the cases of sycosis (barber's itch) yield to the ray. Relapses are not

uncommon, but these cases usually respond readily to additional treatments.

Cases of trachoma resisting ordinary treatment should be given the opportunity of having X-ray treatment. Almost all of them will yield to it.

In all forms of localized tuberculosis, the action of the Roentgen ray compares favorably with other methods, including surgery. The percentage of cures which may be anticipated are as follows:

Tuberculosis of the skin (lupus).....	80%
Tuberculosis of the glands.....	60%
Tuberculosis of the testicle.....	40%	to 50%
Tuberculosis of the joints.....	40%	
Tuberculosis of the long and flat bones.....	35%	
Tuberculosis of the peritoneum.....	40%	
Tuberculosis of the tendon sheaths.....	70%	

As in the case of malignant disease, by combining surgery with the X-ray in selected cases, the results frequently are more successful than indicated above.

In all the diseases treated with the X-ray the individual ability of the operator is all-important, and may cause his results to vary considerably from the figures given.

Regarding the frequency and danger of X-ray "burns" (dermatitis), it would seem that serious burns only occur on an average of about once in 5,000 exposures.

In my personal experience I have given upwards of 30,000 X-ray treatments without producing a single serious burn.

The X-ray dermatitis or "burn" is purely and simply a condition produced by an over-dosage of the ray, and with our present knowledge it will seldom occur where the treatment is given by an experienced radio-therapist.

Mild reactions are necessary in many instances, and should cause no alarm, as they soon disappear.

In my "Practical X-ray Therapy" I give a number of other diseases in which the ray has been successfully used, but those quoted in this paper include the conditions where it has proved of the greatest advantage.

72 E. Madison St., Chicago.

A NEW SUTURE.

R. M. McMillen, M.D., Wheeling, W. Va.

During the annals of surgery there have been two difficulties in closing wounds, and especially deep, incised wounds, that have been hard to overcome, viz:—First, the dipping down of the skin into the deeper

structures; and, Second, the bulging out of the soft parts through the skin.

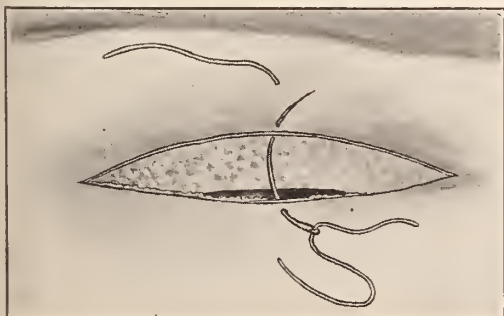
Every surgeon knows of his failure to get union by primary intention because of these difficulties. Even when he has succeeded in getting primary union he has often been mortified to see a wide cicatrix because the skin had dipped down with its two cuticle surfaces in apposition which had prevented union of the skin. This bulging out and dipping in of structures have frequently caused complex tissue growths in cicatrices.

Many kinds of sutures have been employed in closing these deep, incised wounds in order that sufficient traction may be made on the suture to bring the deeper structures into apposition and at the same time not invert the skin. The writer has devised a suture that practically overcomes the above difficulties. It is made as follows: viz.—

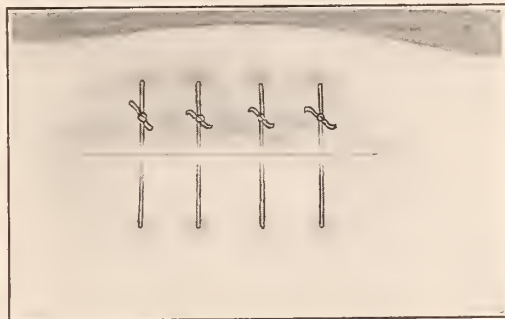
First put in suture the same as the ordinary interrupted suture.



Thread the reverse end of suture and insert needle into the skin very close to the edge of wound about one-sixteenth of an inch. Pass the needle through the skin only, and on over and catch the skin on wound side, and come out on cuticle side about one-sixteenth inch from edge.



The suture is then tied by a reef knot drawn with sufficient force to bring deep structures together. The inner margins of the skin will then be seen to be in exact apposition, and the cut surfaces of the skin will be together when the pressure of the dressing is applied.



The knots are at the side of the wound, and their removal will not disturb the line of union. The line of union is not constricted by the suture and the blood and nerve supply is not interfered with. This suture reduces the size of the scar to a minimum.

PIECE OF STONE ON THE IRIS FOR FIFTY-FOUR YEARS.

John L. Dickey, A.M., M.D., Wheeling.

Mrs. Ellen McCaffrey, aged 66, Bellaire, Ohio, has normal vision in the right eye, wearing + 1.50 for distance and + 4.50 for close. The left eye, she says, has always been as good as the right for seeing, but is blurred somewhat now, from a slight haziness of the cornea, probably from a mild chronic keratitis. The pupil reacts promptly, and there is no evidence of former iritis. Lying on the iris, in the center of the upper and inner quadrant, is a circular piece of stone, about one-eighth of an inch in diameter.

When she was twelve years old, while hoeing in the garden, she was struck in the eye with the small piece of stone, which penetrated the cornea and has been lying on the iris ever since. Twenty-two years ago she consulted me on account of pain and inflammation in the eye. Under sedative treatment the attack subsided in a week or two.

It is rather remarkable that she has had a

useful and comfortable eye after such a severe injury and with the foreign body lying where it lodged fifty-four years ago. She says she hopes it will be another twenty-two years before she will need to consult me again.

Correspondence

LETTER FROM NORWAY.

From Christiania to Bergen and Frond hjem.

Molde, Aug. 10, 1909.

Editor *W. Va. Medical Journal*.

Our last communication was from Hamburg, and while many weeks could have been profitably spent attending the surgical clinics of Kummel and Hoffman, and the demonstrations in dermatology at Prof. Unna's Hospital, our destination was Norway.

A visit to Denmark generally forms a part of a tour to the Scandinavian peninsula, and as Copenhagen was quite *en route*, a visit to this grand old capital so picturesquely situated on the Sound, and so rich in memories of the past, we found a fitting introduction to a tour in Norway and Sweden.

It is not the purpose of this letter to deal with the physical formation, topography or geology of the Danish Kingdom, but it is interesting to note in passing that it owes its very existence to the mountain country of the Vikings; every stone in Denmark may be traced back to its home-country, Norway; detrital sand and boulder clay came here through the grinding of the glacial period ice on the Norse mountains and valleys.

Thus Denmark of the present day and much of the central European plain have been produced by the granite mountains of Norway, which surround me as I write here in Visnas, in the same manner that the Banks of Newfoundland, on our American continent, are now being formed and built up by the grinding icebergs coming from Greenland.

The one day in Copenhagen was spent with the wonderful works of Thorwaldsen, the museums, galleries and collections of northern antiquities. The next day on to Elsinore or Helsingor, stopping long

enough to see the old castle of Kronborg, built by Frederick II. in 1574, and supposed to be the scene of the play of Hamlet, passing the historic battery where Shakespeare makes the ghost of Hamlet's father pass the sentinels, and on the evening of this same day we arrived at Christiania, beautifully situated at the head of the Christiania Fjord with its 230,000 inhabitants.

The day after our arrival, having a letter to the Secretary of Public Health, I found this very affable gentleman in his office and ready to provide a visiting American physician with any information at his command regarding the public institutions for the care of the sick or the municipal "sykehuset," facts regarding the sanatoria and health resorts, the leprosy hospitals, Norwegian climatic conditions, indeed just the man I was looking for, and should there be anything of interest or merit in this letter to the *Journal* the credit belongs to Dr. Nielsen, with whom I talked for more than an hour, taking notes, and arranging through his courtesy to visit many of the hospitals and sanatoria.

Norway, as a land for the tourist, as our friend Dr. Dickey (whose name I find registered this same month two years back in every hotel I have visited), has told us, certainly possesses all the interest that can be presented by diversity of scenery, men and things, and offers many opportunities for pleasure and study, not only to the tourist and lover of nature, but also to the sportsman, the lover of art, the man of science, and the student of economical and social conditions.

The hospitals of Norway's capital, with the exception of the Ullevold institution, are old and far from being up-to-date. The Rigs hospital, the largest institution within the city limits I visited, about ten minutes from the Grand Hotel on the winding Piletraedet, occupies more than two city blocks, and is surrounded by a menacing wall certainly twelve feet in height, and very much resembling the exterior of a penal institution. Through a large iron gate I was admitted by the portier; I presented my card, advanced and gave the usual countersign, "American physician," which seems to be enough to gain admission to and entitle a visitor to all of the courtesy and hospitality desired in any of the "sykehuse" I have thus far inspected. Like the hospitals of

my first letter, this institution is beautifully surrounded with acres of shrubbery and fine old trees. The contrast was rather pleasing as one caught the volatile aroma of the pines and balsams and from flowers of every description, entering the hospital grounds beneath this frowning and unnecessary wall. I wandered with the house surgeon through the various buildings, which had been standing perhaps four score of years and more, and while the floors were immaculately clean and the walls freshly whitewashed, the wards are cold and poorly ventilated, and altogether the institution is far from being an ideal place for twentieth century medical work.

The Ullevold hospital is new, and its location reminded me very much of the Reynolds Memorial hospital at Glendale, situated as it is more than three miles from the center of Christiania in a large open field, surrounded by no shrubbery but new growth, practically out in the country. This large hospital has 600 beds, and contains a training school with nearly 200 nurses. Here the pavilion plan does not obtain, but there is one very long two-story building of brick, stone and concrete, containing innumerable small wards and private rooms, perfectly ventilated and in every way comfortable. The operative work here is in every way of a high order and the equipment is up to date in every particular. There was but one unpleasant feature about the environment of this, Norway's largest and latest creation for the care of the sick, and that was a large and well-filled cemetery occupying its front yard. I did not visit the Grefsen Sanitarium for tubercular patients, but our train passed through the grounds on our journey northward, and the large well wooded fields, innumerable cottages and administrative buildings could be easily seen and were most interesting. Since 1901 the fight against tuberculosis has been made with energy in Norway. The Lyster sanatorium was opened in 1902 and was erected and maintained by money obtained from the St. Jorgens hospital fund, a very wealthy hospital corporation in Bergen instituted centuries ago for the care of the Norwegian lepers, but because of the steady decrease of this malady in this country much of the St. Jorgens fund is now used for the vigor-

ous campaign against the great white plague.

There is a very interesting seaside hospital at Hagevik, in Os, for the care of "scrofulous" children, containing 100 beds, and patients eligible for admission must be afflicted with some bone, joint or glandular tuberculous affection. This hospital is supported not only by the government and private contributions, but like many other philanthropic institutions here is substantially helped by the "samlag," a name given to the effort on the part of the Norwegian Legislature to control and regulate the use of spirituous liquors. It might be well to mention in connection with the "samlag" that alcoholic drinks are not retailed in this country, except in pint or quart containers. The ante-prandial American cocktail or the soda and Buchanan Scotch are not for the sons of the Vikings or their foreign visitors, yet a quart of almost any kind of fire water can be had for the asking at any grocery shop, by presenting the necessary Kroner, Saturday night and Sunday excepted, and such is the "samlag."

Then there are several hospitals in Norway for the care and segregation of incurable consumptives; notably among these may be mentioned the Lungegaard, Voss and Hardanger hospitals.

The Norwegian Leper.

My good friend, Dr. Henry L. Shively, of New York, with whom I had the privilege of serving on the house staff of Presbyterian Hospital about twenty years ago, is spending his sixth summer here in Norway, and he has recently written of the leprosy in the Scandinavian peninsula. Dr. Shively's paper, I think, was read before the New York Academy of Medicine some time in January last. In this article mention is made of this St. Jorgens hospital and in a personal talk with Dr. Shively he urged me while in Bergen to see the various leper institutions. He writes of the great interest St. Jorgens possesses for the medical antiquarian, as in its present form it is said to faithfully reproduce the original building destroyed in the fire of 1702. It is the only one remaining of the lazar houses which were numerous throughout Europe in the middle ages, and it is in every respect a remarkable survival which recalls the type of the ancient hospital depicted in paintings of the Flemish and Dutch schools

of the fifteenth and sixteenth centuries. This venerable institution today is said to be worth about half a million dollars. But as mentioned above the decline of the leper scourge in Norway, due in a measure to the enlightened policy of segregation, instituted by D. C. Danielsen (1815-1894) and continued by Hansen, the present inspector general of leprosy, there are now but 32 lepers in old St. Jorgens. This explains how in the future this entire fund will be available for the tubercular campaign.

We arrived in Bergen early Monday morning, August 2, and understanding that the hour for the visiting members of the profession was between 8:30 and 9:30 in the morning, I procured a conveyance and was driven at once to the Pleiestiftelsen, which is the largest of the hospitals in Norway for the care of lepers, accommodating 270, but at present containing only 92 cases. Unfortunately Dr. H. P. Lie, the superintendent, was not at the hospital, but I was cordially received by his assistant and by him was conducted through the laboratories, where a demonstration of the leprosy bacillus was made, and an exhibition of the wax casts representing the various types of the disease, and then through the wards and rooms, where I saw a number of these pitiable human wrecks, marked and scarred by this devastating malady, ghastly caricatures of their former selves, resembling, as Dr. Shively has described, blanched mummies, with their white, atrophic, tightly drawn, parchment-like skins, as thin and as translucent as cigarette paper, through which the underlying blood vessels, and even the bones seemed plainly visible. These cases were afflicted with the anaesthetic form of leprosy. They share, however, with the tubercular cases in the hideous mutilations of the disease. This was no new sight to me, as I had visited the leprosy hospital while in Cuba several years ago attending the Pan-American Medical Congress, and there, as in the Norwegian hospital, the nodular infiltration of the integument cicatrices and running sores, with partial and complete disappearance of nose, ears, lips and eyelids, producing the most revolting disfigurements, was observed.

This Pleiestiftelsen hospital is one of the most important centers for the scientific study of leprosy, and it has been the seat of much important research work. I was told

that the congress for the study of leprosy would open its work in this hospital the fifteenth of August, and there would be delegates attending from the world over.

While in Bergen I spent several hours in the Bergens Kommune Sykehuset, or the large general hospital. A surgical clinic was in progress and I was taken to the small operating room and there saw an abdominal pan-hysterectomy for malignant papilloma of the cervix. The operation was done in a faultless manner, but without rubber gloves, the technique being much the same as is seen in the German hospitals. This institution was old, having formerly been used as an asylum for the care of the insane; it is far from being what a hospital should be, the wards and rooms unswept and unclean, yet I was assured that their results in surgery and compound fractures were all that could be desired. Ground has already been broken here in Bergen for a large new hospital, and it is certainly very much needed, for verily the leper within their gates fares better than the sick and injured poor. While making the rounds with the chief surgeon I was taken to the bedside of an eight-day-old infant suffering from an umbilical hernia. The translucent sac containing the plainly visible coils of intestine was the size of a large orange, and repeated efforts failed to reduce the mass, the summit of which was surmounted by the gangrenous remnant of the ligated funiculus. The unhappy and cyanotic newborn looked to me as though its terrestrial days were numbered. At my request a photograph of this unusual condition was made while I was there.

As I close this letter Monday morning, August 9, we are leaving the little mountain hamlet of Merok. We are aboard the steamship Romsdal, and the mountains enclosing the Geiranges Fjord are wonderful colossal masses of granite, forming almost perpendicular walls, two or three thousand feet in height, the peaks surmounted by glacier and snow. As I write the roar is heard of the Sv Sostrefos, a mighty waterfall dashing more than a thousand feet into and disturbing the mirror-like surface of the contracted fjord.

In a later letter I shall endeavor to tell you of the Norwegian climate and of her sanatoria. Very sincerely,

FRANK LE MOYNE HUPP.

The West Virginia Medical Journal.

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All communications to this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notices of deaths, removals from the State, changes of location, etc., are requested.

Our readers are requested to send us marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

CONTRIBUTIONS TYPEWRITTEN.

It will be satisfactory to all concerned if authors will have their contributions typewritten before submitting them for publication. The expense is small to the author—the satisfaction is great to the editor and printer.

ADVERTISEMENTS.

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Editorial

If your Journal does not arrive by the 10th drop us a card.

MEDICAL BANQUETS AND WINE.

It has been a custom to serve wine at banquets from time immemorial, on the theory that this contributes to good fellowship. The theory is in our judgment entirely fallacious, except in that the wine intoxicates those who indulge in it to excess, and thus inhibits the nervous centers that preside over judgment and good sense, and lets the fool's; in a man have full sway. Whether this is a desirable thing at a medical banquet we take the privilege of doubting. The happy truth is, that at such banquets, at least ninety per cent of the guests sip their wine, not because they care a pin for it; in fact, it is for them rather disagreeable and totally without effect. The remaining ten per cent drink too much, a few disgracing themselves and the noble profession to

which they belong.

In this connection, and in view of the approach of another annual meeting and possible banquet, we desire to recall the action of the State Association touching this practice. In 1903 at Charleston, the President, Dr. H. B. Stout, in his presidential address criticized the practice of serving wine on these occasions. The committee to which was referred the address of the President reported without dissent, endorsing the President's position, and the report was "unanimously adopted." This declared will of the Association has since been several times disregarded, and the members well know that not all of those in attendance at the banquets have reached their hotel beds in a state in which they would care to have their patrons see them.

We are not fanatical on this subject, but do emphatically uphold this position: Firstly: That as the medical profession is the great conservator of the public health, it is very unbecoming for it, in its organized capacity of a State Association, to set an example not entirely worthy of emulation by less learned and respectable bodies. Secondly: That it is highly improper for our local Committees of Arrangements to provide wine at our annual function when it is a source of positive danger to a few in the Association who cannot taste without being precipitated into a spree. One of the finest men in the profession has on several occasions requested the writer to taste a so-called "punch" to learn whether or not it contained an intoxicant, appreciating the fact that for him a taste of liquor meant a debauch. Thirdly: The local Committee has no right to disregard the expressed will of the Association as reported above. Fourthly: The local Committee should not be taxed for this expensive, unnecessary, harmful custom.

Last year the Maryland Medical Journal took the same position that we now take, and other societies have even enacted a law against the custom here criticized. We can be quite as sociable and can make quite as good post-prandial speeches under the influence of good coffee as under that of wine; and it costs much less and doesn't muddle the brain and impair co-ordination of muscular

movements, nor lessen one's self-respect. We heartily agree with our good friend, Dr. J. N. McCormick, who says: "My ideals for our profession are so high that I advocate putting ourselves upon the highest plane in everything, quietly and without ostentation, trying to make each doctor and each collection of them models of their kind for their people."—S. L. J.

OUR NEXT MEETING.

There is every prospect of a fine meeting at Elkins next month. It will be at the most delightful season of the year. The trip to Elkins will for many of us be the first one, and will be very enjoyable. The local Committee, we are informed, have things in good shape, and are working earnestly for the success of the meeting. Secretary Moore has been busy for weeks in shaping the scientific program so as to have the time fully and profitably occupied. If any one desires to read a paper, let him not wait for an invitation. Each of us has the same rights in this matter, and papers will be welcome from all. The subject should be at once sent to the Secretary at Huntington, so that the program may be completed and sent out.

Once more, Mr. Secretary, stir up the delinquents. We have a letter to-day inquiring the name of a local secretary to whom money might be sent. That secretary has been neglecting his duty, and his society, you may be quite sure, is not very much alive. The life and prosperity of the whole—The State Association—depends upon the life and prosperity of the parts—the local Associations; and the life of the latter is almost entirely in the hands of the local secretary. By the way, what has become of the contemplated meeting of Secretaries? Is any one doing anything towards arranging a program for a meeting of local secretaries at Elkins? If not, why not? It is not yet too late. We venture a prediction, viz., if some of the secretaries do not do better the coming year than the last, (and, we may add, the Councilors, also.) the membership of the State Association will not soon reach the 1,000 mark that seemed in

sight a year ago. Note this fact: The average man will not hunt up a secretary to whom to pay his dues. Another: The average man will not, can not be expected, to retain interest in a society that holds no regular meetings. Get together and try to determine whose is the fault that your local meetings are not more successful. Our Ohio county experience is, that the meetings are much better attended since they were made weekly. In the country they will be better attended if held monthly than quarterly. Try it.—S. L. J.

Dr. J. W. Shull of Romney writes thus: "I cannot understand how any young physician can feel comfortable outside of the society. Verily, it looks like doctors are as hard to organize and keep organized as the farmers, who, if they knew their strength, would speedily take possession of our National Government and enact such laws as would make the money kings be good. What a power for good would our organization be if every doctor were a member."

Constitution and By-Laws

(Report of Committee—Proposed Changes in Italics.)

ARTICLE I.—NAME OF THE ASSOCIATION.

The name and title of this organization shall be the West Virginia State Medical Association.

ARTICLE II.—PURPOSES OF THE ASSOCIATION.

The purposes of this Association shall be to federate and bring into one compact organization the entire medical profession of the State of West Virginia, and to unite with similar societies of other states to form the American Medical Association; to extend medical knowledge and advance medical science; to elevate the standard of medical education, and to secure the enactment and enforcement of just medical laws; to promote friendly intercourse among physicians; to guard and foster the material interests of its members and to protect them against imposition; and to enlighten and direct public opinion in regard to the great problems of state medicine, so that the profession shall become more capable and honorable within itself, and more useful to the public, in the prevention and cure of disease, and in prolonging and adding comfort to life.

ARTICLE III.—COMPONENT SOCIETIES.

Component Societies shall consist of those county medical societies which hold charters from this Association.

ARTICLE IV.—COMPOSITION OF THE ASSOCIATION.

SECTION 1. This Association shall consist of Members, Delegates and Guests.

SEC. 2. MEMBERS. The Members of this Association shall be the members of the component county medical societies.

SEC. 3. DELEGATES. Delegates shall be those members who are elected in accordance with the Constitution and By-Laws to represent their respective component societies in the House of Delegates of this Association.

SEC. 4. GUESTS. Any distinguished physician not a resident of this State who is a member of his own State Association may become a guest during any Annual Session on invitation of the officers of this Association, and shall be accorded the privilege of participating in all of the scientific work of that Session.

ARTICLE V.—HOUSE OF DELEGATES.

The House of Delegates shall be the legislative and business body of the Association, and shall consist of (1) Delegates elected by the component county societies, (2) the Councilors, and (3), *ex officio*, the President and Secretary of this Association.

ARTICLE VI.—COUNCIL.

The Council shall consist of the Councilors, and the President and Secretary, *ex-officio*. Besides its duties mentioned in the By-Laws, it shall constitute the Finance Committee of the House of Delegates. Three Councilors shall constitute a quorum.

ARTICLE VII.—SECTIONS AND DISTRICT SOCIETIES.

The House of Delegates may provide for a division of the scientific work of the Association into appropriate Sections, and for the organization of such Councilor District Societies as will promote the best interests of the profession, such societies to be composed exclusively of members of component county societies.

ARTICLE VIII.—SESSIONS AND MEETINGS.

SECTION 1. The Association shall hold an Annual Session, during which there shall be held daily General Meetings, which shall be open to all registered members, and guests.

SEC. 2. The month and place for holding each Annual Session shall be fixed by the House of Delegates, but the exact date shall be appointed by the Committee of Arrangements.

ARTICLE IX.—OFFICERS.

SECTION 1. The officers of this Association shall be a President, three Vice-Presidents, a Secretary, a Treasurer, and ten Councilors.

SEC. 2. The officers, except the Councilors, shall be elected annually. The terms of the Councilors shall be for two years, one-half being chosen each year. All of these officers shall serve until their successors are elected and installed.

SEC. 3. The officers of this Association shall be elected by the House of Delegates on the morn-

ing of the last day of the Annual Session, but no Delegate shall be eligible to any office named in the preceding section, except that of Councilor, and no person shall be elected to any such office who is not in attendance upon that Annual Session, and who has not been a member of the Association for the past two years.

ARTICLE X.—RECIPROCITY OF MEMBERSHIP WITH OTHER STATE SOCIETIES.

In order to broaden professional fellowship this Association is ready to arrange with other State Medical Associations for an interchange of certificates of membership, so that members moving from one state to another may avoid the formality of re-election.

ARTICLE XI.—FUNDS AND EXPENSES.

Funds shall be raised by an equal per capita assessment on each component society. The amount of the assessment shall be fixed by the House of Delegates, but shall not exceed the sum of \$2.00 per capita per annum, except on a four-fifths vote of the Delegates present. Funds may also be raised by voluntary contributions, from the Association's publications, and in any other manner approved by the House of Delegates. Funds may be appropriated by the House of Delegates to defray the expenses of the Association, for publications, and for such other purposes as will promote the welfare of the profession. All resolutions appropriating funds must, if there be objection to their passage, be referred to the Finance Committee before action is taken thereon.

ARTICLE XII.—REFERENDUM.

SECTION 1. A General Meeting of the Association may, by a two-thirds vote of the members present, order a general referendum on any question pending before the House of Delegates, and when so ordered the House of Delegates shall submit such question to the members of the Association, who may vote by mail or in person, and, if the members voting shall comprise a majority of all the members of the Association, a majority of such vote shall determine the question and be binding on the House of Delegates.

SEC. 2. The House of Delegates may, by a two-thirds vote of its own members, submit any question before it to a general referendum, as provided in the preceding section, and the result shall be binding on the House of Delegates. *It may also by a like vote refer any question, including the election of officers or any number of them, to the general meeting of the Association a majority vote here determining the result.*

ARTICLE XIII.—THE SEAL.

The Association shall have a common Seal, with power to break, change or renew the same at pleasure.

ARTICLE XIV.—AMENDMENTS.

The House of Delegates may amend any article of this Constitution by a two-thirds vote of the

Delegates present at any Annual Session, provided that such amendment shall have been presented in open meeting at the previous annual session, and that it shall have been published twice during the year in the bulletin or journal of this Association, or sent officially to each component society at least two months before the meeting at which final action is to be taken.

BY-LAWS.

CHAPTER I.—MEMBERSHIP.

SECTION 1. The name of a physician on the properly certified roster of members of a component society, which has paid its annual assessment, shall be *prima facie* evidence of membership in this Association.

SEC. 2. No person who is under sentence of suspension or expulsion from a component society, or whose name has been dropped from its roll of members, shall be entitled to any of the rights or benefits of this Association, nor shall he be permitted to take part in any of its proceedings until he has been relieved of such disability.

SEC. 3. Each member in attendance at the Annual Session shall enter his name on the registration book, indicating the component society of which he is a member. When his right to membership has been verified, by reference to the roster of his society, he shall receive a badge, which shall be evidence of his right to all the privileges of membership at that Session. No member shall take part in any of the proceedings of an Annual Session until he has complied with the provisions of this section.

CHAPTER II.—ANNUAL AND SPECIAL SESSIONS OF THE ASSOCIATION.

SECTION 1. The Association shall hold an Annual Session in such month and at such place as has been fixed at the preceding Annual Session by the House of Delegates.

SEC. 2. Special meetings of either the Association or of the House of Delegates shall be called by the President on petition of twenty delegates or fifty members.

CHAPTER III.—GENERAL MEETINGS.

SECTION 1. All registered members may attend and participate in the proceedings and discussions of the General Meetings and of the Sections. The General Meetings shall be presided over by the President or by one of the Vice-Presidents, and before them shall be delivered the address of the President and the orations.

SEC. 2. The General Meeting may recommend to the House of Delegates the appointment of committees or commissions for scientific investigation of special interest and importance to the profession and public.

CHAPTER IV.—HOUSE OF DELEGATES.

SECTION 1. The House of Delegates shall meet on the day before that fixed as the first day of the

annual session at an hour to be determined by the Committee of Arrangements. It may adjourn from time to time as may be necessary to complete its business, provided, that its hours shall conflict as little as possible with the General Meetings. The order of business shall be arranged as a separate section of the program.

SEC. 2. Each component society shall be entitled to send to the House of Delegates each year one Delegate, and one additional for every twenty-five or fraction thereof above twenty members. In case the regularly elected delegate or delegates be not present at the annual meeting, the members of the component society to which he or they belong who are present shall select a delegate or delegates *pro tem*.

SEC. 3. The delegates and the Councilors present shall constitute a quorum.

SEC. 4. The House of Delegates shall, through its officers, Council and otherwise, give diligent attention to and foster the scientific work and spirit of the Association, and shall constantly study and strive to make each Annual Session a stepping stone to future ones of higher interest.

SEC. 5. It shall consider and advise as to the material interests of the profession, and of the public in those important matters wherein it is dependent upon the profession, and shall use its influence to secure and enforce all proper medical and public-health legislation, and to diffuse popular information in relation thereto.

SEC. 6. It shall make careful inquiry into the condition of the profession of each county in the State, and shall have authority to adopt such methods as may be deemed most efficient for building up and increasing the interest in such county societies as already exist, and for organizing the profession in counties where societies do not exist. It shall especially and systematically endeavor to promote friendly intercourse among physicians of the same locality, and shall continue these efforts until every physician in every county of the State who can be made reputable has been brought under medical society influence.

SEC. 7. It shall encourage post-graduate and research work, as well as home study, and shall endeavor to have the results utilized and intelligently discussed in the county societies.

SEC. 8. It shall elect representatives to the House of Delegates of the American Medical Association in accordance with the Constitution and By-Laws of that body.

SEC. 9. It shall, upon application, provide and issue charters to county societies organized to conform to the spirit of this Constitution and By-Laws.

SEC. 10. In sparsely settled sections it shall have authority to organize the physicians of two or more counties into societies to be designated by hyphenating the names of two or more counties so as to distinguish them from district and other classes of societies, and these societies, when organized and chartered, shall be entitled to all the privileges and representation provided herein for county societies, until such counties may be organized separately. (See sec. iv chap. vii.)

SEC. 11. It shall divide the State into Councilor Districts, specifying what counties each district shall include, and, when the best interest of the Association and profession will be promoted thereby, organize in each a district medical soci-

ty, and all members of component county societies, and no others, shall be members in such district societies. When so organized, from the presidents of such district societies shall be chosen the Vice-Presidents of this Association, and the presidents of the county societies of the district shall be the vice-presidents of such district societies.

SEC. 12. It shall have authority to appoint committees for special purposes from among members of the Association who are not members of the House of Delegates. Such committees shall report to the House of Delegates, and may be present and participate in the debate on their reports.

SEC. 13. It shall approve all memorials and resolutions issued in the name of the Association before the same shall become effective.

CHAPTER V.—ELECTION OF OFFICERS.

SECTION 1. All elections shall be by ballot, and a majority of the votes cast shall be necessary to elect, *provided, however, that when there are more than two nominees, the nominee receiving the least number of votes on the first ballot shall be dropped and the balloting continue until an election occur.*

SEC. 2. The election of officers shall be the first order of business of the House of Delegates after the reading of the minutes on the morning of the last day of the General Session.

SEC. 3. Any person known to have solicited votes for or sought any office within the gift of this Association shall be ineligible for any office for two years.

CHAPTER VI.—DUTIES OF OFFICERS.

SECTION 1. The President shall preside at all meetings of the Association and of the House of Delegates, *unless both bodies are in session at the same time, when he shall delegate a Vice-President to preside over the general meeting;* he shall appoint all committees not otherwise provided for; he shall deliver an annual address at such time as may be arranged, and perform such other duties as custom and parliamentary usage may require. He shall be the real head of the profession of the State during his term of office, and, as far as practicable, shall visit by appointment the various sections of the State and assist the Councilors in building up the county societies, and in making their work more practical and useful. *The President-elect shall not assume the duties of his office until after the first meeting of the House of Delegates at the next annual session after his election.*

SEC. 2. The Vice-Presidents shall assist the President in the discharge of his duties. In the event of the President's death, resignation or removal, the Council shall select one of the Vice-Presidents to succeed him.

SEC. 3. The Treasurer shall give bond in the sum of \$1,000. He shall demand and receive all funds due the Association, together with the bequests and donations. He shall pay money out of the Treasury only on a written order of the President, countersigned by the Secretary; he shall subject his accounts to such examination

as the House of Delegates may order, and he shall annually render an account of his doings and of the state of the funds in his hands.

SEC. 4. The Secretary shall attend the General Meetings of the Association and the meetings of the House of Delegates, and shall keep minutes of their respective proceedings in separate record books. *If both bodies are in session at the same time, he shall delegate some member to act in his stead in the general meeting.* He shall be *ex-officio* Secretary of the Council. He shall be custodian of all record books and papers belonging to the Association, except such as properly belong to the Treasurer, and shall keep account of and promptly turn over to the Treasurer all funds of the Association which come into his hands. He shall provide for the registration of the members and delegates at the Annual Sessions. He shall, with the co-operation of the secretaries of the component societies, keep a card-index register of all the legal practitioners of the State by counties, noting on each his status in relation to his county society, and, on request, shall transmit a copy of this list to the American Medical Association. He shall aid the Councilors in the organization and improvement of the county societies and in the extension of the power and usefulness of this Association. He shall conduct the official correspondence notifying members of meetings, officers of their election and committees of their appointment and duties. He shall employ such assistants as may be ordered by the House of Delegates, and shall make an annual report to the House of Delegates. He shall supply each component society with the necessary blanks for making their annual reports; shall keep an account with the component societies, charging against each society its assessment, collect the same, and at once turn it over to the Treasurer. Acting with the Committee on Scientific Work, he shall prepare and issue all programs. The amount of his salary shall be fixed by the House of Delegates.

CHAPTER VII.—COUNCIL.

SECTION 1. The Council shall meet on the day preceding the Annual Session, and daily during the Session, and at such other times as necessity may require, subject to the call of the chairman, or on petition of three Councilors. It shall meet on the last day of the Annual Session of the Association to organize and outline work for the ensuing year. It shall elect a chairman and a clerk, who, in the absence of the Secretary of the Association, shall keep a record of its proceedings. It shall, through its chairman, make an annual report to the House of Delegates.

SEC. 2. Each Councilor shall be organizer, peacemaker and censor for his district. He shall visit the counties in his district at least once a year for the purpose of organizing component societies where none exists; for inquiring into the condition of the profession, and for improving and increasing the zeal of the county societies and their members. He shall make an annual report of his work and of the condition of the profession of each county in his district at the Annual Session of the House of Delegates. The necessary traveling expenses incurred by such Councilor in the line of the duties herein imposed may be allowed by the House of Delegates on a

proper itemized statement, but this shall not be construed to include his expense in attending the Annual Session of the Association.

SEC. 3. The Council shall be the board of censors of the Association. It shall consider all questions involving the rights and standing of members, whether in relation to other members, to the component societies, or to this Association. All questions of an ethical nature brought before the House of Delegates or the General Meeting shall be referred to the Council without discussion. It shall hear and decide all questions of discipline affecting the conduct of members or component societies on which an appeal is taken from the decision of an individual Councilor, and its decision in all such matters shall be final.

SEC. 4. In sparsely settled sections it shall have authority to organize the physicians of two or more counties into societies, to be suitably designated so as to distinguish them from district societies, and these societies, when organized and chartered, shall be entitled to all rights and privileges provided for component societies until such counties shall be organized separately.

SEC. 5. The Council shall provide for and superintend the publication and distribution of The W. Va. Medical Journal and all proceedings, transactions and memoirs of the Association, and shall have authority to appoint an editor of the Journal and such assistants as it deems necessary. All money received by the Council and its agents, resulting from the discharge of the duties assigned to them, except the Journal receipts, must be paid to the Treasurer of the Association. As the Finance Committee it shall annually audit the accounts of the Treasurer and Secretary and other agents of this Association and present a statement of the same in its annual report to the House of Delegates, which report shall also specify the character and cost of all the publications of the Association during the year, and the amount of all other property belonging to the Association under its control, with such suggestions as it may deem necessary. In the event of a vacancy in the office of the Secretary, the Treasurer or the Journal editor, the Council shall fill the vacancy until the next annual election. *In the event of one or more vacancies in the Council, the President shall be empowered to fill the same by appointment until the next regular meeting.*

SEC. 6. *All reports on scientific subjects and all discussions and papers heard before the Association shall be referred to the W. Va. Medical Journal for Publication. The editor, with the approval of a majority of his assistants, may curtail or abstract papers or discussions, and may return any paper to its author which may not be considered suitable for publication.*

CHAPTER VIII.—COMMITTEES.

SEC. 1. The standing committees shall be as follows:

A Committee on Scientific Work.

A Committee on Public Policy and Legislation.

A Committee on Arrangement, and such other committees as may be necessary. Such committees shall be elected by the House of Delegates, unless otherwise provided.

SEC. 2. The Committee on Scientific Work shall consist of three members, of which the Secretary shall be one, and shall determine the character and scope of the scientific proceedings of the Association for each session, subject to the instructions of the House of Delegates. Thirty days previous to each Annual Session it shall prepare and issue a program announcing the order in which papers, discussions and other business shall be presented.

SEC. 3. The Committee on Public Policy and Legislation shall consist of three members and the President and Secretary. Under the direction of the House of Delegates it shall represent the Association in securing and enforcing legislation in the interest of public health and of scientific medicine. It shall keep in touch with professional and public opinion, shall endeavor to shape legislation so as to secure the best results for the whole people, and shall strive to organize professional influence so as to promote the general good of the community in local, state and national affairs and elections.

SEC. 4. The Committee of Arrangements shall be appointed by the component society in which the Annual Session is to be held. It shall provide suitable accommodations for the meeting-places of the Association and of the House of Delegates, and of their respective committees, and shall have general charge of all the arrangements. Its Chairman shall report an outline of the arrangements to the Secretary for publication in the program, and shall make additional announcements during the session as occasion may require.

CHAPTER IX.—COUNTY SOCIETIES.

SECTION 1. All county societies now in affiliation with this Association or those which may hereafter be organized in this State, which have adopted principles of organization not in conflict with this Constitution and By-Laws, shall, on application, receive a charter from and become a component part of this Association.

SEC. 2. As rapidly as can be done after the adoption of this Constitution and By-Laws, a medical society shall be organized in every county in the State in which no component society exists, and charters shall be issued thereto.

SEC. 3. Charters shall be issued only upon approval of the Council or House of Delegates and shall be signed by the President and Secretary of this Association. The Council or the House of Delegates shall have authority to revoke the charter of any component society whose actions are in conflict with the letter or spirit of this Constitution and By-Laws.

SEC. 4. Only one component medical society shall be chartered in any county. Where more than one county society exists, friendly overtures and concessions shall be made, with the aid of the Councilor for the District if necessary, and all of the members brought into one organization. In case of failure to unite, an appeal may be made to the Council, which shall decide what action shall be taken.

SEC. 5. Each county society shall judge of the qualification of its own members, but, as such societies are the only portals to this Association and to the American Medical Association, every reputable and legally registered physician who

does not practice or claim to practice, nor lend his support to, any exclusive system of medicine, shall be eligible to membership. Before a charter is issued to any county society, full and ample notice and opportunity shall be given to every such physician in the county to become a member.

SEC. 6. Any physician who may feel aggrieved by the action of the society of his county in refusing him membership, or in suspending or expelling him shall have the right to appeal to the Council, and its decision shall be final.

SEC. 7. In hearing appeals the Council may admit oral or written evidence as in its judgment will best and most fairly present the facts, but in case of every appeal, both as a Board and as individual Councilors in district and county work, efforts at conciliation and compromise shall precede all such hearings.

SEC. 8. When a member in good standing in a component society moves to another county in this State, his name, on request, shall be transferred without cost to the roster of the county society into whose jurisdiction he moves.

SEC. 9. A physician living on or near a county line may hold his membership in that county society which is most convenient for him to attend, on permission of the society in whose jurisdiction he resides, and any physician residing in a county having no medical organization, may join a society in a neighboring county until his own county is organized.

SEC. 10. Each component society shall have general direction of the affairs of the profession in its county, and its influence shall be constantly exerted for bettering the scientific, moral and material condition of every physician in the county; and systematic efforts shall be made by each member, and by the society as a whole, to increase the membership until it embraces every qualified physician in the county.

SEC. 11. At some meeting in advance of the Annual Session of this Association, each county society shall elect a delegate or delegates to represent it in the House of Delegates of this Association, in the proportion of one delegate to each 25 members or fraction thereof, above 10, and the Secretary of the society shall send a list of such delegates to the Secretary of this Association, at least ten days before the Annual Sessions.

SEC. 12. *The Secretary of each component society shall keep a roster of its members and of the non-affiliated registered physicians of the county, in which shall be shown the full name, college and date of graduation, date of license to practice in this state, and such other information as may be deemed necessary. And furthermore he shall report each death in his district, as it occurs, to the Journal, and every two years a complete and official list of our honored dead shall be printed in its columns. In keeping such roster the secretary shall note any changes in the personnel by removal to or from the county, and in making his annual report he shall be certain to account for every physician who has lived in the county during the year. (Substitute for Sec. 12 below.)*

SEC. 12. The Secretary of each component society shall keep a roster of its members and of the non-affiliated registered physicians of the county, in which shall be shown the full name, address, college and date of graduation, date of

license to practice in this State, and such other information as may be deemed necessary. In keeping such roster the Secretary shall note any changes in the personnel of the profession by death, or by removal to or from the county, and in making his annual report he shall be certain to account for every physician who has lived in the county during the year.

SEC. 13. The Secretary of each component society shall forward its assessment, together with its roster of officers and members, list of delegates and list of non-affiliated physicians of the county to the Secretary of this Association each year thirty days before the Annual Session.

SEC. 14. Any county society which fails to pay its assessment, or make the report required, on or before April 1 in each year, shall be held as suspended, and none of its members or delegates shall be permitted to participate in any of the business or proceedings of the Association or of the House of Delegates until such requirements have been met.

CHAPTER X.—MISCELLANEOUS.

SECTION 1. *The President shall annually appoint an orator in medicine and an orator in surgery each of whom shall deliver a public address on the evening of the opening day of the next session.*

SEC. 2. No address or paper before the Association, except those of the President and orators, shall occupy more than twenty minutes in its delivery; and no member shall speak longer than a total of ten minutes, nor more than twice on any subject except by unanimous consent.

SEC. 3. All papers read before the Association or any of the Sections shall become its property. Each paper shall be deposited with the Secretary when read.

SEC. 4. The deliberations of this Association shall be governed by parliamentary usage as contained in Roberts' Rules of Order, when not in conflict with this Constitution and By-Laws.

SEC. 5. The Principles of Medical Ethics of the American Medical Association shall govern the conduct of members in their relations to each other and to the public.

CHAPTER XI.—AMENDMENTS.

These By-Laws may be amended at any Annual Session by a majority vote of the House of Delegates present at that session, after the amendment has laid on the table for one day.

Tincture all your thoughts with kindness, all your ambitions with helpfulness, all your acts with determination, if you would make a lasting impression upon your world, be it big or little; but remember that the possession of these virtues, and all others, can not save you from calumny if you insist upon doing your own thinking.—*Backbone.*

There is no bank account that can balance a sweet, gracious personality; no material wealth can match a sunny heart and an ability to radiate helpfulness and sweetness.—*Backbone.*

State News

STATE BOARD OF HEALTH.

We are indebted to Secretary Hugh Barbee for the following list of successful candidates for license to practice medicine in West Virginia. The last meeting of the board was held at Charleston July 13-15. Dr. J. L. Dickey of Wheeling was honored by election to the presidency of the Board, a position which the doctor will honor. Both the Board and the genial and accomplished doctor have our congratulations.

The next meeting will be held at Parkersburg November 9-11. Application must be made before November 1 and the fee of \$10 be deposited with the secretary. Applicants must present to the Board at time of examination a photograph with endorsements by physicians as to character of applicant. This is for the purpose of identification, as frauds have been perpetrated on the State Boards by applicants having other persons take the examinations in their stead. The secretary's address is Pt. Pleasant, W. Va.

Name, F. W. Jones; school of graduation, Medico Chirurgic; year of graduation, '09; school of practice, reg.; home address or previous location, Montgomery, W. Va.

A. E. Lamley, Medico Chirurgic, '09, reg., Blissfield, Mich.

M. D. Cook, Univ. of Louisville, '09, reg., Cyclone, W. Va.

H. M. Coleman, Univ. of Louisville, '09, reg., Alnwick, W. Va.

J. H. Wolverton, Univ. of Louisville, '09, reg., Piedmont, W. Va.

L. W. Deeds, Univ. of Louisville, '09, reg., Richwood, W. Va.

A. G. Bowles, Univ. of Louisville, '09, reg., Hamlin, W. Va.

W. R. Spencer, Univ. of Louisville, '09, reg., Barboursville, W. Va.

J. A. Morford, Univ. of Louisville, '09, reg., Spencer, W. Va.

W. A. Adams, Univ. of Louisville, '09, reg., Meadowville, W. Va.

I. S. Lilly, Univ. of Louisville, '09, reg., Camp Creek, W. Va.

C. X. Reger, Univ. of Louisville, '09, reg., Weston, W. Va.

A. L. Parsons, Univ. of Louisville, '09, reg., Ripley, W. Va.

E. A. Winter, Univ. of Louisville, '09, reg., McClahanan, W. Va.

A. B. Nelson, Univ. of Louisville, '07, reg., Sun, W. Va.

J. E. Corkrean, Ky. University, '09, reg., Richwood, W. Va.

J. E. Simmons, Ky. University, '09, reg., Linden, W. Va.

I. T. Fugate, Hosp. Col. Med., '08, reg., Gary, W. Va.

J. B. Dodrill, Col. P. & S. (Balt.), '09, reg., Birch River, W. Va.

A. M. Sorell, Col. P. & S. (Balt.), '07, reg., Matewan.

J. B. Grove, Col. P. & S. (Balt.), '09, reg., Petersburg.

A. E. Smith, Col. P. & S. (Balt.), '09, reg., Morgantown, W. Va.

R. D. Quillen, Col. P. & S. (Balt.), '09, reg., Lertart Falls, O.

W. Veenstra, Col. P. & S. (Balt.), '09, reg., Patterson, N. J.

V. Biddle, Col. P. & S. (Balt.), '09, reg., Athens, O.

E. G. Braddock, Col. P. & S. (Balt.), '09, reg., W. Liberty, Pa.

J. A. Riffe, Col. P. & S. (Balt.), '09, reg., Hinton, W. Va.

E. J. Grose, Col. P. & S. (Balt.), '09, reg., Lansing, W. Va.

H. O. Rohrbach, Col. P. & S. (Balt.), '09, reg., Monongah, W. Va.

W. J. Walker, Col. P. & S. (Balt.), '08, reg., Baltimore, Md.

L. W. Page, Ec. Med. Inst., '09, Ec., Rock Cave, W. Va.

A. C. Lambert, Ec. Med. Inst., '09, Ec., Wheeling, W. Va.

C. L. Tinker, Ec. Med. Inst., '09, Ec., W. Liberty, Pa.

D. O. Du Bose, Md. Med. Col., '09, reg., Athens, O.

U. Vermillion, Md. Med. Col., '09, reg., Athens, Ohio.

R. B. Page, Md. Med. Col., '05, reg., Hinton, W. Va.

S. W. Hill, Univ. of Md., '09, reg., Switchback, W. Va.

P. Hurdley, Univ. of Md., '09, reg., Beckley, W. Va.

W. J. Blake, Univ. of Md., '09, reg., Benwood, W. Va.

F. L. Banks, Med. Col. of Va., '09, reg., Raleigh, W. Va.

C. F. Shafer, Med. Col. of Va., '09, reg., Grafton, W. Va.

D. L. Coffindaffer, Med. Col. of Va., '09, reg., Jane Lew, W. Va.

A. B. McConagaha, Starling Med. Col., '09, reg., New Concord, O.

J. C. Anderson, Univ. Col. Med., '09, reg., Tomsburg, W. Va.

C. B. Kornis, Balt. Med. Col., '09, reg., Boswell, Pa.

W. W. Bucklew, Balt. Med. Col., '09, reg., Fellsville, W. Va.

C. A. Smith, Balt. Med. Col., '09, reg., Friendly, W. Va.

Norman Goad, Chicago Col. M. & S., '09, reg., Strange Creek, W. Va.

F. Stiltner, Tenn. Med. Col., '09, reg., Marytown, W. Va.

T. D. Sloan, Univ. of Va., '09, reg., Alderson, W. Va.

B. F. Iden, Univ. of Va., '09, reg., Manassas, Va.

F. P. Smith, Jefferson Med. Col., '09, reg., Fairmont, W. Va.

G. T. Faris, Jefferson Med. Col., '09, reg., Bridgeport, O.

F. M. Caldwell, Western Univ. Pa., '08, reg., Pittsburg, Pa.

B. L. Ramsey, West Penn. Med., '08, reg., Pittsburg, Pa.

N. L. Hoffman, Univ. of Pitts., '09, reg., Pittsburg, Pa.

N. F. Rock, Univ. of Pittsburg, '09, reg., Pittsburg, Pa.

T. V. Sullivan, Phil. Col. Osteop. '09, ost.,
Wheeling, W. Va.

R. U. Drinkard, John Hopkins M. C., '08, reg.,
New York, N. Y.

C. R. Wallace, Geo. Wash. Univ., '07, reg.,
Washington, D. C.

P. L. Leyda, Jefferson Med. Col., '09, reg.,
Cairo, W. Va.

Society Proceedings

AMERICAN PROCTOLOGIC SOCIETY.

Abstract of proceedings, eleventh annual meeting, Atlantic City, N. J., June 7 and 8, 1909.

The president, Dr. Geo. B. Evans, of Dayton, Ohio, in the chair.

Officers elected for the ensuing year:

President, Dwight H. Murray, M.D., Syracuse, N. Y.

Vice president, T. Chittenden Hill, M.D., Boston, Mass.

Secretary-treasurer, Lewis H. Adler, Jr., M.D., Philadelphia, Pa.

Executive council:

Geo. B. Evans, M.D., Dayton, Ohio, chairman.

Dwight H. Murray, M.D., Syracuse, N. Y.

Louis J. Hirschman, M.D., Detroit, Mich.

Lewis H. Adler, Jr., M.D., Philadelphia, Pa.

The place of meeting for 1910 is at St. Louis, Mo., Headquarters, Planters Hotel, June 6th and 7th, 1910.

The following were elected fellows of the society: Dr. Chas. S. Gilman, 419 Boylston St., Boston, Mass., Dr. Donley C. Hawley, Burlington, Vt., and Dr. Frank C. Yeomans, 19 E. 45th St., New York City, N. Y.

The following is an abstract of the principal papers read:

President's Address—"Progress in Proctology."

The president, Geo. B. Evans, A.M., M.D., Dayton, Ohio.

Who stated that not many years since the creation of proctology as a specialty was frowned upon; for an indefinite period what was known of and what was done for diseases of the rectum was largely empiric, and not due to special knowledge or scientific study.

A few of us, at least, can remember when it was the rule among general practitioners to make no special effort to determine the pathology of diseases of the rectum; in fact, it was believed unbecoming the dignity of a high-classed, high-toned medical gentlemen to so lightly esteem modesty as to ask for the privilege of seeking the naked truth. Without attempting to make a diagnosis, opium and lead wash, with catharsis, was deemed a sufficient treatment for any case. Little was taught in medical colleges of these diseases, for little was known and no special desire to learn much concerning them seemed to exist. But, fortunately, in the natural evolution of this specialty, this ignorance and indifference in the main, has been eliminated, and this field of work has assumed that of an accredited, and justifiable specialty. No longer do we have to contend with the non-recognition of serious pathology, because of interposed modesty, ignorance and criminal indifference. A knowledge of the importance of being able to diagnose and treat

intelligently diseases of the rectum is now considered essential for every general practitioner, and all this as a result of the creation of proctology by men who have made special effort to develop this field of work. The credit is due to such men as Adler, Allingham, Ball, Gripps, Edwards, Earle, Gant, Martin, Pennington, Kelsey, Matthews and others. To them are we indebted for progressive proctology.

As a matter of course, our pathology of this area is of necessity a modern pathology, and our knowledge of valves, varicosities, neoplasms, ulcerations and suppurations, are not based on hypothetical ideas of a quarter of a century since, but instead on the rather exact revelations of laboratory findings. The import of the presence of staphylococci, gonococci, colon bacilli and tubercle bacilli, is equally as much importance to the rectal surgeon, as is the microscopical proof of the malignancy or benignity of a bit of tissue. With what greater assurance the proctologist approaches examinations of rectal diseases than did the physician of some years since. With a wide open field, if necessary, the aid of anesthesia, the protoscope and the laboratory, there is usually not much difficulty in making a diagnosis—a diagnosis inseparably linked with its dependents—treatment and prognosis. Under the influence of progressive proctologic work, ignorance and indifference to the recognition and treatment of rectal diseases is rapidly disappearing from the average medical man, as well as from the average layman. As a result of which the sum total of human suffering is immeasurably lessened, and individual existence is not so frequently abridged. The victims of rectal diseases are to be congratulated that this branch of science, or pseudo-science, has sufficiently advanced, that it now occupies the serious attention of the most progressive and intelligent men. The Lister methods of that day have been so changed and improved that they now seem very crude. The value of thorough cleanliness, asepsis, and the antiseptic influence of certain drugs, is of immeasurable value. It is now understood that the recto-anal area can be placed in a surgically clean condition, and that there need be no fear following operative interference. In not a few instances, it obtains that relief is dependent on rectal surgery; when the subjects are unfit for narcosis produced from a general anesthetic, in cases of cardiac, pulmonic or nephritic disease, making it hazardous to use general anesthesia. Sometimes it would seem that this danger of the uses of an anesthetic is too lightly thought of, and consequently, the mortality rate is increased. Local anesthesia, under cocaine infiltration, for the most part, is satisfactory, and is a great convenience to the operator and a life-saving narcosis in many instances.

The palliative treatment of hemorrhoids by proctologists is largely a matter of enforcement, viz.: where they are not permitted the opportunity to relieve by radical methods. The operative methods of removing hemorrhoids are so well understood, simple and effective, that it is foolish to attempt to relieve them by drugs or palliative measures.

The Allingham, or ligature method, when correctly and carefully performed, is generally applicable, but is not so free from pain and so quickly convalesced from as the clamp and cau-

tery method. Many regard the last mentioned method as the one to be preferred. I believe, however, that the enucleation method approaches nearest to the ideal in results, and that the retention of the plug is not so painful as some would have us believe.

Protoscopic examination is of importance, and is a distinct advance in rectal work. It is of great assistance in determining disease beyond discovery by ordinary methods. It is of distinct service in diagnosis, and of great value in aiding treatment in not a few conditions.

There is more hope for the ultimate cure of tubercular conditions; our better understanding of what environment means to these people will go far toward helping them to recovery, and there is not so much reason for a delayed recognition of the condition, which is of paramount importance.

I believe there is possibly a better understanding of syphilitic conditions, ulcerations, infiltrations and strictures, but the eternal dependence on anti-syphilitic treatment to resolve hyperplastic tissue is not so conspicuous, and progressive workers in this field realize that incision and excision are often necessary.

Concerning malignant and benign growths, the surgical rules that apply in other anatomical regions apply here. Early discovery and early removal is the only hope, as we all know, in malignant conditions, and as an advance, the removal of cancerous growths not within easy reach from below may be dealt with from above, or supra-pubically, and just here it may not be inopportune to remark that it is to be believed that ere long it will be realized by the average physician that the removal of the rectum per se, is not as disastrous a matter as it is sometimes made to appear, especially since it is known that muscular transplantation will preserve more or less perfectly the function of the sphincters. The development of the technic essential to produce sphincteric power, will relieve rectal extirpation of one of its most unpleasant features and render less hesitant many sufferers who should have the benefit of the operation.

Another matter of progressive interest is that colonic or rectal ptosis is amenable to intra-pelvic or intra-abdominal fixation, bringing relief that in some instances cannot be hoped for by any other method of interference.

After all, the most encouraging sign is that the profession recognizes the fact that proctologists have a legitimate right to exist as specialists, and that diseases in the ano-rectal region deserve the same consideration as elsewhere. With the elimination of difference, estheticism, modesty, the more universal belief in the necessity of early examination and diagnosis, we can but hope for greater progress and more relief to suffering humanity.

Gentlemen, when I consider the personnel of this Association, I am quite confident of the perpetuity of proctology as a distinct entity and am equally sure the progression in this special field of work will be in keeping with that in other specialties. *"A Review of Proctologic Literature From May 1908 to May 1909."*

By Samuel T. Earle, M.D., Baltimore, Md.

Among the interesting conditions referred to in the review by the author, were the following:

"Congenital Idiopathic Dilatation of the Colon" (Hirschsprung's Disease). In Dr. Finley's report of his case he reviewed the literature of the subject to January 1st, 1908, and collected some two hundred and six cases, after which he stated that while to Hirschprung belongs the credit of having first called attention to this disease, a number of cases had been found in the literature antedating his classical description. In the article Dr. Finley discussed the various hypotheses as to the etiology of the disease and some ten theories, which have been suggested from time to time, as the causation of the malady, including that of hypernutrition, which was the author's principal theory. His conclusions as to the etiology of the disease were that no one theory apparently explained every case; that each one explains some.

The symptomatology was described and a complete clinical picture of the disease given with a list of a series of cases discussed in the Johns Hopkins Hospital, eleven in all. Regarding the treatment, the author concludes that no one plan seems applicable to all cases and suggests the method employed in his own case as perhaps the one most applicable to the large proportion of cases, to-wit—a preliminary enterostomy; then a colo-colostomy some months subsequently; finally a complete excision of the affected portion. This artificial anus is left open until after the success of the proceeding steps are assured when it should be closed under cocaine anesthesia.

Dr. Earle in his report alluded to another case of "*Idiopathic Dilatation of the Rectum and Colon as far as the Hepatic Flexure*", which was reported by H. Morely Fletcher, M.D., and H. Betham Robinson, M. S.* (*Clinical Society's Transactions, Vol. XL, p. 80.)

Another case of interest reported was that of a "*Sarcoma of the Rectum in a boy*" aged ten years by Cecil Romntree.* (*Proceedings Royal Society of Medicine, February, 1908.) The pathological examination showed the tumor to be a mixed cell sarcoma. Of five hundred and ninety-six cases analyzed in the Cancer Research Laboratory, of the Middlesex Hospital Reports, there were only six cases under thirty years of age,—the age of the youngest, a boy of sixteen years, who had a sarcoma of the rectum. There are likely to be many metastases in sarcoma of the rectum. This malady is rare at any age.

Attention was called to the method of Dr. Dudley Roberts, of Brooklyn, N. Y.* (*The Medical Record, Vol. 72, p. 985.) for "*Gradual Painless Dilatation of the Anal Canal by Dilatable Rubber Bags*", which appealed to Dr. Earle forcibly as a very satisfactory means of accomplishing the purpose designed.

Attention was called to the article of Dr. Charles O. Files, of Portland, Maine,* (*New York Medical Journal, Vol. 87, p. 1154), in which he considers that there are two important factors that should be studied in connection with the "*Treatment of Pruritus Ani*". These are an analysis of the contents of the rectum and the physical condition and mechanical efficiency of the sphincter ani muscles,—external and internal.

The normal feces contains about 75% of water. This water holds in solution various volatile, fatty acids, and probably other irritating excrementitious substances. During the retention of the feces in the rectum a considerable portion

of the water disappears. In prolonged constipation, the feces become hard and dry, some of the fluid passes by osmosis into the cellular tissue about the anus and thence to the skin. The liquid feces are very often irritating to the mucous membrane of the anus, and causes an intense burning sensation. When this acrid solution is absorbed into the cellular tissue, it causes an irritation of the skin, and we call that irritation, *pruritus ani*.

The sphincter muscle as long as it remains in a normal condition prevents the passage of any appreciable amount of fluid through it. When, however, the action of the sphincter is made somewhat irregular by the pressure of a hemorrhoidal condition some of the fluid leaks through the anus and causes *pruritus* by direct contact. The skin about the anus is often found to be moist in persons having hemorrhoids.

Dr. F. W. Dudley, of Manila, P. I.,* (*Journal of American Medical Association, Vol. 51, p. 991), reports a "New Bloodless Method of Amputating the Anus and Rectum". A description of the same being given.

Dr. W. Ernest Miles,* (*London Lancet, 1908, Vol. 2, p. 1812), reviews the "*Perineal Excision for Carcinoma of the Rectum, and of the Pelvic Colon*" and states that so far as he has been able to gather from the literature on the subject, the technic of previous operations seems to have failed in one important respect, namely, the complete eradication of the zone of upward spread of cancer from the rectum, whereby the chance of recurrence of the disease above the field of operation can be distinguished, if not entirely obviated. In his personal experience of fifty-seven such perineal operations, he found that recurrences took place in periods from six months to three years in fifty-four instances.

In order to ascertain the cause of his failures he made a post-mortem examination of such of his patients who died and found that recurrence appeared in situations that were beyond the scope of removal from the peritoneum, namely: (a) the pelvic peritoneum; (b) the pelvic mesocolon; and (c) the lymph nodes situated over the bifurcation of the left common iliac artery. He considers that this area constitutes the zone of the upward spread of cancer of the rectum, the removal of which is just as imperative, as is the thorough clearance of the axilla in cases of cancer of the breast, if freedom from recurrence is to be obtained.

The appreciation of this important fact, induced him two years ago, to abandon the perineal methods of excision of the rectum and to substitute, therefor, an abdominal method, comparable to those methods of performing abdominal hysterectomy known as the Wertheim and the Kronig-Wertheim. He then gives the technic of his operation in full, and has formulated what he considers certain essentials, which must be strictly adhered to, if satisfactory results are to be obtained, namely: (1) that an abdominal anus is a necessity; (2) that the whole of the pelvic colon, with the exception of the part from which the colostomy is made, must be removed because its blood supply is contained in the zone of the upward spread; (3) that the whole of the pelvic mesocolon below the point where it crosses the common iliac artery, together with a strip of

peritoneum, at least an inch wide on either side of it, must be cleared away; (4) that the group of lymph nodes situated over the bifurcation of the common iliac artery are in all instances to be removed; and lastly (5) that the peritoneal portion of the operation should be carried out as widely as possible, so that the lateral and downward zones of spread may be effectively extirpated.

B. G. A. Moyinham, M.D., Leeds, Eng.,* (*Surgery, Gynecology and Obstetrics, 1908, Vol. 6, p. 463), calls special attention to the "*Frequent Recurrences After Removal of Carcinoma from the Upper Rectum and Sigmoid*", and also for the necessity of inguinal colostomy on account of the sacrifice of a large portion of the bowel in perhaps a large majority of cases.

TREATMENT OF PRURITUS ANI, WITH A CONSIDERATION OF ITS PATHOLOGY AND ETIOLOGY.

(By William M. Beach, A.M., M.D., of Pittsburgh, Penna.)

The following conclusions were drawn by the writer:

1. That *pruritus ani* occurs in mild and severe forms; mostly in middle life; the mild type with simple *pruritus*, the severe type with marked eczema and skin changes.
2. Certain aberrations in general metabolism, or in adjacent structures are simply incidental and should be considered as complications.
3. Intra-rectal growths, as hemorrhoids, adenomas, etc., or the presence of parasites are contributory.
4. The distinct pathogenesis of *pruritus ani* consists of single or multiple burrowing from the anal pockets, emitting a serous or sero-purulent substance, which sinus may be complete or blind and is always accompanied by proctitis, and frequently by cryptitis, and small ulcers at the ano-rectal line.
5. These sinuses when complete are the sequelae to an abscess history, but the origin of the blind recesses is in doubt, and yet it is not unlikely due to an infection by the colon bacillus.
6. The treatment is surgical for the purpose of obliterating the sinuses, correcting a rigid sphincter when necessary, and curing the proctitis and ulceration.
7. Gastro-intestinal and general metabolic disturbances must be met by rational measures.

OHIO COUNTY SOCIETY.

March 27th, 1909.

(28 present.) Dr. G. L. Vieweg lectured on "Congenital Diseases of the Heart". Dr. Linsz discussed the lecture, reporting a case of displacement of the heart of an infant, a monstrosity, having one eye in the center, no nose, no external genitals, and having the heart and the liver in the lower abdomen. Dr. Osburn reported the case of a blue baby born in a tubercular family, being the fourth baby to die of tuberculosis; one living child of four years is very tubercular. The baby reported was premature and lived seventeen days. He reported another case of a baby born at full term and strong; it became very pale

the first day, lost in flesh and died suddenly at two weeks. Dr. Taylor has seen quite a large number of cases of blue baby, one living to the age of 14 years. He has sometimes thought that the giving of ergot in large doses before delivery may have an influence in producing cyanosis. Dr. Wingerter said that in view of the statistics showing that an open ductus arteriosus can exist without symptoms during life, and showing likewise that an open foramen ovale is found in fifty per cent of autopsies, he thought it plain that the cyanosis of blue babies must be due to some other cause than either of these two conditions alone. Dr. Hersey said that he deemed hypertrophy of the thymus responsible for a great number of premature births. The thymus extends in the mediastinum on a pedicle and may cause pressure on the aorta. Most still-births are due to thymic intoxication; in these cases the osseous system will be found to be prematurely developed. Dr. Vieweg reported the case of a woman operated on, from whom the appendix was removed one ovary likewise, and a curettement done. After operation the temperature rose gradually, the patient became cyanotic and pulseless and died remaining conscious till the end. Acute dilatation of the heart was given as the cause of death. Dr. Ackermann thinks the patient died of dry peritonitis, basing his view on the gradual rise of temperature, and the clear sensorium; the cyanosis was due to stasis. Dr. Noome noted that Murphy advises against reopening the abdominal cavity unless we can be satisfied that it contains fluid under pressure. He would be inclined to look below the diaphragm for the cause of death, although the fall of temperature reported, seems to speak against this view. A high degree of hemolysis would account for the cyanosis. Dr. Vieweg noted that though no heart murmur was detected before operation, one was present afterwards. Dr. Schwinn said that it is important to know what happens in the chest cavity after operation. Careful observers have concluded that at least 50 per cent of abdominal cases show changes in the thoracic organs after operation; these are explained by embolic processes. We must watch the heart and lungs after operation. The fever generally ascribed to the abdominal wound is often due to thoracic causes. Dr. Nichols reported a case of tubal pregnancy of the right side, with ruptured tube one month after conception. The patient was operated on for a tubal pregnancy of the left side four years ago, and has a child four months old. A very severe pain was followed by a rise of temperature the next day; operation was done two weeks later; menses appeared two weeks after the pain also. The patient made a fine recovery. Dr. Ackermann reported a case of tubal pregnancy operated upon two weeks ago, leaving the hospital today. Five weeks ago there was a very severe pain, followed seventeen days ago by a second attack. The patient was very pale, with no vomiting nor pain. When the abdomen was opened the peritoneum was very pale, and the abdomen contained an immense quantity of blood extending to the liver. He reported also a crural hernia of the right side in which a large fluctuating tumor was incarcerated for six days, no vomiting was present. The sac was opened and an inflamed appendix peeped out,

which was excised through the femoral opening. He reported a case of large intra-ligamentous cyst in which the womb formed the anterior wall of the cyst. He closed the opening left after removal of the cyst by making a spiral purse-string suture beginning at the body of the cavity and ascending. On the same patient operation was performed for a complete perineal tear, the mucous membrane of the upper vagina being used to reform the anterior wall of the rectum.

CHAS. A. WINGERTER, *Secretary.*

March 1st, 1909.

(32 present). Dr. Ackermann presented a clinical case of radical operation for mastoid disease, explaining the method, difficulties and advantages of the operation. In the case exhibited, six weeks only after operation, epidermization of the cavity to his use of "scarlet-red." Dr. Spragg then lectured on the "Symptoms and Diagnosis of Myocarditis." Dr. Hildreth, discussing the lecture, said that diagnosis depends more upon a study of the general condition of the patient than it does upon ordinary physical diagnosis. He reported the conditions in two cases of myocarditis now under his observation; both are benefited by frequent doses of magnesium sulphate. Dr. Schwinn said that there are changes taking place in the heart muscle in exophthalmic goitre which make surgical interference advisable in good time. In the beginning is the time to operate in these cases. In his experience there is not much pain in myocarditis. Cheyne-Stokes symptom is found in many conditions beside myocardial involvement. He described a form of abnormal breathing characterized by respiration of normal depth, and regular for about fifteen respirations, with a pause following for about one minute, and then the regular breathing again. The treatment in myocardial disease is to lessen the heart's work; salines, diet and rest are invaluable. He outlined Oertel's treatment. Dr. McClellan—visitor—said that in many cases of myocarditis there may be discomfort that is not painful. Over-feeding and over-exertion are causes that often accentuate the "misery." Calomel helps in these cases. Dr. Hildreth II. noted that hyaline casts may be due to congestion of the kidney only, and not be inflammatory. Compound jalap powder will often give great relief in myocarditis. Dr. Jepson said that he had never seen a pure and simple case of myocarditis alone. He discussed the condition of the heart in Graves' disease, and outlined his results with hydrobromate of quinine. Dr. Ackermann thinks that muscular diseases of the heart are very frequent, being more often present than valvular diseases. Many valvular troubles follow from muscular disease. Disease of the heart muscle is becoming more frequent because of the strain of modern life. Exophthalmic goitre is on the increase and is now very frequent. Valvular disease of the heart needs no treatment unless compensation is lost, and this means involvement of the heart muscle. Dr. Gaydosh noted the very close relation between endocarditis and myocarditis. Dr. Wingerter said that if the internist is to turn his cases of exophthalmic goitre over to the surgeon he may rightly demand that the lat-

ter bear in mind the danger of operation in this form of goitre. The advent of the hour for operation may bring on so great a state of hyperthyroidism as to cause death. The operative procedure is trivial in itself; everything depends upon the mental attitude of the patient, and his fate is sealed before the operator makes his first incision. Dr. Crile's method of "stealing the gland" was described. Concerning the disease itself we must remember that there are two well-marked stages; the first where there is over-activity of the center producing the hyperthyroidism and the consequent symptoms, and a second stage, terminal, in which these centers are exhausted. In the first stage the iodides and thyroid extract do harm, while in the second stage they help. If we would reconcile the apparent inconsistency in the results with drugs we must keep these two stages in mind. The proper procedure would seem to be to give intelligent treatment with drugs a fair trial and then turn the case over to a surgeon who realizes the responsibility of avoiding pre-operative excitement. Dr. Schwinn said that the personality of the surgeon counts for much in quieting the patient before operation. The danger is in the heart, and when death follows it is due to the heart. Do not let the heart go too long. Dr. Jepson noted that there are two kinds of exophthalmic goitre, primary and secondary. The latter is the milder form. Hydrobromide of quinine has been reported by two Boston physicians as curing eighty per cent. He had used it in one case with marked improvement, especially in quieting the heart. Dr. Noome said that too often the surgeon gets the neglected cases of exophthalmic goitre. Psychic shock must be reckoned with in these cases. Dr. Osburn said that he did not approve entirely of the methods of Crile in the handling of these cases.

CHAS. A. WINGERTER, *Sec'y.*

March 8th, 1909.

(26 present). Dr. Gaydosh lectured on "Cardiac Neuroses." Dr. Abercrombie said he thinks that cerebral function has much to do with cardiac neuroses. He reported a case bearing on his point, and said that if we can influence patients favorably on the mental plane it may tide them over some of these periods. Dr. Osburn has never been able to feel satisfied concerning the real cause of tachycardia. He reported cases. Dr. Ackermann gave a personal experience with paroxysmal tachycardia, due to the use of coffee. There are various causes of tachycardia. He has seen many cases of bradycardia; it is normal in some patients. He reported a case with a pulse-rate of eighteen. Nervous tachycardia, due to toxins, disappears on removal of the cause. Dr. Wingarter advanced the notion that tachycardia may be at times a process strictly within physiological limits. He rehearsed many of the factors of safety which nature has cast about the organism. In every part of the economy she shows a great fund of reserve material, energy and method. Many processes are not called into action except in emergencies; why may not a tachycardia be a reserve method brought into play to exercise a heart that is not getting the requisite action? Dr. Schwinn said that in tachy-

cardia we have a rapid pulse, and a patient who is really ill and a dilated heart during the attack; the trouble may attack people who are in full health; it stops quickly. The heart works best at 72 beats a minute; an increase is due to shortening of the diastole; in tachycardia the heart is less nourished; he thinks that tachycardia is pathological. Dr. Benton said that many cardiac neuroses are simply expressions of auto-toxicosis. He finds that psychic treatment is helpful in cases of bradycardia and tachycardia. Dr. Quimby noted that Crile has shown that when the heart rate is increased the pressure is lessened. Strychnine slows the heart by increasing tension in the splanenic region, digitalis by constricting the arteries; belladonna dilates the capillaries. Functional disturbances are manifested in interference with chemical metabolism. Dr. L. D. Wilson said that in tachycardia a good dose of morphine will often relieve; its causes are varied. If tachycardia were in any wise physiological we would see it oftener. Emotion will often produce palpitation and cardiac weakness. Dr. Spragg noted that we often find the cause of bradycardia in cigarette smoking. Dr. Osburn noted that the latest authorities teach that the coronaries fill during diastole. Dr. Gillespy noted that the heart gets its nourishment from the terminal capillaries during diastole; the coronary vessels are filled during systole; the veins empty during systole. Dr. Noome stated that a tachycardia is a neurosis. A rapid heart will wear out. He is loth to think that a neurosis can produce dilation of the heart.

Dr. A. Wilson announced that the health office laboratory is now prepared to make the Widal reaction test, and he invited the profession to avail themselves of this means of diagnosis. Dr. Gaydosh, in closing, noted that tachycardia is due to exhaustion of the pneumogastric center.

CHAS. A. WINGERTER, *Sec'y.*

April 19, 1909 (25 present). Dr. McLain lectured on "The Production of Certified Milk." Dr. Hupp recounted the status of the question of the transmission of bovine tuberculosis to human beings as brought out in the International Tuberculosis Congress recently in Washington; and he took the ground that while practitioners are awaiting a final authoritative answer to the question, they should stay on the safe side. Dr. Osburn thinks much unneeded financial loss has been entailed in consequence of the belief that bovine tuberculosis can be transmitted to mankind. The cow is a difficult animal to keep clean. Fermented food is bad for cows, and pure water is important for them. Dr. Andrew Wilson said that the cows hereabouts are generally in good condition. He discussed the value of various foods and the methods of stable-building. Dr. Gaydosh paid a tribute to the Health Department of the city. Dr. Hupp noted that the veterinarian inspectors of the county were high-grade men. Dr. Baird said that we should all be grateful to the Health Department for its part in providing good milk for the children. Dr. Linsz asserted that Wheeling is today getting purer milk than are the large cities. Dr. Wingarter discussed the paper, and Dr. L. D. Wilson said that he is in favor of clean milk and of everything clean.

Prof. Koch has been misrepresented. In 1901 all he said was that bovine tuberculosis is so rare that it might be disregarded in the discussion for the control of human tuberculosis. It is hard to believe that the bovine type of the disease is very communicable in view of the rarity with which it is found in the human being. Concerning milk the gist of the problem lies in the destruction of the bacilli of fermentation; these are the real enemies to be conquered. Dr. Andrew Wilson said that an important feature of the paper was the suggestion that measures be taken to provide certified milk to the babies whose parents are too poor to buy it. He told how this matter is cared for in Rochester, N. Y., and made a plea for a like provision in this city. Dr. Barnett said that his experience had satisfied him that babies may safely nurse from the breast of a tuberculous mother if proper precautions are taken. Dr. McLain noted that in Wheeling the Certified Milk Commission is a body entirely distinct from the Health Department, although their personalities overlap.

CHAS. A. WINGERTER, Secretary.

Reviews

THE OPHTHALMIC YEAR BOOK, VOL. VI.
(The Herrick Book & Stationery Co., Denver, Col., 1909.)

This Year Book was prepared and published by Drs. Edw. Jackson of Denver, Geo. E. De Schweinitz and Theo. B. Schmideman of Philadelphia, in the belief that everyone claiming fitness to practice ophthalmology should have at his command the more recent advances in this department of medical science. As it gives a detailed and comprehensive resume of what has been published on the pathology and treatment of eye diseases during the past year, and also touches upon the newest discoveries in general medicine as applied to the eye, its perusal is of interest not only to the specialist, but to the general practitioner as well.

From the mass of interesting material the following may be especially noted:

The Ophthalmo-Reaction to Tuberculosis has been extensively considered during the year. The literature gives reason for but little alteration of the estimate of the value of this test arrived at previously. With regard to the significance of the reaction, none claim that it is absolutely reliable, while none deny that it gives a probable indication of an active or healed tubercular process somewhere within the body.

In the treatment of *Cornel Ulcers* attention has been especially directed towards the different forms of bacteria found in this region, and the best means for their destruction. Better than the many other kinds of cauterization, Barozzi lauds a one per cent solution of perchloride of mercury as almost a specific, he having failed only in such cases where treatment was delayed until the vitreous had suppurated. The cauteriza-

tion leaves very little scar. Serum-treatment has also been used in this disease, but reports are still conflicting as to its merits.

That *Parenchymatous Keratitis*, when—as usual—caused by hereditary syphilis, is primary, i. e., the corneal disease is the direct result of the general infection, is the contention of von Hippel. While some investigators have attributed the Keratitis to the action of toxins, Prof. von Hippel has for the first time found the spircheta pallida in the human cornea, namely that of a syphilitic foetus. The small percentage of cases of parenchymatous keratitis caused by other agencies, as tuberculosis or trauma, has occupied the attention of several writers, and a few more cases due to acquired syphilis have been added to those previously reported.

Several recent writers on *Iritis* believe that gonorrhoea is much more frequently the cause of this disease, even many years after infection, than is generally admitted; that gout is seldom a cause, and rheumatoid iritis doubtful. Many cases in men ascribed to rheumatism are declared in reality to be due to a long past gonorrhoea.

Sympathetic Ophthalmia has been the subject of a good deal of experimental investigation during the year. According to our present knowledge both the migration and the ciliary nerve theory are untenable. The third possible manner of transmission, namely by way of the blood, originally announced by Berlin, has been especially elaborated by the beautiful work of Romer, and gives the most satisfactory explanation of phenomena of sympathetic ophthalmia.

The above will suffice to give an idea of the usefulness of this year book. G. A. A.

BIER'S HYPEREMIC TREATMENT IN SURGERY, MEDICINE AND ALL THE SPECIALTIES: A MANUAL OF ITS PRACTICAL APPLICATION. By WILLY MEYER, M. D., Professor of Surgery at the New York Post-Graduate Medical School and Hospital; and Professor D. Victor Schmieden, Assistant to Professor Bier at Berlin University, Germany. Second Revised Edition. Octavo of 280 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1909. Cloth, \$3.00 net.

This is in many respects a queer book. The fact that a second edition so soon follows the first is convincing testimony to its popularity with the profession. As an example of bookmaking, its like is not met with every day. As an exposition of the principles and methods of what is known as hyperemic treatment, it is lucid and thorough. The text is supplemented by a profusion of illustrations, which literally leave nothing whatever to the imagination. The range of applicability of the hyperemic method is much wider than one unacquainted with it would suppose. The book opens with chapters on the advantages, methods of inducing and general rules for the application of hyperemia. Then follow those on treatment of special diseases. In the domain of surgery it may be applied to traumatism, inflammations, acute infections, abscesses, joint affections, to mention just a few. In general medicine it is applicable to acute rheumatism,

cerebrospinal meningitis, diphtheria, tuberculosis and even sea-sickness. It also has its uses in gynecology and obstetrics, genito-urinary surgery, otology, ophthalmology, rhinology, pharyngology, laryngology, neurology and dermatology. The danger of including too much in its scope of usefulness does not seem to have insinuated itself into the minds of the authors. There is no doubt that the method is of great value in many conditions, and it is equally obvious that it should be used with care and judgment. The reader will find sufficiently clear and ample instructions for its employment, and all needed cautions against its abuse. The optimistic atmosphere of the work, unless tempered by judicious conservatism, would lead one to expect too much from the method, and many times be productive of disappointment. Of the 280 pages, 215 are of text, carrying 103 illustrations. These are clear and well printed, thanks to the very heavy paper used, but a large number of them are superfluous. There are 46 pages of bibliography—think of it!—and an index of authors, in double column, taking up six pages more. The authors would seem to regard this as an especially important feature of the work, for they say, "While they believe it is fairly thorough, they are aware that it is not complete. Perhaps authors whose articles have been inadvertently overlooked will be good enough to inform either of the writers of the omission, so that it can be made good in a third edition." So, step up, gentlemen, and secure your places in the third edition—unless you think, with the reviewer, that 52 pages of this sort of thing is enough, in all conscience, for inclusion in a book of this size and kind. This is one of the whys we, in the beginning, styled this a queer book. L. D. W.

PRINCIPLES OF PHARMACY: By Henry V. Army, Ph. G., Ph. D.; octavo; cloth; 1175 pages; 246 illustrations. Philadelphia and London: W. B. Saunders Company, 1909. Cloth, \$5.00.

The author has prepared a very creditable book based largely upon the United States Pharmacopoeia.

Prof. Army says of his book that "the frank intention of this book is to explain the Pharmacopoeia from a Pharmaceutical standpoint, and if that standard says that a certain chemical is a dextrogyrate ketone, or that a certain drug is a 'sclerotium,' the writer believes that the average student should be able to learn what such terms mean without having to search through a dozen books."

The book contains a number of good features, such as the discussion of the arithmetic of pharmacy and the exercises in chemical arithmetic.

Some of the chemical explanations are very well stated, but we think the so-called average student would find the definition as well as the graphic formula for camphor a little difficult to comprehend, provided he had had no previous chemical training in organic chemistry.

The book consists of seven parts:

Part I. deals with pharmaceutical processes, all of which are fully illustrated.

Part II. deals with galenical preparations of the pharmacopoeia and those unofficials worthy of notice.

Part III. takes up the inorganic chemicals used in pharmacy.

Part IV. discusses the organic chemicals used in pharmacy.

Part V. presents a systematic grouping of all the chemical tests of the pharmacopoeia.

Part VI. discusses the prescription from the time it is written until it is dispensed.

Part VII. is devoted to laboratory work.

Prof. Army's book covers these subjects in a very thorough manner.

It may be useful as a text book or as a book of reference not only to the student in pharmacy or medicine, but to the busy practitioner as well.

The publishers have given the book a plain and neat binding, well in keeping with the substantial character of its contents. G. J. C.

Medical Outlook

THE PRACTICAL USES OF ACID MILK.

By J. Madison Taylor, A. B., M. D., in Dietetics.

It is interesting to observe how in medicine, as in other branches of human economics opinions veer about until, in the fullness of time and through confirmations by experience, practical conclusions are reached. Scientific tests are applied finally to these accumulations of evidence and knowledge becomes precise. These scientific finalities tend more and more to simplifications, which make for formulations of principles along lines consonant with natural and familiar facts. Nature supplies us not only with abundant inherent powers which, if economically administered, are able to serve all purposes, but also with remedies ready to hand for the commoner disturbances of function. In the realm of dietetics we have suffered violent throes, yet, guided by enthusiastic pioneers and aided by the really splendid findings of physiologic chemistry, we shall hope to achieve ultimate wisdom.

As an illustration of how each one of us can learn truths from accidental experience let me cite my own in respect to acid milk. During my neurologic service at the Howard Hospital, about twenty-five years ago, there were referred to me a large number of poor old bodies, mostly "retired" servant girls, subsisting during their declining years on their little savings, and wretchedly enough, too. They complained uniformly of "nervousness," compounded of monotony, loneliness, evaporated hopes and shreds of divers bodily ailments. Their diet, of necessity, was scanty, consisting chiefly of "bread and tea." Actuated chiefly by considerations of dietetic economy, I urged them to buy buttermilk, which in those days was readily procurable at a cost of 5 cents a quart. (Now commercial "buttermilk" is usually skim milk acidulated by a "starter.") It was a matter of astonishment to myself and my assistants what satisfactory and uniform improvements followed the use of this cheap food, no matter what other and profoundly scientific "treatment" was instituted also.

Remarkable were the enhancements of vigor, muscular strength, mental alertness, sweetening

of disposition which followed the use of this simple and fortuitous device. The powers of sleep, digestion, innervation, defecation and general elimination all notably improved. The roses of youth in many instances came back to cheeks long withered; wrinkles disappeared; capacity for enjoyment, for work—long dormant—returned, and many voluble blessings were heaped upon my head.

These effects were attributed at the time to the ready digestibility and sustaining powers of the milk proteins and to vaguely understood diuretic and laxative effects.

In several cases of typhoid fever among the poor I also used buttermilk as the sole diet, and never before or since had better results.

It is now common knowledge that lactic acid milk is a valuable aliment wherever there is present acute or protracted derangement of digestion, especially the intestinal form. Further, it has now been shown that we can reach and correct many of the fundamental causes of that whole group of disorders known as errors of subcatabolism if we can restore normality to the functions of the intestines.

THE GERMICIDE ACTION OF COW'S MILK.

We have on a number of occasions called attention to the important researches all along this line. In the latest contribution to the *Journal of Infectious Diseases* of December 18, 1908, Heine- man and Glenn reach the following summary and conclusions:

1. The decrease of bacteria in fresh cow's milk is more decided if fairly large numbers are inoculated than if small numbers only are present.

2. The relative increase of bacteria in milk is more pronounced in milk heated to 75° C. or 100° C. than in raw milk or in milk heated to 56° C.

3. The difference in the relative decrease in numbers of bacteria in milk moderately shaken and vigorously shaken is not marked, if this shaking is done by hand. Some difference was observed, however, and this difference might be more pronounced if the milk were shaken more violently.

4. Some species occurring naturally in milk decrease considerably in numbers during the first four or five hours, some decrease slightly, some hold their own or even increase.

5. Milk inoculated with pure cultures of bacteria seems to restrain to a marked degree the multiplication of these bacteria for several hours at 37° C., and for a somewhat longer period at room temperature, excepting in the case of strept. lacticus, which increases from the beginning, although it may be inhibited to some extent.

6. Heating milk to 56° C. for thirty minutes does not entirely destroy the power to restrain the multiplication of bacteria; this power is weakened, however, and at 75° C. is destroyed completely. This fact, together with the fact that milk serum agglutinates some species of bacteria

in vitro to a marked degree, seems to favor the assumption that agglutinins are in part responsible for the apparent decrease of bacteria in fresh milk, since bactericidal substances are destroyed by heating to 56° C. for thirty minutes.

7. The agglutination of certain bacteria in milk serum seems to bear some relation to the apparent decrease in numbers of bacteria observed in fresh milk, but this is probably not the only factor causing such reduction.—*Ther. Gazette*.

CONSERVATISM IN SURGERY.—J. E. Moore, Minneapolis (*Journal A. M. A.*, March 20), objects to conservatism as out of date in surgery, but thinks it is still too much in evidence. Some cases of empyema are still being treated medically or with the aspirator; tumors of the breast are often neglected, in spite of the fact that 80 per cent. of them are malignant; appendicitis is still being trifled with and typhoid and other intestinal perforations are commonly neglected till the last chance is lost. When conservatism was the rule the mortality rate from bowel obstruction was 95 per cent.; this has been reduced to 45 per cent. by progressive surgeons and could be still further reduced if the habit of waiting could be overcome. In female pelvic diseases the radicals long since replaced the conservatives, and are now being themselves, gradually but surely, displaced by the progressive surgeons. Prostatectomy is not yet on a proper footing, and many patients with gallstones are still being treated for dyspepsia. While the cause of cancer is still unknown, we know that the mortality rate, except in a few superficial cases, is 100 per cent., when treated conservatively. We also know that surgery does save a certain percentage with early diagnosis and operation; the cases in which relief is given by the x-ray, radium and caustics do not justify dependence on these agents in cases of extensive malignancy. In at least 75 per cent. of the cases of bone and joint tuberculosis the tendency is toward self-limitation of the disease and ultimate recovery and deformity, and here the conservative aids Nature and relieves suffering and prevents deformity by mechanical appliances. Still he often fails to obtain the best results by his conservatism, drags out the treatment for months when a little surgery would overcome the difficulty at once, and frequently allows the patient to go from bad to worse and die of exhaustion, when a timely crasion, excision or amputation would have restored him to health. If the conservative is to be criticised for his sins of omission the radical operator is to be still more condemned. The former is not a surgeon in the common acceptance of the term, while the latter is classed as one because he is always operating. He classes every operation from which the patient recovers as successful, regardless of whether any good has been accomplished, often performs unwarrantable and unnecessary operations or fails to relieve on account of his inability to recognize the existing pathologic conditions. The radical, for want of surgical training and judgment, is often not radical in his methods. He is very apt, for example, to remove stones from the gall bladder and leave those in the com-

mon duct, take away the prominent portion of a malignant tumor and leave outlying portions and neighboring lymphatic glands. Moore enumerates other instances of sins against good surgery by too radical operators, such as the discrediting of gastroenterostomy by useless operations and the still too frequent unnecessary gynecologic operations, removals of the appendix, etc. He believes that unless the medical profession is outspoken in denouncing the evils of which he speaks the laity will condemn the whole for the sins of the few and be liable to pass drastic legislation that will overshoot the mark and be a serious handicap to legitimate surgery. We should therefore give the matter serious consideration, and the question is, shall we control the evil by legislation or education? The present tendency is to control everything by legislation, and Moore thinks that laws requiring a definite amount of experience as hospital interne or assistant before license to perform major operations is extended would be helpful and would come better from within than from without the profession. It would be better, though, to secure the desired end by making the necessary training a part of the college course. Every medical college now requires so much laboratory work that it takes half a student's time, leaving him very little more time to study the practice of medicine than he had when the requirement for graduation was but two years. Life is too short to spend much more for theoretical training than is now required in our high grade institutions, but the student can well afford to take the time for practical experience, and it should be made obligatory. In conclusion, he mentions the education of the medical student in ethics, and says that our medical organization should be so perfected as to exclude commercialism from the profession, so that anyone who makes merchandise of his patrons can no longer be recognized as respectable. We should teach our students practical ethics, following the golden rule, which always has been and always will be practical.

PALATABLE CASTOR OIL.

- R Saccharinigrs. ij
- Ol. Meth. Pep.....gtt. v.
- Alcoholis q.s. ft.....sol.
- Ol. Ricini5viij.

ANAESTHETICS AND FEEDING.—The common practice and the universal teaching that all food must be withheld for twelve to eighteen hours previous to the administration of ether or chloroform is condemned by Dr. William Hunter in an interesting article in the *Lancet*. He claims that there are an increasing number of cases of late years reported in which toxic conditions developed after anaesthesia and that starving the patient predisposes to this tendency. He thinks that the vomiting which occurs under anaesthetics is not of nervous origin but toxicemic and due to depression of the liver, with consequent diminution of its antitoxic function. It is a well known fact that the starving animal is more easily affected by poisons than the well-fed animal. Beddard in another article in the *Lancet* shows that acidosis or a condition allied to it is present un-

der conditions of starvation. He quotes Rosenfeld as holding that chloroform poisons the hepatic cells in such a way that their metabolic processes are interfered with so that they can not utilize proteids but can utilize carbohydrates. The conclusion to be drawn is that proteid food should be withheld but the patient should be nourished with carbohydrates for some hours before operation. G. D. L.

AN OINTMENT FOR PRURITUS VULVAE.—The following combination is highly recommended by Beall as having good results when all other means had failed:—

- R Mentholgr. viij.
- Quinin. sulphgr. xx.
- Ac. carbolicigr. xx'v.
- Ichthyol5ijss.
- Lanolini5vi.
- Ol. ricini5x.

M. et ft. ungt.

Sig.: Apply freely after washing the parts with hot water.—*Am. Jour. Clin. Med.*

HARRINGTON'S SOLUTION.—This solution, which originated with Dr. Francis B. Harrington, of Boston, is regarded by surgeons (*New York Medical Journal*) as one of the best and least destructive antiseptic fluids for suppurating wounds and for general use in the operating room. Summers says it has been proved experimentally and clinically that it kills all the common germs met in surgical practice in from twenty seconds to a minute, and it is not caustic. Besides its antiseptic property, it possesses the power, when applied to a raw surface, to produce a copious discharge of serum, thus aiding the washing away of noxious elements from the wound. The formula for the solution is as follows:

- R Corrosive sublimategr. xv.
- Hydrochloric acidfl. ʒiiss.
- Waterfl. ʒxii 5vi.
- Alcoholfl. ʒxxvii.

Solve.

Sig.: Harrington's solution.

Miscellany

CASE OF LUMBRICOID WORM IN OVARIAN ABSCESS.

By H. D. Fry, M. D., Washington, D. C.

The patient was a colored woman, 24 years old; admitted to Garfield Hospital, with a diagnosis of double salpingitis. She was so septic and had such a high fever, the uterus being fixed and all the pelvic structures very tender, that it was deemed inexpedient to operate at once. Dr. Fry accordingly waited for the subsidence of fever, and finally operated February 9th. During her stay in the hospital before

operation she vomited a lumbricoid worm, and ova were found in her feces. When the operation was done it was found that the left tube contained no pus, but the ovary was enlarged to the size of a may apple and was evidently the site of an abscess. In attempting to enucleate the ovary the abscess broke, and pus and a lumbricoid worm were evacuated. The worm was about 6 cm. in length. It must have wandered up the vagina, through the uterine cavity and the tube, and finally penetrated the ovary by way of a ruptured Graafian follicle; for the abscess was entirely within the parenchyma of the ovary and the infecting organism was the colon bacillus. The infection was probably conveyed by the worm. The case was unique so far as he was informed, but he had not had the opportunity to examine the literature with care.

THE SCHOOL CLINIC IN BRADFORD, ENGLAND.

(From the *British Medical Journal*, October 24, 1908.)

A school clinic established in Bradford is viewed with alarm by the local physicians. What with Fever, Children's, and Eye and Ear Hospitals and a Workhouse Hospital so luxuriously furnished as to be an actual attraction, a greatly diminished birth-rate and a death-rate that has been reduced so that it is one of the lowest in England, the physicians are barely able to make a decent living. The recently established school clinic is about the last straw.

It was stated by Dr. William C. White, of Pittsburg, at the recent meeting of the National Association for the Study and Prevention of Tuberculosis, that 90% of all the school children in our large cities have tubercle bacilli in their system before reaching the age of nineteen years.

Dr. Shannon, of Edinburgh, recently stated that out of the 1,000 city children under three years of age examined by him 647 had tuberculosis in some form.

WOMAN IN THE BUSINESS WORLD.—

"To give the thousands of shop girls, factory workers, etc., etc., back to the purposes of the human family is the greatest social economic problem of to-day. If this problem is not solved, and nature's intentions are thwarted by social evolution along artificial by-paths, a crisis is bound to occur sooner or later. It will be in the nature of an upheaval such as have periodically occurred in the history of mankind. Whenever the integrity of the race has demanded the return to natural conditions the principle of racial self-preservation asserted itself, and brought about the regeneration which was necessary or the destruction which was unavoidable. The fall of the Roman Empire and the French Revolution were crises of this kind, which arose from economic and political conditions involving the most vital problems of racial existence. That we are even now approaching a crisis of some sort or another is plain to any one who compares the life of the modern man or woman

with the life of the normal man or woman. Race suicide does not only refer to the actual insufficiency of the supply to make up for the loss. It includes the process of deterioration which man, under so-called modern conditions, is slowly but surely undergoing. The invasion of man's sphere by woman appears like a part of this process. As to the future of the race as such, I have no fears. I believe in the necessary survival of the fittest and the necessary destruction of the unfit. This principle supersedes the effects of any casual conditions or transitory states of a portion of mankind on the ultimate destiny of the whole race. The voice of one man may sway a whole century, the genius of an age may direct the thought of a hundred centuries; the necessary laws of nature last forever. Wherever and whenever woman is to play a part in the drama of life, let her be the true and loyal helpmate, but never the competitor or antagonist of man. When paradise was lost, woman was left to man to bring paradise back to him. A true woman can never be satisfied, except in the exercise of woman's own functions which, if I am permitted to quote the words of Louise of Prussia, are 'to love and be loved.' Whether as a dutiful wife, a loving mother, an apostle of sunshine at the bedside, or in the school-room as a guide and example for the young, her proper sphere is in the exercise of all those traits of character which, in their totality, constitute the true woman. Do we find her on the stump, where she harangues and is vociferously cheered by a sympathizing crowd of hysterical females, who, like herself, are women in the anatomic but in no other sense of the word?"—Dr. Otto Juettner, in *Medical Bulletin*.

SPONTANEOUS EXPULSION OF THE UTERUS AFTER CAUTERIZATION.—

Blan (Centrabl. f. Gyn.) reports a peculiar accident following upon a cauterization with zinc chloride. In a woman sixty-four years old who had a cancer of the body and pyometra, a gauze strip, soaked with 30 per cent. zinc chloride solution, was placed in the uterus for fourteen hours. Eight days later the entire uterus, whose walls had been much thinned out, lay as a necrotic sac in the vagina. No hemorrhage resulted and recovery from this remarkable accident was undisturbed.—*St. Louis Med. Review*.

"THE ART OF SECURING PLEASANT DREAMS."—

Said Ben Franklin: "When you are wakened by uneasiness and find that you cannot easily sleep again, get out of bed, beat up and turn your pillow, shake the bed clothes well with at least twenty shakes, then throw the bed open, and leave it to cool: in the meanwhile, continuing undressed, walk about your chamber till your skin has had time to discharge its load, which it will do sooner as the air may be drier or cooler. When you begin to feel the cold air unpleasant, then return to your bed and you will soon fall asleep and your sleep will be sweet and pleasant. All the scenes presented to your fancy will be of the pleasing kind. I am often as agreeably entertained by them as by the scenery of an opera."

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Original Articles

WATERBORNE DISEASES.

S. L. Jepson, A.M., Sc.D., M.D.,
Wheeling, W. Va.

*(Read by invitation before the Central States
Water Works Association, Wheeling,
Sept., 1908.)*

Invited by your Secretary to read a paper on "Waterborne Diseases," my first thought was of the kind of water with which this prosperous city is supplied, and my mind naturally reverted to the plight of Coleridge's ancient mariner, whose vessel, with water tanks empty, lay becalmed in mid-ocean, "under a hot and copper sky," absolutely motionless—

"As idle as a painted ship
Upon a painted ocean."

And in such a plight, with parched throats, they beheld

"Water, water everywhere,
Nor any drop to drink."

Our goodly city, with water in Jonathan's ravine, and water in Wheeling Creek, and water in Caldwell's Run, and water in the Ohio River, and water at times in our streets, our alleys, our houses—everywhere except on our hill-tops, has not a drop to drink that is fit to pass human lips, much less to enter human digestive organs. And the same is

true of almost all the river towns of the state.

Do we realize that water makes up by far the largest part of what we eat and what we are! Milk is 85 per cent. water. Beefsteak compressed with great force, yields four-fifths of its weight. Our blood is 80 per cent. water; and if a man of my weight—140 pounds—were squeezed flat under a hydraulic press, he would lose 105 pounds of water, only 35 pounds of dry residue, composed chiefly of carbon and nitrogen, remaining (Berzelius). How very important then, that the water which composes so large a part of our diet, our blood, our muscles, our very bones, should be pure and plentiful.

Rain-water, before it reaches the earth, is the nearest pure of all natural waters, yet it contains chloride of sodium, salts of ammonia and other inorganic saline ingredients, and traces also of various kinds of organic material received in its passage through the contaminated atmosphere. The impurities are largely augmented by its passage over buildings and over and through the ground. Water differs in quality in accordance with the nature of the vegetation and soil through which it passes, and the depth of earth from which it is drawn. It is well to remember that clearness, although very desirable, is not proof of purity. From a hygienic standpoint water may be harmful although as limpid as if from an Alpine glacier, and not only harmless but even quite wholesome, although, decidedly turbid. To illustrate, water generally becomes perfectly clear in passing through any ordinary

domestic filter, although, especially if the filter has been for some time in use, the water may contain more germs than before it entered the filter. The filter, from use, accumulates a deposit laden with germs, some of which pass through with the subsequent flow. On the other hand boiling, which destroys all germs, does not remove from water its turbidity. Most of us, however, prefer our drinking water both germ-free and mud-free, a choice not many citizens of Wheeling have enjoyed during the past summer.

In addition to the presence of bacteria and clay, as here indicated, water may have an excess of inorganic ingredients, as the various salts and organic impurities both animal and vegetable. The former, if of a certain character and limited amount, may be positively harmless in health and beneficial in some forms of disease. The latter are generally more or less injurious. Among the organic impurities are the algae in many varieties. These are cryptogamic water plants often growing in reservoirs, whose water they render offensive by the discharge of a kind of oil after the plants have reached a certain age, or after the water is agitated, as in pumping. The water has a nauseating odor so that the lower animals refuse to drink it, although we men sometimes find no escape. Our city water has on several occasions during the past year been notably offensive to the smell, but whether or not due to this growth I have not learned.

Various troubles of the digestive organs, as simple diarrhea, nausea or vomiting, may be caused by impure water. The trouble may end here, or the system may be thus rendered less able to resist certain tendencies to ill health and disease. A simple change from soft to hard water will sometimes result in constipation, or even in nausea or impaired appetite. On the contrary, a tendency to looseness of the bowels results for a time when one who has been accustomed to hard water begins the use of soft. Every city physician must have observed this fact in families coming from the country, where they had habitually used hard water. This is doubtless sometimes due to the presence of clay or marl in the city water, and at times to suspended or dissolved animal matter. The same symptoms may result

from an abundant growth of algae or other plants, or vegetable matter in suspension.

Animal parasites in the human system often come from the water, the eggs of different varieties reaching the water supply from human or animal excreta. A number of the most injurious of these, some of which reach the blood even, are peculiar to Eastern countries.

But of greater interest to us are the water-borne diseases of a specific nature, in other words, of germ origin. These are bacillary dysentery, cholera and typhoid fever. Dysentery may occur as an endemic or epidemic, when it is exceedingly fatal. It is dependent upon the presence of the bacillus dysenteriae, which closely resembles that of typhoid fever. Even long before the discovery of this germ, Parkes, a distinguished English hygienist, wrote as follows: "Dysentery is decidedly produced by impure water, and this cause ranks high in the causation of this disease," a fact long recognized in Eastern countries where this type of dysentery is much more prevalent than with us.

Asiatic cholera, which we fortunately seldom see in America, originates among the filthy Hindoos, who start their epidemics by bathing in hordes when on their religious pilgrimages, and as a religious duty drinking the water while bathing, passing it to each other in their hands.

But we are chiefly concerned with that disease which, like the poor, we have with us always, and the chief source of whose spread is drinking water, namely, typhoid fever. This is especially interesting to this community, which has long had a wide-spread reputation as a typhoid generator. Prof. Winslow classes us with four other cities having the highest death rate from this disease. S. J. Lewis, in a government report, says: "The strange thing is, not that Wheeling should lose many lives and thousands of dollars through the use of polluted water for drinking, but that any American city should tolerate such a state of affairs."

That impure water is the chief cause of this scourge is no longer doubted by the medical profession. Permit me to present some evidence of this to satisfy the lay mind. Perhaps the first instance on

record where an attack of typhoid fever was traced to drinking water was recorded by the late Dr. Austin Flint, Sr., a very eminent New York physician. North Boston was a hamlet near Buffalo, containing in 1843 a tavern, eight dwellings and forty-three inhabitants. Typhoid was an unknown disease in the county until a man en route by stage from Massachusetts, alighted at the tavern sick with this disease and there died with it. Of the nine families in the hamlet, six used water from the tavern pump and all—twenty-eight patients—contracted the disease. Three families used a different water, and these escaped. The very rational hypothesis was, that the tavern pump water became infected by the careless disposal of excreta from the imported case.

Plymouth, Pa., a town of 8,000 population, drew its water supply largely from a mountain stream, which was dammed at intervals. In the winter of 1885, a man came from Philadelphia suffering with typhoid fever. The excreta, without disinfection, were thrown upon the frozen ground near this stream. In March came a warm rain, the ground was thawed and the accumulated filth was washed into the stream, and retailed to the people at the regular price for water. In less than three weeks typhoid fever set in, and before it ended its disastrous career about 1,200 cases occurred. The disease was almost limited to families using the town water. "The distribution was particularly emphasized in one street, where the houses on one side all had one or more cases, while those on the other had none at all. The former were supplied by the town mains and the latter depended upon wells." (Harrington.) A similar story can be told of the Butler, Pa., and Ithaca, N. Y., epidemics of 1903. At Butler over 1,300 cases occurred in families using city water, and but two cases in Springdale, a section of the city of 2,500 population, using water from a different source. Investigation at Ithaca, also, where 10 per cent. of the people were attacked, showed that those using water from the public supply suffered greatly, while practically no cases occurred among the families using well water.

Now, permit me to give you a demonstration drawn from our own city experience, and at the same time make a start-

ling exhibit of our urgent need of an improved water supply:

	Deaths from typhoid fever in Wheeling	Typhoid deaths in relation to total deaths.	Total deaths.	Typhoid deaths per 100,000 population.	
1884	65	10.67	609	1884-88	1884-93
1885	65	7.60	632	125	Average for ten years prior to introduction of new pumping station.
1886	28	5.31	511		
1887	33	5.62	587		
1888	35	6.10	576		
1889	39	6.80	567	1889-93	
1890	128	16.19	797	231	179.63
1891	137	16.25	844		
1892	52	7.45	690		
1893	47	6.53	704		
1894	16	2.66	601		1894-1903
1895	10	1.84	553	1894-98	Average for ten years after introduction of new pumping station.
1896	21	4.81	457	54.50	
1897	18	2.93	602		
1898	33	5.65	584		
1899	27	5.11	520		
1900	33	4.46	504	1899-03	
1901	38	5.65	671	90.00	72.35
1902	42	6.63	631		
1903	34	5.06	671		
Average annual typhoid deaths per 100,000 population in 22 large cities, as given in a U. S. government report					57
With reasonably good water					20
More or less contaminated water					40 to 60
Average of 16 Massachusetts towns, prior to improved water supply					77.80
Average of 16 Massachusetts towns, after improved water supply					46.74
(From Harrington's Hygiene.)					
Average of Wheeling for 20 years (1884-1903).					125.

The table here presented shows the Wheeling death rate from typhoid fever for 20 years, with the relationship to the total deaths from all causes. I have chosen 10 years before and 10 years after the introduction of water from our new intake, which is located above the city. This was introduced at the close of 1893. The old pumping station was at the foot of Eighth street, only about six blocks below a large hospital whose sewage, with that of the city for eight blocks, flowed into the river. The table tells the story, and I only add here that for the 10 years prior to the use of the new water the typhoid death rate was 8.88 per cent. of the total deaths, for the 10 years after just one-half of that; for the five years prior to the introduction of the new water the typhoid loss was 9.44 per cent. of the total, and for the five years after but 3.58 per cent., little more than one-third of the previous five years. I ask you to carefully study other points presented in the table. They certainly show the urgent need of a new water supply for this city, especially since, doubtless on account of the growth of popula-

tion immediately above our new pumping station, the typhoid death rate is again on the increase.

A few words as to the germ theory of disease may not be out of place here. Although suggested as early as the 17th century, it did not meet with general acceptance until about 1873, and there are still some doubting Thomases in the profession. Briefly stated, this theory is, that a number of enthetic diseases—those introduced from without—owe their origin to the entrance into the system of certain vegetable germs, during whose multiplication chemical changes occur with products called toxins, which, like other poisons, alter functions, disturb the processes of nutrition and repair, and cause disease. Many of these germs or bacteria are endowed with power of movement and locomotion, and are capable of very rapid multiplication. Woodhead, an English bacteriologist, says that if 200 such organisms are present in a cubic centimetre of water, in 48 hours they will be uncountable. A single germ will double itself by fission in 15 to 40 minutes. Cohn calculates that, starting with a single germ in the conditions most favorable for increase, in three days the number would reach nearly 5,000 billions whose weight would reach 7,500 tons (Woodhead). No race suicide here, certainly. In fact, there rarely is, among the low and vile.

But I must apologize to the bacterial family, the majority of whose members are not only quite harmless but highly respectable and beneficent members of society. Such as these are called saprophytes, which live on dead and therefore useless organic matter, destroying it and decomposing it into its constituent elements, which are returned to the mineral kingdom, again to furnish food for plant life. It is the other variety, called parasites, which chiefly concern us in this discussion, since they live on and hence destroy living matter. To this class all pathogenic or disease-producing bacteria belong.

Returning to typhoid fever for a moment, it should be noted that this disease is often conveyed by milk which, in the washing of cans or in dilution, has been infected by water, for milk is easily poisoned, and it serves as a most admirable nutrient medium for the growth of ty-

phoid germs. But water is not so good a medium, and these germs as a rule multiply slowly in it. In comparatively pure water they will live for many weeks, while in badly polluted water they die sooner, being destroyed by the more numerous and vigorous saprophytic bacteria or their toxins. The typhoid organism is also very hard to find in water. A French observer failed to find it in 250 cultivations made from 70 specimens from the water supplying Marseilles, which is a very hot-bed of typhoid (Woodhead). Prof. W. T. Sedgwick says: "Even in sewage, in comparison with the whole number of bacteria, those of typhoid are probably as rare as planets among the stars, while, unlike the planets, they have no well-marked features of size or motion which enable them to be readily distinguished from their neighbors. The germs of typhoid fever bear to the harmless germs of sewage some such relation as do murderers to ordinary citizens in the passing crowd upon a busy street. They are very few in number, and outwardly very closely resemble the law-abiding. Even expert detectives on the watch may not be able to discover them. It is only afterwards that, unseen and unsuspected, they do their deadly work." Let it be noted, however, that the earth is an excellent culture medium for these destructive organisms, which are liable at every rainfall to be washed into the streams and thus find their way into the human body.

But it has long been claimed that running water purifies itself, and much study has been given to this question by the scientists. One of the recent investigators is E. O. Jordan, Ph.D., of the Chicago University Bacteriological Laboratory, who examined the water of the Chicago drainage canal and the rivers into which it flows. A marked reduction was found in the number of bacteria as the distance from Chicago increased. To what is this due? Dr. Jordan attaches little importance to the influence of the sun or rain, or to the agitation of the water. He thinks the addition of water from springs may have some influence, but that the settling of the water is the most important factor. To quote his own language: "There can be no doubt that the various influences summed up by the

term sedimentation are sufficiently powerful to obviate the necessity for summoning another cause." Prof. W. T. Sedgwick, of the Massachusetts Institute of Technology, attaches much importance to dilution and the scattering of bacteria in the running stream. He adds: "At the same time it has also gradually become plain that sedimentation and the destruction of micro-organisms by various agencies are more completely effected in standing than moving water. So that modern sanitary science has reversed the tenet of thirty years ago, and now unhesitatingly affirms that it is quiet rather than running water that purifies itself." It is not safe, therefore, for any river town to depend for security upon its distance from other communities above, on the theory that the water becomes purer as it flows onward.

But even when typhoid germs do enter our bodies they do not always generate typhoid fever. We must reckon with the host. Elderly persons and the very young are generally immune, and doubtless many others for unknown reasons. It has recently been discovered that some persons serve as typhoid-germ carriers, and may convey the disease indirectly to others while themselves escaping, or weeks after recovery from an attack. To contract the disease one must have the susceptibility, which may be brought about by any cause that tends to lessen the system's power of resistance. Something also depends upon the condition of the digestive organs. Other organisms in the body doubtless play a part in preparing the intestine for the reception of the typhoid germ; and it is claimed that a condition of irritation and removal of the epithelium that may result from the presence of these other organisms may be necessary to prepare the way for the work of the typhoid bacillus, "just as a field is prepared by the farmer for the reception of the seed that he intends to sow." Again, the bacilli do not at all times possess the same virulence, a part of which being lost, they may not retain sufficient vitality to engender the typhoid disease.

The science of medicine, although one of the most progressive, is not yet an exact science, and "the ways that are dark and the tricks that are vain" of the multi-

tudinous microscopic germs are not yet entirely known to even the keenest observers. Hence some of the statements here made must be accepted as somewhat speculative.

Since your Secretary requested me only to prepare a paper on "water-borne diseases," I may consider my assigned task as here finished; but if the experts will pardon the presumption of one who has not heretofore given this subject any attention, I will briefly refer to some of the remedies that have been applied for the purification of water.

For this purpose various chemicals have been used, as alum, potassium permanganate, chlorinated lime or soda, iron in different forms, etc. These act generally by forming "insoluble precipitates which settle out and entangle suspended matters in their descent" (Harrington). In 1903 Dr. Moore of the U. S. Agricultural Department, found the sulphate of copper very destructive to algae, even when used in very dilute solution. His method is to place the necessary quantity of the copper in coarse sacks, attach these to a small boat and drag them through the water repeatedly until all the water in the reservoir has been treated. The algae are quickly destroyed, with a temporary increase in the odor of the water from the escape of an offensive oil that resides in the vegetable growth. But this odor rapidly disappears, and the condition of the water is soon greatly improved. The amount of the copper is very small; practically none remains in solution and the water is not impaired for drinking. Dr. Moore claims, after experimenting in test tubes and tanks, that this solution, even when so weak as to be tasteless, colorless and harmless, will destroy colonies of typhoid germs. He regards it as effective and practicable and as applicable in emergencies to both household and municipal conditions. He says: "It should prove particularly useful in large water supplies accidentally contaminated with typhoid bacilli, and not provided with any adequate means of purification. In general an epidemic could be controlled by a solution of one to 2,000,000 in most cases" (Bureau of Plant Industry—Bulletin 761). Reports from the same Bureau as late as 1906 adhere to the same views, but further experimentation has developed the fact

that the presence in the water of carbon dioxide interferes somewhat with the beneficial action of the copper. This may account for the fact that other than government observers have not found the copper treatment so successful, and Prof. Harrington, in his work on "Hygiene" (1905), throws great discredit upon it. It seems that doctors never can agree.

Ozone has been used for water purification. At Wiesbaden this method has been successfully employed, the water thus purified being pronounced highly satisfactory by experts from the Koch Institute for Infectious Diseases in Berlin. The expense of this method, however, is such as to prevent its general introduction.

Sedimentation has been advocated, and experiments made in Cincinnati showed that 30 days sedimentation removed 97 per cent. of bacteria. But this long delay would necessitate two or more large reservoirs and an expense that few cities are willing to incur.

This brings us to the question of filtration, practically the only method of water purification now under consideration. The term, "natural filtration," has been applied to that which is accomplished when water is drawn from wells sunk below the beds of running streams or in sand and gravel banks or islands. Water has thus been reached that was both abundant and very pure. In some cases it has been hard from water entering the stream from neighboring springs, thus interfering with its usefulness for mechanical and some domestic purposes. In other cases it is impregnated with iron. Again, it may not be found in sufficient quantity for a city supply. Lastly, water pure when the wells are new has been found contaminated several years after their introduction.

From the report of G. L. McKibben, recently made to Hon. J. N. Camden, I gather the following facts: At Bellevue, Pa. (near Pittsburg), and Wellsville, Ripley and Gallipolis, O., water from wells in sand bars or gravel beds in the Ohio River has been for some time in use. These wells vary in depth from a few to over a hundred feet. The plan is said to be approved by the State Board of Health, the results are considered satisfactory, and typhoid fever has almost or alto-

gether disappeared. Equally favorable report is made as to the same system in use at Moundsville and Point Pleasant, W. Va. Says the writer: "It is evident that the water supply from the river gravel is permanent and that the quality is good. The foregoing statistics (omitted here) show that the prevailing tendency at this time is in favor of natural filtration by wells or cylinders in gravel or through river sand, as being the most economical, practical and highly satisfactory from a sanitary standpoint for obtaining pure water, wherever conditions are favorable to it."

A less encouraging view is presented by Dr. C. O. Probst, Secretary of the Ohio State Board of Health, in a recent letter to me. After saying that the Gallipolis water has been found "quite satisfactory," he adds: "On the whole we have rather discouraged this system of obtaining a public water supply, but feel that we have not sufficient evidence to condemn, though we are by no means certain that the favorable results at Gallipolis can be duplicated." A still less favorable opinion is presented by S. J. Lewis of the U. S. Geological Survey, who says: "The plan of natural filtration was for a long time considered adequate purification; the annual decimation by typhoid in towns so supplied has demonstrated the ineffectiveness of the plan." Again: "It has remained for an American city to apply this plan and to demonstrate its ultimate ineffectiveness." (Water Supply and Irrigation Paper No. 161.) He then cites the Gallipolis experience. With a population of 6,000 for three years before the river wellwater was used the typhoid deaths averaged four annually, or 65 per 100,000; for two years after the introduction of wells, no deaths, and for the third and fourth year after, six annually, or over 97 per 100,000. This writer adds: "At many other places which could be cited, the death rate shows that these devices have no efficiency in removing bacteria from polluted water, so that towns which attempt to purify water by natural filtration are likely to spend more money annually in avoiding epidemics of water-borne diseases than many times the interest on the cost of an efficient sand-filtration plant."

Our cities are rapidly adopting these plants, as experience has demonstrated that they reduce organic matter, lessen or destroy turbidity, remove color, and, most important of all from a sanitary standpoint, remove from 95 to 99 per cent. of bacterial content. Two methods are in use, namely, the slow sand and gravel filtration, or English method, and mechanical filtration, the American and, therefore, of course, the rapid method. It is said to be forty times as rapid as the English, but is not quite so efficient, only removing 95 to 97 per cent. of bacteria, while the slow method removes 99 per cent. Either plan is considered sufficiently safe. With water as turbid as is that of our river at times, the filter beds are quickly clogged, necessitating such frequent cleaning as to render the system very expensive. To obviate this, sedimentation must be resorted to before filtration. In the rapid method a coagulant—sulphate of alumina with or without an alkali, as needed—is added to the water before it enters the filter.

A very exhaustive study of the comparative merits of the two systems for use in Washington, D. C., where the river water is much like our own, was made in 1903 by a congressional committee. The most eminent experts were heard on both sides. The engineers seemed to favor the rapid method, while the physicians favored the slow. The final decision was in favor of the slow method, largely through the influence of the medical profession, although the engineer chiefly interested in the investigation reported in favor of the rapid.

It may be here noted that some authorities claim that the alum used in the rapid method, and not the filtration, removes the bacteria; and if the amount of this chemical be too small the bacteria survive, while if it be too large the water is rendered injurious; and that the proper regulation of the amount is very difficult. Others deny this claim, holding that if plain subsidence, coagulation with supplementary subsidence, and mechanical filtration be employed, the result will be a water clear and sparkling in appearance and free from bacteria.

In 1900, at a meeting of the American Society of Civil Engineers, held in London, the question of water filtration in

all its bearings was discussed by eminent engineers from different nations. Mr. Rudolph Hering, whose standing as an expert in this country is second to none, thus concludes a summary of this discussion: "From the entire discussion it appears that no strong reasons have been brought in favor of one and against the other of the two methods of water purification. Both methods have merits and a field of application, and their efficiency and cost do not differ very greatly in any case. In formulating their relative advantages we may say that the slow method generally has advantages for waters which are non-clay-bearing and low in color, which are cases where the rapid method is generally less efficient and greater in cost. On the other hand, the rapid method, with obligatory use of a coagulant, has advantages for waters highly charged with sub-microscopic particles of clay, or which are highly colored, in both of which cases the slow method is less efficient. * * The rapid method may sometimes be preferable solely because it requires a smaller investment of money at the outset, although a larger annual charge for operation, which in some cities limited in their borrowing capacity, is an essential condition for the introduction of water-purification works."

The facts here presented seem to clearly point to the rapid method as the one which, from all points of view, is best adapted to the needs of Wheeling. If, however, either should be introduced, let it never be forgotten that politics and pure water are "chemically incompatible," the result of the union being, both in cost and quality, a product exceedingly distasteful to the public.

It is possible that the time may come by reason of the wonderful manufacturing and commercial development along this upper Ohio Valley, and the consequent water pollution from this cause and from the increasing density of population, when no filtration system can so purify the water, at a cost the people may be willing to pay, as to render it fit for domestic use? There is still a remedy to which we may turn with hope of relief, namely, artesian wells. These are of very ancient origin, known even to the early Chinese and Egyptians. They are simply wells bored until a subterranean stream

or water-basin is reached, where a dip in the strata exists and the water is held, often under great pressure, sometimes sufficient to project it to a considerable height. One of these earliest known wells was bored in France in 1126, and is said to be still flowing. Wells bored in the London basin in 1838 produced an abundant flow of water. In the Paris basin water was reached at a depth of 1,500 feet, and at Grenville, a Paris suburb, at 1,797 feet, 740,000 gallons flowing daily, and reaching a height of 54 feet. This well had a diameter of 28 inches, and reached a final depth of 1,923 feet. The deepest well is near Leipsic, nearly 5,753 feet, or 455 feet more than a mile.

Artesian wells have been bored in the desert of Sahara and have caused it to blossom as the rose. Many are used in our own western country for irrigation purposes. These vary in depth from 100 to 1,500 feet. A well at Columbus, O., is 2,775, and one at Pittsburg, Pa., over 4,600 feet deep.

While many of these artesian wells have produced water in abundance and of excellent quality, it is not always so. The heat of the earth, as is well known, increases as we descend, and as hot water is a better solvent than cold, the water in deep wells sometimes contains mineral ingredients in such quantities as to impair or destroy its fitness for domestic use. Of several Boston wells from 870 to 2,500 feet deep, two contained much salt, one a large amount of both animal and mineral substances, and a fourth, in addition to these, had sulphuretted hydrogen, the result of the action of the earthy sulphates on organic matter.

Again, not every place is over a deep water-basin, and even the geologists cannot always give accurate information on the proper location of wells. Wheeling's experience in the Boggs Run well seems to indicate that we are "not in it." This well reached a depth of 4,850 feet, produced some oil, some gas, considerable salt water (which was cased off), but no water of practical value. Other localities might possibly bring different results. However that may be, our necessities are not yet so urgent that we are driven for relief to make further efforts to reach what the sages of ancient India somewhat fancifully and yet very significantly called

"the breasts of the earth," in order to stop the cries of our people for an abundant supply of this life-preserving fluid, pure water. Our present demands, however, are sufficiently imperative to require early action for relief from existing conditions. We should never forget that old Latin maxim: *salus populi est suprema lex*. Let us speedily make such improvements in our water supply as our own failures and the successes of other cities may lead us to determine to be necessary. We of the present must anticipate future needs and provide for them. When this is done in a proper and efficient manner, it can no longer be said that we have

"Water, water everywhere,
Nor any drop to drink."

CARDIAC ASTHMA; CHEYNE-STOKES RESPIRATION, BRADYCARDIA, ADAMS-STOKES SYNDROME.

L. D. Wilson, M.D., Wheeling, W. Va.

(Read before Ohio Co. Medical Society in Post Graduate Course.)

(Concluded from the Sept. issue.)

Adams-Stokes Syndrome.

Adams, in 1827, and Stokes, in 1846, recorded cases of this curious condition, and in commemoration of their early observations their names have since been conjoined, and by common consent, used to designate it. I am tempted to quote the original paper of Adams, published in the Dublin Hospital Reports. "An officer in the revenue, aged 68 years, of a full habit of body, had, for a long time, been incapable of any exertion, as he was subject to oppression of his breathing and continued coughing. In May, 1819, in conjunction with his ordinary medical attendant, Mr. Duggan, I saw the gentleman. He was just then recovering from the effects of the apoplectic attack which had suddenly seized him three days before. He was well enough to be about his house and even to go out. But he was oppressed by stupor, having a constant disposition to sleep, and still a troublesome cough. What most attracted my attention was the irregularity of

his breathing and remarkable slowness of the pulse, which generally ranged at the rate of thirty in a minute. Mr. Duggan informed me that he had been in almost continual attendance on this gentleman for the last seven years, and that during that period he had seen him in not less than twenty apoplectic attacks. Before each of them he was observed for a day or two, heavy and lethargic, with loss of memory. He would then fall down in a state of complete insensibility, and was on several occasions hurt by the fall. When they attacked him his pulse would become even slower than usual, his breathing loudly stertorous. He was bled without loss of time, and the most active purgative medicines were exhibited. As a preventive, a large issue was inserted in the neck, and a spare regimen was directed for him. He recovered from these attacks without any paralysis. Edema of the feet and ankles came on early in the autumn; his cough became more and more urgent and his breathing more oppressed; his faculties, too, became weaker. Nov. 4th, 1819, he was suddenly seized with an apoplectic attack, which in two hours carried him off, before the arrival of his medical attendant.

Dissection:—The right auricle of the heart was much dilated. The right ventricle externally presented no appearance whatever of muscular fibres; it seemed composed of fat through almost its entire substance. The reticulated lining of the ventricle, which here and there allowed the fat to appear between its fibres, alone presented any appearance of muscular structure. The left ventricle was very thin and its whole surface was covered with a layer of fat. Beneath this, the muscular structure was not a line in thickness; it had degenerated from its natural state; was soft and easily torn, and a section of it exhibited more the appearance of liver than of heart. The septum of the ventricles presented the same appearance. In both ventricles, even in the lining fibres, yellow spots, where fat had occupied the place of muscular structure, were to be observed. The whole organ was remarkably light, the valves were all sound except those of the aorta, which were studded with specks of bone, but elsewhere were cartilaginous and elastic, from which they

derived a disposition to remain closed. A fluid gently injected from the ventricle would pass them, still when the heart was reversed and water poured from the ventricle upon them, these valves retained it, its weight was not sufficient to separate the edges of the thickened valves. There was much fluid blood contained in the heart."

This meager detail could scarcely be accounted of much significance, yet, with that of Stokes that followed some years later, they became the impulse to a course of investigation and controversy which extends down to our own day, which is not yet terminated, but which has been the source of a great deal of our knowledge of cardiac and cerebral physiology and pathology, although leaving the myogenic and neurogenic theories of heart-action still in the field of controversy. "Tall oaks from little acorns grow."

Hypotheses and theories as to the cause of the heart-beat have occupied the attention of investigators for a long time. The question goes clear back to Harvey's time. He interpreted systole and diastole as a contraction and relaxation of the musculature, and seemed to consider it due to an inherent property of the heart-muscle itself, and is the founder of the myogenic theory. This postulate of his was not allowed to go very long without challenge. Others soon brought forward the theory of nervous influence. Some thought, with Willis, that the cerebellum was the seat of the stimulus. Borelli "assumed that the nerves conveyed a liquid, a succus spirituosus, which escapes slowly into the heart and sets up an ebullition causing a contraction." Then, in the 18th century came Haller, who apparently disproved the neurogenic theory by showing that the heart continues to beat after section of the nerves leading to it. This held, notwithstanding an active effort to find some evidence in support of the nerve idea, until Remak, in 1844, described nerve ganglia in the heart's substance. Bichat divided the processes of the body into animal and organic, the latter, including the beat of the heart, being free from the control of the central nervous system, but under the influence of the sympathetic ganglionic system. This seemed to re-establish the nerve idea. In 1881,

Gaskell, who was supported by Engelmann, became convinced by a series of experiments on the hearts of frogs and tortoises, that the heart-muscle possesses the property of automatic rhythmic contraction, and that this is most highly developed in the tissue of the venous end of the heart. We know that normally the heart-beat begins in the great veins and extends to the remaining portions either by way of muscle or nerve fibres. There is evidence that every portion of the heart-muscle possesses in some degree the property of giving automatic rhythmic beats, provided that the proper conditions are maintained. Now if any portion of the heart could be found absolutely without nervous tissue, and conditions so arranged as to cause it to give cardiac rhythmic beats, the myogenic theory would seem to be established. That the fetal heart begins to beat before it possesses nerve elements, is the only fact of this kind so far undisputed, and the possibility remains that even here an improved technique may yet demonstrate the presence of nerve elements. But the myogenic theory had still another obstacle to meet. Up until 1893, it was believed that a connective tissue layer which completely separated them, intervened between the muscle wall of the auricle and that of the ventricle. But in that year, His, Tawara and others, showed that in mammals and man a small strip or bundle of muscle passes from the posterior wall of the right auricle to the septum. Erlanger showed that the stimulus is conveyed from auricle to ventricle along this strip. "By compressing this bundle he was able to break partially or completely the sequence of the auricular and ventricular beats." He also showed that in certain pathological conditions in man, this path of conduction is impaired or broken, forming an important feature of the Adams-Stokes syndrome. If this bundle were absolutely without nerve fibres, the myogenic theory would be practically established, but Tawara has shown that it possesses a network of nervous tissue like that lining the rest of the heart (Neusser), so we shall have to leave the question for the present undetermined.

This rather lengthy review of the facts and theories regarding the heart-beat will

enable us to get a clearer understanding of the condition we are discussing. Its phenomena and symptoms are as follows: In patients with bradycardia due to coronary sclerosis, consciousness is suddenly lost, either without warning, or after an aura of some kind—a peculiar sensation of smell, taste, hearing, or tactile impression. This aura will enable patients sometimes to reach a couch or bed before the attack comes on. Others fall to the ground at once. Consciousness is always completely lost. The breathing is often slowed and stertorous, sometimes of the Cheyne-Stokes type. Sometimes stops altogether. Palsies are absent both during the attack and afterward. The pulse is slower even than usual, and the heart-rhythm is altered. The attack usually lasts a few seconds or minutes, rarely hours. The patient awakes without any paralysis and in many cases is restored to his former condition, but most of these complain of lassitude, and do not fully recover for some time. The attacks are quite often repeated. Krehl mentions a patient who in a period of ten years had several hundred of them. The exciting causes are unknown. Most patients cannot give any reason whatever for the attacks. Some ascribe them to exercise, emotional excitement, &c. It was not until 1905 that its relation to heart-block was demonstrated by Erlanger. By a series of experiments on dogs, he showed that by compression of His's bundle, heretofore mentioned, all stages of heart-block may be produced. The pulse and heart phenomena of Adams-Stokes disease are exactly like those of heart-block. There is not a simple slowing, but a loss of coordination, in which the auricles beat with normal or increased rate, and the ventricles are slowed. The syncope is explained by the slowing of the ventricles. It is not always clear what produces the attacks, but a change in the rate or force of the ventricle is the most common. Proofs of the relation of the disease to His's bundle have multiplied of late. These lesions include sclerosis of the endocardium involving the bundle, gummata in or on the bundle, cartilaginous tumors, fatty infiltration with atrophy, endarteritis in the artery supplying the bundle, &c. Krehl says, "Though the

subject is still incomplete, it can be said that it is a disease of the *heart* and not of the central nervous system." On the other hand, Neusser states the cause to be "partly in lesions of the medulla and partly in simultaneous affections of the heart itself." "That irritation of the vagus nucleus plays a part." He speaks of the disease as "not an entity either in regard to symptoms observed or post-mortem findings." The diagnosis is based upon the symptoms of heart-block, the characteristic difference between the cervical venous pulse and that of the artery. The fluoroscope will sometimes show the difference in the auricular and ventricular contractions. It is differentiated from apoplexy by the fact that it runs its course without paralytic symptoms; from epilepsy, by the absence of the cry or the biting of the tongue, and by the further fact that in epilepsy the pulse is rarely retarded. Heart-block is probable when the pulse is near 30. Besides the Adams-Stokes symptoms, we may have all the symptoms of angina pectoris, with the Cheyne-Stokes breathing.

The prognosis depends on the underlying conditions. Patients may die in the first attack or may live for years.

The treatment in the main is symptomatic. Atropin and strychnin either singly or together sometimes do good. Also a change of posture, such as getting on the hands and knees and hanging the head. When there is a syphilitic history, prompt specific treatment may be effective. Digitalis is usually harmful, and especially is it dangerous when there is impaired intra-cardiac conductivity. In the epileptiform paroxysms, and the attacks of unconsciousness, Neusser recommends amyl nitrite or nitroglycerin. One can readily understand, however, that when the pathology of the affection is considered, but little is to be expected from any form of treatment.

Lipomata of the scalp often undergo cystic degeneration. A tumor which grossly may look like a lipoma, may show under the microscope evidences of sarcoma. Fortunately these sarcomata of the scalp do not often form metastases.—*American Journal of Surgery.*

FRACTURES.

A. P. Butt, M.D., Davis, W. Va.

(Concluded from the Sept. issue.)

I recently had a chance to try the recumbent position in a case of fractured clavicle. Patient also sustained a fracture of the transverse process of dorsal vertebrae, displacement and possible fracture of the astragalus, fracture of the fibulae, of two ribs, and also had that very grave but uncertain affliction known as "internal injuries." I put no dressing whatever on the clavicle. About the usual amount of deformity occurred, no more and no less than I usually see under the regular treatment.

The results in Colles's fracture have ever been a reproach to the profession. The results as regards function are usually good, as regards deformity I am almost tempted to say they are usually bad. Certainly they are bad in a very large percentage of cases. Stimson says: "As a rule, permanent deformity after fracture in youth is slight or entirely absent; but in adults the case is different, either because the original displacement is greater, or because crushing and comminution make complete reduction and retention impossible. That some permanent shortening of the radius results, especially on its outer side, if its cancellous tissue has been crushed, as is the rule in the old and frequent in others, is inevitable. That the prominence of the ulna can be prevented only by bringing the fragment of the radius (and thus the carpus) fully back to its normal position—a practical impossibility in many cases."

I wish to call your particular attention to something that has occurred in two cases of this fracture in my hands within the last year. Both were young adults. In both I secured what I regarded as exceptionally good results. One was particularly so. Time and again as I admiringly examined it the patient, who was a foreigner, exclaimed: "Just the same like before." So I thought, too. But, alas! I saw these patients about six months after discharging them and there was the usual deformity. Not bad, but so much so that I was no longer proud

of the result. Now I would like to know if this has been observed by any of you. Dr. Werner tells me he had such a case. It will at once occur to you that these patients resumed work too soon. While I have not the notes as to the exact time, I am sure it must have been seven or eight weeks, and then they were cautioned not to use the arm very much. Both were drivers in the mine. It may be possible that the arm was put to very hard usage too soon. What I would like to know is, is it possible to have a result like this where everything is done as nearly right as we now know how to do it?

One of the best results I ever got in this fracture was in a very large, rough, strong woman who had a large family. She used the arm all the time after the first two or three days.

In no fracture, perhaps, is anesthesia so important. Reduction is the all-important thing, far more so than any particular kind of splint. This can rarely if ever be properly secured without an anesthetic. The deformity is not usually prone to recur. In one of the cases I mentioned above there was decided lateral deformity, which I overcame for the time by elastic traction applied to the carpus. This deformity reappeared after the patient was discharged.

Compound Fractures.—I grow less afraid of these as my experience increases. I believe they can be successfully handled by any doctor who knows how to clean them up properly and is not afraid to do it.

We read of lengthy discussions by some of our more learned brethren as to technique. We are advised to do so and so if we are sure of our technique, sure of our assistants, sure of our surroundings, sure of our material, etc. These learned gentlemen do not say just what we had best do if not sure of all these things. The inference is we had better let several precious hours go by until we can send the patient to the men who are sure of these things. Then when they get a bad result the patient or his friends will be told that it was too late. This is, of course, exactly true.

With these opinions I wish to take issue. So far as I can recall, I have had but three or four cases of suppurative

following compound fracture. One of these, a case to which I will call your attention more in detail presently, could not, in my opinion, have been prevented by any man under any circumstances. Another did not come to me until ten hours after the accident, another until twenty-four to forty-eight hours. Not a bad record if the surroundings under which I work are taken into consideration. Almost all my people are foreigners and are hurt in coal mines or around coal cars. My assistants are practically always the bystanders who happen to be present.

In compound fractures, if the opening is very small, especially if caused by the bone protruding, it is sometimes advisable to try to seal up the wound and not explore it. However, if it is of any considerable size, I always examine it, remove any tissue whose vitality seems doubtful, make counter openings for drainage and sew up wound if it is large. I do all this with rubber gloves. Place a large amount of dressing around the wound, leave with the patient plenty of absorbent cotton and some antiseptic. If the discharge comes through the dressings, wet it with antiseptic, lay on a heavy layer of cotton, wet it and keep it wet with the antiseptic. I almost always employ rubber drains. One surgeon, von Stockman, of Rotterdam, has for four years, in ninety-six cases, used nothing but balsam of Peru poured copiously into the wound after it has had any foreign bodies removed from it. He uses no antiseptic, and claims excellent results in all but four cases. He puts splints on and does not remove dressing for three weeks.

It is hardly necessary to say that at present but few limbs that formerly required amputation now require it. Let amputation be your last thought, not your first. Unless it is perfectly plain that amputation is needed, give the limb a chance to see what it will do.

If there is anything more embarrassing than to have some fellow walking around on a good leg telling everyone that you wanted to cut it off, I fail to think of it. It is, however, something that is likely to happen to anyone. On one occasion I refused to amputate when the patient wanted it, and had to do it later at con-

siderable risk to his life. I do not know whether my experience is uncommon or not, but I find a strange readiness to have amputations.

Bad Results.—Unfortunately we all have them. If a doctor could truthfully say he has had no bad results it would be sufficient evidence of the fact that his practice had been small.

In his chairman's address, Dr. Richardson of Boston said, at a recent session of the Am. Med. Assn.: "Surgeons of the greatest skill and experience feel more anxiety in the treatment of fractures than in almost any other form of injury. Few can without humiliation review their results."

Failure of union fortunately occurs but seldom, but when it does it often taxes all our resources as the following case will illustrate:

Patsy A., Italian laborer, age 24.—Compound fracture of tibia and fibula caused by fall of coal. Both bones protruded through a rent in the skin about the junction of the middle and lower third. Was extremely hard to reduce. I was on the point of sawing off a section of the bones when reduction was effected by exerting all the strength of three men. I made a counter opening, introduced rubber drainage and sewed up the wound. Healed without suppuration. Used Cabot's posterior wire and side splints at first, afterwards plaster. Took the plaster off after seven weeks. No shortening, no deformity whatever, no exuberance of callus, a beautiful result apparently. Alas, the union was only fibrous. Put the leg back in plaster and the patient to bed for some time. Removed the plaster and used a percussion hammer often. After five months I refractured the leg, drilled holes in either end of the bones. Three weeks later there seemed to be some callus, otherwise about the same. At this time I injected some tincture of iodine around the ends of the bones. Two months after refracturing the leg and seven after the reception of the injury, there seemed to be some improvement but not enough to make me certain bony union was taking place. I should have said that the fibrous union was very firm. Up to this time the leg retained its proper shape. The patient was getting very tired and I was in a somewhat

similar condition. I directed him to use the leg in walking just as much as possible, with crutches and plaster, of course. Nine months after the injury he went to work. He has a very large amount of callus, a crooked leg, walks with a limp and suffers at times with pain over the fibula. The deformity is not very great and was of course produced by using the leg before union was firm. Without this use I could not feel sure union would have taken place at all. It is possible that the deformity could have been prevented by very frequent changes of the plaster. This is, I think, my worst result, a continual eyesore.

Fracture and dislocation of the astragalus are not very common, certainly not in my practice. My first case, perhaps, was a man sixty-five years old. Produced by a fall of four or five feet. Dislocation inward and forward. Was not compound but very nearly so; would have become so I think. Skin was bruised and in a state of much tension, and the sharp edge of the astragalus was almost through. I made vain efforts to reduce it, used a pulley but to no avail. Incised the skin and was able to replace the astragalus which I found to be fractured. According to Stimson, I should have removed the entire bone. Suppuration set in and it was several months before the ankle healed up. There is now a stiff joint, and I regard the result as a bad one. In going over the literature of this class of cases I was much surprised to find how grave, both as to life and limb, is this injury.

After being discouraged and disheartened by a bad result, it is well that the pendulum sometimes swings the other way.

Mike Tossel, age 22, was caught between the bumpers of two coke cars. The bumpers are of steel and about one inch thick by four broad. He sustained a compound fracture of both thighs a little below the middle. The case did not come to me for several hours, and of the right thigh I shall not speak save to say that the doctor who dressed it told me its condition did not make him fear that it would not recover. I found the left thigh in the following condition: Skin torn for about three inches, transversely, both anterior and posterior. All muscular tissue an-

teriorly and externally was cut into, nothing remained whatever. Nearly all was severed posteriorly. A small band of the muscular tissue internally remained. The bone was much splintered and parts of it had to be removed. So you can see that but little of this patient's leg remained. The patient and his friends informed me in advance that no amputation was wanted. This was not surprising, for the leg presented a very fair appearance to the eye. It was only when the fingers were introduced that the extent of the injury was learned. I told the patient that there was a chance to save the limb, but that it was perhaps more dangerous to try to save it than to amputate. Told him of the suppuration and fever that were bound to ensue, of the probable length of time, which I placed at not less than six months, from that to two years. I wired the ends of the femur together, sewed up part of the muscular tissue until warned by the anesthetist that I must stop.

The case did well for a few days, then the inevitable came to pass, namely: Suppuration and fever, which lasted for months. I cut down and removed the wire, curetted several times. The patient was endowed with an extra portion of faith and persistence, and I would not let go, although I felt many times that I would give anything if he would leave me for some one else. The great difficulty was to get a splint that would allow of dressing the wound without moving the bone. I think altogether I made some ten or twelve different splints before getting one that would fill the bill. Finally I made approximation splints of very thin wood, through which I cut holes to go over the wounds in the skin. These I would leave on for several days, perhaps a week, just as long as the dressings were not too badly soiled. A gutter splint with a hole over the wound behind, then a long side splint were used. By this means I could dress the wound without removing any but the long side splint.

As so much of the left femur was destroyed I did not make any extension on the right leg. All things come to an end, and after months of work and worry my patient got well. Was off work for nine months. Walks without a limp, legs are exactly equal in length, and no one would

suspect from looking at him that he had been subject to such an accident. While perfect results can not be gotten by any of us in all cases, still by good hard work results can be gotten, no matter where, of which no one need be ashamed.

DEFORMITIES OF THE BONES OF THE FACE.

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(Read before the Belmont County, O., Medical Society, August 31, 1909.)

A careful study of the embryology and growth of the human body leads us to the conclusion that Nature builds an individual in form and function approaching perfection, provided she is not interfered with. It is a part of Nature's law that the body or any part of the body, to develop normally, must inherit in the embryo a healthy or normal condition, and that it must live in normal conditions of physiological rest and activities, and must have proper nutrition and care. It is well to remember that it is imperative in developing organs to have exercise and rest. But as Nature frequently meets interruption and interference in the building of the human body, many abnormal conditions exist. There is not an organ or an elementary tissue that is exempt from pathological lesions. Abnormal development may be found in most if not all organs, and in various degrees according to causes, time of origin, period of development, etc. In a general way their causes may be enumerated as disease, acquired or hereditary, traumatism, disuse and perverted use; and they may be classified as direct or immediate and indirect or predisposing. While the normal and abnormal development of the bones and soft parts are inseparably connected, this paper is to deal primarily with the abnormal development of the bones of the face and the causes and results of the same. Deformities occurring in the growth of bones in general have various causes, such as syphilis, tuberculosis, rheumatism, rickets, etc. While these systemic diseases affect the bones of the face as they do bones elsewhere, deformities in the

face bones result from other causes which are often complicated. When a deformity of bone occurs in any part of the body, it becomes very obvious at once, because of size, shape or influence on some function. This is particularly true of the bones of the face. And so numerous are these facial deformities that we as physicians are prone to overlook them unless they be extreme. They are apparently regarded as a type rather than a deformity. And yet, overlooked as they are, they are often the cause directly or indirectly of some disease which the physician is treating. Deformity may be directly or indirectly the cause of malocclusion of the teeth, nasal occlusion, hypertrophied turbinates, adenoids, hypertrophied tonsils, acute or chronic rhinitis, tonsillitis, inflammations of the accessory cavities of the nose or any part of the respiratory tract, diminished vital resistance of the mucous membrane of the respiratory organs (thus opening up the way for the tubercular germ), carious teeth, and sometimes of the backwardness in mental development. They may also be the cause of many reflex nervous troubles about the face and head, as well as a general disturbance of the nervous system. It may seem strange that although these deformities may produce the above named conditions, any one of the first five may in turn cause facial deformity or may in other cases serve as the causative factor in the production of each other. Adenoids especially are one great cause of both malocclusion of the teeth and the resulting facial deformity. Thus it is seen that we have many abnormal conditions in this part of the anatomy that are sometimes the cause and sometimes the result of other abnormal conditions. This may seem strange at first, yet when we consider the complex anatomy of the mouth, throat, nose and its accessory cavities and the interdependence of their functions, we may comprehend the importance of their reciprocal influences. Here in this small space we find the organs of three special senses (the nose and tongue having several other functions), the organs of mastication, insalivation and starch digestion, tonsils and accessory cavities of the nose, the peridental membranes, with their wonderful structure and three-fold function. And here, from the second month of fetal life to about the

twentieth year, are formed and erupted 52 teeth, each one a specialized organ, with its special membrane, nerve and blood supply, and each having a special time and relative place of eruption. And with the eruption of both sets of teeth, there is developed to support them a bony process (the alveolar), which has been termed a provisional structure. Here, too, we have the special sense organs, the muscles of mastication and all the teeth connected together through the fifth nerve which supplies them. This will at least throw some light upon the production of the numerous complications of which we have spoken. No doubt many physicians would think that these statements are far-fetched and overdrawn, yet the dentist or specialist who has studied the anatomy, physiology and mechanism of these parts, and has observed the steps in the development of these deformities and their influences, can understand and vouch for these changes from cause to effect as plainly as the physician who can trace a metastatic abscess or a thrombosis back to some local lesion.

So much for the results of facial deformity. Now let us consider the causes. Here we find an etiology that is very complex indeed, yet simple enough when taken singly. But to fully explain that here would require too much space. There are eleven or twelve causes, and each may act singly or may be complicated by one or several others. They may be enumerated as follows: Premature loss of deciduous teeth; habits such as thumb-sucking, imperfect crowns, fillings, etc.; loss of permanent teeth; disuse; supernumerary teeth; prolonged retention of deciduous teeth; tardy eruption of permanent teeth; nasal obstruction, etc. Of these, nasal obstruction with the resulting mouth-breathing, is the most potent and important factor. It occurs most frequently between the ages of three and fourteen years, which is the most important period in the development of the dental apparatus. Here in the region of the dental apparatus a very slight and apparently innocent departure from the normal, either in structure or function, may cause a series of changes, increasing step by step from the normal to the abnormal, often taking on a reinforcement of causes as the case proceeds. Let us

take one particular case for example. A child six years old, during a period of six months, has one or more attacks of cold which has been neglected, and suffers during this time with acute rhinitis more or less continuously. This interferes to some extent with his nutrition. His vitality becomes lowered and the rhinitis takes on a chronic form. The pharyngeal gland being more or less involved during this period, becomes somewhat hypertrophied. Every time the child takes cold the condition becomes aggravated, and the enlargement of the lymphoid tissue increases until it is called an adenoid growth or adenoids. This, when it becomes large enough partially occludes the posterior nares, and partial mouth-breathing results. At this stage an acute attack of rhinitis enlarges the adenoids and causes the Schneiderian membrane to hypertrophy. This entirely occludes the nasal passages and total mouth-breathing ensues. At this stage of the trouble other complications arise and additional causes set in. Here we find one of Nature's laws of development transgressed. An important organ having a four-fold function lies in disuse. It is the nasal organ. Now we can not expect it to continue its development. The three pairs of turbinated bones and the Schneiderian membrane which covers them are now hypertrophied, their secretions perverted and their function of preparing the air for its ingress into the lungs is prevented. Its accessory cavities, the maxillary, ethmoidal, frontal and sphenoidal sinuses, have become occluded so far as the circulation of air is concerned, and have insufficient drainage of fluids. The nasal organs and accessory cavities, situated as they are in the central part of the face and head like a keystone in an arch when they develop normally, exert an important expanding and widening influence upon the upper part of the face and base of skull. But in this instance, not being able to develop, we can not expect their expanding influence. At the beginning of the mouth-breathing period the teeth were in normal position and their cusps were able to rock normally, but are now losing that reciprocal influence because the jaws are parted. And the lips which normally exert a binding force about the alveolar arch, binding the teeth together as the

hoops do the barrel staves, are now losing that force, and the arch has a tendency to over expand and the teeth to fall apart, as do the barrel staves when the hoop loosens. At this stage there are several forces operating to produce deformity. After several months of nasal occlusion and mouth-breathing, the child has lost much vitality. The lungs and chest have not continued their normal development; the central part of the face shows a lack of development; the palate is high and arched; the upper alveolar arch is elongated and "V" shaped; the teeth are in mal-occlusion; the upper incisors protrude; the upper lip is short and unable to cover the teeth at all; the nose has a pinched appearance; the chin and lower jaw are short, and the deformity is now very marked. The patient now has impairment of hearing and smelling and is subject to reflex nervous disturbances and frequent colds. He can not sleep well and is dull and stupid in school. In hopes of relieving these conditions the destructive growths are removed. But, alas! in this case the operation was too long deferred. The conditions remain the same. The mouth-breathing was only partially relieved because of the mal-occlusion of the teeth and the undeveloped upper lip. Some of the face bones remain undeveloped and some have an actual deformity. Anatomical changes have taken place and Nature, unaided, can not regain her lost forces and reconstruct the parts.

This is but one series of changes out of many that may result from a simple cause. From the causes mentioned there may result three distinct classes of deformity, with several divisions and subdivisions. The time required for the correction of any case must necessarily be somewhat protracted, as we are dependent upon Nature's assistance in the resorption and deposition of osseous tissue. However, those cases that have resulted from traumatism or a resection of bone, may be moved more rapidly. Yet they must be retained in place for several months, as in all other cases.

The treatment of these cases depends, of course, upon the stages in which they are found, and the kind of deformity present. Those of short duration require a more simple treatment. In cases of nasal

occlusion due to lack of development of the nasal organs, the passages may be opened up by forcibly spreading apart the superior maxillae, which may be accomplished in from ten days to two weeks, and permanent relief may be experienced. This would be advisable only in those cases in which the patient is too old for a full correction, or in which the correction be contra-indicated for some other cause.

In cases of cleft palate, in which the cleft is too wide for successful operation, the maxillae and palate bones may be gradually approximated so that the soft tissues may be successfully united. In orthodontia, as in other divisions of medicine and surgery, the best results are to be obtained by prevention. At least fifty per cent of the growing population need some preventive treatment along this line. This duty lies within the province of the general practitioners of medicine and dentistry, and by them the people should be instructed in real prophylaxis. In this as in other oral work, much good would come from the habitual consultation between the physician and dentist.

Schulmbach Building,
Room 314.

THE NOSE AND THROAT, IN RELATION TO TUBERCULOSIS.

M. O. Fisher, M.D., Parkersburg, W. Va.

(Read at the Tuberculosis Exhibit, July 19, 1909.)

The subject this evening is the Nose and Throat in Relation to Tuberculosis. The specialists on tuberculosis are coming to recognize clearly that the root of the evil must be attacked by prevention, not cure, and that it would have been better for civilization if all the money expended in the attempts at cure had been directed to the accomplishment of prevention instead. A careful study and observation will convince any one that, left to itself after the onset of the tangible symptoms, it is the same fatal disease it has always been, and that under the best conditions and with every modern method brought to bear, it is ultimately nearly always fatal in nearly any stage beyond incipency.

To prevent infection not only of tuberculosis but of nearly all diseases, we must

avoid the germs. We know that nearly all germs reach us through the upper air tract, entering with dust. We must, therefore, adhere strictly to the rules of hygiene relative to pure air. The normal function of the mucous secretion is most important in order to prevent infection. Mucous secretion of the nose entangles the germs which enter with the inspired air. Thus they are rendered innocuous and are wafted to localities where they can do no harm.

Local resistance in the nose and throat to infection, requires a healthy mucous membrane with normal mucous secretion. Infection may best be resisted when hygienic conditions are ideal. There must be sufficient sleep and exercise, proper food and drink, and an unlimited supply of fresh air.

When chronic nasal obstruction occurs at an early age it exercises deleterious effects on the neighboring parts, on the general well-being, and on the development and growth of the whole body.

The full consequences of nasal obstruction are most frequently seen in children suffering from adenoids. It is of great importance that these effects should be thoroughly recognized, for there is still much misconception with regard to them.

The symptoms resulting from nasal obstruction are snoring, a very common symptom in children; speech is curiously altered; the power of smell and in a less degree that of taste for flavors is lost or diminished. Children, and in a less degree adults with nasal obstruction, have a great tendency to repeated or chronic colds in the head. This is probably due to insufficient nasal drainage, the obstruction preventing proper blowing of the nose and allowing secretion to accumulate in it.

The accumulation of secretion and its constant contact with the nasal mucous membrane diminish the vitality of the parts and predispose them to microbial infection.

Catarrh of the Eustachian tubes and repeated attacks of ear-ache and deafness, especially where both ears are affected, are nearly always due to adenoids or other forms of nasal obstruction, when occurring during childhood. Children become anemic, stunted, and ill-developed, and are always ailing. The increase of

bodily and mental activity and rapidity of growth following a successful operation are frequently surprising.

An infection which has already taken place is arrested by the maintenance of local hygiene, by the removal of all diseased teeth, adenoid growths, diseased tonsils and of *all* forms of obstruction to the entrance, expulsion and circulation of the air in the nose and throat.

Any form of nose and throat catarrh is a growing soil for tuberculosis and other germ life.

The specialist on nose and throat diseases has a responsible place in the aid to be given in preventing the predisposed from developing disease, as well as in helping to place the consumptive in a condition to throw off the germ of tuberculosis. It has been shown by a series of experiments that tubercular bacilli of a virulent nature frequently invade the tonsillar tissue in preference to other portions of the throat, and that even an apparently normal tonsil is unable to filter them out. Many experimenters have also shown that the tonsils and lymphatic glands of the neck combine to form a direct route for the invasion even of the contents of the thoracic cavity, such as the pleura and apices of the lungs. Tuberculous glands of the neck and even pulmonary tuberculosis may therefore be traced directly to diseased tonsils, and my own experience has led me to believe that inflamed glands of the neck, whatever the character of the infection, may, in the great majority of instances, be traced directly to diseased tonsils or teeth, or to both of these sources combined.

It is all a matter of education, letting in the sunshine of knowledge, and of the correction of known defects of the youngest children in the schools, and so on through the grades, so that no boy or girl will leave the grammar school to go to work or to the high school or to college without being of a certain standard of normal physical condition. This is a big ideal, one full of potential energy for the public.

The building up of sound citizens is a work of civics peculiarly the province of our schools. Health is a civic obligation. The French government offered a prize for the best treatise on the subject of tuberculosis, and the well-known New

York tuberculosis expert, Dr. Adolphus Knopf, won the prize. Dr. Adolphus Knopf's book was published in 38 languages and dialects. Copies of this essay amounting to 15,000 are given free distribution each year by the German government, which recognizes the importance of this world-wide movement for the protection of her people.

Everyone recognizes that it is education that will wipe out the disease. Hot sunshine and oxygen are really just beginning their careers as disease preventers. Our age has become convinced that disease is not a necessity.

Vigor of mind and body can be secured through observance of a few simple rules in respect to food, air, water, drainage, clothing, occupation and exercise. A truth I seek to impress is, that perfect health usually is enjoyed by those who live hygienically, and that hygienic living makes it possible to work efficiently and comfortably, without excessive weariness, and to get out of oneself the best that is there.

Physical habits we form in youth make or mar the foundation of our health for the rest of our days.

The recognized methods used to prevent tuberculosis are the methods that the up-to-date physician uses to help him in combating all diseased conditions.

It is absolutely essential that the nose and throat shall be put in as nearly a state of perfect health as possible. The larynx is found to be affected in over half of all cases of tuberculosis of the lung. The nose must be kept open, as it is not only the filter for the air, transforming it into a purified, moistened and warmed state, to enter the throat and lungs. Any child, or man, or woman who breathes night or day with an open mouth should beware of the results sure to come if these conditions are allowed to remain. There is no obstruction to breathing more important to the future of the child than adenoid growths, found in nearly all forms of mouth breathing in children under sixteen years of age. The removal of these is as nothing compared to the benefits following it. This exhibit is not for the consumptive. Its object lesson is for the man, woman and child who is in every way healthy. It should teach him to remain so.

When the suggestions given here in this exhibit are followed out, it insures against all diseased conditions and makes of the follower a stronger, more healthy and effective individual.

We should all be thankful to the ladies who were progressive enough to see the vast importance, to each of us, and to humanity in general, of the duty of everyone to be strong and vigorous. This subject should be interesting to every thinking man and woman who wishes to make his life effective for the general good. He should join the movement and aid in the march of progress, and strive to know what is going on in the world in respect to one of the greatest forward movements of modern medical science.

Correspondence

LETTER FROM BUDAPEST.

The 16th International Medical Congress
At Budapest, Hungary, August 29-
September 5th.

By Frank LeMoyne Hupp, M.D.
Wheeling, W. Va.

The Celts long before the Christian era erected a town upon the site of the present meeting place of the great International Medical Congress. The capital city of Hungary looks back upon a restless past; many were the revolutionary conflicts and changes; every inch of ground upon which the beautiful Budapest now stands has been occupied and ruled by Celt, Roman, Hun, Avar and Slav before possessed as a home by the Magyars, and made the center of the Hungarian kingdom.

The advantage of the site as a home place and a region for health building was recognized long before the time of Christ. The Celts called their hamlet Ak-ink, meaning water kingdom, and later in the second century the Romans preferred the name of Aquincum for this part of the valley of the Danube.

While this settlement acquired the dignity of a municipality under the Roman Hadrian and Servius, antedating many of the old Italian cities, as a great metrop-



Professor Kalman Mueller, President of the Congress.

olis and centre of medical learning and balneology, it has only been brought conspicuously before the outside world within the last half century, for it was only in 1872 that the two cities, Buda on one bank of the Danube, and Pest on the other, united under the one municipality of Budapest.

With all its wealth of natural beauty and most fascinating surroundings, this city, in fact Hungary itself, is unfortunately but little known by the American traveler. Of the thousands who cross the Atlantic and throng Europe annually few there are who reach the "Gate of the East," and this is not because of inaccessibility, situated as it is but four hours from Vienna, and twelve hours from the Adriatic port, Fiume. The latter city is in direct line with our own New York, through many luxuriously appointed ocean steamers. The writer has no hesitancy in saying that Budapest is the most beautiful city he has thus far

visited in Europe. Arriving by steamer from Vienna, one is profoundly impressed with the splendid panorama, coming first to St. Margaret's Island, a veritable earthly paradise; on the right the Pest embankment, with its stately edifices and commodious hotels and rich monuments, admirable specimens of Hungarian art; the imposing house of Parliament of pure and rich Gothic architecture, surpassing, in the writer's opinion, anything of which Westminster may boast, whose ceilings are exquisitely carved and gilded, whose walls are alternately adorned with gigantic mirrors and historic paintings; and with stately corridors, chambers of law whose floors are laid with rich marble and miles of crimson carpet, noble staircases and lofty halls, superbly furnished and decorated

Rudas and Saros, belong to the city authorities, who conduct them solely with a view to benefit humanity; and the low charges for bathing at these beautiful pavilions certainly excludes the possibility of any profit coming to the municipal fathers. As the writer drank from one of the hot springs yesterday he saw hundreds of the poor and lowly coming and going with their jars and jugs to be filled at these healing springs. The Apenta and Hunyadi Janos are too well known to be mentioned here, and many of the visitors have been carried to these bitter water springs, but few there were who drank copiously at these visits. Two delegates who fell by the way, with more curiosity than wisdom, kept their more discreet room-mate busy serving paregoric and bismuth cocktails the following night.



New Artesian Hot Spring and Bath, Budapest.

with statuary, busts and works of art. On the left bank, high up on the mountain, the Royal palace, the dismantled citadel crowning the heights, the wonderful St. Matthew's Church, and a masterpiece of native architecture, the Fisher, Bastion and St. Stephen's Steps. This is Budapest, and six splendid bridges connect the two parts of the city.

In the neighborhood of Old Buda is the interesting dead city of Aquincum, with its historic Roman remains and amphitheatre and baths. There many members of the Medical Congress have been taken on the sight-seeing tours. No city, not even Carlsbad, is so rich in hot mineral and saline springs as Budapest, and many of these, notably the Artesian,

A few words might not be out of place here, before speaking of the work of the Congress. The artesian Bath was erected at a cost of 3,000,000 crowns or \$600,000, and the rebuilding and extension it is now undergoing will cost several millions more. It is situated on the shore of the lake in the beautiful City Park, and beneath the shadow of the Hungarian monument to the illustrious Father of our own country, George Washington. The Thermal Spring comes from a depth of 3,000 feet, and has a temperature between 160 and 198 degrees F.

The beautiful Rudas Bath is situated on the left bank of the Danube, a hot spring gushing from the rocks at a depth of 300 feet, with a temperature of 110

degrees F. A wonderfully beautiful building has been erected here by the city.

The Saros mud bath has a temperature 127° and its curative properties have been known for centuries.

In such a place, then, the great Medical Congress is now convened, in the political, scientific, social and intellectual centre of the Hungarian Kingdom, the headquarters of many of the learned societies of the Orient, the seat of the Eastern Academy of Science.

I was told today by a Hungarian physician that the general public, or the visiting physician could not begin to comprehend the magnitude of labor involved in bringing to a successful issue an enterprise so great as the present Congress, including as it does some 6,000 members from every part of the civilized world. Tens of thousands of circulars and pamphlets have been written, printed and distributed, thousands of letters received and answered, entertainment and accommodations have been generously provided for the army of medical invasion. The guiding spirit back of this prodigious task has been Prof. Mueller of Budapest, a man of broad mental range, and of wide experience as a leader of men.

Many of the representatives here are no ordinary men, but physicians and surgeons of international fame. From Europe, Asia, Africa and America they have come to unselfishly place their God-given knowledge at the service of each other and for the good of their brother-man. The very wide field of medical science is certainly being demonstrated by the series of public addresses, hundreds of papers and discussions delivered in every tongue,

in the twenty-one sections, representing toilsome research work in every field, and the best fruits of the bedside findings in this twentieth century.

The first International Medical Congress was held in Paris forty-two years ago, and was made up of 333 French and 589 foreign members, and at the last assembly at Lisbon there were 1762 members. Certainly one may justly conclude that the present session, with about 6,000 registrations, indicates an increasing sympathy and vitality. Many receptions and places of amusement have been provided for those who wear the bronze emblem of the Congress; garden parties, soirees, and gala performances at the various theatres. A royal reception was given at the Palace by His Royal Highness Archduke Joseph, representing His Majesty the Emperor of Austria-Hungary. Indeed the far-reaching kindness and hospitality of these good Hungarians will never be forgotten by those of us whose privilege it has been to be members of this Congress.

It was the intention of the Royal Hungarian Ministry of Agriculture to present a little box containing two bottles of Tokay wine, manufactured here in Hungary, to each member of the Congress, perhaps for the purpose of directing the attention of the medical visitors to one of the exports of the country. This act of kindness became known to the International Medical Abstinence League, and inflamed by the proposition, they immediately set forth to put a stop to this "captatio benevolentiae."

A large circular was distributed yesterday to the members of every section, endeavoring to show that "alcohol as a



Budapest.

medicine is useless and even dangerous"; how by receiving such a present the members of the Congress will make themselves allies of the "alcohol-capital" and distillers the world over; promoting and encouraging the drink habit and inebriation, and by accepting this present a great scientific congress will be the means of advertising a reprehensible traffic. The document was signed by Sir Victor Horsley as President and eight other members of this temperance society. Whether the members of the Congress received their drink of Tokay is still a problem.

Lectures in Esperanto.—The International Association of Esperantist Physicians have been giving a series of scientific lectures during the progress of the Congress. These lectures were largely attended and the subjects well handled by physicians from all parts of Europe.

The members of the Congress from the United States of North America met on Monday afternoon at the statue of George Washington in the City Park, and did honor to the father of their country. This statue occupies a conspicuous place in Budapest's chief playground, overlooking a most picturesque lake, and surrounded by the carpet-field landscape for which Hungary is noted.

Several hundred Americans, Hungo-Americans, Hungarian Ministers of State, and officers of the United States Army and Navy gathered to listen to patriotic utterances from Count _____, the Minister of Education and Interior, Dr. McMurtrie, ex-President of the American Medical Association, and Mr. _____, the representative of the *Chicago Tribune*. Following these orations a number of children born in America, but whose parents have returned to their native land, sang with feeling, "My country 'tis of Thee, sweet land of liberty," and they were joined heartily by the visitors beneath the shadow of this beautiful granite monument of their compatriot.

The official delegates from the United States of America are as follows:

A. D. Bevan, M.D., Prof. Clinical Surgery, Rush Medical College, Chicago; George V. J. Brown, M.D., Wisconsin; George Dock, M.D., Prof. of Medicine, Tulane University, New Orleans; R. H.

Fitz, M.D., Prof. of Medicine, Harvard University, Boston; John S. Fulton, M.D., Secretary General of the 15th International Congress on Hygiene and Demography to be held at Washington; Surgeon H. D. Geddings, M.D., Department of Health and Marine Hospital Service U. S. A.; J. Riddle Goffe, Prof. of Gynaecology, Post Graduate Medical School, New York; Ramon Guiteras, M.D., Prof. of Genito-Urinary Surgery, New York; Charles H. Hughes, M. D., St. Louis; Reid Hunt, M.D., Baltimore; H. L. E. Johnson, M.D., Washington; R.W. Lovett, M.D., Massachusetts General Hospital, Boston; Graham Lusk, M.D., Prof. of Physiology, Bellevue Hospital Medical School, New York; G. Lloyd Magruder, M.D., Emeritus Prof. of Materia Medica and Therapeutics, Georgetown University, Washington; Edward Martin, M.D., Prof. of Clinical Surgery, University of Pennsylvania, Philadelphia; James M. McBride, M.D., Pasadena, California; L. S. McMurtry, M.D., Prof. of Surgery, University of Louisville; J. B. Murphy, M.D., Prof. of Surgery North-western University, Chicago; John H. Musser, M.D., Prof. Clinical Medicine, University of Pennsylvania, Philadelphia; C. A. L. Reed, M.D., Prof. of Gynaecology, University of Cincinnati; Charles W. Richardson, M.D., Washington; Major Paul F. Straub, U. S. Army, Washington; William S. Thayer, M.D., Prof. Clinical Medicine, Johns Hopkins Hospital, Baltimore; General George H. Torney, Surgeon-General U. S. Army; Fenton B. Turck, M.D., Chicago; Albert Vander Veer, M.D., Prof. of Surgery, Albany; J. A. Witherspoon, M.D., Prof. of Medicine, University of Nashville.

Besides these there are delegates of the various societies of different nations and cities, and society representatives, and thousands who have come individually. The writer found no other credentials necessary than the card showing membership in the American Medical Association.

Aside from the sessions of the various sections there have been many joint or "common sittings" in the large museum lecture hall; but the joint session for appendicitis, involving the sections of Surgery, Gynaecology and Internal Medicine,

was held in the House of Commons of the Parliament building, and as has been true of the sessions of the American Medical Association, it created more excitement and brought together a larger crowd than any other joint session.

One of the noteworthy papers of the Congress was by Gluck of Berlin, "Die Diagnose und Behandlung des Larynxcarcinoms." This skillful operator presented three patients upon whom he had done a complete laryngectomy; indeed on close inspection of these cases it seemed that from the chin to the episternal notch nothing had been left but the bony spine of the cervical region and the oesophagus. These patients had been provided with some ingenious musical contrivance with a battery attachment, with tubes passing into the nares above and also into a tracheal opening below, and by grinding a crank, pressing a button and the patient performing the act of speaking with tongue and lips—words and sentences were audibly produced, horribly sepulchral-like but distinctly heard over the wide hall where the surgical section was in session. While Gluck's wonderfully clever device may bring speech to those made dumb by the surgeon's knife, certainly the wearer of one of these strange voice boxes should be heralded, otherwise the shopkeeper and the salesman in the public places may be the victims of nervous prostration—because of the strangely unhuman and graveyard-like intonations. It is rather interesting to note that all of Gluck's operative cases of laryngeal cancer had gone beyond the two-year limit without recurrence. Loud and long was the applause following the reading of this interesting paper.

Dr. Wm. McEwen said today, in discussing the radical cure of inguinal hernia, that he considered the Bassini operation an unanatomical procedure. Dr. John Walker of the Ruptured and Crippled Hospital of New York had just read his paper reporting upward of 2,000 cases of hernia receiving the Bassini operation, for the most part children, and McEwen, with characteristic grace and emphasis, said these were no fit cases to judge the merits of any method of operation; that the cicatrix remaining after the removal of the sac in these children

would almost invariably produce a sufficient barrier to prevent any recurrence, even if no stitches were used. McEwen considered the cutting of the apponeurosis of the external oblique, as is done in every Bassini operation, very objectionable and useless. The Italian method of cord transplantation was very unanatomical and utterly unnecessary; it had in many cases caused atrophy of the testicle, and often developed a source of weakness in the resulting scar. The operation of Bassini compromised both the nutrition and nerve supply of the testicle, and he had observed many cases of unremitting testicular pain caused from transplantation and stretching the cord. McEwen claimed that his operation, performed for the most part on soldiers, ironworkers and men whose vocation necessitated much heavy lifting, had stood the test of time; he never removed the sac, but used it as a part of the barrier to plug the unnatural opening.

Lucas Championniere of Paris read a paper describing his hernial operation in which he resects the cord, but his French was too much for the writer to glean anything of the technique.

Freyer (London) reviewed with interest 600 cases of total enucleation of the enlarged prostate, but of this we shall hope to speak later after visiting the operating room of this master prostatectomist two weeks hence.

Harvey Cushing's (Baltimore) paper on Partial Hypophysectomy for Acromegaly with remarks on the function of the hypophysis, was a masterpiece and epoch-making. His lantern-slide demonstrations of cases upon which he had operated with results and transformations almost startling, merited the generous applause it received.

Soresi (New York) demonstrated a new method of producing end-to-end anastomosis, by means of a rubber ring. The writer had the pleasure of witnessing a private demonstration of this ingenious coupling before the paper was read, and we do not hesitate to confess that it is a speedy and safe method for resection. Soresi brought two dogs all the way from Gotham, upon which this new operation had been performed, and one of these dogs was opened before the section, the

operation having been done some months ago. It was almost impossible to identify the site of the coupling.

Papers were also read in the Surgical Section by the following well-known surgeons: Tuffier and Doyen of Paris; Kraus and Hildebrand of Berlin; Kuemmel of Hamburg; Theodore Kocher of Berne; Gerster, Murphy, Andrews, and Bevan of United States; Pozzi of Paris in the Gynaecological Section; Van Noorden, Lander Brunton and Barker in the Section on Internal Medicine. Markoe of New York quite startled the Obstetrical Section with his "Observations and statistics of 60,000 labors occurring in the service of the Lying-in Hospital of the City of New York." The papers of Brandsford Lewis in the Urological Section and Dench in the Section on Otology and Gerster in the Surgical Section on "Perforative Peritonitis" were well received.

In the Educational Section Kutner of Berlin read a helpful paper on the work of medical extension, and in closing his remarks he recapitulated as follows:

"1. A medical education is not to be considered finished at the end of the university course. The constant progress of science requires of the physician an equally constant effort in the direction of further study.

2. Physicians must be given opportunities to supplement their knowledge without great material sacrifice on their part.

3. Therefore the arrangements which are to serve this purpose must be:

(a) gratuitous (for the physicians of the country):

(b) in the home city of the physician or near the same;

(c) able to be used by the physician at the time most convenient for him.

4. There should be created, in the larger cities, scientific centers—educational institutions, in connection with which the local hospitals can be utilized, and in which physicians capable of teaching may act as lecturers.

5. The lectures given should embrace all theoretical and clinical subjects; also related domains of modern medical science (social medicine, etc.)

6. While at present lectures (with or without demonstrations) and courses (with demonstrations or practical work), given in scientific institutions and hospitals, must be accepted as the best form of continued study, it should be our aim in future to create as many institutions as possible serving exclusively the purposes of medical after-college education."

The English-speaking journalists visiting the Congress are unfortunate in receiving the abstracts of the papers in a foreign tongue. It was certainly an interesting sight to visit the press room and there see the scores of men preparing material for the medical press all over the world, translators, typewriters, clerks and reporters grinding out their polyglot.

We cannot conclude this article without expressing the conviction that this great world-gathering of medical men will do much to dispel the vast ignorance concerning Hungarians and their fair land. The members of the 16th International Medical Congress, now about to adjourn, have been royally received by these hospitable people, blessed with a civilization as good as our own, and ever ready to emulate the highest and the best. The one hope entertained by every visitor, as they depart from Budapest and her 800,000 people, is that some day they may be able to return, when there shall not be so many things scientific to engross the attention, that even more may be learned of the land of *Des Konig Stephan der Heilige*.



Sulphur Baths, St. Margaret's Island, Budapest.

The West Virginia Medical Journal.

S. L. JEPSON, A.M., Sc.D., M.D., *Editor.*

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Editorial

If the Journal fails to come, drop us a card.

OUR ANNUAL MEETING.

For the first time in the history of the Association, our annual session is this year to be held in the autumn. The arguments in favor of the change of date were, that the weather is generally more settled, the country roads in a better condition for the few who may have to travel them, and sickness generally at its lowest level. Besides, the spring meeting sometimes conflicted with that of the American Medical Association, or occurred so near it in time that our members did not care to attend both. Our last meeting was the largest in the history of the Association, partly because

Clarksburg is very conveniently located and especially because it is near the center of the well organized part of the state. Elkins has the advantage of being in a district that many desire to visit, and the Barbour-Randolph-Tucker Society is one of the largest and most active and progressive of our component societies. The weather in October is generally ideal, and we do not believe any member will regret a visit of a few days to the little mountain city that has had the honor of sending two of its citizens to the United States Senate, and which, in the person of West Virginia's "grand old man," had also a candidate for the second office within the gift of the American people.

The program of papers which has been prepared for the meeting is one of the finest we have ever had. Secretary Moore deserves very great credit for the hard work he has done in preparing this fine list of papers. No one is in closer touch with the secretary than the writer, and few can so well understand the amount of labor and skill put forth by Dr. Moore, not only in preparing this scientific feast, but in keeping up an interest in medical organization in the state. If the Association can secure a set of counselors equal in energy and efficiency to our secretary, its membership can very soon be made to reach the 1,000 mark. Let this be our aim for 1910, and with this in view let no man be elected to the counselorship who cannot be depended on to "hustle" for members during the coming year.

S. L. J.

KEEPING THE OPEN MIND.

In a world filled with wonderful forces, the human mind is the most marvellous of all within the range of our experience. It imperiously bids all other forces to yield up their secrets, to uncover their processes, and to become obedient to it.

We have heard much in the decades just past, of the rights of the mind. It is well for us to remind ourselves from time to time of the undeniable fact that the mind has duties also. In a strictly true sense there is no such thing as a private mind. Neither ancient faith, nor modern science, nor the eternal principle of justice admits of absolute free thought. The mind must be open at all times to all sorts of intrusions from the outside. It is a temple of Janus

that must never be closed. Every truth has the right of sanctuary. The mind must give a hearing to every comer who offers "truth" as the password. No judgment is or can be perfect without full information on the subject to be judged; and we can never tell beforehand what proffered information shall be worthy a place in the array of facts that shall determine judgment.

One of the most harrowing thoughts that we have ever met in many years of reading was that enunciated by the foremost psychologist of America, when he said that the average man becomes "old foggy" at the age of twenty-five; that at that early age he begins to close his mind against new ideas. How horrible, if it be true, that we are in this danger of early mental hibernation! How doubly devastating, if it be true of the men devoted to medicine!

If there is any one profession more than another that should ever keep the open mind it is the great and honorable guild that is seeking to conserve the health and stamina of the race. Let us not hide from ourselves the fact, humiliating though it be, that medical men have not always measured up to the highest standard of open-mindedness on every occasion or in every age. Prejudice or pre-judgment has kept out even elemental truths. The phenomena of inflammation were among the very first to be brought before us. The profession registered its judgment made from limited information; and now after thousands of years of complacent self-satisfaction, it has to acknowledge its error. Bier brought the open mind to bear on old and long-known facts, and has obliged us to erase our old judgment from the slate and prepare to write a new one.

No historian can tell us when the treatment of fractures by splints and immobilization began. It is coincident with the first beginnings of recorded surgery. Any treatise on fractures, ancient or modern, from Hippocrates to Ambroise Pare, to Dupuytren and Malgaigne, down to Hamilton of yesterday, teaches us to reduce and immobilize fractured bones. The results of the treatment have always been unsatisfactory; pain and impaired function have resulted, because of the treatment, as we now know, and not in spite of it, as we believed. For centuries surgeons have been chagrined at the results observed clinically,

but it seems not to have occurred to them to try other means, least of all means diametrically opposite to the treatment in vogue for so long. Minds were closed to that possibility. But the old facts, after knocking for a thousand years at the door of the human mind, found one willing to open at last. We are now seeing what was there for us to see all the time. We are seeing that we must do just the opposite of what we were doing. Sitting at the feet of Lucas-Championiere, we bow our heads in humiliation as he erases our olden judgment and writes a new one.

The imagination shudders at the contemplation of all the sacrifice of life and usefulness that must be charged up to our profession for having closed its mind during all the past centuries to the truth about inflammation and fractures. And these are only two modern instances of the importance of keeping before us the duty of being open-minded. The whole history of medicine is replete with like instances. When some pioneer of truth has raised its standard, we have been too often slow to see and to follow. Harvey, Jenner, Laennec, Auenbrugger, and a hundred before them and after, have been laughed at, have been persecuted by the rank and file of the profession, for daring to open their minds to the admittance of new truths.

A poet has sung of

"Truth forever on the scaffold,
Wrong forever on the throne."

Let us see to it that in our profession, at least, we shall keep the open mind, giving a hearing to all claimants who ask for it, ready at any time to depose our most cherished judgments and to replace them with the legitimate, accredited heirs of truth, no matter how unseemly their raiment or how despicable their former habitation. Let us resolve to welcome every scientific doctrine from whatever source, that is full of ventures and suggestions; that wakes our opposition; that puts us on our guard; that makes us think and criticise; that forces us to examine our intellectual consciences. To do less than this is to be unworthy of the vision we hold up before the profession.

C. A. W.

We will meet you in Elkins Oct. 6-8.

Selections

METHODS IN THE MEDICAL EXAMINATION OF SCHOOL CHILDREN.

Ernest B. Hoag, M.D., Director of Hygiene and Medical Examination in Throop Polytechnic Institute and in the Pasadena City Schools.

Argument is no longer necessary to support the idea of medical work in schools. The necessity for such health supervision is now pretty firmly established in the minds of nearly all progressive school people. We may, therefore, concentrate our attention upon methods for the organization of the school health department.

In studying that most admirable book of Gulick and Ayres, "Medical Inspection of Schools," one is struck with the very general lack of uniformity in health organization, not only in the schools of this country, but to a less degree in those of Europe as well.

Medical inspection, or, as I much prefer to call it, health supervision of schools, is provided for by methods which vary all the way from desultory voluntary services to the complete, well-paid, and methodical plan of New York City. In general it may be safely stated that schools get just about what they pay for. One does not usually expect satisfactory service from a voluntary or poorly paid superintendent or teacher. Whatever sort of public service is worth having is usually worth paying for. Health officers in schools should, therefore, be regarded in the same light as any other employees of the school system. We frequently hear of a school medical officer inspecting several thousand children in a year, or even less time, while giving to this work only a portion (and usually a small one) of his time, and receiving for such work a pittance or \$200 or \$300 or less. Now such a piece of work as this is sometimes worth just about what is paid for it, but more often its value is much less. No inspector can possibly cover several thousand cases yearly in a few hours per week and do valuable work for the schools. He is just what his name

implies, an "inspector," and he places himself in about a plane with our RAT inspectors in San Francisco and Los Angeles. He *inspects*, it is quite true, but he never *studies* nor *adjusts*.

Health work in our schools, to be useful, requires training, aptitude, time, and respectable recompense. Except where the health department of a city is organized on a large and complete plan, with its various departments in charge of well-qualified directors, the medical supervision of schools ought to be under the direct control of the *Board of Education*. This is true because medical work in schools naturally forms an essential part of our general educational system. It is a great mistake to think of it as first of all *medical*, for it is first of all *educational*. It must aid the boy and girl in healthy growth and development; it must help the school to adapt its work to individual physical and mental conditions; it must aid in the correction of existing physical defects and in the prevention of others; it must teach the fundamental elements of preventive medicine; it should superintend the teaching of physiology and hygiene, and help to raise these subjects out of the depths of their present state of alcoholic and anatomic perversion to a rational basis intelligible to the child; lastly, it should cooperate with, or direct, the work of physical training, until the school physician is regarded as something more than an "inspector." But when, as is already the case in some cities, and among them New York, Boston, Philadelphia, Chicago, Los Angeles and even little Pasadena, the medical work in schools is correlated with the entire school system and receives the hearty support of superintendent, principals, and teachers, then we may hope for, and confidently expect, results which in the end will give the pupils a square deal while in school, a better preparation for life's work on leaving school, and results which will place the parents of the future generation in a position to more intelligently aid their children in growth, development, and character formation. This is the work of the physician in the schools; and, to my mind, any school health organization which does not recognize the essential points in the plan here outlined is little better than none at all. — *School Hygiene*.

NEURASTHENIA OF SCHOOL TEACHERS.

One of the most startling facts as to our public schools is the recent revelation of the large percentage of retired teachers in N. Y. City who have neurasthenia recorded as the cause of their disability. It is indeed somewhat alarming that there should be a condition of affairs that causes such a nervous state, for if there is anything which hopelessly unfits one from managing children it is neurasthenia. Even babies are excited or soothed as the nurse is nervous or phlegmatic, and sensible mothers always prefer nurse maids who are slow even if dull. A neurasthenic teacher, even in the early stages, has a deplorable influence upon pupils and for the sake of both the disease must be prevented.

The cause of teacher's neurasthenia is rather obscure when we reflect that teaching is not only a most wholesome employment of itself but that it is the normal and natural life of woman, who has developed a genius for managing children as a result of the evolution of ages. It is part of her nature, for without it the family would have perished. None the less, it is a nervous strain, and many a poor woman suffering with "nerves" has undoubtedly been wrecked by the worries and jars of raising a brood of wriggling youngsters. Nothing is harder to bear than the noise of other people's children, and we must suffer unconsciously from that in our own households. The strains of the school room must then be quite serious.

Nevertheless there must be other causes which equally affect the pupils, for their nervousness is a subject of frequent comment in medical literature, and every family physician, almost as a matter of routine daily practice, is compelled to remove some little sufferer from school because of ill health, chiefly "nerves." It is a deplorable state of affairs, because the ideal school should build up, strengthen and develop the physique as well as train the mind. It would be like the millenium if we could prescribe school for the weaklings of a family, whereas now only the strong can stand the strain.

The poor physique of normal school graduates has been known a long time, but Dr.

Elizabeth Jarrett (*Medical Record*, April 1, 1908) has shown that many are unfit to take up the profession of teaching for which they were trained. Much of this is known to be due to improper food. Insufficient nitrogen has prevented proper growth and development. Poverty is at the basis of it of course, and instead of advocating public feeding, we should advise these cases to do what is done by every boy too poor to attend college—to work at something else. The calling is so wearing at present that none but the robust should aspire. And there must be something radically wrong with the whole system. Undoubtedly there is not sufficient outdoor exercise and bodily training and this emphasizes the lack of nutriment.

Perhaps the hygiene of the school room is not wholly understood, in spite of the enormous amount of study which has been given to it in the last thirty or forty years. Physicians and teachers seem to have had their attention directed more to the physical condition of the pupil. The defects of the children have always existed but have only recently excited comment and bid fair to blind us to their environment. It is quite well therefore that Dr. Geo. W. Vandergrift (*Medical Record*, June 13, 1908) should warn against allowing this new pendulum to swing too far. His article on The New School Hygiene is so timely as to deserve wide attention for it emphasizes the need of smaller classes, shorter sessions, more recesses for relaxation outdoors in adjoining parks, and many other things the absence of which is in great part responsible for the neurasthenia of the teachers themselves. He very properly blames the medical profession for not taking more interest in school affairs. If every family physician who has been compelled to remove little patients from school would have devoted the same amount of labor to removing the injurious factors from the schools, the pupils would now be reaping the benefit. It is to be hoped that medical literature will now contain more on the subject from the standpoint of the family doctor.

It might be well to hint at one point on which we are going to extremes. There is no doubt of course that a well lighted room is essential, but we must remember that in the last few years it has been definitely determined that too much is a cause of nerv-

ousness, and this may fully account for the condition of many a teacher and pupil. Architects are now studying the matter to the end that the headachy glare of the typical school room may be abated.

State News

This interesting announcement recently came to the editorial office:

Mr. and Mrs. Thomas Trickett Houlton
announce the marriage of their daughter
Myrtle DeVene Shaw
to
Docteur Charles Walter Waddell
on Tuesday, the fourteenth day of September
one thousand nine hundred and nine
at Baltimore, Maryland.

We extend congratulations to Dr. Waddell and bride. The doctor is one of Fairmont's rising young men, and he has our best wishes for future success and happiness.

Dr. Harriet B. Jones, of Wheeling, has recently arrived home from her European tour of several months. We have no more enthusiastic member of the State Association, and she is endeavoring to have all the women M. D.'s of the state at the Elkins meeting.

Dr. F. L. Hupp, whose very entertaining European letters our members are now enjoying, hopes to be home in time for the Elkins meeting.

Our editorial co-laborer, Dr. L. D. Wilson, will be missed from our annual meeting, as he is making preparations to sail for Europe early in October, on a trip which will end only after he has circled the globe. Our best wishes will accompany the doctor, whose genial companionship, editorial assistance and accurate proof reading we shall very greatly miss for four months. If our readers encounter many errors in the JOURNAL, charge them up to L. D.'s absence.

We greatly regret that our treasurer and genial friend Barber has thought it necessary, on account of the condition of his health, to go to Europe for a time. We sincerely hope the trip and rest may bring all the improvement hoped for. No member will be more missed from our annual meeting than our optimistic treasurer.

Dr. Kenney, who spent last winter in Baltimore in post graduate work, has recently located in Keyser.

Dr. T. H. West and Dr. W. M. Babb, of Keyser, have formed a partnership and will have their offices in the rooms occupied by Dr. West.

Dr. T. H. West and Mrs. West have just returned from a month's automobile tour through the northern and eastern states.

Dr. T. Jud McBea writes us from Elkins that the Committee on Arrangements for the state meeting is making fine progress, and a great meeting may be looked for.

Society Proceedings

ELKINS ACADEMY OF MEDICINE.

ELKINS, W. VA., Sept. 25, 1909.

Editor *W. Va. Medical Journal*.

On a call from the chairman, Dr. O. L. Perry, a special meeting was held at his office and a program was arranged for the coming school season. It was decided that the first meeting be held September 16th.

Dr. Golden reported that as a member of the committee on public schools he took up the matter of lengthening the school term from eight months, as it has been heretofore, to nine months. The main reason for desiring this change lies in the fact that by so doing the pupils can be dismissed at 3 p. m. instead of as formerly at 4 p. m. He was glad to inform the session that he met with success and the board of education put into effect the nine-month school term. He also reported that he was successful in persuading the board to install in the new school building filtration plants whereby the entire water supply of the buildings will be filtered.

The following resolution, offered by Dr. Perry, was adopted:

Resolved, That the city council be asked to pass an ordinance prohibiting the exposing for sale in stores, restaurants or on the side walks such fruits and vegetables as are eaten without cooking and to provide screens to protect from flies and dust.

September 16th.

Instead of the regular program the meeting was a special one on account of the presence of Dr. James D. Nydegger, of the U. S. Public Health and Marine Hospital Service. By request Dr. Nydegger demonstrated his method of bandaging a fractured clavicle as described by him in a recent issue of the *Journal of the A. M. A.* All present were impressed with his claim that when properly applied his method is superior to all others on account of its durability, and freedom from slipping, the bandages remaining intact for two weeks or longer, requiring no readjusting as frequently occurs with the application of other methods.

The remainder of the evening the doctor devoted to the discussion of tropical diseases. Pellagra, beriberi, bubonic plague, and amoebic dysentery he took up and discussed in turn. With the two latter he has had extensive experience. He has made a special study of amoebic dysentery, having himself at one time been a sufferer from it. He agrees with the statement made that this form of dysentery is not at all rare in the States, but believes that many cases are diagnosed as amoebic dysentery in mistake for trichomonas intestinalis.

The meeting adjourned to the home of Dr. Golden, where light refreshments were served.

E. R. McINTOSH, Recorder...

GRANT-HAMPSHIRE-HARDY-MINERAL SOCIETY.

The regular quarterly meeting of the Grant-Hampshire-Hardy-Mineral Medical Society was held in Petersburg on July 23rd. The society met in the court house at eight o'clock in the

evening and was a very successful and interesting meeting. The attendance was fair and the papers were of excellent quality. The following program was rendered during the evening:

"Rest in Certain Surgical Conditions," Dr. A. P. Butt, Davis, W. Va.

"Placenta Previa with Report of Case," Dr. Glenn Moomau, Petersburg, W. Va.

"Typhoid Fever," Dr. W. T. Heighberger, Maysville, W. Va.

Drs. W. T. Heighberger and W. H. Yeakley were elected delegates to the West Virginia State Medical Association.

The next regular meeting of the society will be held in Burlington, Oct. 22nd.

W. HOLMES YEAKLEY, *Sec'y.*

LOGAN COUNTY SOCIETY.

This society, which has not been as active in the past year as it should have been, was recently visited by Councilor Rader, of Huntington, and the society was reorganized with the following officers:

President, F. W. Farley, of Holden.

Vice President, S. A. Draper, of Logan.

Secretary, S. B. Lawson, of Logan.

Treasurer, J. W. Thornbury, of Man.

Additional members:

J. D. Biggs, Holden.

Macdonald Cook, Big Creek.

J. E. Macdonald, Logan.

H. H. Farley, Logan.

L. E. Steele, Logan.

OHIO COUNTY SOCIETY.

April 5th, 1909. (34 present.) Dr. Jepson lectured on "Waterborne Diseases." The discussion was opened by Dr. A. Wilson, who said that the subject was most important for the health of the city. The conditions in Wheeling have been bad and are still deplorable. We have been drinking sewage and are likely to do so again in the near future. Mr. C. Hal Bruce, of the City Water Board, being present, stated that the Board expected the assistance of the medical profession in its effort to solve the problem of a pure water supply for the city. He described the difficulties of a practical nature confronting the Board and the methods tried in other places to meet these difficulties, with their results in actual practice. The satisfactory solution of the problem is not yet in sight. Dr. McLain said that the typhoid record of Wheeling is a disgrace to the city. During the recent low stage of the river the mortality was also low. Since the first of the present year careful investigation has been made concerning the source of infection in all cases of typhoid occurring. Dr. Benton recited the condition in Chester, north of us, where they use a filtration system. No cases of typhoid can be traced to the city water; what cases have existed were traced to water from springs. Dr. Hupp said that no matter what method is used for obtaining good water on a large scale, domestic boiling of the water should be insisted upon; herein lies the possibility of suppressing typhoid. Typhoid germs have been found on lettuce leaves, toothbrushes and water bottles. Raw vegetables should be washed in boiled water. The driven wells about the city are not free

necessarily from bacteria. Dr. Quimby emphasized the fact that there is danger from glasses and dishes washed in river water. A nice question is whether natives of Wheeling have acquired an immunity. Dr. Jepson is authority for the assertion that in three-fourths of the cases here the patients are new-comers. Dr. Gaydosh thinks that the fact that the foreign element is more subject to typhoid than are the natives is due to other causes than water. Dr. Walden noted that change of climate and of diet and overstrain may lessen the resistance of new-comers. Dr. A. Wilson said that of course the lowering of vitality is an element to be considered, but typhoid is contracted from the germ of typhoid, and it is wise to avoid infection from the water. The Ohio County Medical Society should give hearty co-operation to the new Board of Control. Dr. Noome said that we should take the same precautions against typhoid as we do against tetanus and tuberculosis. Water is a factor and we should urge the boiling of the water. Dr. Osburn thinks the natives have acquired some immunity against typhoid. Dr. Jepson inclines to attribute some influence to meteorological causes. Dr. Hupp offered the following, which was seconded and carried: Resolved: That it is the sense of the Ohio County Medical Society that because of the manifestly impure state of our drinking water, the Board of Education is respectfully requested to provide the children studying in the public schools with either distilled or boiled water.

CHAS. A. WINGERTER, *Secretary.*

April 12th, 1909. (24 present.) Dr. Reed lectured on "The Pure Food Law." Dr. McMillen said that when unfit raw material is used, preservatives must be employed to hide the fact. He understands that such material is used by some canning concerns. Dr. Walden said that this society wants pure water and clean milk; it is just as important to have pure food, and we should go on record in favor of Dr. Wiley's work. Dr. Fulton thinks that it will be difficult to make people eat what they should eat. Dr. Noome thinks that the disinterestedness of Dr. Wiley is apparent; the present preservers who uphold him make the argument strong in his favor. Preservatives are harmful. No drug should be taken unless there is a clear indication. Dr. Wiley should be upheld. Dr. Osborn expressed himself as being pessimistic. The public has to be educated. He thinks that some of the stories about bad food are overdrawn; extremists have gone to absurdity in the matter. Dr. Wingerter thinks that the medical profession can do a great deal more in all these matters if it will only arouse its optimism, and realize the power of united action even against moneyed interests. We must not allow the issue to be clouded in the Wiley matter. Whether or not Dr. Wiley has made mistakes of judgment, he has been actuated by a desire to safeguard the public health, and the stand he has taken on the matter of the preservatives is one that gives to the public. Dr. Gaydosh thinks that we should most assuredly be upheld. Dr. Hersey said that if we work together we can do much; but the medical profession needs education as well as

the public. Dr. Gaydosch thinks that we should not put too much blame on ourselves; a remedy must be sought somewhere for our ills. Dr. Walden offered the following resolution, which was seconded and carried unanimously:

Resolved, That the Ohio County Medical Society approves the measures of Dr. Wiley in opposition to the adulteration of foods, and stands pledged to further such principles within our own state by every honest effort.

Dr. Gaydosch reported the case of a child in whose esophagus a pickle coin was lodged for fourteen days. It was removed by a simple wire hook made extempore, after very elaborate instruments had failed. Dr. Nichols reported the case of a child who had swallowed a scarf-pin and passed it safely.

CHAS. A. WINGERTER, *Secretary*.

April 26th, 1909. (22 present). Dr. Wingarter lectured on Hysteria and Neurasthenia. Dr. Reed said that the subject is a most important one and demands our best attention. He thinks there is an analogy between hysteria and neurasthenia and diseases of the spinal cord, locomotor ataxia and diseases with true paralysis. He thinks that in time the so-called functional diseases will be shown to be organic disturbances. Dr. Osburn thinks that in time most hysterics will be classed with the insane; even now it is dangerous to speak of your patient as hysterical in the hearing of herself or her friends. Hysteria is often a refined kind of depravity. Dr. Gaydosch said that hysteria is purely a sympathetic disease; he thinks hypochondria, melancholia, and neurasthenia the same disease. Introspection leads to many cases. Dr. Quimby said that just as there are physical stigmata of degeneracy, so there are probably the same in the mental sphere. He thinks it unlikely that hysteria and neurasthenia should exist in the same patient. Many of the so-called functional disturbances are due to disturbed chemical processes. The study of the ductless glands is going to elucidate this subject. Dr. Andrew Wilson said that in almost all hysterical cases there is a neurasthenic element; although the converse is not true. Dr. Noome thinks we have our hands full when we have a case of hysteria or neurasthenia. The paper of the evening will help us to differentiate these conditions at the bed-side, and that means a great gain for us. In surgery, when we have a high leucocyte count we know immunity is being gained. The loss of inhibition in hysteria makes the discordant note. Dr. Wingarter closed the discussion.

CHAS. A. WINGERTER, *Secretary*.

Reviews

PRACTICAL DIETETICS, WITH SPECIAL REFERENCE TO DIET IN DISEASES.—

By W. GILMAN THOMPSON, M.D., Professor of Medicine in the Cornell University Medical College in New York City; Visiting Physician to the Presbyterian and Bellevue Hospitals. Fourth Edition. Illustrated, enlarged and completely re-written. New York and London: D. Appleton & Co. 1909. Cloth. Pp. 930. Price, \$5.00.

We have not seen, in a long time, a book so generally satisfactory as this one. It is now in its thirtieth thousand; the present edition, the fourth, being entirely re-written and printed from new plates. These facts alone show that it has no considerable rival in the field which it covers. The usual text-book references to foods and dietetics are apt to be vague and unsatisfactory. Such indefinite directions as "the diet should be nutritious," or, "should be easily digested," or, "should be carefully supervised," &c., are what one generally meets with, and to say that these are valueless would be mild characterization indeed. To remedy this grave deficiency is the promise of this book, and right thoroughly it does it. A short synopsis of its contents embraces the following: Foods and food preparations; stimulants, beverages, condiments; cooking, food preparation and preservation, quantity of food required; food in childhood, adult life and old age; food digestion; diseases caused by dietetic errors; administration of food to the sick; diet in disease—general diseases, diseases of respiratory, circulatory, urinary, digestive and nervous systems, liver, skin and miscellaneous diseases; rations and dietaries—army and navy, prisons, cures, athletic training, pregnancy, puerperal state, nursing, infants, hospitals, &c.; and an appendix containing recipes and directions for preparing beverages and foods for convalescents. These various subjects are treated with clearness and thoroughness. Where all is so excellent, it is difficult to point out anything that merits special approval, but the parts dealing with foods and food preparations; stimulants, beverages and condiments; and cooking, food preparation and preservation, are particularly to be commended. In the light of very recent developments the recital of the observations of Dr. Frederick A. Cook, physician to the Peary Arctic expedition in 1890-1892, concerning the quantity and quality of food needed in those high latitudes, has a special interest. There are occasional blemishes due to careless proof-reading, for instance, pentosuria for pentosuria, curacao—a very common error—for curacao, tumeric for turmeric, tubular for tubercular. But these cannot detract from the solid merits of the work. We heartily commend it to our readers, every one of whom should possess a copy.

L. D. W.

VACCINE AND SERUM THERAPY.—By EDWIN HENRY SCHORER, B.S., M.D., C. V. Mosby Co., St. Louis. 1909. \$2.00.

Recent medical literature is teeming with articles on treatment of disease by means of vaccine and serum therapy. The writers assume on the part of the readers familiarity with certain fundamental principles on which such treatment is based and with various technical terms necessary for the elucidation of the subjects—such as agglutins, precipitins, complements, amboceptor, antigens, opsonin, etc., etc. To many physicians, perhaps to the majority, these terms convey little real meaning. The aim of the book under review is to supply just such information as the practicing physician must possess in order to comprehend the modern thought on these subjects, and to be able to employ intelligently vac-

eine and immune sera in the treatment of their patients.

The introductory chapters discuss in an elementary way infections in general and the theories of immunity. There follows a clear presentation of the technique of the determination of the "opsonic index", as developed by Wright and Douglas, the pioneers in this field. Chapters on "Opsonic Index in Health and Disease" and the "Nature of Opsonins" complete the first half of the book. The remainder is devoted to the practical application of vaccine and serum therapy. The concluding chapter deals with the sera used in various diseases—diphtheria antitoxin, tetanus antitoxin, antistreptococcal serum, antimeningococcal serum, etc. An attempt is made to estimate the value of such treatment.

Dr. Schorer is not carried away by enthusiasm for his subject. On the contrary, his attitude toward vaccine therapy is eminently sane and conservative. One receives the impression that the determination of opsonic index is at best rather inaccurate and of questionable value; also that, while vaccine therapy is undoubtedly of value, the basic principles upon which the action of vaccines rest are imperfectly understood and are yet to be worked out.

It might be well to emphasize one point upon which Dr. Schorer has laid stress—namely, that the causal micro-organism must be determined before the vaccine is administered, since vaccines are for immunization against specific infections.

We recommend to the practitioner this timely monograph which enables him to secure with a minimum expenditure of time and energy the information needed. J. T. T.

HAND BOOK OF DISEASES OF THE RECTUM.—By LOUIS J. HIRSCHMAN, M.D., Detroit, Michigan, U.S.A., Fellow American Proctologic Society; Lecturer on Rectal Surgery and Clinical Professor of Proctology, Detroit College of Medicine; Attending Proctologist Harper Hospital; Consulting Gynecologist, Detroit German Polyclinic; Collaborator on Proctology, *Physician and Surgeon*; Editor *Harper Hospital Bulletin*; Chairman Section on Surgery, Michigan State Medical Society; ex-President Alumni Association, Detroit College of Medicine, &c., &c. C. V. Mosby Book & Publishing Co., Pub'rs. \$4.00.

The purpose of the author of this new work on Rectal Diseases is to simplify the diagnosis and treatment of the more common affections of anus and rectum. The remissness of the profession in this particular field, is given as a prominent reason for its publication and because of the additional fact that the irregulars are permitted largely to preempt it, by extending to patients the hope of relief without the knife and general anesthesia; methods with which all physicians should be familiar, and frequently make use of.

Superficial examination with consequent faulty diagnosis resulting in inefficient treatment is the imputation. The author, therefore, has strongly emphasized the importance of methodical investigation and has described the best mode of procedure, giving special consideration to the question of diagnosis.

The two chapters, one in which are recounted the symptoms which should direct attention to the rectal region, and the other, in which are described clearly the simplest methods of examination, deserve special commendation and should prove of great assistance to the general practitioner.

The method of producing local anesthesia sufficient to accomplish sphincteric relaxation, and permitting the painless performance of all the simpler operations of this region, is plainly outlined and the author's operative technique given with equal clearness. Its simplicity is such as should encourage physicians, which is the author's purpose, to perform in the office much of the work which he has been doing in the hospital.

The operative suggestions throughout the book are in accord with the generally approved surgical practices in all the progressive clinics of the country. In some instances the "author's operations", it may be said, involve technique long used by many surgeons without a suspicion of their being the property of any one, but the presentation of every subject is so clear and concise, and the teachings measure so fully up to the high standard of modern science, that it is a pleasure heartily to endorse this new volume.

R. J. R.

DIET IN HEALTH AND DISEASE.—By JULIUS FRIEDENWALD, M.D., Professor of Diseases of the Stomach in the College of Physicians and Surgeons, Baltimore; and JOHN RUHRAH, M.D., Professor of Diseases of Children in the College of Physicians and Surgeons, Baltimore. Third Revised Edition. Octavo of 764 pages. Philadelphia and London: W. B. Saunders Company, 1909. Cloth, \$4.00; Half Morocco, \$5.50 net.

The fact that a third edition of this work is so soon called for, is evidence of its popularity with the profession. Its authors are both widely known, and the positions occupied by them give guarantee as to their qualifications for the preparation of a satisfactory book on the subjects here presented. An outline of the contents will well inform our readers as to the field covered. The Chemistry and Physiology of Digestion; Classes of Foods; Beverages and Stimulants; Various Factors in their Bearing on Diet; Infant Feeding; Diet for Special Conditions—as in old age, during pregnancy and the puerperium, etc.; Diet in Disease. While the authors laud the milk diet in typhoid fever, yet they allow a very considerable variety of other articles. They also think alcohol should not be abandoned, regarding it as a valuable food. A chapter is given on Special Cures, and the usual directions for preparing foods and beverages for the sick. Directions are given for the selection of meats. A very full table on the Chemical Composition of American Food Materials is a valuable feature of the work; also Rapid Reference Diet—Lists for the various diseases. A very complete index adds materially to the value of this very excellent book.

MEDICAL SOCIOLOGY.—A Series of Observations Touching Upon the Sociology of Health and the Relations of Medicine to Society. By

JAMES PETER WARBASSE, M.D., New York. D. Appleton & Co., N. Y. \$2.00.

The author of this charming book of essays was until recently editor of the *N. Y. State Journal of Medicine*, and his editorial work gave him a reputation as a most graceful and interesting writer. This book will enhance this reputation. The book will be enjoyed by every educated physician (and we might add, layman) who reads it. Some of the chapters are as follows:

Public Policy and the Medical Profession.

Some Medical Aspects of Civilization.

The Alcohol Question.

Instruction of the Young in Sexual Hygiene.

Idle Wives, Unmated Men, and the Venereal Peril.

Christian Science.

The Emmanuel Movement and Kindred Phenomena.

The Medical Expert Witness.

The Small Medical Society.

We can cordially commend this book as interesting and instructive on every page.

INTERNATIONAL CLINICS.—A Quarterly of Illustrated Lectures and Especially Prepared Original Articles on Medicine. Vol. III. 19th Series. 1909. Lippincott, Pub's., Phila. \$2.00.

The fact that this series of medical and surgical papers has had a continuous success for nearly twenty years is evidence of its right to exist. Each volume contains papers that are strictly up-to-date by eminent men of America and Europe. Among the authors in this volume we may name S. S. Cohen, Dench, Diller, Eisen-drath and Ochsner of this country, Dieulafoy and Dechaux of France and A. Laphorn Smith of Canada.

Cohen writes of Graves's Disease; Dench of Intracranial Complications of Otitis Media; Diller of Chronic Constitutional Headaches; Barach of Observations in 500 Cases of Typhoid Fever; Walsh of Women in Medicine; Eisen-drath of Postoperative Complications; McCarthy of Neuropathology in Childhood. The book is well illustrated and is a very interesting number of this valuable series.

MANUAL OF THERAPEUTICS.—Parke, Davis and Company.

The Manual is a well-printed volume, handsomely bound in flexible leather, of about 650 pages. It is really an encyclopedia of useful information which the physician is bound to value, considering the convenient form in which it is presented.

Here is part of its contents: Weights and Measures; The Metric System; Respiration at Various Ages; Facts Regarding the Temperature; The Pulse at Various Ages; Doses Proportionate to Age; The Care of Surgical Instruments; Baths in Common Use; Important Abnormal Constituents in Urine; The Urinary Solids; Differential Table of Eruptive Diseases; Directions for Modifying Milk for Infants; Percentage Composition of Various Foods; Percentage of Nutrient in Certain Articles of Food; Approximate Time Needed for the Digestion of Some Principal Foods; Alcohol in Various Liquors; Notes on Feeding; Hypodermic Medication;

Poisons and their Antidotes; Eruptions Caused by Drugs; Important Incompatibles; Medical Latin Translated; Therapeutic Suggestions.

The book is largely devoted to *Materia Medica*, and every practitioner will find in it many valuable hints that will aid him in his practice. If the reader will ask for it, he may be able to get a copy without pay, and we know of no equally valuable offer.

PHYSIOLOGICAL AND MEDICAL OBSERVATIONS AMONG THE INDIANS OF SOUTHWESTERN U. S., being Bulletin 34 of the Bureau of American Ethnology, Smithsonian Institution. By ALES HRDLICKA. Washington Government Printing Office. 1908.

This bulletin is said to comprise the results of extended researches and personal observations among the tribes of Indians living in the southwest, and it deals with their clothing, houses, occupations, food, drinks, and general habits of life. A study of their physiology is also entered into, with the proportion of the sexes, sizes of families, reproduction, character of the labor of the women, etc. The statement is made that "a healthy Indian woman of normal physique, with a normal child, on the average suffers quite as much and as long as does the normal white woman." This is contrary to the commonly accepted belief. The book is filled with new and interesting information concerning our native Indians.

THE INFLUENCE OF SODIUM BENZOATE ON THE NUTRITION AND HEALTH OF MAN.—U. S. Department of Agriculture. Report No. 88.

This is the much discussed—and to some extent "cussed"—report of the Referee Board of Consulting Scientific Experts, composed of Ira Reimsen, R. H. Chittenden, John H. Long and C. A. Herter. The methods of investigation pursued by this committee were of course highly scientific, and their conclusions must be accepted as the verdict of men who are thoroughly trained chemists. They say: "The conclusion is obvious that sodium benzoate does not exert, in small or large doses, any pronounced influence upon the processes of metabolism or nutrition. We are of the opinion that sodium benzoate, up to 4 grams per day, is no more harmful than corresponding amounts of common salt." Galileo, after being compelled to retract, said: "Still the world does move." And so we feel like saying, notwithstanding this report, that manufacturers will continue to adulterate their products to the injury of the people, and this report will give them encouragement to persevere in so doing. *Salus populi suprema lex.*

PAMPHLETS RECEIVED.

PLAGUE AMONG GROUND SQUIRRELS.—By W. C. RUCKER, U. S. Pub. Health & M. H. Service.

In 1894 plague began to spread from Central Asia. Since then it has been carried to practically all parts of the world, including the Pacific Coast of the United States, where the disease has appeared in man, in rats, and in ground squirrels. The infection in ground squirrels has so far appeared in Contra Costa and Alameda Counties, California, chiefly in the

former, where, up to September 10, 1909, 220 plague infected squirrels had been found. The The Public Health and Marine-Hospital Service is attempting to destroy all the ground squirrels in the involved area, or at least to so reduce them in number that the plague infection among them will die out of its own accord. This article gives a detailed account of plague infection among the ground squirrels in Contra Costa County, and the relation of squirrel plague to plague in man. It also describes the means employed for the destruction of the squirrels, and gives a serial list of infected squirrels with the location where found.

Requests for copies should be made to the Surgeon-General, Public Health and Marine-Hospital Service, Washington, D. C.

THE AM. MED. ASS'N BULLETIN, VOL. V.,

NO. 1.—This issue of the Bulletin contains the report of the Fifth Annual Conference of the Council on Medical Education. This Council is doing a most excellent work for the cause of higher medical education, and every one interested in this cause should have a copy of this Report.

REPORT OF THE HOFFMAN HOSPITAL.

KEYSER, W. VA.—This is Dr. Hoffman's 4th report; and it indicates that a good work is being done. A total of 845 patients have been admitted. Surgical operations 425, gynecological cases 144, typhoid fever cases (1907-'09) 42, pneumonia 22.

INTERNATIONAL CONGRESS OF TUBERCULOSIS.—Report of the Delegation from the National Fraternal Congress.

STUDIES UPON LEPROSY.—Upon the Utility of the Examination of the Nose and Nasal Secretions for the Detection of Incipient Cases of Leprosy. By W. R. BRINKERHOFF, S.B., M.D., and W. L. MOORE, M.D., Public Health & M. H. Service.

THE ALCOHOLIC PROBLEM AND ITS PRACTICAL RELATIONS TO LIFE.—This

contains the papers read at the semi-annual meeting of the Am. Society for the Study of Alcohol and other drug narcotics, at Washington, D. C., March 17-19, 1909. The alcohol question is presented under these heads: Conclusions from Recent Laboratory Researches, concerning the action of alcohol on cell and tissue; Special causes and conditions favorable to the growth of Inebriety; Responsibility and the public care of inebriates; The most available treatment of inebriety; The Alcoholic Problem in its sociological, physiological and medical aspects. Under the second head our fellow-member, Dr. G. H. Benton, writes interestingly of "Toxins as active causes of inebriety." Ask your congressman to send you this document. It is worthy of a place in your library.

Medical Outlook

ETIOLOGY AND PATHOLOGY OF GASTRIC AND DUODENAL ROUND ULCER.—Abstract of paper by Fenton B. Turck, M.D., Chicago, at International Congress.

1. Object of Experiment Series IV—To determine the role of intestinal bacteria in the production of ulcer by mouth feeding of *B. coli*.

2. Positive feeding experiments with *B. coli*. Activities of the bacillus in the intestines and its relations to anaerobes.

3. New culture methods for intestinal germs—Use and value of the foetal pig.

4. Cultural characteristics of *B. coli* and Bacillus of Welch when injected into the foetal pig.

In my fourth series of experiments of gastric and duodenal round ulcer the object has been to determine the role of the principal intestinal bacteria in this condition and especially of the colon bacillus. The ulcers induced by the mouth feeding of *B. coli* were positive in every case (International Medical Congress, Lisbon, 1906. *Journal of the American Medical Association*, June 9, 1906), but they did not reveal much concerning the nature of ulcer or its finer underlying principles. And all other series of experiments, whether based on mechanical injury, general dysemia, disturbances of local circulation, injuries to nerves and ganglionic centers, local infection, or injection of bacteria into the blood not only failed to throw light on the process of ulcer formation, but they failed to produce the ulcer itself. This Gibelli has also shown in his review of the literature on ulcer and in his own experiments by trauma (*Archives Internationales de Chirurgie*, Volume IV, Fascicule 2, 1908).

The positive feeding experiments with *B. coli*, however, indicated that alterations in the toxic state of the alimentary canal with consequent changes in the blood, such as diminished activity of the antiferments, may be responsible for ulcer formation. To produce acute ulcer, from 500-2000 cc. of bouillon cultures of *B. coli* were fed to dogs daily for three to four months in connection with the usual meat diet. The colon bacillus was at no time found in the blood and few symptoms of systemic disturbance appeared. The blood serum, on the other hand, agglutinated bacillus coli in high dilutions, the coagulating time was slower and haemolysis was present. Such an ulcer terminated in the usual perforation and hemorrhage. Histological examination of the tissues showed no round cell infiltration and no indication of healing. If the feeding process was interrupted at the end of 6 or 8 weeks, the ulcer healed. The mucous membrane and glands were restored, and the muscle layer, if perforated, filled in with connective tissue. Resumption of the feeding of *B. coli* in large quantities was followed by violent reactions,—diarrhoea, bloody flux and death, all of which showed that increased susceptibility was produced during the period when feeding was suspended. If the feeding was resumed in small quantities and at intervals, no anaphylaxis occurred and the result was typical chronic deep ulcer of the stomach or duodenum (*Journal of Medical Research*, February,

Be at war with your vices, at peace with your neighbors, and let every new year find you a better man.—*Ben. Franklin.*

1908). The colon bacilli used in these feeding experiments were isolated from the stools of patients who showed ulcer of the stomach either at operation or autopsy.

Although very large quantities of the bacteria were fed, no local infection of the stomach occurred at any time and the stomach appeared to empty itself of germs as readily as of food. The cecum and colon showed increased numbers of the colon bacillus, and when diarrhoea set in the anaerobes were also increased. If the colon bacillus multiplies above normal and its endotoxins are set free, the resulting toxæmia charges the blood and lymph with more toxins than the antibodies can neutralize; and if this process be continued sufficiently long, a much lowered resistance of the blood and fluids of the body is produced. The anaerobes appear to be a factor in setting free the endotoxins of the aerobes and the cellular ferments of the tissue cells may be additional factors.

"In vitro" cultures do not furnish conditions for the study of bacteria like those associated with infections of the colon and intestines, and injections and cultures in any living animal would be just as complicated as in the dog or in the human. The foetus of an animal suggested itself as an appropriate culture chamber, and on account of the facility of procuring, the foetal pig has been used altogether in this series of experiments. The factors controlling germ activity in the colon of the living animal are not present in the dead foetus, whose tissues are not only free from antibodies, but are also sterile, and therefore have no bacteria of their own to disguise the phenomena of the inoculated micro-organisms. It has therefore been possible to use the foetal pig in determining the relation existing between the two main groups of germs in the intestines. It furnishes one of the very best culture chambers for aerobes, and with slight modifications is equally good for aerobes. The cultural characteristics of the injected bacteria are so definite that the diffusion routes and the toxins can be traced.

I have made the inoculations by way of the umbilical cord, colon, stomach and peritoneum with variable effects upon the viscera according to the bacteria injected. If *B. coli* is injected into the umbilical cord, the liver liquefies after a few hours incubation and complete nuclearlysis occurs, which extends through all the tissues as the time of the incubation lengthens. If the bacillus coli is introduced first into the colon or stomach the nuclear changes occur more quickly in the wall of the digestive tract, and focal lesions in the form of ulcer or erosions occur in the mucous membrane of the stomach or duodenum after 4 or 5 days, while the controls are negative. The reaction of the bacillus of Welch is in marked contrast. If the injected pig is opened at 8 or 9 hours' incubation, all the organs can be seen distended to the utmost. Gas bubbles are everywhere underneath the peritoneum, but especially thick underneath Glisson's capsule if the injections are made in the umbilical cord. After the liver bursts open the tissue shrinks into a leathery mass. The gas bacillus affects nuclear substance but little, while plasmolysis is marked. Even in a 36-hour-incubated pig the nuclei are

stainable, the chromatin substance dense and compact. The combined growth of bacillus coli and *B. welchii* has been obtained by first injecting *B. coli* into the rectum and incubating 12 hours; then injecting *B. welchii* into the umbilical cord and incubating again 12 hours. This method results in increased virulence of the pig, as shown by injecting its serum into rabbits. Pigs injected with a stool in which the bacillus of Welch predominates, quickly develop the gas bacillus in pure culture to the exclusion of all other germs of the stool.

5. Conclusion—(a) In round ulcer of the stomach or duodenum toxins are diffused from the intestines by definite diffusion routes. (b) The foetal pig is a culture chamber of great value for the study of intestinal bacteria.

ORTHODONTIA.—In the Section of Stomatology of the International Medical Congress held at Budapest, in August, Dr. Victor H. Jackson, of New York, read a paper with this title, and illustrated it with slides and models with apparatus. He said, in part:

Expansion of the dental arches to increase the Narial openings, for improving the breathing capacity, and for correcting the occlusion of the teeth. "Orthopœdia of the face" includes the changing of the shape of the jaws and the correction of irregularities of the teeth. The roof of the mouth is the floor of the nose. Changes in the shape of the palatine processes of the maxilla, and the inter-maxillary bone, changes the floor of the nose. For study, the dental arch is divided into three divisions. The divisions of the upper arch have natural borders, they being separated by the lines of the suture. The divisions are named as follows: The Right Maxillary division, which contains the Molars, Bicuspids and Cuspids on the right side; the Left Maxillary division containing the Molars, Bicuspids and Cuspids on the left side; and the Inter Maxillary division, which contains the four Incisors. In expanding the upper arch laterally, the force includes the Cuspids with the Bisuspids and Molars. These teeth are grasped by the apparatus in such a manner, that as force for expanding the arch is applied, it moves the teeth bodily, which takes with them some of the process and bone, broadening the floor of the nose, and increases the nasal capacity. It is more effective for young patients. It is accomplished by an improved method of anchorage to the teeth. A comparatively small number of cases require the expansion of the distal part of the arch. Therefore a large wire known as a Base Wire is shaped to the palatine curve of the distal part of the arch, and the ends are bent to extend forward forming arms, that are arranged to rest on the lingual side of the teeth, and are soldered into the anchorage portion of the appliance, which is arranged to move the teeth bodily. Force for expanding the anterior part of the arch is caused by removing the appliance at intervals of once a week, and pressing outward by the fingers, on the ends of the arms enough to bend the base-wire a little at a time, and insert the appliance, which moves the teeth so slowly and steadily that it encourages development at the sutures. The apparatus is removed by the

patient as regular intervals, favoring prophylaxis.

THE PRESENT STATUS OF THE SCHOOL CHILD, was the title of a paper read at the above Congress, of which the following is an abstract:

The data for this paper were gathered as a result of an investigation of the school child by the author for the Section on Diseases of Children of the American Medical Association. They were gathered in thirty-six cities ranging in population upward of one hundred thousand.

The methods employed were, use of school statistics, correspondence with some ten thousand educators, and personal investigation. The paper comprehends the examination of 369,290 pupils and tabulates their ages, grades, period of time spent in each grade, the number of normal age pupils, number of over-age pupils, number of under-age pupils with the percentage of promotions from the several grades.

The percentage of persistence in attendance during the school years at ten years of age is ninety; at eleven years, eighty-two; at twelve, seventy-nine; at thirteen, sixty-four; at fourteen, forty-three; at fifteen, twenty-three, and at sixteen years, thirteen per cent.

The average length of time spent in the grades diminishes from over eighteen months spent in the first grade to less than ten months spent in the eighth grade, due largely to over-age pupils. The decline in the time of period spent in the grade is from grade to grade in regular progression.

The number of over-age pupils increases rapidly throughout the primary grades, reaching a maximum of thirty-one per cent. of the class in the fourth grade and gradually diminishing to fifteen per cent. of the class in the fourth grade and gradually diminishing to fifteen per cent. in the eighth grade through loss by the withdrawal of over-age pupils.

The causes contributing to the deficiency of the school child as stated by the school principals is given, showing the contributing factors both within and without the school system.

A report of the physical examination of one hundred and fifty-three thousand school children is tabulated, giving the total number of defects, the defects by ages and grades.

Physical defects as a whole have no apparent effect upon the scholarship. Groups of good, fair and poor pupils were frequently compared with negative results.

[For the above abstracts we are indebted to our good friend, Dr. F. L. Hupp, who has in many ways shown his interest in the JOURNAL.—Editor.]

From W. L. Cahagan, M.D., Coroner of Hamilton County, Chattanooga, Tenn.

BETTER RESULTS THAN FROM ANY COMBINATION.

I must say that NEUROSINE has given better results and more universal satisfaction than any combination ever used by me. I have tried it in

many nervous affections and in Epilepsy of long standing. In some it is a specific, in others a therapeutic agent of great value.

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Original Articles

THE DUTIES OF THE MEDICAL PROFESSION.

PRESIDENTIAL ADDRESS.

V. T. Churchman, M.D., Charleston,
W. Va.

*(Read at Annual Meeting State Medical Ass'n, at
Elkins, Oct. 1909.)*

*Fellow Members of the W. Va. State Med. Asso-
ciation:*

Allow me to thank you, from the bottom of my heart, for the great honor you have conferred upon me by electing me president of this Association. It is an honor that any man may well be proud of; for is it not the highest honor in the gift of the medical profession of this State? When one has attained that honor, it should be his duty to honor the position to the best of his ability. There is none perfect among us, and as an humble member of the medical profession in this State, I can not hope to perfectly fill this position, but I do promise you that I shall always endeavor to do my whole duty, as the dictates of my conscience may lead me; and I trust that each and every one of you may lend me a helping hand whenever you may be called upon.

I have taken for my theme today a subject that I know I shall be unable to entirely and fully discuss, for it is a subject that

has been both spoken and written upon, since the very beginning of our profession, and yet one that should be always interesting to us.

The duties of the profession are those we owe ourselves, mankind, and our commonwealth.

I shall first speak of the duties we owe ourselves, if for no other reason than because "self preservation is the first law of nature."

In the summer of 1887, when I first began the practice of medicine in old Virginia, I was associated with one of those grand old members of the profession whom one considers it an honor to have known. We have them among us in this State, and as members of this Association; it is not necessary for me to mention their names, you know them, they live in Wheeling, Parkersburg, and many other places. They are men who have sacrificed their entire lives to the service of mankind, and very many of them will pass from this life to that grand and glorious life beyond, and leave nothing except an enviable reputation for good on this earth. Thus it was with my dear old friend in Virginia. Upon one occasion I asked him if he had a copy of the Code of Ethics of the American Medical Association. After waiting for some time, his answer was: "I did have one just after they were published, but I lost it. If you do get one always remember that a doctor may need a code of medical ethics, but a physician will never need one, and I hope that you will always be a physician rather than a doctor". I must admit that this

rather floored me, and I asked him to explain himself, and he did so as follows:

"There are only two rules that a physician should have and they are, first, the Golden Rule, to do unto other physicians as you would have other physicians do unto you; secondly, be a gentleman"! When I asked him to explain the difference between a physician and a doctor his reply was: "A physician should be the creation of God Almighty, but the doctor is more often the handy-work of the devil".

What a glorious profession we would have, if there were more men in our profession like this man. While I can lay no claim to having lived up to the teachings of this man, I have never owned a Code of Medical Ethics and never expect to, but I have remembered, and always shall his code as he taught it to me, and while I may sometimes fall short of his first rule, it has been because the body was weak, as are all human beings, and liable to err.

This I think fully covers our duties to our brother physicians. But there is a duty we owe ourselves as individuals which we should not overlook, and which really requires more thought, and at least more attention, than the average physician pays to it. I speak of the "rainy day" to come, when sickness or old age has overtaken us, and we find that we can no longer attend our patients but must care for ourselves. The average physician has no more idea of *business* than a boy. As long as he has money enough to pay current expenses and can keep the wolf of want from his door, he is satisfied. The physician who accumulates enough of this world's goods to retire from his profession when he is yet able to enjoy the comforts and pleasures of this life, are few and far between; but, on the other hand, the physicians who in their old age, come to want, or who die and leave a dependent family, are many. In fact, I do not believe there is a business or profession where there are so many widows and orphans left helpless, as are left by our profession. Take any branch of commercial life, and you will find these men banded together for their mutual protection, and every man in every community has a special credit rating, and when he has reached that limit he is promptly notified that he must pay up, or at least show some evidence of trying to pay up, else his credit will be cut off, and he will be compelled to pay cash.

Now, I would like to ask, is it any more than just and right that the medical profession in every county should have some such arrangement? Is it not a duty we owe our wives and children, and therefore ourselves, to see that our services are substantially appreciated by the public? It is true, that unlike the merchant who can refuse to sell without the cash, even to the very poor, we must attend these same families; but where will you find a physician who would refuse to attend a person for the reason that he was too poor to pay for his services? It might be that you would find a doctor who would refuse, but not a physician. On the other hand, we should refuse to attend those patients who we know are at least able to pay something for the services and yet do not. I realize there are men who say these questions should not be discussed in our scientific association, and yet how long would we have a scientific association if we were not to give some thought to the business end of our profession?

There are also the many forms of quackery which should receive proper consideration by the profession; but while this concerns us as physicians, I shall speak of it under the head of our duties to mankind.

Our duties to mankind and our commonwealth comprise a subject of much greater scope than any other. We have for years tried to obtain proper legislation to protect the public, and what happens when we do? There can always be found men in our legislative halls who will at once begin to cry out that we have selfish motives in seeking such legislation. It is with pleasure that I note the increasing number of physicians in our State legislature, but am sorry to note that they sometimes fail to take the stand they should upon a subject that may be of vital interest to the public, as well as to the medical profession. Time and time again I have talked to members of the profession, who were members of our State legislature, and have had them to tell me that for *political* reasons, they dare not take the stand they knew to be just and right. At the last session of our legislature I went to a member of this association, who was also a member of the legislature, and requested him to take a certain position on a bill that was then pending; and he very calmly informed me that he could not do as I requested, that while he realized that I was entirely right,

it would mean a loss of political prestige to him.

Why not let us stand shoulder to shoulder on all subjects that affect our profession, regardless of any political affiliation? What is of interest to the Medical Association of this State should be of interest to each individual member. How often do we hear the slanderous remark that the medical profession is a divided profession, and that we are forever and eternally trying to cut each other's throats? You and I know that this is not true, and therefore let us throw aside all petty bickerings and agree that politically at least, we shall stand together for those laws which should be of greatest good to the greatest number. When we succeed in educating the public to that point where they will fully realize that we are working for the greatest good for the greatest number, then, and not until then, will the public stand by us in our fight against quacks and charlatans. Allow the grandest member of this Association to utter one word against these humbugs, and immediately will the cry go out that this "doctor is jealous" of such a man. How absurd to think that an educated member of this grand old profession of ours should be jealous of such a "blackleg". Now, the best way to stop such remarks is, for the legitimate and regular medical profession in this State to get together, and make up their minds that upon all subjects affecting the general welfare of the public they will stand together for what is right.

I know of medical men who advise their patients to consult an optician, who may be entirely ignorant of what is wrong with the patient, when there is an ophthalmologist, and it may be several of them, within a stone's throw, and while these ophthalmologists may be members of this Association, they are not even thought of. I feel that this is often done thoughtlessly, and had they stopped to consider such advice, they would never have given it.

Some years ago at a meeting of this Association in Fairmont, I advocated the medical profession taking a more active interest in politics. I do not mean by this that we must be affiliated with any special party, but let us take an active interest in all broad questions of politics which concern the whole people. Upon one occasion I heard the late Senator Barbour, of Virginia, say, that, if

you would put a united medical profession on his side, he would be willing to fight all other professions and politicians, knowing full well that in the end he would win. This is absolutely correct, as each and every one of you will agree, if you will only stop and think for one moment. Just let us suppose that this is a subject that we are determined the public shall fully understand, and in which we want their aid and support; how long would it take the medical profession of this State to see every thinking man in the State, and have him fully realize the importance of the subject, and obtain his support, or find out where he stood? Let us take the subject of tuberculosis. Why is it that the Anti-Tuberculosis League of this State, and in fact all other States, find their work such an up-hill business? If you do not know I am going to tell you; it is for the sole reason that *as a profession* we are not doing our whole duty in the matter, and we are not *united* in the fight as we should be. Do not for one moment think I am accusing any member of the profession of being opposed to such a movement, for I know full well you can not find a physician on earth opposing it, yet I do say, and that without fear of contradiction, that seventy-five per cent. of the physicians of this State *are not working for it as they should*. I will even go further and say, that I do not believe there are five physicians present who can conscientiously say *they have done all in their power for this cause*. This is a grand cause for humanity, and we should do all that we can for these poor sufferers. This disease, as you know, is not restricted to any class of humanity, but it affects the high and the low, the rich and poor, and members of our own profession as well as the layman. I want you to distinctly understand that I am censuring myself in this matter as much as any other member of our profession.

We should also teach the public the dangers of unrestricted drug using. If this is carefully done, we could in a short while almost entirely free the public from drug fiends. The profession of the entire country has quietly sat by and allowed a layman to do a great deal of this work for us. I shall not call names, but I am speaking of a man who has, single handed, made such a grand fight through one of our weekly magazines, against patent medicines, nostrums, etc. I have no doubt that his articles

have been of incalculable value to humanity through this entire country; but what have we done to aid him in this work? Have we done our duty?

I am afraid that the medical profession has been too modest for its own good and the good of humanity at large. There seems to be a fear that we shall be unduly criticised if we take an active part in these questions which are affecting the entire country. I would like to see each county society in this State appoint, each month, a man to deliver a lecture to the public, upon some subject of vital importance to the whole community. These lectures could be given in some public place, as a school hall, or the lecture room of some of the churches. I realize for a time these meetings would be very discouraging, but soon the public would learn to look for them and appreciate them. There are subjects which would be of interest to men only, and others which would be of interest to women only; but by carefully selecting the proper man, and one whom the public would respect, these meetings would soon be largely attended. This is a subject that should be brought up in every county society throughout the entire United States, and this State Association should lend all possible aid to each county society in organizing these public lectures.

There are many questions of vital importance to the public health which the public, as a whole, has never given a single thought to, and which we should carefully bring before them in the plainest possible way, that they may fully understand their importance.

Look at the thousands of cases of unnecessary blindness which could be prevented, if the public were only properly instructed as to its cause and prevention. Look at the thousands of cases of pus tubes that might be prevented through this same course of instruction. One of the most damnable diseases affecting the human race today is syphilis, and many and many of these cases can be prevented. When we find a case of syphilis, it has always been our rule to shield this man or woman, in every possible way, not even allowing members of the family to know what the trouble is. I want to ask you, do you think you are doing your duty to humanity when you shield such a person? I have done so in many cases, but I must confess that I have never done so without my conscience hurting me. Now, if these public lectures are properly

conducted, many moons will not have passed before the general public will begin to realize *where we are* on this question, and in the future it would be clear sailing. Just allow me to give you a history of a case of protection which came under my own observation: A young man belonging to one of the very best families came to me to examine his throat, as it had been sore for several weeks and showed no signs of healing. Upon examination, I found the tonsils and fauces almost covered with mucous patches. I was frank, and told him I thought he had syphilis, and questioned him carefully to try to bring out a history of syphilis. He absolutely denied ever having the initial lesion, and became very much offended that I should accuse him of such a thing. To make a long story short, he left my office without my treating him at all. Now the results of this case are as follows: I afterwards treated this young man's mother, sister and a young lady to whom he was engaged to be married, for the same trouble. Whether there were other results, I do not know, but I feel sure there were many more if they could be traced. I must confess that my conscience has always hurt me in this case, for I feel that I should have notified his family of his condition. Yet I realize that if I had done so, public opinion would have been against me, and in the end it might not have done any good. Now it is for the education of public opinion that I am advocating this course of public lectures, and I truly hope to see these courses started throughout the entire State the coming year. To aid us in this matter, we might take up the work as outlined by the American Medical Association, when a committee from that body recommended the formation of a board for the following purposes:

"To supply the community at large with established facts regarding matters of general moment and public health; to supply these facts ethically, in good taste, and without an element of individual advancement. To harmonize, and give the added value of combined effort to the several interests which are now working independently for the common good along medical lines. To direct the work under the auspices of this Association, thus giving unity of purpose among the workers, and public expression of the aim and aspiration of this Association". This committee proposed educating the public by means of the public lectures;

by the publication of articles in the lay press, and by issuing pamphlets on such subjects as sexual hygiene, typhoid fever, syphilis, etc. All this to be under the supervision of a competent committee, which could accurately and systematically supply the press with suitable information, opinions, and happenings. I truly hope that a proper movement looking to this end may be started at this meeting.

I shall only speak a few words regarding the quacks and charlatans who infest our country. These, like many other evils, we have always had with us, and, to some extent, shall always continue to have them. It has seemed that opposition does more to nourish this form of evil than anything else. It is almost impossible to make a skeptical public believe that it is not for our own selfishness that we carry on a campaign against them. Yet how can we sit quiet and not raise our voices against such outrages, when we know of so many cases of sacrifices of the innocent? How can we but feel the greatest indignation, when we hear of the neglect of helpless children, made to suffer unnecessarily, or even dying under the crazy logic of some self-styled "healer"? It would seem that this should be enough to force us to devise some remedy, but it is a subject that requires the most careful consideration. It is my humble opinion that a careful education of the public, as I have already intimated, will go far toward the solution of this problem. Another avenue open to us, as physicians, is to carefully carry on our own work that the general public may see the contrast between the followers of Hippocrates and the pretenders, so that those in need of medical attention will go to the physician with a confidence as strong as faith in the supernatural.

Lately there has developed in our midst a new scientist, known now as the optometrist. At the last session of our State legislature a law was introduced through a member of the medical profession, which had for its object the creation of a "State Board of Examiners in Optometry". Before going further, I wish to explain that the present optometrist is the same man who was but yesterday known as an optician. In its original form the bill was a farce pure and simple, and, as a member of the medical profession of this State, I fought it in every possible way. I did not succeed in killing the bill entirely, but the bill that was finally passed

by the legislature has many advantages, such as the requirement that all future applicants for registry as optometrists in this State, or who have not practiced optometry for two years, must pass an examination on the anatomy of the eye, ophthalmoscopy, retinoscopy, the use of the ophthalmometer, the general laws of optics and refraction. The governor, in making his appointments for this board, has seen fit to appoint two ophthalmologists, and I feel sure they will do their duty to the public. It may be possible, at some future meeting of the legislature, to have this law so modified that it will do a vast amount of good to the people throughout the State.

Before closing my address, there is just one other subject upon which I wish to make a few brief remarks.

We not only have faults as individuals, but this Association has faults which we should endeavor to correct.

Among them is the farce of allowing an individual member of a component society the right of appeal to the State Association, and when such an appeal has been taken, in the past, we have heard the evidence of one side, and then referred the matter back to the component society to correct or adjust, as they deemed best, at the same time giving the farcical excuse that the State Association should not interfere. For your benefit, allow me to copy the section: Sec. 6 of Chapter 9: "Any physician who may feel aggrieved by the action of the society of his county in refusing him membership, or in suspending or expelling him, shall have the right to appeal to the Council, and its decision shall be final".

Now, I beg of you to either repeal that by-law, or carry it out to the letter. There should always be a court of appeals where one may have the right to submit his case and where the evidence and arguments on both sides may be heard, and an unbiased decision rendered by disinterested parties. Whatever dispute may arise in the local or component societies, it will be found that the local men are necessarily prejudiced to one or the other side; therefore it is nothing more than just and right that either party may have the right to appeal to the State Association to try the case. According to our by-laws it is the duty of our Council to hear the evidence in such cases and render a decision in accordance with all the evidence that may there be submitted. You must stop

and think, that when a physician is expelled from his local society that expulsion carries with it expulsion from the State Association and also from the American Medical Association. Now I want you to stop and consider whether or not it is just when we refuse this man the right of appeal as we promise him in our by-laws?

Suppose a man should be tried in one of our circuit courts for a crime and should be found guilty. The laws of our State allow this man the right of appeal to a higher court; suppose such an appeal should be taken, and when the case is called in the Court of Appeals, would it be right for that court to listen only to the evidence on one side and render a decision that "*they think it best that the local circuit court should decide its own cases*"?

No! a thousand times no! Why, every thinking man in this State who had an atom of justice in his body, would cry out at such an outrage against justice. I tell you this is no more an injustice than for this State Association to render such decisions in appeal cases as has been done in the past. Let us have the manhood to stand up for what is right, and in all cases reserve our decision until we have heard the evidence on both sides, and then render our decision according to the best of our ability, basing the same upon the evidence submitted. Let us remember, no man has ever been injured by justice, and it should be the duty of every member of this Association to see that justice is done every other member.

In closing, let me hope that it will be our aim in the future to carry our Association to higher planes of usefulness, not only to our individual members, but also to the great public at large.

SURGERY OF THE HEART.

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(Read before the Ohio County Medical Society in Post-graduate Course.)

When Moses ascended the mountain of Herob to satisfy his curiosity as to the cause of the burning thorn-bush, the voice of the Lord ordered him to halt, because the land he was about to tread on was sacred territory. He was, however, allowed to come nearer after preparing himself; for instance, he had to take his shoes off.

On the landscape of human anatomy we also meet such sacred territories—territories which demand our utmost consideration. Let me mention only the abdominal, cranial, spinal and chest cavities, and the joints. How gingerly approached surgeons fifty years ago the abdominal cavity, while at present it has become somewhat desecrated and is entered with impunity. Mechanical cutters, so called operators, anatomical, pathological and physiological surgeons all operate here, while antiseptics and asepsis hold their protecting hands over them even as Minerva did over the ancient arts. The sun shines here in verity over good and bad. The abdomen is easily entered and its contents leisurely handled. This is not so with cavities of the central nervous system and the chest, as their exposure requires already a preliminary operation of some magnitude (trepanation, thoracostomy), and in the pericardium we find an organ which does not keep a minute quiet but contracts and relaxes alternately, and thereby interferes seriously with any kind of surgical intervention. Until quite recently the heart itself has enjoyed surgical immunity which has been shared by few other organs of the body. Only in quite recent years now and then a surgeon, bold and of high standing, has endeavored to enter its sanctum to do the necessary imperative repair in injury of this physiologically most important organ. Before we dwell upon surgery of the heart proper, allow me to make some remarks on surgical invasion of the pericardium.

Galen already knew that life could persist after puncture as well as after exposure of the heart. The artificial exposure of the heart, however, looked so bold, and the diagnosis of liquid accumulations in the pericardial space was so difficult, that Galen's observation never served therapeutically in ancient times. The puncture of the pleural and abdominal cavities was practiced already in the earliest times of medicine. Riolan (anatomist) in 1646 proposed to open the pericardium therapeutically, but Corvisart, the physician of Napoleon I called it foolhardy to do so. In 1819 Romero of Barcelona performed puncture of the pericardium three times with two recoveries. The operation was more frequently done after physical diagnosis came into existence. Skoda had it performed on patients by the surgeon Schuh in Vienna.

Kryer in 1840 performed it frequently. Sellhain reports 40 cases from 1840 to 1850. Up to 1879 Hindenlang counted 65 cases. West gathered 80 cases from the literature up to 1883, and Schroetter 100 cases up to 1903. Paracentesis of the pericardium is not nearly so often executed as the puncture of the neighboring cavities of the chest and abdomen. This is not strange, because large and dense effusions in the pericardium are rare and their diagnosis often difficult. Enlargement and acute dilatation of the heart have already been mistaken for it by the very best authorities, and besides that, the operation is so delicate and dangerous that it will not become a fashionable procedure, and we must remain with it, as Billroth expresses it, on the rather low standpoint of a mere casuistic. This surgeon was very much opposed to paracentesis pericardii and wrote in 1860: "The paracentesis pericardii is an operation which in my estimation borders closely on that which some surgeons call prostitution of surgical art; others call it surgical frivolity, an operation of more interest to the anatomist than physicians. Clinical medicine should become more and more surgical but internists plan the boldest operations."

The pericard-paracentesis is indicated in all cases of pyo-pericarditis, and when a large effusion with severe disturbance of compensation in the circulation exists. If large effusions in other cavities are co-existent, it is better to evacuate them first in the hope to reduce thereby the accumulation in the pericardium.

The physiological pressure in the pericardium is from three to five millimeters. To create positive pressure therein it requires a considerable quantity of liquid, because the pericardial sac is very stretchy. An effusion of 100 cc., when forming slowly, does not necessarily create circulatory disturbances, but when it grows beyond that larger and larger, we get conditions which Cohnheim has so ably demonstrated on animals: The arterial pressure falls rapidly below one-half of its normal and the pressure in the veins becomes higher and higher. On further higher intra-pericardial pressure the systolic elevation of the pulse-wave becomes steadily lower and disappears finally entirely, while the pressure in the veins remains high. This physiologic-pathological

phenomenon is not only produced so much by the amount of the effusion, but also by the intra-pericardial tension and pressure. To illustrate that I will state that a very quick-forming pericardial effusion can in a human being cause death even when the total amount reaches only to 100 to 150 cc. From this it is evident that *rupture* of the heart is especially fatal. We find, therefore, that increasing weakness and dyspnoea are other indications to puncture the pericardium even if the amount of the effusion is not large.

Technic of Pericardial Paracentesis.—In the fourth or fifth intercostal space one inch from the left sternal margin make an incision through the skin large enough to let a canula of the aspirator pass through easily. This has the following advantages: 1st, it allows delicate manipulation of the needle, imparts accurate feeling while passing through softer tissues, and allows the needle to be passed more obliquely; 2nd, the pain is decidedly less; and 3rd, it is more aseptic, as the skin harbors pathological micro-organisms. If the paracentesis reveals the fact that we have to deal with a pyo-pericardium we have to add at once to it incision and drainage, as punctures, even repeated, are insufficient and only prolong sepsis. In rare instances there have been found several pockets of pus in the pericardium.

Statistics.—West reported in 1883 eighty cases, and states that only one death was due to the operation; while six other deaths occurred within the first twenty-four hours after the operation, but were due to the natural course of the severe underlying diseases. If we consider that this operation is often done in extremis it is really a low death-rate in 80 cases. In all cases of pericardial puncture the instantaneous success is good, as cyanosis, dyspnoea, strength of pulse and heart-action are very favorably influenced. Hindenlang reports 32 recoveries out of 65 cases. Of West's 79 cases 12 lived one week, 8 one month, 6 ninety days and 12 cases longer. In Schroetter's statistics 47 recovered and 53 died.

Accidents During Paracentesis.—1st, Injury to lung and pleura; 2nd, entrance of air to the pericardium either through the canula or from the injured lung. The characteristic symptom is a churning noise like one hears in a half-empty pump, or the

splashing noise of a water-wheel; 3d, sudden death; 4th, injury to the heart. Dilatation of the heart or anterior synechia of the pericardium has led to puncture of the heart-chambers and in one case ten ounces of blood were aspirated from the right ventricle before the mistake was discovered (Burton-Shaw); the case notwithstanding recovered. Sloan drew 300 cc. of blood through the canula; this case also recovered. West reports a case of laceration of the right ventricle by the trocar with death. Fifty years ago in Oigla's case, the surgeon Roux found an enormous rapidly growing heart dulness. On incision (not puncture) an immensely dilated heart was found with no effusion in pericardium; patient died.

Traumatic rupture of the heart is confined mostly to the right heart as it faces the front of the body and is thin-walled, while spontaneous ruptures occur almost always in the left heart. The latter are due to predisposing causes, such as fatty degeneration of the heart muscle and arteriosclerosis of the coronary arteries, or to other causes tending to myomalacia and dilatation of the heart. The mechanism of spontaneous ruptures is different. In the traumatic rupture a high blood pressure in the heart itself is caused by an external force which created the rupture of its muscle. In the spontaneous form the blood pressure remains the same but the wall has lost its physiological resistance by pathological changes, in so far that it gives away on the slightest elevation of blood pressure such as we see on exertion, vomiting, defecation, shock or epileptic seizures.

A typical case of traumatic rupture of the heart was the following: While a *chevalier* (light cavalryman) drove a horse over a fence it kicked him against the chest. The injured man walked a few steps, fell unconscious and vomited. His face was pale, breathing regular but very fast, heart action and pulse apparently absent, surface cold and covered with sweat, pupils normal, eyelids closed. The ictus cordis could neither be seen nor felt, and the heart sounds were inaudible. In putting a stethoscope over the heart the patient pushed it away with his hands. In a short time the breathing became very irregular. Involuntary passage of stool occurred, and extreme cyanosis and death one hour after the acci-

dent. On autopsy 950 cc. of blood were found in the pericardium and the rent of two cm. length in the right atrium.

Penetrating Wound of the Heart.—There are two kinds of injuries: 1st, such as wound the heart muscle solely, and 2d, such as pass through the heart wall into one or more of its cavities. It is evident that the wide opening of the heart cavity must cause immediate death. Small wounds, however, allow a shorter or longer persistence of life, and some recover under therapeutic measures either operative or expectative. Under expectative measures I understand the posture or position of the patient, relief of pain, application of heat or cold, stimulants, ventilation and, perhaps, venesection. It has been shown at post-mortems in later life that complicated heart injuries have healed spontaneously; at the same time it has been observed that relatively very small injuries have caused immediate death. Fisher and Loison have gathered 700 cases of heart wounds from the literature from which two very important facts have been gleaned: 1st, that heart wounds can heal, and this happy event takes place in about ten per cent; and 2d, a still more important fact, that in only 26 to 30 per cent death follows immediately.

Most cases die later in consequence of the trauma, i. e., from one to twenty-four hours or from one to twenty-one days or more. The less dangerous ones are the simple stab-wounds by needles or similar instruments, with 39.5-10% of recoveries; more dangerous are the stab-cut wounds, with 12.2-10% recoveries; and the most dangerous ones are the bullet wounds with only 2.7-10% of recoveries.

For the sudden cessation of the heart action (mort foudroyante) after very slight injuries of that organ there exists one explanation only, and that is reflex action.

A summary of dangers of penetrating heart wounds are in short:

I. *Loss of blood*, which is proportional to the *extent* of the wound.

II. *The pressure* which the blood extravasation in the pericardium exerts upon the heart and large blood vessels. (Rose's heart tamponade, analogous to the brain pressure in intra-cranial hemorrhage.)

III. *The severance* of a coronary artery.

IV. *Injury of the co-ordination centre*,

which, according to Kronecker and Shmey, lays in the upper third of the ventricular septum.

To understand correctly the processes which can occur after penetrating heart wounds we must not look at the complications but at the heart muscle and its functional peculiarities. Bode found that a slight touch of the rabbit's heart has no influence on the heart action. A longer pressure creates arrhythmia. Pricking of the heart muscle causes mostly a short arrest and then follows frequent and arrhythmic heart action. Small wounds do not show any tendency to gape; larger ones gape no matter in what direction the heart muscle is severed. Therefore, small wounds show a tendency to spontaneous recovery, while all large ones lead to exitus lethalis. An oblique muscular wall wound gapes less as the muscular layers are in a post position, while in a wound at right angles the cut muscles are in juxtaposition and gaping must result. The amount of hemorrhage is also depending on the phasis in which the heart was when injured. Wounds inflicted during systole according to Elsberg bleed livelier than diastolic ones. While in small wounds blood escapes only during diastole, in larger ones it spurts forth during diastole as well as during systole, and in broad gaping wounds it wells simply forth from the interior of the heart without any hindrance at all. An important difference exists in the single compartments of the heart. *A priori* we should expect that a hemorrhage from the left ventricle, in consequence of its higher intrinsic pressure, should be more vehement than from the right; but the contrary is the case. The plus of danger here is overcompensated by the architectonic of its wall. The crossing muscle fasciculi close the wound during systole proportional to the thickness of the wall. Therefore are hemorrhages from the right ventricle in general more violent and an individual can bleed to death from a right ventricular wound which would lead to spontaneous recovery in the left ventricle, provided the extent of both lesions is equal in size. The most dangerous and almost always fatal ending are the perforations of the atria. If we want to obtain a clear clinical picture of heart wounds we must divide them into three groups.

The first group contains those few cases of which Riedinger says: "They don't die,

but are dead already." Such cases have interest only for the pathological anatomist and forensic medicine. Here are found extensive lacerations and wounds single or multiple even with total severance from the large blood vessels and are mostly the consequence of severe chest contusions or due to intra-cardial explosion caused by the hydrodynamic action of a projectile which has a velocity of more than 250 mm. a second.

The second group comprises the largest contingent. The injured staggers, may fall or walk a short distance when syncope overcomes him. The sensation is extinct, the pulse very fast and small. The wounded, however, recovers from the first shock and awakes from syncope; pulse is better; after a short interval the above symptoms come back and death may occur in a short time or in a few days.

So died Elizabeth, the Empress of Austria, on September 10th, 1908, while sojourning at Geneva, Switzerland. The whole world was filled with compassion when the sad news was flashed in every direction that Lucheni's murderous hand had driven a three-cornered file, used as a stiletto, into the heart of this most estimable and charitable lady. After the injury she walked 60 yards to the wharf, mounted a ship and fainted; after a while she regained consciousness, but died within a short space of time.

How much of this collapse may be attributed to shock or hemorrhage or to circulatory disturbances is hard to say in any individual case. Syncope, extreme paleness, air hunger, restlessness, cyanosis, very poor, frequent, irregular pulse, frequent, irregular breathing, in short, all signs of *insufficient heart action and circulation appear in rotation*. At this moment comes the vital question: Will the circulation keep up or cease? Fortunately we know that a large percentage of heart wounded overcome the first attack of hemorrhage, that is to say, that the first disturbances are counterbalanced by local accommodation of the heart muscle (contraction around the wound). The laborious circulation, however, can never be lost sight of.

We know also by what general means a temporary or partial recovery is possible. It is nature's attempt at self-preservation, the *syncope*, the greatest general hemostatic

in existence. Countless lives have already been saved, when the precious blood and with it life threatened to ebb away, by the popularly most hated symptom,—the *syncope*. What is syncope? Syncope is cerebral anemia, and may be produced by *physical* or *psychical* shock or *severe hemorrhage*. The result of syncope is a diminution of frequency and force of the cardiac systole and prolongation of diastole; as a consequence there is a slowed blood current which favors clotting. Thereby syncope proves to be nature's remedy for grave hemorrhage. In the whole casuistic the recurrence of hemorrhage plays a big role. Repeated hemorrhages from the heart are endured longer if they are diastolic in nature. It is very clear if we consider the different compartments of the heart singly and the nutrition of the heart muscle, why a systolic hemorrhage must be much more dangerous than a diastolic one. The accumulation of blood in the pericardium causes difficulties in the heart action and circulation. Systole and diastole, however, according to Cohnheim's experiment, never stop during even *high* pressure in the pericardium, but the afflux of blood from the venae cavae is *arrested*, the heart muscle is not supplied with blood any longer, and a standstill results. It is easily supposed that the heart is pushed off from the chest wall and backward, but this is not the case. Even in complete filling of the pericardium only a thin stratum of liquid separates the heart and chest wall. The liquid contents are found back of the heart, behind the atria in the upper posterior recesses of the pericardium, where it compresses the auricle, large blood vessels, especially the large veins (Rehn).

The third group contains finally the few cases of spontaneous recoveries. The inflicted wound is small and deadly hemorrhage does not occur. We know that an otherwise healthy heart muscle is able to close a wound in its wall in a very short time. To this fact alone are due the spontaneous recoveries which we find in the literature. But such cases are by no means out of danger for days and weeks to come and ignorance of this fact has led here to grave consequences. Such patients thought to be on the way to recovery have died on the slightest exertion suddenly. The obliterating coagulum gave away and second-

ary hemorrhage led to speedy death (Goebert's case on the 11th day). A definitive recovery is never a *restitutio ad integrum*, because a new formation of muscle facilli does not take place. The boundary muscle fibres are destroyed by growth of the interstitial tissue, the necrotic masses are sequestered and finally replaced by connective tissue and after about four weeks the cicatrix is formed but no perfect substitution obtained. A uniform cicatrix formation, however, is the most favorable course. It has happened that only a partial cicatrix formed on the heart surface while inside a cavity with blood coagula remained; in other words a traumatic heart aneurism, which may rupture on the slightest provocation. Besides this danger we know that infection, pericarditis, empyema and general sepsis may end the life of a heart-wounded individual after weeks or even months. Two important lessons ought to be drawn from these statements.

I. That spontaneously-created heart cicatrices are always a *locus minoris resistentiae*, and

II. That recovered heart-wounded persons should remain a long time under careful observation and guidance.

In general we may say that the fate of a patient with penetrating heart wound, and who did not die immediately after the accident, is depending on the amount of hemorrhage. A second consideration is infection. It would be very desirable if we could make a sure diagnosis at once, but this is by no means easy. We must therefore first consider the situation of the external wound and its direction; if necessary, make a careful use of the probe to ascertain depth and course of the wound. If we find the wound in the region where the heart approaches the chest wall, then the probability of a heart injury is very evident; but such an injury can not even then be excluded when the instrument entered farther off from the heart region, in the auxiliary region or upper part of the abdomen. It is very easy to recognize a heart injury when a needle or similar instrument sticks in the chest and moves synchronously with the heart's action or when in a broad thorax wound the heart shows itself and propels a stream of foaming blood outward. Without these open signs, however, we ought to be able to diagnose what happens in the interior.

The classical picture of a penetrating heart injury shows a triad of symptoms, which should sink deep in our gray matter.

First, the signs of internal hemorrhage.

Secondly, the complex of symptoms called heart tamponade.

Thirdly, the changes in the heart sounds.

The symptoms of hemorrhage in heart wounds are naturally the same precisely as in injuries of all large blood vessels, i. e., progressive anemia, restlessness, cold sudor, vomitus and small pulse.

The symptoms of heart tamponade are the same as we see in large pericardial exudate, i. e., increase in the area of absolute heart dulness, dyspnea, cyanosis, great anxiety, small *irregular* pulse and subnormal temperature.

The heart sounds, at first fully audible, become with progressing heart weakness finally inaudible.

The diagnosis is relatively easy if all three symptoms are present, but if one or perhaps two are absent then the diagnosis meets insurmountable difficulties. The heart tamponade is absent when blood exudes from the pericardium through a hole into the pleural cavity; compression of the heart then does not result. If pleura and lung arc injured at the same time air may accumulate in the pericardium, and instead of an increased heart dulness we find an abnormal tympanic tone; we have a pneumo-pericardium. In very small or puncture wounds all three symptoms may be absent. (Case on record.) If we are therefore in doubt we ought to resort to explorative pericardiectomy.

Therapy.—The rational therapy of heart wounds is an acquisition of the last decade. The knowledge that part of the fatal cases do not die from hemorrhage but from heart tamponade has led to an essential progress in the surgical therapy. The paracentesis, to evacuate the compressing fluids alone, is only sufficient in cases in which the hemorrhage has ceased already; and even then is a patient better off with a sutured heart than without the suture. All cases in which the hemorrhage still persisted were lost. Since Rehn's fortunate case in September 1906, the heart suture has been repeated in many cases with variable success. Up to 1906, 83 cases of heart operations were published; 78 of these were heart sutures, of which 32 recovered and 42 died. Dr.

Vaughn of Washington, D. C., reports in the *Jour. of A. M. A.* (Feb. 6th, 1909) 150 cases of heart surgery with a mortality of 65%. Over half of these cases is therefore an autopsy *in vivo*. These statistics are not as good as those compiled in 1906 by Bernhard, when out of 78 cases 32 recovered and 42 died. Previous to 1896 all operative measures consisted in venesection or aspiration. E. Rose performed venesection on a young physician; a dagger had entered in the upper region of the heart. Rose found him gasping for air, profoundly cyanotic, almost pulseless, but conscious; heart dulness increased from minute to minute enormously. In order to lower the blood pressure a copious venesection was made. The cyanosis and dyspnea gradually disappeared and the pulse became palpable; recovery in five weeks, blood in pericardium fully absorbed.

What has kept the surgeon so long at bay here from the old tried principle of a direct hemostasis? Without doubt there exist very grave obstacles, which frightened surgeons off from heart suture. Some cases are so close to the great beyond that an anesthetic would be sure death, and without it the operation is extremely difficult. The patient should keep absolutely quiet—but this is from the surgeon's standpoint only a pious desideratum. The severe dyspnea and terrible anxiety do not give a moment's rest. Oh! how welcome is then here again the otherwise so much despised syncope! Through it not only the blood pressure sinks with its beneficial influence on hemorrhage, but it becomes also a nature's anesthetic and during its duration quick surgical measures may be undertaken, such as pericardiectomy. It is already difficult to lay the heart extensively free, and to suture a tumultuously working heart taxes great skill. Sometimes it is impossible to get at the bleeding point, especially in posterior heart muscle wounds. But most of the injuries happen from the front, and if there is not a through and through penetration we can repair them. The front of the right ventricle and a big part of the left one can be exposed by a temporary resection of the fourth and fifth ribs, making a rectangular osteoplastic hinge door flap. In injuries of the auricles or for operations on the large blood vessels we must include also the third

rib. The most difficult to expose is the left atrium. Many operators have in the moment of danger simply enlarged the existing thorax wound and resected temporarily or permanently the bony structures of the chest. General rules for extempore operative measures can not be formulated.

As soon as the bleeding heart is exposed we should prevent further hemorrhage from it. I plead here most earnestly against the use of the hemostatic forceps or other sharp instruments, or the employment of traction sutures, as they only lacerate the heart muscle. Only one remedy is advisable here and that is the tamponade with fingers or digital or manual compression. It is more practicable to take the whole heart into the left hand without dislocating it much and then work quickly and deliberately. The wound is sewed with fine silk threaded in a fine round needle. We grasp the epicardium and much of the myocardium without injuring the endocardium. (Vaughan says that it makes no trouble if the suture does enter the cavity of the heart.) Never use a running suture. Elsberg and Rehn recommend to tie the suture during diastole because a systolic-tied suture is apt to cut through during diastolic dilatation and producing a crucial instead of a linear wound. Sometimes the pericardium is full of blood, caused by aspiration and churning of blood so that the heart wound cannot be found. In such cases Rehn recommends to open at once the left pleural cavity when further aspiration will stop. Bernhard denies this advantage and sees danger in opening the pleura.

A penetrating heart wound is most always an infected wound and most operators therefore drain the pericardium. Statistics, however, show that more cases recovered when the pericardium was closed. If we like to drain we should never use gauze here; catgut or a fine smooth rubber drain is only admissible. Gauze creates an enormous secretion in consequence of the rubbing of the heart muscle against the gauze drain tampon. Gauze drain often causes retention of secretion, instead of draining it off, even to such an extent as to produce in turn again intracardial compression (Bernhard's case).

Three cases from the literature:

I. Case of Rehn in Frankfort-on-the-Main.

Germany. A male 22 years old was stabbed on Sept. 7th, 1896, in the left fourth intercostal space. When arriving at the hospital he was cyanotic, almost pulseless, and covered over and over with blood; heart dulness enlarged, especially to the right, heart sounds very weak but clear. Next day (8th) he was some better except heart dulness was larger. On Sept. 9th, he was very much worse, pulse very fast and small, respiration 76 per minute. Patient made the impression of a dying man. Operation: Incision of the pleura in the fourth intercostal space, resection of the fifth rib, exposure of the pericardium, enlarging the wound therein and exposing the heart. The hemorrhage was terrific. A wound $1\frac{1}{2}$ c.m. long in the wall of the right ventricle could be seen which allowed blood to escape only during diastole. This was easily controlled by digital compression without encumbering the heart's action. Rehn mastered the hemorrhage by three silk sutures tied during diastole. Patient recovered. This is the first case on record of heart suture.

II. Case of Dr. Joseph Blake, of New York, 1907. A negro 24 years old was stabbed into the heart, took little notice of injury and walked one block, when he had to sit down on account of weakness. The ambulance surgeon found him in good condition, but on arriving at Roosevelt Hospital he became rapidly worse. A wound 2 c.m. long was found over the fourth costal cartilage even with the nipple line. The wound was bleeding moderately and occasionally air bubbles escaped. The area of heart dulness increased, heart sounds became inaudible, radial pulse barely perceptible and irregular in force and rhythm. Dr. Dwight made the diagnosis of heart wound. Operation $2\frac{1}{2}$ hours after injury, drop ether anesthesia. As air bubbles were escaping it was evident that pleura and lung were implicated. A rectangular flap was cut over the heart area and bent over the sternum. A wound 1 m. long was found in the pericardium from which blood was flowing: 60 c.c. of clotted blood in the pericardium. Close to the anterior coronary artery was a wound in the right ventricle from which a small fountain of dark blood played a distance of 10-12 c.m. at each systole. The hemorrhage was easily controlled by gentle finger pressure. Owing to the close proximity to the coronary artery the four silk sutures were introduced through the whole thickness of the muscle wall with difficulty and as still some oozing appeared, a Halstead mattress suture was applied over them. The pericardium was irrigated with salt water and sutured, the pleural cavity drained. Patient recovered.

III. Case of Dr. Charles Park. A negro 24 years old was stabbed at 10:30 p. m. on June 14th, 1903, over the heart region. The heart sounds could not be heard and there was no pulse at the wrist; respiration shallow; patient in profound shock. A trap-door flap was made from the margin of the second rib to the sixth rib. A wound in the pericardium close to the sternal edge so that a portion of the sternum had to be removed. Intrapericardial pressure was so great that no heart pulsations were felt. On incision dark blood

once. The rapidly beating heart churning the blood in the pericardium, made it difficult to locate the lesion; the blood came from the upper right corner. The heart, held in the left hand, was drawn slightly forward and turned when the wound was seen in the left auricle still bleeding. Four No. 0 chromicized catgut sutures controlled the hemorrhage completely; pericardial toilet and closure; time of operation 65 minutes; patient recovered. Dr. Blake stated that very few stab wounds of the auricles recover.

THE PRODUCTION OF CERTIFIED MILK.

W. H. McLain, M.D., City Health Officer,
Wheeling, W. Va.

CLASSIFICATION.

In providing for the classification of milk the primary object is to exclude all milk which may be harmful to the consumer, and to provide for milk that will be wholesome and nutritious.

The danger of using raw milk from diseased cows, improperly constructed dairies, 1000 bacteria to the cubic centimetre.

or milk improperly handled, or impure from other causes, is well known, and it is therefore very important that no raw milk be sold, except when those in authority know that it is safe to be used in that condition.

The Department of Agriculture has divided milk into three classes, suggesting them as ideal standards.

Class 1. Raw milk of the highest standard should be produced for the use of infants, invalids and for those who desire the best, and who are willing to pay for the greater cost of production. Milk of this standard has come to be known as Certified Milk, and does not contain more than 10,000 bacteria to the cubic centimetre.

Class 2. A wholesome supply of raw milk which can be furnished without involving unreasonable cost, to be provided for general consumption.

This means milk produced under good conditions, but not necessarily equal to the conditions provided in Class 1.

This milk must not contain more than 100,000 bacteria per cubic centimetre and is known as Inspected Milk.

Class 3.—Pasteurized Milk. Milk from

dairies unable to comply with the requirements specified for the production of Class 1 and Class 2, should be Pasteurized before being sold, and should be known as Pasteurized Milk. In other words, dirty or contaminated milk should be Pasteurized, which means heating to a temperature of 150° F for 20 minutes, or 160° F. for 10 minutes. As soon as possible after milking, the milk should be cooled to a temperature of 50° F.

Applying this to local conditions, there will soon be a supply of Certified Milk in this city. This will be under the general supervision of the Wheeling Certified Milk Commission, composed largely of members of the Ohio County Medical Society.

Class 2 or Inspected Milk.—For the last fifteen months the health officials have been using their utmost endeavors to bring our local supply to such a standard that it could come under the general head of Inspected Milk.

The general averages for the year 1908 published in January of this year showed that seventeen of our dairymen had attained this standard. The second published list for the first three months of 1909 showed a great improvement, as thirty-five, or one-half of our total number, were found to be in the class producing perfect market milk.

It must be remembered that this is considered perfection for market milk, and can only be attained, at this time, in small cities where the supply is produced near at hand.

Bacteria in Milk.—The milk of all large cities is excessively rich in bacteria. In Washington during the summer of 1907 the general milk supply averaged over 11,000,000 bacteria per cubic centimeter, and over 22,000,000 bacteria during 1906. In making comparisons, it has been found that dirty milk contains more bacteria than almost any other substance. Compared with sewage, which is popularly supposed to contain more germs than anything else, it has been determined that milk, when dirty, is richer in bacteria than the sewage of either Boston, New York or London.

However, we know that disease is due to agencies and conditions other than the mere presence of enormous numbers of bacteria, so that as far as numbers are concerned they need not greatly alarm us.

By universal consent, however, milk containing excessive numbers of bacteria is unsuitable for infant feeding. The mucous membrane of infants is especially susceptible to bacteria, and a large proportion of the summer complaints of infants has been traced to the use of dirty milk.

It has been well said that the number of bacteria in milk is not so important from a public health standpoint as the kind and nature of the bacterial products. This is very true, but as cleanliness and the use of ice will keep the bacteria low in numbers, this affords a mode of protection against the dangerous species and their poisonous products. Milk containing few bacteria will contain proportionately few harmful varieties.

One reason for this is that most of the specific, pathogenic bacteria which at times contaminate milk grow best at high temperatures, and not at all at the low temperatures at which milk must be kept to keep the bacterial count low.

Milk freshly drawn from the udder even under extraordinary precautions always contains bacteria; these are mostly cocci, and come from the udder. The number varies from 100 to 500 per cubic centimeter.

The first attempt to make a standard for milk bacteriologically was in New York City in 1900, when the New York Department of Health tried to have 1,000,000 per centimeter as a standard. It was found impossible to enforce this, on account of the enormous volume of the milk trade in that city. Some of the milk came from a distance of 350 miles, and had a bacterial content of over 2,000,000 when it arrived in New York. The Boston Board of Health adopted a standard of 500,000 per cubic centimeter in 1905, and much scoffing was indulged in at their expense.

Their example was followed by others until in 1908 there were 20 cities making bacterial counts of their milk supply.

Dr. Goler of Rochester, N. Y., in 1907 adopted as a standard 100,000 per cubic centimeter. Wheeling in 1908 adopted the same standard, believing it to be possible in a place of this size, where so much of our milk is produced within several miles of our city limits. The number of bacteria, therefore, allowable in milk depends upon

the purposes for which it is used and varies with the locality.

This brings us to Certified Milk and the manner of its production.

Certified Milk.—During the year 1887 Dr. Henry L. Coit, a physician of Newark, N. J., investigated the milk supply of his community with more than usual interest, because he was endeavoring to find clean milk for his infant son. He went from one place to another and finally picked upon a small suburban dairyman who kept, cared for, milked and delivered the milk of four cows. The dairyman was honest and industrious, and promised to carry out the ideas of the physician as to cleanliness. However, upon making an unexpected visit to the farm the physician found the dairyman acting as night nurse for three cases of diphtheria in addition to his duties as a dairyman during the day. Realizing fully the dangers of such ignorant methods, he succeeded in having a committee appointed by the New Jersey State Medical Society, which for two years agitated the question of pure milk. The committee discontinued the work in 1891, having demonstrated the helplessness of ordinary measures to accomplish for the cause of pure milk what physicians require.

Dr. Coit appealed to the State Board of Health and to the State Dairy Commissioner, but without result. Being a somewhat persistent individual, he determined that if clean milk could not be obtained for the State of New Jersey, it could at least be secured for the section in which he lived. After interesting a number of his associates it was decided to form an organization to be called the Essex County Medical Milk Commission.

The first meeting was held in Newark, N. J., April 13, 1893, and there the plan of producing clean milk was adopted in its entirety, and the machinery for effective work devised. At that time there was no dairy hygiene in this country; the finest herds were kept and milked under the poorest sanitary conditions. As a means of distinguishing the milk produced through the operation of their plan from that produced under ordinary conditions Dr. Coit coined the term "Certified Milk." This, in the strict sense of the term, means milk produced under a legal contract between a

milk commission and a dairyman, and which conforms to the requirements. As all milk commissions have been modeled upon this plan, a description of it will serve to give a general idea of milk commissions and their requirements.

The plan includes three general requirements:

1. That physicians give their practical support to the movement.

2. That trustworthy dairymen possessing honor, financial ability and dairy facilities shall be induced, by reason of promised support and the increased price of the milk, to conduct their business in conformity with the requirements made by the milk commission, and imposed by them in due legal form.

3. The duty of the commission is, first, to establish correct clinical standards of purity for cow's milk; second, to be responsible for a periodical and personal inspection of the dairy; third, to provide for expert examinations of the dairy stock, and a medical supervision of the employees by a competent physician. The milk to be examined chemically and bacterial counts to be made periodically, usually semi-monthly. In case all of these reports are satisfactory the commission "certifies" to the milk.

The requirements specify as to the character of the land used for pasturage; it determines the construction, location, ventilation and drainage of the buildings; provides for a pure and abundant supply of water; it requires in the stable cleanliness and order, and disallows the keeping of any live stock except the cow within 300 yards of the dairy buildings. All unhealthy cattle are excluded from the herd, each animal is tested for tuberculosis and removed if found tubercular. Provision is made for proper housing and shelter for the cows, together with their grooming, their treatment, and the prompt removal of their waste from the stable. It regulates the feeding and governs the collection and handling of the milk by insisting upon a proper regard for cleanliness, as viewed by the bacteriologist as it relates to the animal, her surroundings, the milkers' hands, vessels and the association of persons handling the milk with immediate or remote sources of infection.

It controls, by minute specified require-

ments, every step in the cooling of the milk and its preparation for shipment; each bottle is packed in ice and kept so until delivered to the consumer.

The motives of the commission are disinterested, and its members forbid to themselves any pecuniary rewards. The experts are employed by the commission and paid by the dairyman.

As to the milk itself the following were adopted as standards of purity:

1. An absence of large numbers of micro-organisms or germs, and an entire freedom from the pathogenic or disease-producing varieties.

2. Unvarying resistance to early fermentative changes in the milk, so that it may be kept under ordinary conditions without extraordinary care.

3. A constant nutritive value of known chemical composition and a uniform relation between the percentages of fats, proteids and the carbohydrates.

This briefly is an outline of the plan adopted. It does not supersede the municipal authorities in their work of looking after the general milk supply. The health officials work through the operation of the law, or the stimulus of comparison and the enforcement of ordinance, in their efforts to secure clean milk for the public. The milk commission wants clinical milk for infants and invalids primarily, which in its purity is far above the requirements of the law, and attempts to get it through contract control of methods and the enforcement of scientific cleanliness.

As stated, the first commission was organized April 13, 1893. The second commission was not formed until 1898. After 1899 more rapid progress was made, as thirteen commissions were organized in 1907. The total number up to date is forty-two, including three in New York City; some of these are not certifying milk at the present time, as several commissions after organizing could not find a dairyman who could meet the requirements.

Certified Milk Compared to Market Milk.—From a chemical standpoint, certified milk does not differ much from market milk. The commissions require that the fat standard is not made high because milk containing about four per cent fat is con-

sidered to be the best for immediate consumption.

It is when certified milk is compared to market milk from a bacteriological standpoint that a striking difference is noted. Bacteria first enter the milk (aside from those in the udder) from the dirt of the stable or from dirty methods of handling the milk, improper cleaning of milk pails, bottles and other utensils coming in contact with the milk. At ordinary room temperature each one of these bacteria increases about 450 times in twenty-four hours. Even clean milk spoils rapidly through germ growth unless it is kept cold. Just before the Cincinnati Milk Commission was formed examination showed the ordinary market milk, as sold on their streets, counted from 4,000,000 to 25,000,000 bacteria per cubic centimeter. Pittsburg recently established a certified milk commission, because it was found that their supply averaged from 3,000,000 to 10,000,000 per cubic centimeter.

Keeping Qualities of Certified Milk.—The theory that clean milk, kept cold, keeps sweet a long time works out in practice. Certified milk with its small number of germs keeps sweet for weeks. I know one physician who had certified milk shipped from a farm in Pennsylvania to New York, taken on board a steamer and used until his arrival in Plymouth, England. Part of this supply was brought back to this country and at the end of thirty days it was still sweet. Many people now take certified milk when going to Europe, particularly when traveling with infants. Several producers have depots in London so that a guaranteed quality of milk can be secured by people going in either direction. Some of the samples sent to the National Dairy Show in Chicago were shipped from points over 1,500 miles distant, and in some instances the milk was still sweet at the end of forty-two days. Of course, in these instances the milk was packed in ice for shipment and kept on ice, but cleanliness and ice were the only preservatives used.

The Price of Certified Milk.—The price varies in different cities, the average price being 12 cents per quart, though in Philadelphia 16 cents is secured, and in several other places 20 cents per quart is charged. The price of market milk in the United

States varies from 5 cents to 10 cents per quart, and averages about 7 cents. Certified milk therefore sells for an average of 5 cents more per quart than the ordinary market supply. As Dr. Schroeder of the Department of Agriculture says: "The dairyman is not alone to blame for impure milk; as a rule he attempts to supply a pure milk to his customers and is not conscious of the impurities and infections in the article he is distributing. The price he receives is too low for the production of a constantly pure milk. He should be better paid. If the money that goes to doctors, druggists, undertakers and burial grounds directly through the use of impure and unwholesome milk could be diverted to the dairyman, he would be amply repaid for producing a wholesome, safe milk, and the entire community would profit by having better health, fewer deaths and less suffering."

The Wheeling Certified Milk Commission has organized and has prepared a list of the rules and regulations for the dairymen who desire to produce milk under its supervision.

The following advertisement has been inserted in the daily papers:

NOTICE TO DAIRYMEN.

The Wheeling Certified Milk Commission will send a copy of its requirements to any dairyman who desires to engage in the production of certified milk. The Commission will consider each application and after inspection of the dairies, select the one best qualified to meet its requirements. Applications must be received on or before April 23, 1909.

WHEELING CERTIFIED MILK COMMISSION.

The regulations of the commission are very important. They will be sent to anyone on request.

The Working Methods of the Commission.—The dairyman selected will be bound by contract to live up to all of the requirements of the Commission.

The Commission agrees to furnish caps and parchment seals for the bottles. On the seals is provided a space for the date of milking, which date is stamped in at the dairy. The Commission also agrees to have samples of milk examined by its chemist and bacteriologist twice a month or oftener, if the Commission sees fit. At intervals a physician will examine the employees as to their general health. The

veterinarian of the Commission will examine the physical condition of the dairy once a month. This includes an examination of the cattle and the general management of the dairy.

The standing of the dairy is determined upon the sum total of the reports from the experts, and upon them depends the certification of the dairy and its product each month.

As to the question of finances, the sum of \$1,100 was raised by subscription, and three times that amount could have been secured had it been considered necessary.

The expenses of the Commission, the fees for examinations, the printing and the supply of caps and seals, will be met by taxing the dairyman a small sum on each quart of milk produced. Most commissions charge one-half cent per pint.

The original idea of this Commission was to supervise the production of a limited supply of milk, of whose quality the physician could at all times be certain, and which he could safely prescribe for the use of infants, convalescents and invalids.

Personally, however, I shall not be satisfied until we can make an arrangement whereby it will be possible to distribute certified milk to the poorest of the poor whenever it is considered necessary by the physician in charge.

Mr. Nathan Strauss of New York has furnished the funds for a laboratory in New York for the modification and bottling of pure milk, and it has been estimated that the lives of 10,000 infants are saved annually by this alone. St. Louis, through its milk commission, is expending over \$5,000 yearly in distributing milk to the poor of that city. Boston, Chicago, Cambridge, Mass., Rochester, N. Y., and other cities have done the same noble work, and with the aid of the charitably inclined we can do it in Wheeling.

This rather lengthy account of what our milk commission means and what it proposes to do is made with the hope that a greater knowledge of our aims will arouse enthusiasm on your part, and then our share of the work will become comparatively easy.

HYDROPHOBIA.

K. M. Jarrell, M.D., President Raleigh County Board of Health,
Clear Creek, W. Va.

Definition—Hydrophobia in man is an acute infectious disease, resulting from the inoculation of a specific virus from an animal suffering from rabies, declaring itself by a variable period of incubation following the primary infection.

Etiology—Hydrophobia in man is always the result of inoculation with the virus of a rabid animal, most frequently the dog (90%), less frequently cats, wolves and foxes.

It is said that 12% to 14% of those bitten contract the disease (Roux) and all of these die.

Yet while the ordinary medium of infection is the saliva of a rabid animal, the disease can also be produced by inoculation with the fluids and tissues of such an animal.

It is generally thought that the disease is due to a specific micro-organism which by its multiplication within the body, finally causes the ultimate overwhelming symptoms of the disease, but to no one's satisfaction yet has this organism been demonstrated.

Pathology—There is no gross lesion that can be considered specific of the disease. Cadavers are apt to emaciate rapidly and the blood is usually dark and somewhat thickened. The brain and membranes, also the gastro-intestinal tract and respiratory tract may be congested and show slight hemorrhage.

In 90% of the cases, foreign bodies, such as wood, hair, and straw are found in the stomach.

Microscopic examination of the medulla oblongata and spinal cord shows irritative lesions, marked by infiltration of the perivascular sheaths with leucocytes, which at points may be accumulated in considerable number. Usually as a rule hyperemia and moderate oedema of the brain and spinal cord and their membranes will be seen. Changes are found in the ganglia of the cerebro-spinal and sympathetic systems and are especially in the plexiform ganglion of

the pneumogastric nerve and in the Gasserian ganglion.

Normally the ganglia are composed of supporting tissue holding in its meshes the nerve cells, and these nerve cells are surrounded by an endothelial layer and capsule. The rabic virus brings about an abundant multiplication of cells lining this capsule, leading finally to the destruction of the normal ganglion, and leaving in its place a collection of round cells.

Period of Incubation—The average period of incubation is about six weeks; and is seldom less than fourteen days, and may be protracted to some months. In extremely rare cases this period has been prolonged to between one and two years. In the young the period of incubation averages less than in the old.

Wounds about the face and head are especially dangerous. Next in order of mortality comes bites on the hands, then injuries on other parts of the body.

This depends in part upon the fact that the face, head and hands are usually naked, and would appear also to depend somewhat upon the richness in the nerve supply of the part bitten, and the extent and severity of the wound, the punctured wounds being most dangerous. The wolf, cat and dog in order named are the most dangerous animals.

Symptoms—There are three recognized stages of the disease:

Premonitory Stage—The outbreak of general symptoms is usually preceded by a brief period, generally not more than twenty-four hours, rarely extended to two days, by some uneasiness and pain in the region of the wound.

When the outbreak of general symptoms is ushered in, there will usually be irritations about the bite, pain or numbness. There will be headache, loss of appetite, sleeplessness and much mental depression and irritability, with a tendency to aimless wandering about. A general hyperesthesia soon follows, as evinced by sensitiveness to currents of air and to light.

The stage of full development is ushered in by noticeable spasms of the muscles of deglutition, with a sense of tightness about the pharynx, with some difficulty in speaking at times, and with intense thirst and great dread of fluids and inability to swal-

low, from which the name hydrophobia was given.

Sometimes precursory symptoms are absent, and the first manifestations of the disease may be spasmodic contractions of the larynx while attempting to drink; at other times oppression of breathing is first noted combined with the usually already described pharyngeal symptoms.

II. Stage of Excitement—The disease has now fully declared itself. The spasms of the muscles of deglutition and respiration are more marked and more sensitive and easily excited; swallowing becomes impossible; the mere suggestion of it suffices to bring on a spasm. Currents of air, an unexpected touch or the dropping of water on the body, and the slightest source of agitation will suffice to bring on a convulsion. These successive muscular spasms are separated by periods of complete relaxation, there being no tonic spasms as are seen in tetanus.

The embarrassment of breathing caused by spasms of the muscles of respiration is great, producing an impending danger of suffocation.

The mental faculties remain for the most part unimpaired, though excitement, anxiety and terror occupy the mind.

The duration of the time of the convulsive period is variable, rarely continuing longer than one-half to three-quarters of an hour, and for the most part for a much shorter period.

There are, however, occasional fits of furious mania, and in the intervals between the attacks the mind appears clear.

The temperature varies from 100° to 103° F. Urine is scanty, free from albumen, but frequently contains sugar. This stage lasts from thirty-six to seventy-two hours, but during its course death may occur, but if not it passes into a state of comparative tranquility.

III. Paralytic Stage—Here we find a gradual remission of the severe symptoms, excitability diminishes, resulting in freer respiration and recovery of the ability to swallow, while general debility and prostration continue.

The convulsions become feebler and finally cease entirely. If life be sufficiently respiratory failure develop, terminating in death by syncope. The duration of this

stage is brief, as a rule, ranging from two to eighteen hours.

The paralytic stage may be marked from the outset—the so-called dumb rabies.

Prognosis—Fatal in all cases in those who develop the disease.

Treatment—Prevention is the point of general importance by systematic muzzling of dogs, by which means the disease can be practically eradicated.

Prophylactic inoculation with emulsions of the dried spinal cords of rabbits infected with hydrophobia after the method of Pasteur has been proved to be of the greatest value in establishing absolute immunity against the strongest hydrophobic infection, if the series of inoculations is completed a sufficient time before the actual development of constitutional symptoms.

The earlier the inoculations are begun after the infection, the better results may be obtained. Statistics show that only 0.5% of the persons bitten and treated by the Pasteur method have died.

Prophylaxis—Every wound infected by a possibly rabid animal should be subjected at once to free excision or thorough cauterization. If cauterization is more feasible it should be done with the actual cautery, if possible, applied deeply and thoroughly.

If chemicals are used caustic potash or fuming nitric acid is to be preferred.

If the part bitten be an extremity, a bandage or tourniquet should be applied tight enough to stop all circulation of the extremity between the bite and the heart, before any excision or cauterization should be done, as this will probably aid in keeping the virus from entering any further into the system.

When the person bitten has once contracted the disease, palliative treatment is all that any case admits of. Keep the patient in a quiet, dark room. Morphia should be given hypodermically in amounts sufficient to allay spasms and to quiet the patient. Inhalations of chloroform may have to be resorted to in combination with the morphia to relieve the severity of the spasmodic paroxysms. Thirst may be allayed to some extent by rectal enemata.

Case 1. Mrs. E. W., married, age 48, was bitten by a mad dog on the right hand, the ring and small finger being badly lacerated. She was bitten July 2, 1908, and the wound healed perfectly in a few days. She was informed by members of the laity that there was no danger of any further trouble and not to consult a physician for it

would be one of their methods of getting a fee; so she treated the case lightly and let it pass by without any further thought.

On the 26th day of February, 1908, I was called to see the patient and found her to be one advanced in the second stage of hydrophobia. She had only been feeling unwell for about twenty-four hours, but grew rapidly ill about 1 A. M. the morning of the 26th, and I arrived about 5 P. M. in the afternoon of the same day. Previous to the setting in of the second stage the family stated that she had complained of some pain and numbness in the hand which was bitten by the mad dog and had been very restless and uneasy, carelessly wandering around the premises; and toward the beginning of the second stage patient suffered from some constriction about the larynx and at times with dyspnea. The second stage was typical of the disease; she gradually grew worse and died February 27th, 1908, at 9 A. M., before the expiration of the second stage.

Special Abstract

FRACTURE OF PATELLA.

Treatment by the Open Method.

(Author's Abstract.)

In the August number, 1909, of *Surgery, Gynecology & Obstetrics*, Aime Paul Heineck (Chicago) tabulates and analyzes 1100 fractures of the patella treated by the open operative method. He discusses the following questions:

1. Is the patella essential to the functional integrity of the knee-joint?
2. Are permanent displacements of the patella, in whole or in part, congenital or acquired, or the rudimentary development of this bone deformities significantly impairing the functions of the knee-joint?
3. Are there other traumatic lesions, simulating from the symptomatic standpoint, by the functional disturbances which they entail, fractures of the patella? What are these conditions? How are they best treated?
4. Which is the treatment of choice for fractures of the patella?
5. Is operation at times contraindicated? If so, when?
6. If operation is not always indicated, when is it indicated?
7. How should the treatment of old fractures of the patella differ from that of recent fractures, or is the same treatment applicable to both? If not, why not?

8. Which of the principal various open operative procedures that are now in vogue for the treatment of fractures of the patella is the most universally applicable, the most satisfactory from the standpoint of early and of late result: transverse or longitudinal osseous suturing, looping of the patella (cerclage Berger), hemi-cerclage (Quenu), or suturing of the peri-and para-patellar fibrous tissues (suture des ailerons, Vallas, *retinaculæ patellæ*, B. N. A., reserve extensor apparatus (Mikulicz)?

9. Should one, if he be an advocate of the open operative treatment, operate on the day or on the morrow of the infliction of the injury, or should he wait till the soft tissues have recovered from the immediate effects of the traumatism?

10. Should the operative field be rendered bloodless by the employment of an Esmarch bandage?

11. What should be the nature of the anaesthetic employed: local, lumbar, or general anaesthesia?

12. By what type of incision is the operator best enabled to perform the repair work which he deems appropriate and necessary?

13. Is it advisable in these cases to irrigate the articulation; if so, with what fluid, an antiseptic solution, irritating or non-irritating, or merely a cleansing agent, such as normal salt solution? Or is the mere sponging out of the extravasated liquor and clotted blood, from the synovial cavity, productive of the most satisfactory results?

14. Should non-absorbable, or absorbable, suture material be used? Are there any valid reasons for discarding non-absorbable suture material?

15. Shall the periarticular tissues be drained?

16. Shall the articulation be drained?

17. Shall the completely detached bony fragments be removed?

18. What should be the duration and the nature of the post-operative treatment?

Heineck answers them as follows:

1. A careful study of the literature amply justifies the statement that congenital or acquired absence, unilateral or bilateral, of the patella, is always associated with some impairment of the functional integrity of the anatomically defective knee-joint or joints. This impairment in some cases

is very slight; in other cases, it is considerable.

2. Any dislocation of the patella, be it intermittent or permanent, be it complete or incomplete, be it congenital or acquired, is also always associated with some impairment, slight or severe, of the functional integrity of knee-joint.

3. All upward or downward displacements of the patella as a whole, if dependent upon rupture of the quadriceps extensor femoris tendon, or of the ligamentum patella, will cause symptoms somewhat analogous to those which are caused by complete transverse, oblique, stellate, or comminuted fractures of the patella. Violence of the same nature can determine a solution of continuity of either the tendon, the patella, or the ligament.

4. To secure the best functional results, it is essential that in fractures of the patella the torn peri-patellar fibroperiosteal tissues be carefully sutured. All tears in the para-patellar tissues must be sewed up. To contribute to the maintenance in apposition of the fragments, the patella is circumferentially looped by a ligature passed close to its periphery. This ligature is passed so as to be close to the periphery of the bone, so as to hug it, as it were. It is inserted in such a way that it lies imbedded in the substance of both quadriceps tendon and ligamentum patellæ midway between their anterior and posterior surfaces. If deemed necessary, two such looping ligatures may be used. These different maneuvers are all extra-articular.

We do not advise the open operation.

1a. In fractures of the patella that occur in a diabetic patient. The tissues of diabetics offer very little resistance to infection.

b. In fractures of the patella occurring in patients having advanced tubercular disease.

c. In fractures of the patella occurring in patients suffering from well developed cardiac, renal, or hepatic disease, or the subject of the malignant disease.

2. In closed longitudinal fractures with no displacement, or with but slight lateral displacement.

3. In subaponeurotic or in incomplete fractures.

4. Fractures of the patella in which the separation of the patellar fragments is so

slight as to be barely detectable do not call for the open operative treatment.

It is our belief that after ample preparation of the patient and of the operative field, the open operative treatment is positively indicated:

1. In all fresh fractures of the patella in the absence of contraindications:

- a. If the surroundings are favorable.
- b. An aseptic operating room.

2. Skilled surgeon, and assistants having an aseptic conscience.

3. A dependable suture material, rubber gloves, etc.

b. If the patient is in the best possible condition.

c. If the fracture be of such a nature that a disabling defect is to be expected, if one resorts to non-operative treatment.

d. When the bony fragments cannot be returned exactly by manipulation to their normal position and retained therein by retentive apparatus.

2. In all compound fractures.

3. In all comminuted fractures.

4. In all cases associated with considerable intra-articular effusion.

5. In all cases associated with marked laceration of the periarticular tissues (aileron, reserve extensor apparatus).

6. In all cases in which the interfragmentary space or diastasis has at any time exceeded 3 cm.

7. In such fractures as are very liable to cause serious functional joint impairment; among such may be cited, cases in which bony fragments have escaped into the articular cavity.

8. In all bilateral fractures of the patella, be they of simultaneous or of successive occurrence.

9. In all refractures, in the absence of contraindications.

10. In old fractures of the patella, associated with marked impairment of function.

In old fractures, two additional steps are added to the usual technique:

1. The resection of the interfragmentary fibrous callus.

2. The freshening of the fractured surfaces.

Heineck operates all compound fractures immediately. In subcutaneous fractures, operative intervention is delayed for from three to five days, being guided by the associated injuries of the soft tissues. Unless

contraindications be present, general anaesthesia is employed. The employment of the Esmarch bandage is not recommended by the author.

In operating, for fractured patella, Heineck generally employs for the exposure of the parts, a flap having its convexity downwards. The incision commences on a level with the upper margin of the patella, about one inch to one side, from here it passes downwards to a point a little below the apex of the bone from where it is continued across the limb, and carried to a point corresponding to that from which it started. This incision does not interfere in any way with healing.

Heineck sees no value in the irrigation of the articular cavity, in the waterlogging of the tissues. Only in exceptional cases are the articular cavity or the periarticular tissues drained. The author contents himself with sponging out of the synovial cavity all the extravasated liquid and clotted blood. All completely detached bony fragments either in the articular cavity or in the peri and para-articular tissues are removed. For the approximation of the divided soft tissues and for the encircling of the bone, Heineck uses exclusively absorbable ligature and suture material.

Immediately after the operative procedure and the application of the protective dressing to the wound and while the patient is still anaesthetized, moulded plaster of paris splint is applied to the injured extremity. This splint should be amply padded, should cover the posterior and lateral surfaces of the limb and should extend from about 10 cm. above the external malleolus to the gluteal fold. The object of this splint is to immobilize the extremity in the position of full extension of the leg on the thigh, and of slight flexion of the thigh on the abdomen. The slight flexion of the thigh on the pelvis has for its purpose the relaxation of the rectus femoris muscle. During the patient's confinement to bed attention must be given to the heel and to the toes. So as to avoid the development of a pressure-sore upon the former, the heel should be protected by a doughnut pad or other means. By the use of a "cradle" the toes will not be subjected to the weight of the bedclothes and talipes decubitus will not ensue. In the absence of a marked elevation of temperature, of in-

tense pain, of saturation of the dressings, the protective gauze dressings on the joint remain undisturbed for from 10 to 15 days, then, if indicated, the removable sutures are ablated. The immobilizing splint is kept in position for about a month.

Correspondence

BERLIN LETTER.

August 20, 1909.

Editor W. Va. Medical Journal:

The King's Charite is probably the oldest Krankenhaus in Berlin, covers acres of ground, bounded by Luisen and Invaliden streets and Humbolt Haven, and within ten minutes walk of our hotel on Unter-den-Linden. As I entered the grounds of this old hospital, and found my way over the winding avenues, beneath the cooling shade of fine old forest trees, here and there were observed the monuments of men of science, whom Germany always delights to honor, and whose memory they have perpetuated in bronze and marble. There were Spinola, Mehlhausen, Traube, Henoch and Althof. On entering the large new Chirurgische Klinik, one notes the artistic adornment of its walls, and is brought face to face with Joseph Lister, Franz Koenig, Heinrich Bardeleben and Johann Rust, excellently executed in mosaic, a national expression of the epoch-making deeds of these old masters in medicine.

It was Prof. Hildebrand's clinic I had visited, but as he was off for a holiday I was introduced to Prof. Koehler, who has charge of this clinic in the month of August.

The tables in the operating room are arranged here very much the same as they are in the Hospital for Ruptured and Crippled in New York City; that is, two tables, two operators, and their assistants and nurses working at the same time. The work of the morning consisted of two radical cures for inguinal hernia (Bassini's); nephrectomy for tubercular disease and pyonephrosis; external urethrotomy; varicocele, open operation; for double hare-lip and cleft palate; and Freyer's operation—prostatectomy. I have noticed in all of the hospitals visited in Berlin that the apparatus used for administering the anaesthetic is

the one described in my Hamburg letter, the invention of Dr. Roth-Draeger. I have also noticed that when a local anaesthetic was used, not only in this institution but elsewhere, it was very imperfectly administered, as the howls of "schmerzen" could be heard all over the operating pavilion, and it might be said parenthetically that this condition of affairs is not limited to Germany, but this same picture of medieval torture can almost daily be observed in many of our American hospitals.

The operation for hare-lip was dexterously done by the Herr Professor, and there were some points, new to me, which I am sure will be of interest to those who undertake this kind of plastic operative surgery. The infant was brought to the operating room bandaged to a board, a little longer and somewhat broader than the patient. This board had been padded after the fashion of a splint, and as the child was carried into the operating room it resembled very much the pictures one sees of the Eskimo new-born or the Indian papoose. Even the head and eyes were securely bandaged to the board. The nurse, seated in front of the operator, held the child in an upright position, so that the blood, instead of filling the throat and suffocating the patient, ran out of the mouth. No anaesthetic was used and the child cried lustily throughout the ordeal. In this operation no part of the lip was sacrificed, but both sides were split and following this the integumentary margins were carefully approximated in the usual way.

The German operators I have seen do not seem to have any idea of comfort for themselves; the only garment removed is their coat, even the high collar, which, particularly with the assistants, is more like a cuff, is worn and softened under steam and perspiration and wilted along with the pride of the wearer by the hot-air vituperations which ever and anon issue from the excited man behind the scalpel.

This is literally true at the Charite Krankenhaus, for there were twelve men at work about the two tables the morning I made my visit, and some six nurses; and verily it was to me a Babel of tongues most of the time. The appropriate motto which is to be read on the wall of the Allgemeines Krankenhaus Eppendorf in Hamburg, "Praesente algrota taceant colloquia ef-

fugiatrix, dum omnia dominat morbus", might well be written here in Berlin's institution, where he who cuts may read.

It is rather poor form to criticize the operative work in a hospital where one is treated with such uniform courtesy as the Americans are here in Berlin. It may have been an "off" day at the Charite, nevertheless there were certain observations that I made, and errors in technique utterly disregarded by the chief of the clinic, who was there passing from one table to another directing the hand of his assistants, errors which would not be committed more than once in a well regulated American hospital. The operator wore no gloves, his first assistant wore rubber gloves, the man presiding at the instrument tray wore white cotton gloves, the nurses were gloveless.

The patient had manifestly been shaved the day before the operation, and the operative field had been hacked and mutilated evidently by a dull razor, and was the seat of an incipient traumatic, pustular eczema.

The sterile material was brought to the operating room in old flat, covered baskets, which had seen better days, and while, perhaps, perfectly sterile, their looks were certainly enough to condemn them. The sterile towels were anchored to the patient's skin with tenacula, thus unnecessarily traumatizing the operative environment.

The gut and omentum in an ordinary, uncomplicated Bassini were unduly and roughly manipulated through an extraordinarily large wound, and an utter disregard was observed for the blind spaces, so prejudicial to primary healing. The integument and fat of the abdominal wound were approximated by means of heavy twisted silk. This, with the bacilli-laden, atomized saliva necessarily issuing from the many mouths and always bewhiskered workers, may easily explain why some hernial wounds in the Fatherland heal by granulation.

Freyer, of London, would not have recognized his supra-pubic operation as I saw it done.

If Berlin possessed no other attraction for the medical visitor than the wonderful Rudolf Virchow Hospital, I am sure one would be amply repaid for crossing the sea or travelling thousands of miles, for no other purpose than to study the methods here and learn of the architectural harmony and beauty and the unexcelled system in this, the world's greatest institution for the care of the sick.

I have spent two days there this week and regret that I am unable to remain in Berlin longer, in order to learn more of this remarkable Krankenhaus.

The hospital was built during the years



VIRCHOW KRANKENHAUS — HAUPT-PORTAL (ENTRANCE).



VIRCHOW KRANKENHAUS, BERLIN, ADMINISTRATION BUILDING.

1899 to 1906; the inauguration with great ceremony occurred October 1, 1906. The area of the whole ground covers 64 acres. There are 60 detached buildings. There are over 2,000 beds and, the cost of the buildings and equipment amounted to 20,000,000 marks (\$5,000,000). The institution is built on the pavilion plan after the fashion of the General Hospital in Hamburg, described in my first letter. Yet the sections for gynaecology, midwifery, dermatology, etc., and infectious diseases are executed after the corridor system, with buildings several stories high. All of the buildings have underground floors and communicating tunnels or passages for receiving the conduits for steam, waste water, gas and wires.

All rooms in which patients are kept are

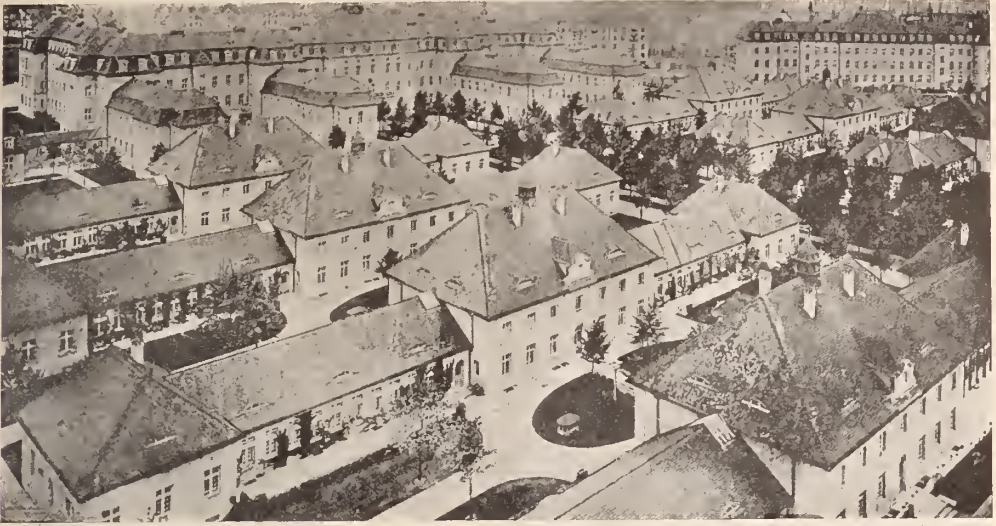
heated by water. I visited the machinery house and it is certainly the center of great activity, comprising machines for producing electrical power, the water works and large tower and ice plant. The administrative department and all buildings not intended for the reception of patients are heated by low-pressure steam.

The steam from the eleven low-pressure steam boilers is also used in the buildings for working of a thousand different technical devices, such as sterilizers, bandage rollers, solutions of sodium chloride, heating cabinets for diaphoretic purposes, as well as for kitchen, lavatory, disinfecting house; this latter being a complete plant in itself.

Ventilation—There is a large system of fans and these are so constructed as to draw



ONE OF THE BEAUTIFUL AVENUES, HAUPT ALLE,



VIEW OF ONE-THIRD OF THE BUILDINGS FROM WATER TOWER.

the outside air from specially arranged vertical air houses, and every bit of air in the winter is filtered through cotton wool (which is changed frequently), and heated as it passes through a system of distributing channels, according to the much talked of Rabiz system. Provision has also been made for withdrawing the foul air from the many wards and rooms. Trap windows are also to be found in all rooms. There is a very interesting telephone service in the hospital, with 95 speaking stations, connect-

ed with a central bureau with the usual incandescent light signals.

The water system of this great hospital, as explained to me, was most attractive. The water is raised from 3 pipe wells on the premises each 40 metres in depth, by means of 3 pumps. As it contains a percentage of iron, provision is made for the elimination of the iron by air injection, thus precipitating the ferrus oxide in a special iron cylinder as hydrated oxide, and this is filtered through 8 sand filters with an easy



ONE OF THE TEN SECTIONS OF THE DEPARTMENT OF SURGERY.



LINE UP OF THE MEDICAL PAVILION.

return current for cleaning. From here the water is conducted to a high tank, well shown in the illustration (water tower) and distributed in the usual way.

Time and space forbids further description of the ice plant, the disinfecting house, laundry, kitchen, etc.

For the running of this plant it requires physicians, chemists and nurses 350, managing director and assistants, 18 office clerks, 50 persons for technical service, and

overseers in the departments, and 239 in the domestic service.

This hospital, dedicated as a memorial to Professor Rudolf Virchow, the most famous of Germany's contemporary men of science, is I believe the greatest monument that has ever been erected to any man in any country. A great master of science was Virchow, with a record of intellectual achievement unsurpassed in our time for vigor, variety, and distinction. There are



KUECHIE (KITCHEN).



WATER TOWER AND ELECTRICAL PLANT.

but few even of those who are best able to appreciate his work, I was told by a Berlin man of letters, who can measure adequately the extent of his power, so multifarious was his activity and so versatile his genius.

On October 13, 1901, representatives of German and foreign medical science, and of the Imperial and Prussian Governments, gathered in the new Pathological Museum of Berlin to do honor to Virchow on his 80th birthday. Certainly on that occasion the German savant had full proof of the confidence of his scientific colleagues, of the respect of his political contemporaries, and the unmeasured affection of his numberless students. The various motives which combined to make the celebration of Professor Virchow's natal day the homage by diverse elements to a commanding personality, were concisely summed up by Lord Lister, who, speaking of and on behalf of the Royal Society and other learned institutions in Great Britain and Ireland, said: "All these bodies join in the recognition of your gigantic intellectual powers, in gratitude for the great benefits which you have conferred upon humanity, and in admiration of your personal character, your absolute uprightness, the courage which has enabled you always to advocate what you believed to be the cause of truth, liberty and justice, and the genial nature which has won for you the love of all mankind."

Verily, it is fitting and proper that the

greatest hospital of this 20th century should bear the name of this genius in medicine, this servant of truth, Rudolf Virchow.

I was invited by Prof. Burchardt yesterday to witness a private operation in one of the beautiful operating rooms of the Virchow Hospital, a posterior gastro-jejunostomy. No visiting physician can attend any clinic here in the surgical department without a formal card of introduction, which must be presented the day before the clinic, when a letter of admission is promptly furnished. In my travels over Europe and in our own country of America, I have never seen a clinic conducted with so much decorum, or where the details of modern aseptic technique were fulfilled in any more fitting way.

Prof. Burchardt is not only a gentleman, but one of Germany's best operators. His clinical observations and gentle consideration for his patients—charity and pay cases are one and the same to him—reveal alike the scientific student and the even finer qualities of the humane and kindly surgeon.

As Shively has written of Dr. Lie, of Bergen: "In the conduct of his clinic he recalls Chaucer's description of the Oxford scholar of the Canterbury Tales, whose spirit is also that of modern, scientific medicine:

"Gladly wolde he lerne, and gladly teche."

Very sincerely yours,

FRANK LEMOYNE HUPP.

The West Virginia Medical Journal.

S. L. JEPSON, A.M., Sc.D., M.D., *Editor.*

ASSISTANT EDITORS

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C. A. WINGERTER, A.M., M.D., LL.D.

WHEELING, W. VA., NOVEMBER, 1909.

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All communications to this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notices of deaths, removals from the State, changes of location, etc., are requested.

Our readers are requested to send us marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

CONTRIBUTIONS TYPEWRITTEN.

It will be satisfactory to all concerned if authors will have their contributions typewritten before submitting them for publication. The expense is small to the author—the satisfaction is great to the editor and printer.

ADVERTISEMENTS.

Advertising forms will go to press not later than the 20th of each month.

Advertisements of proprietary medicines must be accompanied with formulae. Rate cards sent on application.

REMITTANCES

Should be made by check, draft, money or express order or registered letter to Dr. S. L. Jepson, Ch'n of Pub. Com., 81 Twelfth Street, Wheeling, W. Va.

Editorial

Doctors thinking of attending N. Y. Post Graduate School will find it advantageous to write to us.

If the Journal fails to come, drop us a card.

OUR ANNUAL MEETING.

‘What is so rare as a day in June?

Then, if ever, come perfect days.’

So sang our poet Lowell; but had he been spared to accompany the doctors to Elkins, and pass those three gorgeous days with us in the little mountain-girt city, we feel quite sure that he would have been inspired to pen another poem to sing the charms of those October days and paint the glories of the autumnal forests. The scenery from Grafton to Elkins is fine, that from Elkins to Huttonsville magnificent. The latter a few were permitted to behold, through the courtesy of ex-President Golden. The

green and yellow and crimson and brown of those interminable mountain forests will linger long in memory as a vision of beauty and grandeur.

Our meeting from a scientific viewpoint was a pronounced success. All the papers were excellent, a number of them of exceptional interest. From the discussion on fractures it is evident we must study their treatment anew. The X-ray has made us intelligently unhappy at our bad anatomical results, whereas we have been heretofore ignorantly happy at our good functional results. It is questionable whether this is a positive gain; certainly it is not unless it stimulates us to secure improved anatomical results in all of our fracture cases.

The several papers touching on crime and degeneracy and their prevention elicited much interest, and we trust they may lead to changes in our state laws that will inure to the benefit of the state.

The question of psychotherapy was touched by several papers, and extensively discussed by one. We believe all should inform themselves as to modern rational methods of influencing the mind in disease, and thus be enabled to take this form of therapy, sometimes potent for good, out of the hands of the quack and mountebank.

We feel proud of the constant improvement in the quality of the papers presented at our annual meetings. Having been intimately associated with the publishing of these papers for a third of a century, we are in a position to note this marked change; and are glad to welcome to the ranks of the organized profession the many young men of superior qualifications who are annually joining our Association.

We cannot omit mention of the social functions provided so generously by the medical profession of the Barbour-Randolph-Trucker Society and the warm-hearted people of Elkins. At the reception tendered the visitors, ladies and physicians, at the palatial home of ex-Senator Davis, we had the pleasure of meeting not only the Senator and family, but many of the delightful men and women of the little mountain city, and all were charmed by their cordial hospitality. On several other occasions the lady visitors were handsomely entertained socially.

The banquet was the happy ending of a delightful and profitable meeting. All returned home feeling that in matters social

Elkins is certainly entitled to wear the palm, for at no former meeting of our State Association has such provision been made for the social man. And who among us does not love his professional brother better for having thus mingled for a few days together among these hospitable people?

Three cheers and a tiger for Elkins, its doctors one and all, its fair women and handsome men. Peace be within its walls, and abundant prosperity! S. L. J.

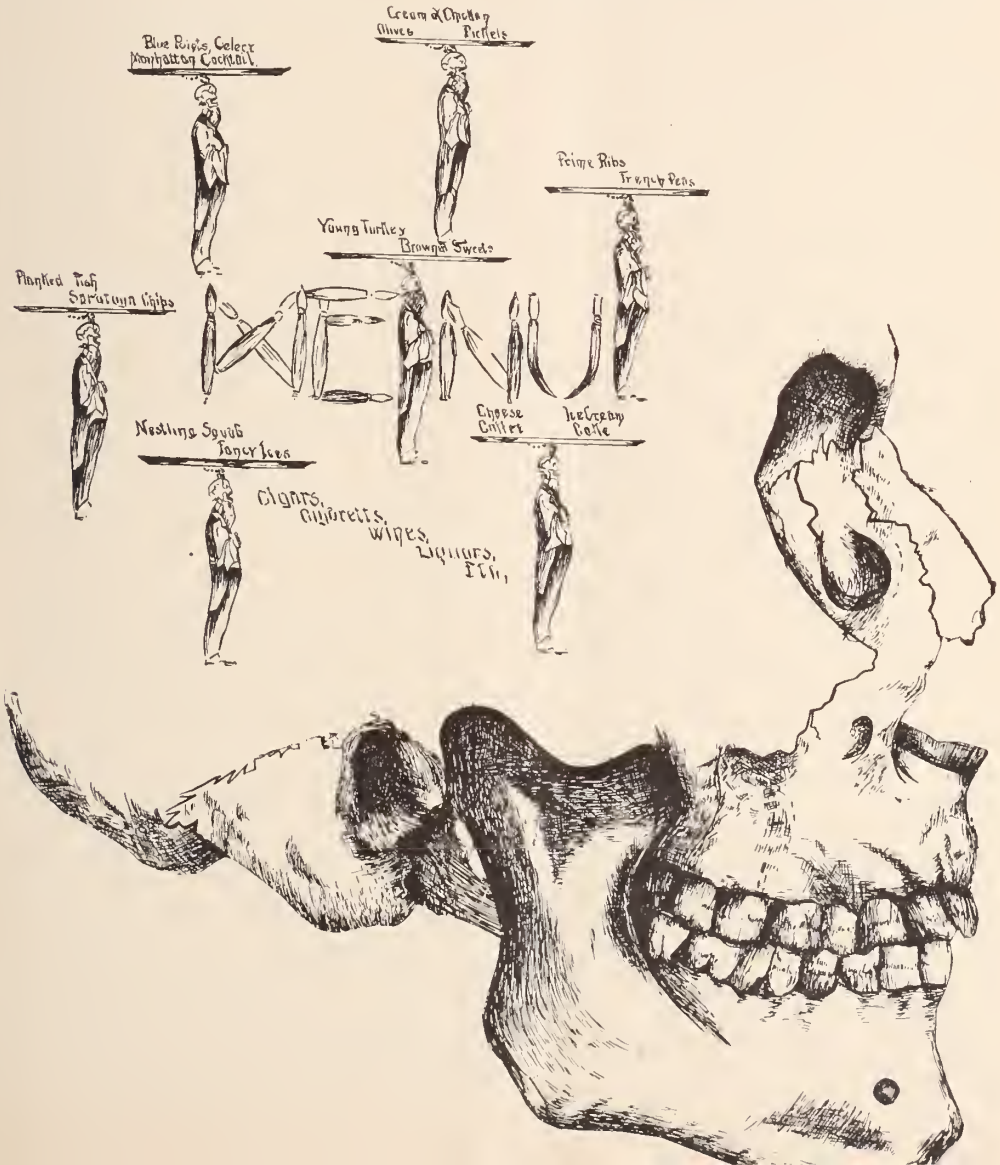
Dr. E. W. Strickler, of Kingwood, has an overcoat which he will be glad to exchange for his own, taken by mistake by some one at the Elkins meeting.

State News

We are pained to announce that the health of our highly esteemed friend, ex-President Barber, of Charleston, was not materially improved by his recent sea voyage and sojourn abroad. His absence from our recent meeting was sadly felt, for Barber and good cheer are synonymous terms. The Association kindly remembered him with a message of sympathy.

* * *

The menu card at the Elkins banquet was a work of art, of which we here give the second page. The first page contained the committees constituting the working force that made preparations for our fine meeting. The second contained the oath of Hippocrates, and the fourth the toasts and the program of music. We learn that Dr. Burt is responsible for this unique piece of work.



The West Va. Dental Society held its annual meeting at the Stratford Hotel, Woodlawn, Wheeling, Oct. 13th, 14th and 15th. It was quite largely attended, and was in every way a pronounced success. Papers were read by Dr. C. M. Wright of Cincinnati, Dr. Geo. H. Wilson of Cleveland, Dr. B. Holly Smith of Baltimore and Dr. D. Willard Flint of Pittsburg. The subject of the last address, of interest to physicians as well as dentists, was: "The Local and Systemic Effects of Adenoids." Drs. Jepson and Aschman were honored by a place on the program to discuss this question. A large number of pictures were thrown on the canvas illustrating the correction by mechanical appliances, of facial deformities in children resulting from adenoids.

Many "chair clinics" by Wheeling and other dentists were given during the meeting.

Great credit is due the committee on arrangements, Drs. John H. McClure, A. C. Plant and F. L. Wright, to whom is due the great success of the meeting, which closed with a fine banquet at the Stratford. All lamented the absence (on account of illness) of Dr. H. H. Harrison, ch'm of the Program Committee, and sincere wishes for his speedy recovery were expressed.

* * *

We regret to learn that Dr. O. D. McCoy, of Wheeling, is ill with typhoid fever in the Wheeling Hospital.

* * *

As the minutes of the House of Delegates can not be published until our next issue, we here give the result of the election of officers:

President—T. W. Moore, Huntington.

First Vice President—C. L. Holland, Fairmont.

Second Vice President—James McClung, Richwood.

Third Vice President—A. L. Grubb, Berkeley Springs.

Secretary—A. P. Butt, Davis.

Treasurer—H. G. Nicholson, Charleston.

Councilors—1st District, G. H. Benton; 2nd District, J. C. Irons; 3rd District, B. B. Wheeler; 4th District, L. O. Rose (one year), A. S. Grimm (two years); 5th District, J. E. Rader.

Delegates to The American Medical Association—A. S. Bosworth, C. A. Wingerter. Alternates—H. D. Hatfield, C. S. Hoffman.

* * *

The State Medical Association has at last passed the 800 mark. We now have 815 paid-up members. If those who have permitted their membership to lapse during the past four years would resume their place in the association, we would certainly have more than 900, and with the active efforts of all can easily reach 1000 before the Parkersburg meeting. Having this as our goal, let us pull all together.

* * *

Our Association numbers among its members 11 Wilsons, 6 Smiths, 5 Browns and 5 Joneses. The Smiths, Browns and Joneses should "get a move on," or stand forever disgraced. Even the Johnsons are ahead of them, with seven members.

* * *

The Graduate-Nurses' Association convened in Parkersburg on Oct. 12th. In addition to the address of the President, Mrs. Lounsbury, Dr.

Harriet B. Jones, of Wheeling, read a paper on tuberculosis, Miss Loretta McGrail, of Parkersburg, a paper on massage treatment, Miss Nellie Stewart, of Charleston, a paper on surgical nursing, and Mrs. C. W. Archbold a paper on the treatment of tuberculosis in Colorado.

The officers chosen were as follows:

President—Mrs. Geo. Lounsbury, of Charleston.

Secretary—Mrs. Dudley, of Wheeling.

Assistant Secretary—Mrs. Bullard, of Wheeling.

Treasurer—Miss Loretta McGrail, of Parkersburg.

Vice Presidents—Mrs. Carpenter, of Wheeling; Miss Vernon, of Fairmont; Miss Gaule, of Huntington; Mrs. Kendall, of Charleston; Miss Elizabeth H. Williams, of Parkersburg; Miss Linginfelt, of Hinton, and Dr. Virginia McCune, of Martinsburg.

The next meeting will be held in September instead of October, it was decided at the sessions. Mrs. Carpenter, of Wheeling, was chosen as delegate to the national association from West Virginia. Mrs. Lounsbury was chosen as alternate.

* * *

At a recent meeting of the Anti-Tuberculosis League of Parkersburg, recently organized, steps were taken for the building of anti-tuberculosis or open-air camps here. The site chosen is the South Side, and a committee was named to look after the matter of financing, to investigate the situation, the number of camps needed, etc., and to gather other pertinent information.

The committee is composed of Chairman Upson, president of the league, Mrs. Mary Rathbone, and Mrs. R. B. Taylor. The committee will make a report at a coming meeting of the league. It is anticipated that the camp movement will be started at least by next spring.

* * *

MARRIED—On Oct. 23rd Miss Hulda Margaret, daughter of Dr. J. P. Johnston, of Wellsburg, to Mr. Ralph Kline Cox. We wish the young couple much joy.

Society Proceedings

MINUTES OF THE FORTY-SECOND ANNUAL SESSION

Of the West Virginia State Medical Association, Held in Elkins, October 6, 7 and 8, 1909.

GENERAL SESSION.

WEDNESDAY, OCTOBER 6TH, 10:30 A. M.

Called to order by the President, Dr. Fleming Howell.

Prayer by the Rev. G. E. Bartlett.

Address of welcome was delivered by Dr. A. S. Bosworth, of Elkins, as follows:

Mr. President, Fellow Physicians, Ladies and Gentlemen:

In the name of the Tri-County Medical Society I welcome you. Our hearts and our homes are

open. Your mission here is not individual advantage. Rather your impelling impulse is the purpose of enlarging your powers of beneficence and philanthropy. You honor us with your presence. However, I felicitate you on coming to our magic Mountain City, a gem in the valley, surrounded by a country like Job's country, "where the mountains skip like rams and the little hills like lambs"; a veritable father of waters that supply many cities with pure, sparkling streams for the dilution of their sewage. May you enjoy temporary immunity from the cares of a strenuous profession. The duties of the physician are many and arduous. Man is not entrusted with greater responsibility than the care of her who goes down into the "valley of the shadow of death" to perform the highest physical function of life in the perpetuation of the race. She merits our greatest skill and sympathy. The birth-chamber is the holy of holies, the hour is God's hour, when life and death clasp hands and the flower of love puts forth its fruitage to bless a couple whom God hath joined together. The offspring of love is but the angelic raindrops that from heaven fall when two kindred clouds in the sky arise and mingle into one.

The typical physician of the past has been the general practitioner, the old-time family physician. "His life was gentle, and the elements so mixed in him that nature might stand up and say to all the world, this was a man." Perhaps he was unknown outside of the precincts of his own limited activity. Fame and fortune were denied him. He lost the material rewards of life, but found that which the race has sought in all the varying stages of transition from amoeba to man—happiness. Many have sought happiness in the intoxicating cup, only to have thirst feed upon thirst and appetite upon appetite, until at last the victim with a jug chained about his neck is drowned in the depths of his own dissipation. Many have sought happiness in the gratification of the voluptuous desires of their own flesh, only to go down, down, down beneath the animal ancestry from which they sprang. Many have sought happiness in the acquisition of wealth, and have had their avarice satiated, only to find that all of the holy, sacred and sublime things of life were destroyed by the moth and rust of gold. The imperial race of Rome sought happiness in power, and when once attained, sat on her seven hills and from her throne of beauty ruled the world; yet how futile and ephemeral were her granted gifts. But the old-time physician found the true Nirvana, and through service and sacrifice for others planted the paradise of God in his own bosom. The rains of summer and the snows of winter may have pierced his shabby clothes, but the peace of God and the sunlight of heaven illumined his soul. But let us look to the future. There are no standpatters in the profession of medicine. The shibboleth of the physician of the future will be serums and sanitation. Environment will no longer make man. Man will make environment. Then there will be a race invulnerable to disease of flesh or brain, fair and comely, faultless in form and function. The struggle for life will be supplanted by the struggle for light. Climbing on the stepping stones of past

achievements, man will reach the dizzy heights where the full glare of the sunlight of God's perfect knowledge will beat him in the face. The inevitable hour must come, but in the fulness of time "the reaper death" will garner the ripened fields of golden grain. Man, in the happiness of old age, with the love and the gratitude of his children about him, will fall asleep.

Again I extend to you the greetings of the local society, and while you are our guests "may your nights be filled with music and the infections that infest your day fold their tents, like the Arab, and as silently steal away."

Address of welcome, Mayor Boyd Wees.

Response, Dr. C. A. Wingerter, Wheeling.

President's address, Dr. V. T. Churchman, of Charleston (Page 149).

The following committee, Dr. C. A. Wingerter, Dr. J. M. Miller and Dr. O. F. Covert, was appointed to act upon the recommendations contained in the president's address and report to the House of Delegates.

Dr. A. M. Fredlock, chairman of the Committee on Arrangements, reported that a Dutch lunch would be tendered the members on Thursday afternoon; at 8:30 o'clock Senator Davis would give a reception to the ladies and gentlemen present, at his home; on Friday evening at 8:30 a banquet at the Hotel Randolph. The ladies attending the association, together with the wives of the local dentists and druggists, would be entertained Friday evening at the home of Mrs. Dr. Bosworth by the wives of the local physicians.

WEDNESDAY, 2:30 P. M.

Called to order by President Churchman.

Credentials of Dr. W. S. Gardner, of Baltimore, a fraternal delegate, were received and Dr. Gardner was invited to participate in the scientific and social features of the meeting.

Dr. R. H. Powell, of Grafton, in a few well chosen remarks, presented the Society with a gavel, which was accepted by ex-President Howell in his characteristically happy manner. A rising vote of thanks was tendered Dr. Powell.

The secretary read letters from Hon. W. E. Glasscock, Governor of West Virginia; Dr. W. H. Sharp, of Parkersburg, and Prof. W. M. Coplin, of Philadelphia.

Governor's Offices, }
Charleston, October 2, 1909. }

Dr. T. W. Moore,
Huntington, W. Va.

Dear Doctor:—

Please convey to the West Virginia State Medical Association my thanks for its invitation to attend its 42nd Annual Meeting to be held at Elkins on October 6th, 7th and 8th, and say to the members of this association that I should like very much to accept this invitation, but as I have promised to be at Point Pleasant on October 9th to attend the unveiling of the monument there, it will be impossible to accept your invitation.

Again thanking you, and with personal regards, I am,

Yours very truly,
WM. E. GLASSCOCK.

Dr. Jepson moved that as the Medical Association of Virginia is in session, a telegram of congratulation and greeting be sent by the president

and secretary. Carried, and the telegram sent. The following reply was received:

"Thank you for your telegram.

We send greetings and hope that you are having as much fun as we are.

Signed: STUART McGUIRE, *President*.

LONDON B. EDWARDS, *Secretary*."

Dr. S. L. Jepson delivered the Oration in Medicine, "Human Suggestibility, or Fads, Fakes and Faith Cures."

Dr. G. A. Aschman read his paper, "Atrophic Rhinitis." Discussed by Doctors Moore, Churchman, Covert, H. R. Johnson, and Aschman.

Dr. C. A. Wingerter read his paper, "The New Neurology."

Dr. J. Howard Anderson read his paper, "Artificial Hyperemia as a Therapeutic Measure." Discussed by Doctors Putney, Hupp, and Anderson.

Dr. J. T. Thornton read his paper, "The Arithmetic of Milk Modification." Discussed by Doctors Henry, Putney, Wingerter, and Wister.

Adjourned.

THURSDAY, OCTOBER 7TH, 9:30 A. M.

Called to order by President Churchman.

Moved by Dr. H. L. Carter that the following telegram be sent Dr. Frederick A. Cook:

"The West Virginia State Medical Association now in session, sends greetings and congratulations. Your achievement is to us of the medical profession a source of great pride."

Signed by the President and Secretary.

Carried.

Papers were then read by Dr. S. M. Mason, "End Results in Fracture of Long Bones."

Dr. A. J. Noome, "Colles' Fracture."

Dr. A. Judson Quimby, "Radiographic Diagnosis." Discussed by Doctors Schwinn, Putney, Wheeler, Hupp, Butt, Judy, Covert, Hoffman, Strickler, Golden, Jepson, Mason, Noome, and Quimby.

Dr. S. L. Jepson offered the following as a substitute for Sec. 3, Art. IX of the Constitution:

"Sec. 3. The President and Secretary shall be elected by ballot in the General Session, and all other officers named in Section 1 by the House of Delegates, on the morning of the last day of the annual session, and no person shall be elected to any such office who is not in attendance upon that session, and who has not been a member of the Association for the past two years; nor shall any member resident in the county in which the annual session is held be eligible to election as President or Secretary, unless in the case of Secretary it be a re-election."

To lie over until next annual meeting.

Dr. Thornton moved that a stenographic report of discussions be made at future meetings. Dr. Churchman stated that he would try and perfect himself in stenography so that he could report said discussions at the next meeting. In view of the above, Dr. Thornton withdrew his motion.

Dr. Frank LeMoyné Hupp read his paper, "A Contribution to Brain Surgery, with Report of Cases."

Adjourned.

THURSDAY, OCTOBER 7TH, 2:30 P. M.

Dr. R. H. Powell read his paper, "Cranial Injuries and Report of a Case of Sub-dural Cyst." Discussed by Doctors Schwinn and Hupp.

Dr. W. S. Gardner, of Baltimore, presented some interesting histological specimens of the endometrium.

Dr. Geo. A. MacQueen, chairman of the Committee for Sanatorium for Tuberculosis, made his report.

Discussed by by Doctors Jones, Henry, Forman, Arnett, and F. Howell, after which the report was received and the committee discharged.

Dr. Cannaday delivered the Oration in Surgery, "Early Diagnosis of Gall Stone Disease."

Dr. Forman read his paper, "Differential Diagnosis of Gall Stones, with original drawings."

Dr. J. E. Rader read his paper, "A Report of a Case of Gall Stones."

Dr. W. W. Golden read his paper, "Appendicitis and the General Practitioner." Discussed by Doctors Venning and Hupp.

Adjourned.

FRIDAY, OCTOBER 8TH, 9:30 A. M.

Dr. G. H. Benton read his paper, "The Influence of Physical Defects on Personalities, Moral Obliquities and Crime."

Dr. Jas. R. Bloss read his paper, "The Sterilization of Confirmed Criminals and Other Defectives."

Dr. G. D. Lind read his paper, "What Can the Medical Profession do to Prevent Crime?" Discussed by Doctors Aschman, Wingerter, Henry, Putney, Anderson, Venning, Hood, Benton, Arnett, Bloss, and Lind.

The following resolution was offered by Dr. Benton and unanimously adopted:

"Resolved, That the West Virginia State Medical Association in assembly hereby express their heartfelt thanks and extend their sincere congratulations to the following individuals, committees and corporations in our appreciation of their efforts to make the congregation and sojourn at this meeting in Elkins so delightful: Hon. Henry G. Davis, Hon. Mayor Boyd Wees, Rev. G. E. Bartlett, A. S. Bosworth, M.D., C. A. Wingerter, M.D., the committee of local ladies who entertained the visiting ladies, the reception committee, the entertainment committee, the banquet committee, the committee on arrangements of the State Association, the committee of commissioners of the county court who furnished the use of the court house for our meetings, the Johnston Drug Company, who furnished ice water, the telephone company and the railroad companies, together with the officers and members of the society who assembled and participated in the proceedings of this convention."

Adjourned.

FRIDAY, OCTOBER 8TH, 2:30 P. M.

Dr. T. W. Moore read his paper, "Prolonged Intubation." Discussed by Dr. Putney.

Dr. Daniels read his paper, "Serum Therapy." Discussed by Doctors Venning, Howell, Bloss, Anderson, and MacQueen, and by Bloss again, by motion, and Jepson, McMillan, Putney, and Daniels.

On motion it was ordered that the papers of Dr. Barber on "Institutional Specialism," and Dr. Sharpe, on "Placenta Previa," be read by title.

On motion it was ordered that the secretary be instructed to write a letter of condolence to Dr. Barber, of Charleston, who has been an invalid for some time.

On motion it was ordered that the Association extend a vote of thanks to the Anti-Tuberculosis League for the pathological exhibit.

On motion Mr. Gillespie, of the Anti-Tuberculosis League, was given the floor to explain the methods of exhibits of that organization.

The following resolution was offered by Dr. James McClung:

"WHEREAS, the criminal and the insane in the State of West Virginia are increasing at an alarming rate, and whereas, careful scientific investigation has proven beyond any doubt that heredity has much to do with the development of the criminal and the insane, said influence causing untold suffering, disgrace and want among the people of our State, thereby lowering the moral, social and intellectual standing, and necessitating the expenditure of vast sums of money for the care of the defective, and the prosecution and punishment of the criminal, therefore be it resolved, by the West Virginia State Medical Association, now assembled, that we recommend to the Legislature of West Virginia a more strict law with relation to marriage licenses, and the control of procreation among the defective classes."

Carried.

Adjourned to meet in Parkersburg 1910.

V. B. CHURCHMAN, *President*.

T. W. MOORE, *Secretary*.

List of members registered at Forty-second Annual Meeting of the West Virginia State Medical Association, held at Elkins, October 6, 7, and 8, 1909:

Name.	Address.	Society.
1. G. D. Lind,	Richwood,	Webster-Nicholas.
2. P. A. Haley,	Charleston,	Kanawha.
3. G. C. Rodgers,	Elkins,	Barbour-Randolph-Tucker.
4. A. A. Shaway,	Charleston,	Kanawha.
5. V. T. Churchman,	Charleston,	Kanawha.
6. J. E. Rader,	Huntington,	Cabell.
7. J. C. Irons,	Elkins,	Barbour-Randolph-Tucker.
8. W. S. Robertson,	Charleston,	Kanawha.
9. G. A. MacQueen,	Charleston,	Kanawha.
10. W. F. Shirkey,	Malden,	Kanawha.
11. F. T. Ridley,	Bluefield,	Mercer.
12. J. W. Hopkins,	Fayetteville,	Fayette.
13. H. Lon Carter,	Danville,	Boone.
14. H. H. Young,	Charleston,	Kanawha.
15. Fleming Howell,	Clarksburg,	Harrison.
16. O. L. Perry,	Elkins,	Barbour-Randolph-Tucker.
17. E. W. Smooth,	Madison,	Boone.
18. James Putney,	Charleston,	Kanawha.
19. L. W. Talbot,	Elkins,	Barbour-Randolph-Tucker.
20. W. W. Golden,	Elkins,	Barbour-Randolph-Tucker.
21. A. S. Bosworth,	Elkins,	Barbour-Randolph-Tucker.
22. T. Jud. McBee,	Elkins,	Barbour-Randolph-Tucker.
23. H. G. Nicholson,	Charleston,	Kanawha.
24. G. W. Swimly,	Bunker Hill,	Berkeley.
25. H. C. Skaggs,	Kaymoor,	Fayette.
26. B. B. Wheeler,	McKendree,	Fayette.
27. S. M. Steele,	Weston,	Lewis-Upshur.
28. T. K. Oates,	Martinsburg,	Eastern Panhandle.
29. Frank Burden,	Paw Paw,	Eastern Panhandle.
30. R. M. Baird,	Wheeling,	Ohio.
31. M. A. Dowler,	Glendale,	Marshall.
32. O. F. Covert,	Moundsville,	Marshall.
33. T. H. Weirich,	Wellsburg,	Brooke.
34. M. F. Gruher,	Helvetia,	Barbour-Randolph-Tucker.
35. G. H. Davis,	Chester,	Hancock.
36. A. M. Fredlock,	Elkins,	Barbour-Randolph-Tucker.
37. I. N. Houston,	Moundsville,	Marshall.
38. M. F. Wright,	Burlington,	Grant-Hampshire-Hardy & Mineral.
39. Richard E. Venning,	Charlestown,	Eastern Panhandle.
40. J. McKee Sites,	Martinsburg,	Eastern Panhandle.
41. W. Holmes Yeakley,	Keyser,	Grant-Hampshire-Hardy & Mineral.
42. Wm. J. Judy,	Kerens,	Barbour-Randolph-Tucker.
43. A. L. Grubb,	Berkeley Springs,	Eastern Panhandle.
44. S. L. Jepson,	Wheeling,	Ohio.
45. J. M. Miller,	Halltown,	Eastern Panhandle.
46. J. A. Dye,	Minnora,	member-at-large.
47. H. P. Linsz,	Wheeling,	Ohio.
48. Thos. M. Wilson,	Elkins,	Barbour-Randolph-Tucker.
49. H. V. Varner,	Clarksburg,	Harrison.
50. C. S. Fortney,	Hundred,	Marshall.
51. M. J. Fortney,	Hundred,	Marshall.
52. H. K. Owens,	Elkins,	Barbour-Randolph-Tucker.
53. J. M. Teter,	Riverton,	Barbour-Randolph-Tucker.
54. J. Schwinn,	Wheeling,	Ohio.
55. C. A. Wingerter,	Wheeling,	Ohio.
56. J. G. Walden,	Wheeling,	Ohio.
57. E. B. Fittro,	Salem,	Harrison.
58. G. A. Aschman,	Wheeling,	Ohio.
59. T. W. Moore,	Huntington,	Cabell.
60. G. H. Benton,	Chester,	Hancock.
61. H. C. Whisler,	Smithfield,	Wetzel.
62. R. M. McMillen,	Wheeling,	Ohio.
63. W. T. Highbarger,	Maysville,	Grant.
64. F. Moomau,	Franklin,	Pendleton.
65. H. W. Daniels,	Elkins,	Barbour-Randolph-Tucker.
66. John T. Thornton,	Wheeling,	Ohio.
67. E. R. McIntosh,	Elkins,	Barbour-Randolph-Tucker.
68. A. J. Quimby,	Wheeling,	Ohio.
69. J. A. Burke,	Crawford,	Lewis-Upshur.
70. Percival Lantz,	Alaska,	Grant-Hampshire-Hardy-Mineral.
71. Glenn Moomau,	Petersburg,	Grant-Hampshire-Hardy-Mineral.
72. C. O. Henry,	Fairmont,	Marion.
73. H. R. Johnson,	Fairmont,	Marion.
74. W. S. Gardner,	Baltimore, Md.,	visitor.
75. Jas. E. Cooper,	Cameron,	Marshall.
76. J. L. Bosworth,	Huttonsville,	Barbour-Randolph-Tucker.
77. Claude L. Holland,	Fairmont,	Marion.
78. W. C. Jamison,	Fairmont,	Marion.
79. R. H. Powell,	Grafton,	Taylor.
80. Howard Osburn,	Rippon,	
81. P. W. McClung,	Elizabeth, Little Kan. & Ohio Val.	
82. Harriet B. Jones,	Wheeling,	Ohio.
83. L. H. Forman,	Buckhannon,	Lewis-Upshur.
84. C. S. Hoffman,	Keyser,	Grant-Hampshire-Hardy-Mineral.
85. D. E. Musgrave,	Standard,	Kanawha.
86. R. W. Fisher,	Morgantown,	Monongalia.
87. J. A. Ar buckle,	Elkins,	Barbour-Randolph-Tucker.
88. C. H. Hall,	Elkins,	Barbour-Randolph-Tucker.
89. J. L. Sammons,	Calis,	Marshall.
90. F. L. Hupp,	Wheeling,	Ohio.
91. W. P. Fawcett,	Alderson,	Greenbrier.
92. O. S. Gribble,	Beverly,	Barbour-Randolph-Tucker.
93. James McClung,	Richwood,	Webster & Nicholas Bi-Med.
94. W. D. McClung,	Rupert,	Barbour-Randolph-Tucker.
95. L. L. McKinney,	Burnsville,	Braxton.
96. J. C. Cannady,	Charleston,	Kanawha.
97. J. Howard Anderson,	Marytown,	McDowell.
98. E. W. Strickler,	Kingwood,	Preston.
99. I. B. Johnson,	Laneville,	Barbour-Randolph-Tucker.
100. H. J. Cherry,	Spring Lake,	Ottawa County.
101. A. H. Hawkins,	Cumberland, Md.,	visitor.
102. A. S. Grimm,	St. Marys,	Pleasants.
103. W. H. Young,	Bens Run,	Little Kan. & Ohio Val.
104. John N. Simpson,	Morgantown,	Monongalia.
105. T. M. Hood,	Clarksburg,	Harrison.
106. C. R. Ogden,	Clarksburg,	Harrison.
107. S. M. Mason,	Clarksburg,	Harrison.
108. C. N. Slater,	Clarksburg,	Harrison.
109. L. N. Harris,	Mill Creek,	Barbour-Randolph-Tucker.
110. J. R. Caldwell,	Wheeling,	Ohio.
111. H. W. Neel,	Glady,	Barbour-Randolph-Tucker.
112. A. L. Peters,	Grant Town,	Marion.
113. B. F. Conaway,	Mannington,	Marion.
114. F. B. Murphy,	Philippi,	Barbour-Randolph-Tucker.
115. G. L. Howell,	Worthington,	Marion.
116. W. P. Bonar,	Moundsville,	Marshall.
117. A. P. Butt,	Davis,	Barbour-Randolph-Tucker.
118. A. H. Woodford,	Belington,	Barbour-Randolph-Tucker.
119. R. D. Mackin,	Grafton,	Taylor.
120. A. S. Warder, Jr.,	Grafton,	Taylor.

121. Phoebia J. Moore, Mannington, Marion.
 122. Susan A. Price, Marlinton, Pocahontas.
 123. C. A. Willis, Jenningston, Barbour-Randolph-Tucker.
 124. N. B. Michael, Junior, Taylor.
 125. Lanzo O. Rose, Parkersburg, Wood.
 126. E. M. Hamilton, Belington, Barbour-Randolph-Tucker.
 127. M. Virginia McCune, Martinsburg, Eastern Panhandle.
 128. S. G. Moore, Coalton, Barbour-Randolph-Tucker.
 129. W. D. Miller, Weaver, Barbour-Randolph-Tucker.
 130. M. M. Hoff, Philippi, Barbour-Randolph-Tucker.
 131. C. R. Enslow, Huntington, Cabell.
 132. Jas. R. Bloss, Huntington, Cabell.
 133. O. W. Ladwig, Evenwood, Barbour-Randolph-Tucker.
 134. J. M. McLaughlin, Webster Springs, Nicholas-Webster.
 135. F. S. Holsberry, Bower, Barbour-Randolph-Tucker.
 136. Perry Bosworth, Huttonsville, Barbour-Randolph-Tucker.
 137. Chas. E. Rusmisl, Gassaway, Preston.
 138. C. T. Arnett, Clarksburg, Harrison.
 139. Wm. Gaston, Clarksburg, Harrison.
 140. Chas. L. Moore, Harding, Barbour-Randolph-Tucker.
 141. Edmund J. Horgan, Jenningston.
 142. A. J. Noome, Wheeling, Ohio.
 143. E. A. Hildreth, Wheeling, Ohio.
 (Several members failed to register.)

List of County Secretaries, West Virginia State Medical Association:

Society.	Secretary.	Town.
Braxton, M. T. Morrison, Sutton.		
Boone, E. W. Smoot, Madison.		
Barbour-Randolph-Tucker, T. J. McBee, Elkins.		
Brooke, J. B. Palmer, Wellsburg.		
Grant-Hampshire-Hardy-Mineral, W. H. Yeakley, Keyser.		
Cabell, J. R. Bloss, Huntington.		
Doddridge, Chas. L. Percy, West Union.		
Eastern Panhandle, A. O. Albin, Charles Town.		
Fayette, H. C. Skaggs, Kaymoor.		
Greenbrier Valley, T. C. McClung, Ronceverte.		
Harrison, C. N. Slater, Clarksburg.		
Hancock, G. H. Benton, Chester.		
Kanawha, P. A. Haley, Charleston.		
Lewis-Upshur, M. D. Cure, Weston.		
L. K. & O. V., C. J. Scott, Parkersburg.		
Mercer, F. T. Ridley, Bluefield.		
Marion, J. W. McDonald, Fairmont.		
McDowell, D. G. Preston, Eckman.		
Mingo, Tunis Nunemaker, Williamson.		
Monongalia, W. C. Moser, Morgantown.		
Mason, U. G. Arnett, Henderson.		
Nicholas-Webster, Jas. McClung, Richwood.		
Ohio, J. R. Hersey, Wheeling.		
Pleasants, Riley McCollum, St. Marys.		
Preston, S. W. Varner, Kingwood.		
Raleigh, W. W. Hume, Beckley.		
Summers, E. E. Rose, Hinton.		
Taylor, J. H. Doyle, Grafton.		
Tyler, Victor Hugo Dye, Sistersville.		

AMERICAN PROCTOLOGIC SOCIETY.

Abstract of Proceedings of 11th Annual Meeting.
 (Continued from Sept. issue.)

"Pruritus Ani, Its Etiology and Treatment."

T. Chittenden Hill, M.D., of Boston, Mass., said that he was convinced that Pruritus ani was practically always caused by some local lesions of the pelvic colon or rectum, which produced an unnatural moisture about the anal region.

He said the most common sources of irritation, in the order of their frequency, were as follows: (1) Superficial ulcerations and abrasions of the anal canal. This lesion he found in about 75% of all cases and attributed the frequency of its occurrence to the method of fusion of the proctodeum with the blind end of the bowel. (2) Rectitis and sigmoiditis, which are the sequelae of habitual constipation, often bring about pruritus, since the passage of flatus allows a small quantity

of mucus to escape. (3) Hypertrophied anal papillae and inflammation of the crypts of Morgagni are more often the cause of pruritus ani than is generally admitted. (5) Small polyps of the anal canal, protruding internal piles, prolapse of the rectum and anal fissure, do occasionally produce itching about the anus, but it is exceptional to find them the sole cause of chronic pruritus ani.

He stated that in order to attain permanent results, it was essential that the treatment be directed to the removal of the exciting causes. At the same time the skin in the immediate vicinity of the anus should receive appropriate treatment since it is nearly always in a state of acute inflammation from scratching or so much infiltrated and thickened as to require stimulating applications, nitrate of silver and ointments, in order to bring about a return of normal epidermis.

"Ball's Operation in the Treatment of Cases of Pruritus Ani with Report of a Case in Which Necrosis of the Flap Occurred."

By Louis J. Krouse, M.D., of Cincinnati, Ohio.

The case reported was that of a severe intractable case of Pruritus Ani in a man well advanced in years who underwent the above operation for pruritus with the result of having the anal flap necrose. He went into the pathology as to the cause of the necrosis and came to the conclusion that the trouble lay in the poor supply of blood to the anal flap. He claimed that there is no anastomosis between the blood-vessels from within the anus and those of the skin. The writer called attention to the fact that Sir Charles Ball's operation has recently been modified so as to prevent sloughing of the anal flap.

A new method of operating was proposed by the author which is somewhat different from that of Sir Charles Ball and of that of Dr. Thos. Chas. Martin, and consists: first, in doing away with the elliptical incision which cuts off the greater part of the circulation from the diseased area; and secondly, in making six to eight linear incisions through the skin into the subcutaneous connective tissue. These linear incisions, beginning at a point outside of the point of irritation, follow the course of the radii of a circle whose center is the anal canal. The skin lying between the adjacent radii are then undercut until the whole affected area is undermined. Should the dissection be difficult and more room be needed, every alternate flap could then be loosened at the anal margin and dissected outwards toward the periphery. After all the adhesions are loosened and the bleeding has stopped, the parts are again replaced and sutured.

The advantages of this operation over the original one of Ball, lie mainly in the better nourishment of the flap. The blood must come from the circumference and must radiate towards the anal canal.

"A Consideration of the Prophylaxis and Treatment of Cicatricial Rectal Stricture."

By Alois B. Graham, A.M., M.D., Indianapolis, Ind.

Opinions were based upon the results obtained in the treatment of fifty-five cases. He stated

that prophylaxis implies a careful rectal examination; a careful rectal examination implies an early diagnosis; an early diagnosis implies correct treatment, and correct treatment implies the prevention of a stricture.

When cicatricial rectal stricture is diagnosed, surgical intervention is indicated. In cases where there is no danger of infection, excision should be the choice of all the surgical measures at our command. If successful, its results are ideal because of the fact that it effects a cure by the complete removal of the stricture. In cases where it is not safe to practice the excision method—(and there are many such cases)—complete posterior proctotomy or colostomy, either alone or combined, should be performed. While neither of these surgical measures has effected an authentic cure, yet they undoubtedly can and have effected a symptomatic cure. Gradual dilatation should be employed only in cases of small annular stricture. The excision method needs no defense as its results are all that could be desired. As for the other surgical methods, the writer was not at all pessimistic as to the results which can be obtained, if they are followed by correct and systematic after treatment.

"The Use of Spinal Anesthesia in Rectal Surgery."

By Collier F. Martin, M.D., Philadelphia, Pa.

Who reported 87 cases in which tropacocain and stovaine were employed. The technic was given in detail. The method is not recommended where the hips of the patient have to be elevated.

Of the 87 cases, 57 were either frankly tubercular or the condition was suspected, 16 were alcoholics, 4 had anemia with from 35% to 60% of hemoglobin, 2 had sepsis, 2 cachexia, 2 were suffering from general debility and old age, 3 had cardiac complications and one refused to take ether.

The conditions operated upon were as follows: abscess and fistulae 54, hemorrhoids 21, rectal stricture 2, sacral sinus 1, fissure with fistula 2, gangrenous cellulitis 2, anal condylomata 2, rectal carcinoma (perineal excision) 2, and Ball's operation for pruritus ani 1.

The only complications observed were headache 18 times, coming on from 1 to 3 days after operation. Only three cases had severe headache lasting over one or two days. A few cases complained of some stiffness of the back of the neck and shoulders. One patient developed a temporary oculo-motor palsy which recovered under treatment. In two cases spinal fluid was not obtained because of the difficulty in inserting the needle with spinal deformity present.

Spinal anesthesia was selected in cases with pulmonary tuberculosis to avoid the congestion following the use of ether. Alcoholics were also found easier to manage than when ether was used.

Under spinal anesthesia, the sphincters are completely relaxed, there is no muscular spasm and there is an entire absence of the venous engorgement and swelling of the tissues so often seen while the patient is under ether. Bleeding is not as profuse and is more easily controlled, since all parts of the rectal cavity are as accessible as their anatomy will permit. The complete

muscular relaxation reduces the traumatism to the tissues.

Spinal anesthesia is at its best when used in operations about the rectum and genito-urinary tract. Careful selection of cases, drugs of uniform strength and purity, and a careful technic will do much to reestablish the confidence of the surgeon in this method of producing anesthesia.

"Vaginal Anus in the Adult, With Report of Two Cases."

By Louis J. Hirschman, M.D., Detroit, Mich.

Dr. Hirschman reported two cases of imperforate anus with the anomalous opening occurring in the lower part of the vagina, both occurring in adults. He successfully operated in both cases, restoring the anal outlet to its normal position with a good functional result in both cases. His first case was aged 25, unmarried, and until a few months before examination did not know that she was anatomically different from other young women. She was brought up by a maiden aunt who, while realizing that her charge was not normal, felt that as long as she was having regular bowel movements, she would put off any operative interference until later in life.

The operation in this case consisted of closing the vaginal anal orifice after dissecting the rectum free from the vaginal septum. There being present an infantile sphincter muscle at the normal anal site, an incision was made through the center of this, and by blunt dissection the tissues between it and the blind end of the rectum were separated. The rectum was then pulled down, opened and sutured to the integument. The perineum was not split open nor was the sphincter divided. A good functional result followed.

His second case was also unmarried, 23 years of age. The case was very similar to Case 1, except that there was an over-development of the sphincter vaginae which gave her good fecal control. There was present in this case a small fistula connecting the anus and vulva but not communicating with the rectum. In this case the perineum was split and the fistula dissected out. The vaginal anus was dissected free and brought down to the normal anal site in a manner similar to that pursued in case 1. The perineum was then repaired as in an ordinary perineorrhaphy. The functional result in this case was also good. The author concludes from his experience with these two cases, and realizing the very high mortality from operations for imperforate anus, in infants, that where there is some abnormal outlet for the feces present, it is far better to allow patients to go on in their abnormal condition until they grow old and strong enough for surgical interference and the correction of nature's failure.

"Tubercular Fistula With Extensive Infiltration With Specimen Exhibited."

By Samuel T. Earle, M.D., Baltimore, Md.

Who reported a case of tubercular ischio-rectal fistula, which on the skin surface, resembled an acute inflammatory condition ready to break down, yet when opened, it proved to be a dense

mass of fibrous tissue with only a few tracts of necrotic tissue running through it.

The patient was a policeman, age forty-five; robust and of a ruddy color, weighing 180 pounds; no cough, no history of pulmonary trouble. Patient admitted to hospital, Dec. 29, 1906.

The left buttock was very much swollen and inflamed; there were several fistulous openings on its surface, which could not be followed far beneath the skin, and there was one of them that opened just to the right of the anterior commissure, into the anal canal. Upon laying open the buttock between two of the openings, there was exposed a mass of white fibrous tissue that seemed to be encapsulated—except at points which apparently were necrotic—which was adherent to the subcutaneous tissue. Supposing it to be a tumor, which had broken down in places, an incision was made, on either side near each lateral border, for the purpose of removing it, which was done. The mass measured 6x3x2 inches.

It ran down to and some went between the muscles of the buttock, and in one or two instances involved the same. The tract from the inner margin of the mass to the opening in the anal canal, was then laid open and packed with gauze. The cavity left was so large that sutures were introduced to draw the edges partially together, and to hold in the packing. These were supplemented by adhesive strips.

After the mass was removed, it was found to be composed principally of fat, with here and there a sinus which was surrounded by dense fibrous tissue from one-quarter to one-half inch thick, and there were found several large larva, supposedly of flies deep down in the sinuses of the growth. The tapering, tail-like process, that extended over the trochanter major, was composed principally of muscle.

Upon microscopical examination, the growth proved to be tubercular. The patient made a slow but complete recovery. The large cavity filled in completely. The patient is now perfectly well and robust.

OHIO COUNTY SOCIETY.

March 22nd, 1909. (40 present). Dr. Ackermann lectured on "Surgery of the Heart," illustrating his lecture by drawings, and exhibiting a ruptured heart.

In discussing the lecture Dr. Schwinn said that the literature on this subject is incomplete, and the lecture was especially valuable because of the great amount of information it contained. It is important for the practitioner to be able to make a quick diagnosis. In cases of injury to the heart, symptoms can be divided into two classes: first, where the pericardium of the heart is opened; second, where the pleura is opened. The differential diagnosis is helped by remembering that in the first class of cases we are apt to have the pressure symptoms or heart tamponade already outlined by the lecturer; we here have physical symptoms of dilatation of the pericardium increasing from hour to hour. In the second class, especially where the pleural cavity is widely opened, we have less of these symptoms; the physical symptoms are those of fluid in the pleural cavity. What is to be done while a capable

surgeon is awaited? As puncture of the pericardium relieves symptoms, the chest wall may be opened, and a trocar used to withdraw a little blood from the pericardium. The probe should not be used at all in these cases as it teaches nothing worth while, and may do harm by adding to the injury or by adding infection. To the dangers named by the lecturer should be added injury to the bundle of His. Patients improving for a time from heart wounds should be watched to see if repeated improvements are at longer intervals. If the intervals are growing shorter, some radical measures should be taken. Do not wait too long for all of the classical symptoms; when reasonably certain of the diagnosis, go ahead, remembering that only ten per cent. of these cases are spontaneously cured. Dr. Linsz noted that the heart is very tolerant of trauma. He rehearsed some statistics bearing on the subject of mortality, having in view the site of the wound. He gave the details of several very interesting cases found in the literature. Dr. Quimby reported the case of a patient whose heart was exhibited. He was a robust man 54 years of age, who had severe pain in the chest over the heart and extending to the right shoulder. He worked until the third day following the onset of this first pain, which then returned and was most excruciating; death followed in two hours after the onset of the pain. The autopsy revealed twelve ounces of blood in the pericardium, a dark spot over the left auricle which proved to be the site of a rupture. Dr. Armbrecht reported the case of a man who received a charge of shot in the breast; the apex of the heart was shot away, both ventricles being opened; before death the victim moved twenty feet away from the place where the shot was received. Dr. Jepson noted that Dr. Ackermann's suggestion that the knife be left in the site of the stab-wound is of especial interest to the general practitioner. Dr. Noome said that this paper makes us proud of American surgery. In these cases the diagnosis is a most important feature; and the lessening of the heart sounds is most helpful here. Dr. Ackermann said that when there has occurred a wound of the heart, the patient should be placed in the horizontal position.

CHAS. A. WINGERTER, *Secretary.*

May 3rd, 1909. (22 present). Dr. Wingert continued his lectures on Hysteria and Neurasthenia. Opening the discussion, Dr. Benton said that the profession for a long time was in a confused state of mind concerning these troubles, but has come to study them better, and to classify them better and to study causes. Autotoxicosis is a most important element in some cases. Education and environment have great influence. The man who would treat these cases successfully must be filled with sympathy and human kindness. All patients who come under our care can be helped to some degree by psychic means. We must show patients not only what things are to be overcome, but also how to overcome them. Dr. Osburn told of a case of traumatic neurosis and of neurasthenia and morbid fears. It is hard to tell how many people are carrying a load of mental anguish and morbid fear. We do not often think of the value of inhibitory powers; how much anguish we are spared by our faculty

of forgetting. One way of describing many cases of insanity is the loss of the inhibition of the mind. Dr. Campbell said that we have all recognized hysteria and neurasthenia for years; and we never succeeded in doing any good to our patients by telling them there is nothing the matter with them. The confidence in the physician has always been a valuable asset of the profession. We have practiced psychotherapy for years in various ways. He approved the thought that a careful diagnosis is most important. Dr. Taylor said he has had much experience in these cases, and has found the cases of hysteria the hardest of all to treat. He reported some very interesting cases. He thinks that sympathy, as usually understood, is not helpful. It was moved and seconded that the lecturer be requested to continue his lectures on the subject of nervous diseases, taking the subject of locomotor ataxia for the next meeting. Carried.

CHAS. A. WINGERTER, *Secretary.*

Reviews

TUBERCULOSIS—A Treatise by American Authors on Its Etiology, Pathology, Frequency, Semeiology, Diagnosis, Prognosis, Prevention and Treatment. Edited by ARNOLD C. KLEBS, M.D. With 3 colored plates and 243 illustrations. New York and London, D. Appleton & Co. \$6.00.

This is a handsome, well-bound octavo volume of 940 pages. Its editor is a widely-known Chicago physician. The contributors are men of large experience in the management of tuberculosis, and among them are E. R. Baldwin, Lawrason Brown and Edward L. Trudeau of Saranac, N. Y., H. M. Biggs and S. A. Knopf of New York, Ludwig Hektoen, L. L. McArthur and the editor of Chicago, C. L. Minor of Ashville, von Pirquet of Baltimore and Wm. Osler. From such authorities we can expect nothing but the best, and no one will be disappointed who carefully reads the work. The matter is well arranged and the reader gets the latest information, as each author appends to his chapter a brief resume of matter presented at the late Congress of Tuberculosis, touching the topic under discussion. Hektoen's chapter on morbid anatomy is equal to the writer's best, which is saying much. Minor gives the symptomatology and physical diagnosis in very clear style, Osler has a very interesting "Historical Sketch," in which he says that "a few cases of congenital tuberculosis occur," and "a constitutional susceptibility may be transmitted, i.e., a soil favorable to the growth of the bacillus." Karl Pearson, after an extensive statistical study, says Osler, "concludes that the diathesis of pulmonary tuberculosis is undoubtedly inherited." Klebs has an excellent article on "The Sanatorium, Its Construction and Management," which should be interesting to all West Va. physicians, in view of our efforts to secure the establishment of one or more of these institutions in the state. Dr. Sewell of Denver writes of "The Physiology of Climate," and Barlow of Los Angeles has a most

valuable chapter on "Climatic Therapeutics," while Brown discusses the various forms of "Specific Treatment." These are a few of the many very excellent chapters which make up this very excellent treatise, certainly one of the most valuable that has come from the American press touching Tuberculosis.

SERUMS AND VACCINES—Issued from the press of Messrs. Parke, Davis & Co., this publication consists of 52 pages, and appears in brochure form. It is handsomely printed on white enamel paper of first quality and bears in colors a profusion of half-tone illustrations. A brief chapter on the origin and development of biological therapeutics, with an interjected hint as to what the opsonins may have in store for us, constitutes the introduction. Then follow chapters on serums—antidiphtheric, antitetanic, anti-streptococcic, antigonococcic, antitubercle and antivenomous; on tuberculins; on vaccines, including the new bacterial vaccines which are exacting so much attention from the medical world; on organo-therapy, its development, and some of the important products that are associated with it—"a tabulation," in the language of the brochure itself, "of such creations of biologic pharmacy as are really utilizable in medicine."

This little book, "Serums and Vaccines," is distinctly "worth while." If you haven't seen a copy, drop Parke, Davis & Co., a postal card at their home offices in Detroit, mentioning this journal, and get one. It is a safe guess that any physician who receives the brochure will read it admiringly and with interest, filing it away thereafter for future reference.

TUBERCULOSIS AMONG CERTAIN INDIAN TRIBES OF THE U. S.—Bulletin 42 of the Bureau of American Ethnology.

From the Hygienic Laboratory of the U. S. P. H. & M. H. S.

Bulletin No. 51—Chemical Tests for Blood.

Bulletin No. 53—Influence of Certain Drugs Upon the Toxicity of Acetanilid and Antipyrine.

Bulletin No. 54—The Fixing Power of Alkaloids on Volatile Acids, etc.

Bulletin No. 55—Adrenalin and Adrenalin-like Bodies.

All the above are valuable, and we hope to give our readers something from them hereafter.

Public Health Reports Nos. 37, 38, 39, 40, 41, 42, 43.

These contain Notes on the Prognosis and Treatment of Pellagra; Report on Second International Conference on Leprosy, 146 cases of which are said to exist in our States; Cholera in Rotterdam; Report on Revision of Classification of Diseases; The Surface Privy as a Factor in Soil Pollution; Report of the 12th International Congress on Alcoholism and the 16th International Medical Congress; The Pollution of Streams and Its Prevention; Milk Supply of Buenos Aires, and other topics of interest, all illustrating how much the U. S. Government is doing to conserve the public health.

Medical Outlook

POLIOMYELITIS.—J. G. R. Manwaring, M.D., of Flint, Mich., reports a small epidemic of Acute Anterior Poliomyelitis in his vicinity. The report is accompanied by an excellent article on the subject in the *Jour. of the Mich. State Med. Soc.* The fact of its occurring not infrequently as an epidemic lends a point to the theory of its bacterial origin. The text books say the cause is unknown. G. D. L.

WORMS IN THE SKIN.—H. Gates, M.D., of Manatee, Fla., reports in *Va. Med. Semi-Monthly* a rare and peculiar case. He was treating a man for diarrhoea and when examining his abdomen he noticed nodules under the skin. These nodules when scratched and squeezed would yield formless white masses which when placed in water proved to be living worms. The man after a time died from bulbar paralysis. Autopsy revealed these worms in almost every part of the body, in the brain, spinal cord, pericardium, lymphatic glands, skin, muscular tissue, scrotum and lungs. They varied much in size, from very small to as much as nine and a half inches. One taken from the scrotum was of this size. The worm is the larval form of some kind of tape worm, taken into the system in some form of raw meat. Dr. Gates has heard of two other cases in Florida which may have been similar and cites one recorded case, a Japanese woman in a hospital in Tokio. All attempts to propagate the worms by inoculation and feeding to animals failed. The worms lived from one to two days in warm normal salt solution, but died in one hour when placed on dry wood or glass. Tyson, in a full discussion of the diseases caused by tape worms, mentions no cases similar to the above. Osler mentions a case in which there were subcutaneous nodules attended with tingling and numbness, but no brain symptoms and excision proved the presence of tape worm larvae. The case of Dr. Gates is entirely different from the so-called Echinococcus disease, in which the hydatid cysts are found in the liver and other organs. G. D. L.

Dr. Latimer, of St. Louis, says: "Our experience teaches that the most important step toward the amelioration of Chronic Nasal Catarrh is cleanliness. A generous use of an alkaline Antiseptic with spray, sufficiently stimulating to encourage the formation of new blood vessels and invigorating those that have remained. GERMI-LETUM has proven in my hands the ideal solvent and alkaline Antiseptic and will effectually cure the most advanced cases of Chronic Nasal Catarrh.

GOING SOME.

The attention of our readers is called to the advertisement of The Abbott Alkaloidal Co. on page iv. The idea is particularly appropriate at this time and will do much to emphasize the fact

that Dr. Abbott and his products are right "up to the minute." We suggest that you send for a copy of the "Digest of Positive Therapeutics" if you have not already received one. This a three hundred page book of practical pointers and will be sent free on request if this journal is mentioned.

A CONVENIENT CHLOROFORM PACKAGE.

Much interest is being manifested in the chloroform dropper-ampoule marketed by Parke, Davis & Co., and which, in the opinion of a good many physicians and surgeons, is the most convenient and practical chloroform package that has ever been introduced to the profession. The new device is at once a hermetically sealed container and a perfect dropper-bottle that can be carried about in the emergency bag at all times in readiness for immediate use. It supplies in portable form enough of the anesthetic for one service—about thirty grammes. The desirability of such an individual package and its superiority over the ordinary amber, cork-stoppered bottle heretofore supplied is appreciated when one remembers that chloroform in broken packages rapidly deteriorates under the influence of air and light and becomes contaminated with chlorine decomposition products.

Physicians desiring further information relative to the dropper-ampoule are advised to write for Parke, Davis & Co.'s illustrated circular descriptive of the new package.

NOTICE!

The State Board of Health of West Virginia will meet in the City of Parkersburg, on the 9th, 10th and 11th of November, 1909, for the purpose of examining applicants for license to practice medicine and osteopathy.

Examinations begin promptly at 8 A. M. on the 9th. All applications must be filed with the Secretary on or before November 1st. Headquarters of the Board, Hotel Chancellor. For further information and application blanks, address

H. A. BARBEE, M.D., Secretary

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Original Articles

THE NEW NEUROLOGY.

C. A. Wingert, A.M., M.D., LL D.,
Wheeling, W. Va.

(Read at the Annual Meeting of the State Medical Association, Oct. 1909.)

The title of this paper must not lead to any misconception; therefore let it be said in the beginning, that the new neurology is being built partly out of the materials of the old neurology. It is new by what is added by the spirit of man. The past had gathered much raw material and piled it in haphazard fashion upon the field; stones here, bricks there, and lumber and other materials yonder. Next was needed the flash of the architectural artist's genius, and the work of willing and enthusiastic hands to build it into beauty. Who will deny to the completed cathedral the epithet of new?

The science of the nervous anatomy is ancient. In the strictest sense it was not a biological science. It was a science of the dead. Starting with it we began to think anatomically of the nervous system. Brain, and cord, and peripheral nerves! There they were for us to see and study and we parcelled them out as the surveyor stakes off the earth. But this was the first round of the ladder by which we were to climb. Here was raw material.

"It is superannuated to think anatomical," Lepine told us long since, however. And

the eager spirit of man perceived this, and looked for life. The true science of medicine finally came upon the scene. Claude Bernard told us that "there is only one science in medicine, and that science is physiology, applied to sound and to morbid states." Physiology brought more and valuable raw material, and long and patient efforts were made to bring some order into chaos, but the old anatomical incubus still hung over all like a darkening mist, confusing all things, as did the blight of tongues that fell on the builders of the tower of Babel. Any one who studied neurology more than a dozen years ago understands this perfectly. We were all like men in a labyrinth. Confusion confounding confusion, and no thread of hope to lead us out but the frail thread of sheer memorizing. Is it any wonder that we deemed the study of nervous diseases a *bete noir* from which to flee as from the devil himself. We had to be held in its clutch just long enough to please the examiner but then away from it forever! During practice if a nervous patient came to us, we tested the knee-reflex for locomotor ataxia; finding no reflex we gave the iodides; finding it we gave sedatives, or "tonics" or "alteratives" or treated "on general principles," whatever that may mean. Everything was dark and mysterious till there came a flash in the sky—the neurone doctrine! and instantaneous lucidity opened across the whole landscape. Here was design that was intelligent! Here was the unit whose lack made confusion! Here was the germ-thought of the designer! Now the builders may begin to build in right

earnest! And well have they wrought.

The leaders of the new neurology began to think physiologically. It was no longer a matter of memorizing a mere chain of clinical phenomena; we could now see the inter-relation of cause and effect; we could now know how and why observed phenomena exist.

For instance, once we have grasped the knowledge of the neurones as units, and of the neuronie levels; cortical neurones, neurones of relay, and peripheral neurones; and have then learned that locomotor ataxia is a slow degeneration of the peripheral sensory neurones, all becomes clear as noonday. We no longer need to memorize symptoms. We know why there are all kinds of sensory disturbances over a widely extended peripheral sensory apparatus; why there is failing vision and hearing and smell; why there is loss of inco-ordination of movement; why the patellar reflex is absent; why the pupils react to distance but not to light; why there is no true motor paralysis; why there are vasomotor and trophic disturbances; why there are paresthesia and anesthesia, and analgesia and loss of temperature sense; and disturbance of bladder function. We see the why of every symptom. The variability of the symptoms depends on the variations in the location of the degenerative process; the uniformity of the disease depends on its sensory character and its progressive course.

We have learned that unity exists in function and not in geographical location. The division into diseases of the brain and of the cord and of the peripheral nerves is not only useless but screens our clear understanding of the disease. Unity exists in function only. A stimulus applied to the extremity of the great toe produces a sensation that is appreciated in the brain cortex under the scalp; and if the toe is drawn back in response to the stimulus, the motor impulse starts from the brain cortex. Both impulses, sensory and motor, have traversed brain and cord and peripheral nerves. If there should be disturbance of either of these impulses, it will not be located in either the brain or the cord or the periphery alone. The cortical neurone is no stranger in the cord; the peripheral neurone has right of residence there likewise.

If a great railroad system should be tied up by a strike, we would not be doing justice

to the situation if we said merely that there is trouble in the executive offices, or trouble along the tracks, or trouble among the men, or in the round houses, or at the stations. There is trouble in all these quarters truly, but we have not stated the situation adequately until we see and say that the railway traffic system along that entire route is crippled or out of action. That railway's function is disturbed wherever it functionates. A federal committee of pacification sent to lift the strike, would not sub-divide itself into five divisions to go to the five divisions of the railway; or send one member to study the main offices, one to study the shops, one to investigate the trains, one to look over the stations. It would approach the problem far otherwise. There has been a failure of the railroad's function because of a break in the functioning apparatus which demands normally the combination and "team work" of employers and employes. If the commission can bring these broken parts of the normal apparatus properly together, function will be restored even if the committee has never cast an eye on a rail or a depot or a car.

Let us repeat; in the nervous system, just as in the railway system, there is not a question of mere geographical location to be envisaged, there is first and wholly a question of restoring function to every part of the functioning system, from end to end.

Grasset, of Montpellier, was the first boldly to put the ax to the roots of the old tree of neurology. In 1905 he published his great work on *Les Centres Nerveux, Physiopathologie clinique*. He presupposes in his reader a knowledge of the anatomy of the nervous system studied in the light of the neurone doctrine, and he builds upon six great pillars his treatise on the symptomatology of nervous disease:

1. The central nervous apparatus of motility and general sensibility.
2. The central nervous apparatus for orientation and equilibrium.
3. The central nervous apparatus for language.
4. The central nervous apparatus for vision.
5. The central nervous apparatus for hearing, taste and smell.
6. The central nervous apparatus for cir-

ulation, secretion, nutrition, digestion and respiration.

This is revolutionary indeed in the strictest sense, for revolution means a turning of the wheel backward. We must forget much and learn again. The ancients were wise beyond all telling when they made Lethe, the river of forgetfulness, the boundary of a better land. That river once swum successfully, however, and they were in Elysium where dwelt the Gods. We must do as they taught. We must forget the old anatomical division utterly; but having done that, we shall open our eyes to the blinding light of the very gods of right knowledge. Neurology becomes a cave of wonder and delight. It is a repetition of the tale of our childhood days, carrying in its heart the secret of fairyland: "If you love the ugly beast truly and well, he will change before your very eyes into a charming prince." The horrid beast of neurology was loved by our brethren and it has become a fairy prince who exultingly hastens to bless us and our fellow men. The curse has been lifted indeed.

A year before Grasset's great work was published, Dr. Harrison Mettler, of Chicago, published his *Diseases of the Nervous System*. He adopted in this work the neurone concept of Waldeyer and presented a classification which is not so radical as that of Grasset, but is founded likewise on a physio-pathological basis. He viewed the nervous system as being made up of two distinct sets of tissues: the true, functioning tissues (the neurones); and the mere supporting, nutritive tissues (the vascular and connective elements.) This makes a grand division of nervous diseases into those that are primarily neuronc and those that are primarily non-neuronc or extra-neuronc. In the latter, the neurones are always more or less damaged of course, but secondarily. Thus, locomotor ataxia is a neuronc disease primarily; myelitis is an extra-neuronc disease primarily, but affects the implicated neurones secondarily. Amaurotic family idiocy is a neuronc disease; infantile spastic diplegia is primarily an extra-neuronc disease, and thus to the end of the chapter. He next subdivided neuronc diseases into the so-called functional and organic. Functional neuronc diseases were again divided into those of the cerebrospinal

and sympathetic systems; and the organic neuronc disease into those of the afferent, efferent, and combined afferent and efferent systems.

Here again is the blessed light from the Happy Land, though shining less brightly. To those who have been in darkness, however, a dimmed light often permits better vision at once than does the blinding blur of the full and unclouded brightness. Mettler's book makes an admirable half-way halting house on the road to the Mecca of Grasset, whose work remains as yet untranslated.

For all the leaders of the new neurology, however, the goal to be attained is the same: the study of function along purely physiological lines. To quote from Grasset:

"For each function, simple and complex, there corresponds a special nervous apparatus. Each of these apparatus extends through all of the neuronc levels; continues throughout all planes of section of the nervous system; has its own peripheral neurones, its neurones of relay, and its cortical neurones. Each one has at one and the same time centripetal fibres, centers and centrifugal fibres. The visual apparatus for instance comprehends motor nerves that are quite indispensable for vision, just as the general motor apparatus would be powerless to act without its kinesthetic nerves. And thus vanishes the division of the nervous system into cerebrum, medulla oblongata, spinal cord—which division has nothing but a mere geographical value. Furthermore, there is not even a geographical unity in the nervous system, nor a unity in the direction of the nervous current; the system of neurones arranged in these various apparatus possess unity only in function, and that is a physiological unity."

In the blazing light of the new knowledge things but dimly perceived before take on a startling plainness. Clinical neurology becomes childlike in its simplicity, and becomes truly scientific at the same time. The simple was ever the sign of the true. We can now comprehend and rationally explain the why and wherefore of the phenomena we have long observed. We know why a deep reflex is lost in one disorder and exaggerated in another; why a paralysis is sometimes spastic and at other times flaccid; why in one form of muscular atrophy we find the

electrical reaction of degeneration, but are unable to elicit it in another form. We have at last the knowledge that is power; the knowledge that bears fruit; the knowledge that begets results in therapy, present and to come.

Physio-pathology is now writing for us the splendid chapter on the nervous system to which this modest paper merely draws attention. The next chapter has hardly been outlined as yet, but it promises to be even more alluring. In the Happy Land we have been placed in a crystal fairy palace of delight, and have had time to inspect the first chamber only; more glorious things are to come. Psychology is to lead us by the hand into the next bewilderment of shining and shaking delight.

Man is body and spirit united during life, and he reacts to the world about him as a biological unit. In the study of these reactions we must recognize his psyche as a distinct force. It is a force, moreover, of which the neurologist must take account. He could not close his eyes to its effects even if he would. Imagine a man, a stranger in a strange land and in a strange environment, under circumstances like that of the mouse under the air-pump with the pressure down to five pounds, not knowing what is to happen next, but instinctively feeling that the struggle for life itself is on the verge. Suppose that this man suddenly hears, in his mother tongue, a warning of danger. As a mere physical stimulus the words are without value, for one unlearned in his tongue would react no more to them than to the whistle of a bird. But in him there is a mental reaction, a psychic call. Does the reaction extend to his physical body? Are there any physiological changes in him that a clinical observer could note? Yes, there is tachycardia, and tremor; the pupils are dilated; the sphincters are relaxed; the breath comes hard; a cold sweat bedews the brow; the skin pales to the color of death; a shattering weakness overwhelms him; he may even fall into the utter annihilation of unconsciousness, momentarily wiping the whole universe out of existence so far as he himself is concerned. Surely this reaction of fear is one that comes into our proper study, and no one will deny that it starts from a purely psychic stimulus.

Fear and hope and pride and envy and

ambition and joy and love and aspiration and desire and all the primal, elemental calls to the spirit of man must be studied in their effects upon the nervous system if we are to have a complete and adequate science of neurology. Behold here we are at the door of the next chamber in the palace! And in it dwells Psyche, the soul. Chemico-physics as an ultimate cause is ruled out here. Chemico-physical changes may take place from the instant that sees the reaction begun, but the antecedent stimulus is purely psychic. The mere materialists have had their little day, but another day is dawning that will place man, in his entirety, above the stars, which are only cosmic dust and mud, and are less than the spirit in worth and power.

Psychotherapeutics in the treatment of nervous diseases is no mere passing fad, gentlemen; it is the beginning of a new era; it is the heralding of a new science. It will not do to say that medical men have always practiced it unconsciously, though that is true. No man can do any human act without producing some psychic reaction, great or small, in the conscious human beings in his environment. But if he is unskilled in the use of a powerful two-edged sword, he may slay his friend instead of the enemy. Use with knowledge is the only sane and worthy use. The greatest force in a world of great and marvelous forces is the human mind. It is being studied as never before; it is the next great energy that man is to put into harness, and no one can tell to what far star it will carry his chariot. Man has besieged the citadel of his own greatness, and the fortress is ready to surrender. Medicine should be amid the van-guard to make the first entry into the captured stronghold. About this successful beleaguement the next great chapter of the new neurology will be written; around these truths a science is even now being constructed; the first layer of the foundation is already placed.

The time is here now when psychotherapeutics is to be employed consciously, scientifically, with full and motived knowledge. Psychotherapy has waited patiently since the foundations of the world, and she is coming into her own at last. Her name is even now being enscribed upon the immortal pillars of the universe.

ARTIFICIAL HYPEREMIA AS A THERAPEUTIC MEASURE.

J. Howard Anderson, M.D., Marytown,
W. Va.

(Read at Annual Meeting State Medical Ass'n, at
Elkins, Oct. 1909.)

Oh, glorious Cup! Oh, Cup divine!
Why should mere man with ills repine,
When, lingering in thy lucent depth,
A cure for ages long has slept.

This may seem to be a strange rythmical flight emanating from the wilds of McDowell county, where liquid refreshments are reputed to abound. However, my theme is not the cup of beer, but the Bier's Cup. The object of this paper is not to present original ideas of my own, but to call your attention to a method of treatment already promulgated, whose merit and simplicity are not fully appreciated.

Therefore my subject, "Artificial Hyperemia as a Therapeutic Measure", might be more precisely stated Bier's Hyperemia Treatment.

A little over a quarter of a century ago medicine and surgery cut loose from hampering traditions, and since, have been steadily shattering the hide-bound fetters of Empiricism. Scientific research has superceded and become dominant. The post mortem table, vivisection and the microscopic study of dead and living tissues are continually shedding more light upon physiologic and pathologic processes; while the learned men of our profession are studying and finding out ways not only of enhancing, but even changing the physiologic processes of our bodies, and thus assisting nature in her struggle against pathologic disturbances. Along this line, successes have been scored by Pasteur and Behring, in the treatment of diphtheria by a anti-diphtheric serum; by Murphy, in the treatment of acute peritonitis, by reversing the flow of the lymphatic streams of the abdomen, and, I think, by Bier, in the treatment of acute inflammation, cellulitis or infection, by artificial hyperemia.

The blood, as it come through its Harveyian channels, is the life-giving stream of the tissues of the body. It not only maintains their various physiologic functions in health, but with delicate, mysterious cunning, adapts itself to counteract disturbing

external influences, and to overwhelm the forces of invading injury and disease.

In his hyperemia treatment, Bier turns for his working material to this life-giving stream. For the essential principle of artificial hyperemia is "the increase of the quantity of blood in a given diseased part of the body". Bier claims this increase not only aids nature in working out her beneficent results or cures, but that it can be artificially stimulated or obtained, by elastic constriction proximal to or by suction cup directly over the diseased or injured part, without interfering with or violating any of the fundamentaal principles of surgery.

In order to more fully understand the basis for such a claim, let us turn to our definition of inflammation, and to the physiologic processes of its first stage—hyperemia. Probably the best definition is as follows: "Inflammation is an expression of the effort made by a given organism to rid itself of or to render inert noxious irritants, arising from within, or introduced from without".

Here let us note that Bier claims, that since inflammation is but a symptom or expression of nature's effort to set disorders right, we in our treatment should not adopt any means, such as cold, which tend to subdue or render inert nature's effort to overcome the irritant or the infection causing the disturbance—any more than we should knock down a fever by coal tar products, or like drugs. Let us see, as nearly as it is known, what takes place in the first or hyperemic stage of an inflammation. Blood plasma or liquor sanguinis exudes and leukocytes by ameboid movement and chemotaxis migrate into the perivascular tissues in the neighborhood of the irritant or infection. The polymorphonuclear leukocytes come from the blood vessels, the hyaline and eosinophiles from the adjacent connective tissue. This exudation of plasma tends to wash away irritants from the tissue, and to destroy bacteria by means of its germicidal property. The leukocytes in turn attack and destroy bacteria by phagocytosis, furnish anti-toxins which antagonize or neutralize poisons, aid in separating dead from living tissue, and proliferate and form fixed cells.

In this age, the blood count is considered almost indispensable in surgical diagnosis. A largely increased number of leukocytes is indicative of the presence of an active pathologic process or condition somewhere in the body. The ratio of the differ-

ent types of leukocytes present, together with the presence or absence of certain physical signs and symptoms, give the diagnostician a more positive clue to the exact cause and the location of the constitutional disturbance. This increase may not be satisfactorily explained, but since the leukocytes are likened to a corporate police force flocking to seats of disturbance and disorder, may it not be that this increase is but nature calling forth and commissioning the reserve force of protectors to police areas of unusual or abnormal physical disturbance.

Dr. C. F. Hicks, superintendent of Miners' Hospital No. 1, to whom I am greatly indebted for much of my data, found that in many cases treated by Bier's hyperemic method, blood counts invariably showed an increase in leukocytes of the polymuclear type. Therefore, in view of what actually takes place in a physiologic hyperemia, and in view of the fact that an artificial hyperemia or "an increase of the quantity of blood in a given diseased part", and an increase of polymuclear leukocytes in the general circulation, can be obtained by the Bier's method, does it not seem at least plausible that much aid may be rendered nature in her battle with infection, by its employment.

Hyperemia may be obtained in one or all of three ways: by elastic bandages or bands; by cupping glasses, and by hot air, and it is applicable in many cases, such as contusions and sprains, lacerated and contused wounds, furuncles and carbuncles, acute lymphadenitis and abscesses, phlegmorus and puerperal mastitis, felons and tenosynovitis, ununited fractures and osteomyelitis, tuberculosis of joints and bones, etc. Its use is not incompatible with the modern fundamental principles of surgical treatment, such as incision and evacuation of pus, but in conjunction with them, rather enhances their value.

Technique—Elastic Constriction—A soft rubber bandage, $2\frac{1}{2}$ inches wide, is given six or eight ascending spiral turns about a limb, each layer overlapping its predecessor about $\frac{1}{2}$ inch, and thus covering four or five inches of healthy surface some distance from the infected area, and between it and the heart. Thus, if the infection is of the hand, the bandage is applied above the elbow, etc.

The degree of bandage pressure is the most important factor, and must be so gauged as to constrict the lumen of the thin-walled veins and lymph channels, and thus

retard the return flow of the blood, without causing stasis, and must never bring such stress upon the arteries as to obscure the pulse below the bandage. When correctly applied, pain is diminished rather than intensified or created; the distal part becomes swollen, slightly oedematous, bluish red in color, and possesses a warm comfortable glow and feeling. When the constriction is too great, discomfort or pain is experienced, hyperaesthesia or anaesthesia sets in, the distal part becomes cold and bluish white in color, and the oedema is not readily absorbed when the bandage is released.

The duration of application is governed by the condition to be treated, and the effect desired. In acute inflammatory processes of great severity, the bandage is applied for ten to twenty-two hours, and after an interval of two to four hours, in which the oedema should subside, it is reapplied. This is continued as long as proper reaction occurs, or until the inflammatory process has subsided. When the constitutional symptoms have subsided and the temperature becomes normal the application is shortened two hours each day until stopped altogether. In chronic conditions, the constriction is applied for two to four hours daily.

Suction Cups—With cups, we desire and produce the same effects, but more localized and intensified. However, instead of placing them some distance from the area of the trouble, they are usually applied immediately over the infected center. Cups especially designed to conform to the surface of most any part of the body may be obtained, but for all practical purposes, the simplest type are amply sufficient, while in emergency, a clay pipe with an attached aspirating rubber bulb may be pressed into the service.

Where the skin is broken by any means, surgical or otherwise, it is necessary to keep the cups absolutely aseptic. Caution is also necessary against the exertion of too great suction. The color of the skin drawn up in the cup is the best indicator, and must never be whitish, but rather a red, or bluish red. Daily sittings are the rule, and these take place usually at the regular dressing hour. The infected part is anointed with sterile vaselin, and the cup applied for five minutes, it is then removed, and after an interval of two or three minutes it is reapplied—this being repeated five or six times during one sitting.

The special merits of the cup are evinced when used upon open wounds, furuncles, etc., for it aspirates slowly and painlessly pus, bacteria and necrotic tissue; it stimulates granulations by hyperemia; and it directs the current of secretion outward, as it were, reversing the lymphatic current.

Hyperemia by means of hot air differs slightly from the other two in *modus operandi*. It is an *arterial*, rather than a *venous* hyperemia, and hence is especially adapted to produce absorption of chronic exudates, infiltrations, adhesions, and is quite useful in neuralgias of various types. The different types of administrative apparatus are legion, entirely too varied to describe. The sittings are daily or every second day. The duration is one-half to one hour at a sitting, and the temperature is gradually raised to the endurance of the patient, even to the limit of 250° F.

The advantage of artificial hyperemia may be briefly stated as follows: First—By increasing or prolonging the hyperemic stage of inflammation, beginning infection may sometimes be suppressed. If not, it hastens pathologic processes, or suppuration, speeds the contest between the conquering elements of the body and the infective germ, and this hastens demarcation and separation of necrosed tissue.

Second—It diminishes pain and gives comfort to the patient.

Third—It favors absorption and lessens the tendency towards adhesions, especially those involving tendon sheaths.

Fourth—It reduces the size and the number of incisions necessary to get rid of pus and debris, and does away with extensive and painful packing or tamponading wounds.

Fifth—It is so simple in principle and easily applied that it is within the domain of every general practitioner, and is specially adapted to the character of work he so frequently is called upon to do.

And now, by courtesy of Dr. Chas. F. Hicks, Supt. of Miners' Hospital No. 1, I will report a few cases which have been treated during the past six months in that institution under his especial direction and care. It will be noted in these cases that the length of stay in the hospital is shorter, and the destruction or impairment of tissues of the patient is much less than that in like cases in which Bier's treatment was not employed.

Case No. 152. J. C., American, age 32, coal miner, was admitted to hospital March 1st, suffering with a deep palmar abscess, with cellulitis of the fore arm. The clinical symptoms showed virulent infection. Temperature 101.4-5, pulse 106. Patient gave history of picking a splinter out of his hand with his knife ten days previous to his admittance. His hand was opened up and multiple incisions were made. The elastic bandage was applied for ten-hour periods, with two-hour intervals. Each day when his arm and hand were dressed he was given the cup treatment for five five-minute applications with three-minute intervals. Appropriate constitutional treatment was also administered. After six days the arm and hand cleared up to such an extent that the Bier's treatment was discontinued. On the tenth day he was discharged from the hospital practically well.

Case 170. Initials B. C., American, age 28, lumberman, was admitted to the hospital April 10th, suffering with cellulitis in the forearm, which followed a small wound in the back of the hand received while working in the lumber yard. His arm was opened up, free drainage established, the elastic bandage was applied for ten-hour periods, with two-hour intervals for four days. The cup treatment was given for six five-minute applications, with three-minute intervals, daily at the time of dressing. On the eighth day his general condition had so improved, and the infection so subdued, that he was discharged with a useful arm.

Case 185. B. T., American, age 40, was admitted to hospital May 7th, suffering with cellulitis of the forearm. This was a most instructive case, both in the extent of the infection and the progress of the improvement. His arm was full of pus, temperature 103, pulse 120, arm very much swollen, and amputation seemed inevitable. The infection was streptococcal and most virulent. His arm was opened up and free drainage established. The elastic bandage was applied for twenty-two hour periods with two-hour intervals. Constitutional treatment and irrigation of the arm twice a day, together with the application of the cup for six five-minute applications with three-minute intervals at each dressing, produced a very rapid and most interesting improvement. The disease never extended beyond the point where the bandage was applied. After eleven days the Bier's treatment was discontinued, and on May 20th the patient was discharged without loss of any fundamental portion of the arm or hand and without the impairment of their future usefulness.

Case 358. H. C., American, age 20, laborer, was admitted to the hospital on June 5th, suffering with appendiceal abscess, with a history of eight days' duration. The constitutional symptoms were those of an aggravated case of this character. The usual drainage operation was performed. At the time of daily dressing the Bier's cups were applied for six five-minute applications with three-minute intervals. Under this treatment it was interesting to note not only the speedy change of the character of the discharge from purulent to serous but also the rapid improvement of the wound. The patient was dis-

charged on June 16th, which seemed early for a case of this character.

I do not deem it necessary to take more of your time by reporting further cases. It is an interesting fact that in all cases under observation the disease never extended beyond the point where the constricting bandage was applied. The wounds healed more rapidly, the patient escaped the pangs of prolonged and painfully daily packing or tamponading and suffered practically no extensive or vital tissue loss, had no adhesions of tendons to their respective sheaths and carried away with them useful members. From these experiences I feel that Bier's treatment can be heartily endorsed and recommended, especially in cases of the character cited above.

ATROPHIC RHINITIS.

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W. Va.

(Read at Annual Meeting State Medical Assn.,
October, 1909.)

The treatment of atrophic rhinitis has always been a *crux medicorum*, and of late years the consideration of this disease seems to have been very much neglected by writers on rhinological subjects. Scant reference to it is to be found in the Transactions of the American Laryngological, Rhinological and Otological Society for the past ten years, and only four or five papers touching upon the subject have been presented in the Section on Laryngology and Otology of the American Medical Association for a good number of years.

If this disease is of such discouraging nature to the special worker, is it any wonder that the general practitioner gives it but scant attention and generally declares it incurable! And yet atrophic rhinitis is prevalent throughout the land, and is more or less frequently found in the practice of every physician. Furthermore, it is more annoying to its owner, and to those with whom he comes in contact, than almost any other disease. To be sure, every possible new remedy or procedure has been tried—only to be found wanting in most cases. It is with this as with some other disease: the more numerous the remedies the less efficacious is any one of them; in other words, there is no specific for atrophic rhinitis.

Nevertheless, from an experience of over twenty years I have come to the conclusion that with painstaking and detailed attention to both local and general conditions, much can be accomplished; and I herewith desire to submit the mode of procedure which has given me most satisfactory results. Before doing so, it is necessary to briefly consider the nature and etiology of the disease.

By the term atrophic rhinitis we understand a chronic inflammation of the nasal mucous membrane, which is accompanied by a wasting or atrophy which extends gradually to the underlying basement membrane and sooner or later involves the bone itself. The nasal membrane is therefore of a pale color and dry in appearance. The lumen of the passages is greatly increased, so that one can see through to the throat. On this account the patient is unable to bring sufficient air-pressure to bear to dislodge the drying secretions, and they are necessarily permitted to stick fast until decomposition renders them fetid and indescribably odorous. In this form, or *ozæna*, smell is diminished or lost—a beneficent provision—taste impaired and sometimes the hearing also. A muco-purulent discharge is often found in such cases, and this, on drying into green or dark-brown crusts, forms regular casts over the underlying structures. Sometimes the process extends to the pharynx, which increases the discomfort and difficulty of removal. All authorities agree that atrophic rhinitis is more than twice as frequent in females as in males. In looking over my last fifty cases, I find there were thirty-two females and eighteen males. It usually appeared between puberty and the thirty-fifth year, and in females seems to be worse during the catamenia. The pharyngeal form is unusual before twenty; but among the above mentioned cases I found it nine times, once in a girl of twelve and once in a girl of sixteen years.

To what extent the general condition of the system is etiologically responsible for the nasal atrophy is still a mooted question; but it cannot be denied that in a large percentage, especially among young women, there is anaemia and chlorosis, and this should be given due attention in the treatment by using tonics, alteratives and hygienic measures. Some authors believe there is often a syphilitic taint at the bottom of the trouble, but in only eight per cent of

my cases did it seem to be a factor. However, as the administration of I. K. increases the fluidity of the nasal discharge it is well to prescribe it as a routine measure at the beginning of the treatment and to keep it up for a certain length of time. It is surprising to find how many such patients tolerate comparatively large doses.

Some writers of text-books, like Bosworth, of New York, and Bishop, of Chicago, have declared that this disease is simply a succeeding stage of hypertrophic rhinitis, but most recent investigators regard the process as *primarily* an atrophic one, and not as the sequel to any hypertrophy. Bosworth, moreover, has given as his explanation of the origin that it is subsequent to the purulent rhinitis of children; but this opinion has not been accepted by others. Grunwald, of Munich, and others are of the opinion that atrophic rhinitis is secondary to some trouble in one or more of the accessory sinuses, which theory, however, is not accepted by the majority of nasal pathologists. While all admit that inflammation, enlargement and suppuration of a neighboring sinus is found in some cases, it is to be regarded as an accompanying or resulting factor rather than as a causative one. As a rule we find in most sinus troubles swollen and oedematous mucous membranes with fluid pus, and not the wide-open crust-covered nares of atrophic rhinitis.

With the great strides made in bacteriology, many workers have searched diligently for some specific micro-organism. While various bacteria have been found in this disease, including the pneumococcus, the bacillus mucosus, the so-called ozaena bacillus of Loewenberg, and the coccobacillus fetidus of Pertz, it has not been proved that any of them are the origin of anything but the odor.

Freudenthal, of New York, in 1903 offered the theory that the disease is brought about by a deficiency in the humidity of the air we breathe. He thinks that thereby the normal secretions become thickened and, by attaching themselves to the mucous membrane, clog the gland openings so that the resulting crusts form a perfect nidus for the micro-organisms which produce the fetid odor. But, in opposition to this theory, we find that the disease is just as prevalent in moist as in dry climates. It is true, how-

ever, that quite a number of such patients are inhabitants of ill-ventilated over-dry rooms, who are generally worse in winter when they spend the largest part of the day and all of the night in tightly closed houses. Such conditions should be well looked into and eliminated as much as possible.

Thus it would seem that the etiology of atrophic rhinitis is still *sub judice*, and in a general way does not offer us much help with regard to efficient treatment. But in every individual case it is well to look for all possible causative and accompanying factors, and by eliminating them our efforts towards a cure will certainly be enhanced.

By far the most important part of the treatment consists in local manipulations which have as their object the removal of the crust-formation, the fetid odor, and the regeneration of those parts of the mucous membrane which have not entirely succumbed to atrophic changes. In less advanced cases in which there are still some islands of normal or possibly hypertrophic membrane left, one should avoid treating them with any kind of cauterization—as is unfortunately sometimes done—as thereby the progress of the atrophy is only enhanced. From the start the patient must be thoroughly imbued with the prime importance of painstaking and persistent cleansing, both at the hands of the doctor and, in the interval, by himself. Under illumination with the head-mirror the parts are first anesthetized, and then all adherent mucus and crusts mechanically removed with the cotton-tipped probe. The swab must also be passed into the olfactory fissure and under the turbinated bodies, so that every nook and cranny of the nasal fossae and naso-pharynx is reached. Frequently the crusts and scabs are so hard and tenacious that they must first be softened. This is best accomplished by using Gottstein's tampon. A piece of absorbent cotton, adjusted to the size of the nostril, is twisted around the end of an applicator until an even cylinder three inches long is formed. This is slowly and gently screwed into the nostril as far as it will go, and is then wet with peroxyd of hydrogen which by its formation of foam aids in disintegrating and loosening the crusts. The tampon is left in situ for about half an hour, and another is then introduced into the other nostril. Upon removal it is generally covered with crusts and thick secretions; and where

it came in contact with the mucous membrane the latter presents a clean and succulent appearance. Should any patches of secretion still be found, they must be removed with the probe or possibly the nasal forceps. In some bad cases it is necessary to instruct the patient how to insert the tampon at home, especially if he cannot be frequently seen; and the result is best when the cotton plug is left in one nostril at a time for twenty-four hours or more. Then the nares are thoroughly washed out by means of the spray or atomizer. It is especially in this condition, with wide open cavities, that the nasal douche should never be used, because of the danger of forcing fluid through the Eustachian tubes with consequent infection of the middle ear. For the same reason we should not omit instructing the patient to blow only one side of the nose at a time. Of the many washes, I use most frequently Dobell's solution, Seiler's tablets or Glycothymoline.

After the nares and nasopharynx have thus been thoroughly cleansed, I *massage* these parts—under illumination—with a cotton-tipped flexible applicator. The cotton is tightly wound into a little ball around the end, and with short jabbing wrist-movements rubbed over the surface of all the parts mentioned above as having been covered with crusts. In the more fetid cases it is well, before applying it, to dip the cotton ball into a fresh argyrol or ptoargol solution. This aids in stimulating whatever is left of the mucous membrane and favors more liquid and normal secretion. The nasopharynx is massaged through the nose, and sometimes through the mouth, in the same way. Finally the local treatment is completed by insufflating some antiseptic and stimulating powder. Of the many that may be used, either singly or in combination, I have found Europhen to be the best, and use it now altogether. As it is the lightest in weight and very fine in structure, it can be blown into the smallest crevasses with the least amount of pressure. In fact, one should be careful not to blow it too violently, as otherwise too much is forced down into the pharynx or larynx, where it will produce an obstinate fit of coughing. Europhen clings most tenaciously to the mucous membrane, and particles of it can still be found after several days, even though the spray

has been used in the interval. Care should be taken to distribute the powder in a thin layer evenly over the whole lining, which will feel quite comfortable to the patient and prevent the early re-formation of thick mucus and crusts. The patient is instructed to return at first every second day or, if residing at a distance, as often as possible; and then at increasing intervals according to the effect of the treatment. The nasal fossae are irrigated at home twice a day, and it is beneficial to use a different wash every month or two. I generally prescribe first Dobell's solution, then Seiler's tablets and finally any bland non-irritating antiseptic wash.

If this treatment is kept up long enough there is bound to be improvement in all cases, and in some a virtual cure. The first thing, after making the diagnosis and deciding upon the course of procedure, is to emphatically inform the patient that unless he or she is willing to patiently follow up the treatment for a sufficient length of time, according to conditions, it would be as well not to start at all. It will always be a matter of *months* and sometimes *years*, so that it should be realized at the beginning that it needs a good deal of perseverance to accomplish results. Of course, the local discomfort will soon be relieved, but if there be a let-up in the proper care, discouraging relapse will soon occur. When, however, the treatment is consistently continued there will be a slow improvement from month to month, the odor will soon disappear, the crusts decrease in size and numbers, and finally the time for their re-formation will gradually be prolonged. Upon this will depend the length of the intervals of treatment. If relief has been afforded lasting a month or more, people are only too anxious to return from time to time for further attention. Thus some of my patients, who were regularly treated for the necessary length of time, have been returning for the past number of years once or twice in the spring or fall to receive additional help. With proper care at home they have felt perfectly well and comfortable, and regard themselves virtually cured; but sometimes with a change in the weather, or a run-down condition generally, a little thickening of mucus or crust formation has recurred which they themselves could not well re-

move, but which by proper manipulation could again be eliminated for an indefinite period.

Of the fifty cases treated twelve fell by the wayside, coming for less than a month's treatment and then passing from observation. Seventeen were completely cured, most of them being of slight degree from the start, but which undoubtedly would have grown worse without treatment. Fifteen were virtually cured, i. e., they were relieved of all disagreeable symptoms, but still need from time to time to give attention to the toilet of the nose and throat. The remaining six cases proved intractable; while seemingly better for a time, they were just as bad as ever when regular treatment was omitted.

My experience, therefore, in the treatment of atrophic rhinitis has been as follows:

Totally cured -----	34%
Virtually cured -----	30%
Failures -----	12%
Passed from observation-----	24%

THE DIAGNOSIS AND TREATMENT OF PERFORATION IN TYPHOID FEVER.

Report of Three Cases Operated Upon.

Chas. M. Scott, M.D., Bluefield, W. Va.

(Read at Annual Meeting West Virginia State Medical Assn., October, 1909.)

It has been twenty-five years since Leyden first called our attention to the fact that perforating ulcers in typhoid fever should be treated surgically; and yet this condition alone costs the United States from 20,000 to 30,000 deaths annually. It was not until 1901 that the first successful operation in America was recorded by VanHook, and up to April, 1905, all medical literature contains the paltry sum of only 362 cases surgically treated.

The diagnosis of perforation occurring during typhoid fever is beset with many difficulties. It occurs very frequently in ambulatory cases or in cases in which the mental condition of the patient—stupor or delirium—deprives us of all subjective symptoms. In many instances perforation takes place in the absence of any subjective symptoms; and again, we have the most characteristic and pronounced symptoms pointing to perforation, so that, at times, it

is an easy task to make a diagnosis, and again, it is impossible; so we see that the only positive proof of its occurrence is the finding of the perforation.

Symptoms—If possible, we should satisfy ourselves that we are dealing with a case of typhoid fever; then, the most important symptoms are, first, pain; second, tenderness; and third, muscular rigidity.

Pain in abdomen, especially in lower part, occurring at any time during the course of typhoid fever, must be regarded as a danger signal. It sometimes occurs several days before actual perforation, and is described as tearing, shooting, sharp, and sudden. Along with pain we have tenderness, which may be a hyperesthesia of the whole abdomen, and on the other hand, it is frequently referred to the appendix. The sudden sharp pain and tenderness at any point in the abdomen, with marked rigidity, makes diagnosis of perforation almost certain.

Shock—I have found it in cases I have seen not marked, and believe it to be like tympany, a late symptom, and one not to be waited for, though in highly sensitive persons it may be more marked than I have thought; however, it was not present to any degree in any of the cases that I have had. Cold, clammy perspiration with great tympany, I am inclined to believe, are rather unfavorable symptoms as to any operative interference.

Effacement of liver dullness by gas is a late symptom and one not to be relied upon. If, in a given case of typhoid fever, we have sudden pain in abdomen, general or localized tenderness, with muscular rigidity, we should not delay calling a surgeon in consultation, for not one of us would hesitate to open an abdomen if these were in a suspected case of appendicitis. We have now the golden opportunity to save our patient, and as Dr. Wilson in an eloquent appeal in 1886 said, "the courage to perform it will come of the knowledge that the only alternative is the patient's death."

Mikulicz, in 1884, stated that "if suspicious of a perforation, one should not wait for an exact diagnosis and allow peritonitis to reach a pronounced degree, but, on the contrary, one should immediately do an exploratory operation, which in many cases is free from danger."

It is hard to realize that this was written twenty-five years ago, and it is still more

difficult for us to change or modify these telling words which represent the experience and opinions of physicians who have had practical experience with this most trying complication of typhoid fever.

Case No. 1. Swede, aged 30 years, could not speak a word of English. Diagnosis was made by rigidity, pain, and tenderness. Operation revealed two perforations in last two feet of ileum; purse string suture, cigarette drainage. Patient did well for seven days, when he succumbed to a septic peritonitis.

Case No. 2. J. P., aged 10 years, male, white, American. Was seen by my assistant, Dr. Slusher, after he had been ill one week. His temperature ran high, with a great deal of tympany. Called hurriedly at 9 a. m.; severe pain in abdomen, with rigidity and tenderness; marked desire to avoid urine, which was very painful. Removed to St. Luke's Hospital. Operation seven hours later revealed perforation size of match head near head of cecum. Purse string suture. Death on table I think death was due not so much to operation as to anesthetic, as patient did suddenly, evidently due to paralysis of respiration.

Case No. 3. H. O. W., aged 21 years, white, American, occupation civil engineer. Occurred in practice of Dr. O. S. Hare, and was admitted to St. Luke's Hospital September 15, 1908, the eighth day of his illness.

History—Had been in bed four days, highest temperature 104°. The fever chart shows patient admitted with a pulse of 98 and temperature 102.4°. Nose bleeding. From September 16th to September 23rd, inclusive, temperature ranged from 99 to 103.4; pulse from 76 to 104°. On September 24th temperature at 10 a. m., 94°, pulse 66.

3 P. M.—Pain in abdomen—ice bag applied.

4 P. M.—Chill.

7 P. M.—Temperature 102°, pulse 94.

10 P. M.—Patient rolling from side to side, knees drawn up, suffering with pain referred to right iliac fossa—rigidity and hyperesthesia over whole abdomen. Consent having been obtained, we operated at 2 a. m., September 25th. Operation revealed perforation about eighteen inches from head of colon, with free fecal matter in peritoneal cavity, which was carefully sponged out with hot saline. Abdomen was not flushed, nor did we use drainage, as we did in Case No. 1. Relied entirely upon thorough cleansing with sponges. At 10 a. m. temperature 98°, pulse 98; medication, morphine $\frac{1}{4}$ grain hypodermatically. From September 26th to October 2nd temperature ranged from 98° to 101°, pulse from 78 to 94. On October 2nd, bowels acted from olive oil given by mouth, assisted by saline enema. On October 3rd temperature ranged from 98.6° to 102°, pulse 88 to 96. This was the first day and nourishment was given by mouth—beef tea and albumen. Nutritive enemata had been given since third day after operation, consisting of beef extract one drachm, hot saline three ounces. From October 4th, both temperature and pulse reduced until on October 12th, eighteen days after operation, temperature and pulse were normal. Only two hypodermics of morphine were given during the eighteen days. October 22, 1908, patient was discharged.

PLASTIC OPERATION FOR RELIEF OF UTERINE ANTEFLEXION.

Hugh G. Nicholson, M.D.,

Surgeon to the Barber Sanatorium & Hospital, Charleston, W. Va.

On August 13th of the present year, I was consulted by a young lady eighteen years of age suffering with a severe cystitis, causing her to get up as many as a dozen times at night to relieve her bladder, which at that time had to be done as soon as two ounces of urine had been secreted.

Upon examination I found there was no stone or other foreign substance in the bladder; but pressing directly against it was the most acutely anteflexed uterus I had ever met with. She was willing to submit to any measure that promised relief; so she was properly prepared and the next morning I did the following operation:

First a dilatation and curettement was done, and the uterine cavity wiped out with plain sterile gauze, so that in case I cut into the uterine cavity in my next step, there would be a minimum danger of infection. In doing the dilatation I might say it was almost impossible to introduce the dilators.

I next opened up the abdominal cavity, and finding the point of flexion on a line with the insertion of the round ligaments, I made an incision about one-quarter of an inch deep entirely across the uterine body from the upper border of the insertion of one round ligament to the corresponding point on the other side. I then used a heavy catgut suture, putting it through one end of this incision to its full depth then out through the other end. When this was tied it had the effect of changing the line of the incision from transverse to longitudinal, and at the same time corrected the flexion. Other sutures were then put in to close the incision its full length.

The patient was in the hospital two weeks, and when she left she held her urine with comfort for six hours and as much as sixteen ounces could be retained. I was very much gratified at the relief of symptoms, but it remains to be seen what effect the operation will have (if any) on parturition. Personally I feel that inasmuch as the cavity was not opened there will be no danger of rupture in case she is ever confined.

Selections

EYE AND EAR DEFECTS OF CHILDREN.

Thomas Faith, M.D., Chicago, Ill.

It is common experience, I believe, that it is often a matter of some difficulty to determine how much is dullness and how much is deafness when examining a young child with defective hearing, and the author has often settled this question by noting the child's ability in lip reading, a faculty which the really dull child does not develop to any extent.

Newmayer says that the eyes and ears are particularly the organs which may cause mental retardation. That normal hearing is important to normal mental faculties, but when one considers that there are few impressions dependent upon the sense of hearing that cannot be conveyed by the sense of sight, this fact coupled with the fact that the percentage of children who have defective hearing is only about one-fourth of those having visual defects, one is led to conclude that visual defects are by far more important causes of mental dullness than defects of hearing.

It has been the author's experience that the *child* with a high degree of refractive error of any kind soon learns that he is unable to see as well as other children and does not attempt it, but he does not usually suffer from headaches, eye pains and irritated eyes or eyelids, and consequently his disability may not become known early to either parent or teacher. As a result he may become inattentive and indifferent to his school work, he makes the least possible effort as he finds effort of no avail. He gets behind in his classes, becomes dissatisfied and if congenial company is found among truants he may become a truant also.

On the other hand the child with a low degree of refractive error, particularly hyperopia and astigmatism, is usually capable of overcoming the error by muscular action and thus obtaining normal vision, but at the expense of an immense amount of nervous energy; the result is headaches and asthenopic symptoms, and if the nervous system is not up to par a chronic condition of nervous irritation results. Such children then be-

come irritable, dissatisfied and unruly; and this, in turn, may cause them to think they are abused and misunderstood.

We may, I think, divide these cases of defective sight and hearing into two classes. *First*, those who cannot be driven to do their work on account of physical inability to accomplish results with ease, and *second*, those who can accomplish results and will be urged on by their teacher, parent or ambition, until they either break down or rebel on account of the nervous strain imposed in carrying on the work.

To the first class belong the cases of high refractive errors, congenital defects of the cornea, lens, etc., the cases of congenital word blindness and the cases of defective hearing. To the latter belong the cases of slight defects of vision due to disease, low degrees of refraction errors, cases of muscle imbalance, and cases of deficient accommodation. As these physical defects would certainly tend to cause children to leave or be taken from school at an earlier time than would ordinarily occur, just so certainly would they tend to produce dissatisfied and unsuccessful members of society as the uneducated individual does not have an equal chance with the educated individual in the struggle for existence, all other things being equal.

In every day life we are all familiar with the fact that unsuccessful and dissatisfied people frequently become addicted to the use of alcohol and in this connection it is interesting to note that of 5,000 inmates admitted to the New York State Reformatory at Elmira between 1900 and 1906,—2,735 or 54.7% were addicted to the use of alcohol, that 675 or 13.5% had defective eye sight and 281 or 5.625% had defective hearing. The average age of the inmates was 20 $\frac{3}{4}$ years.

Case, who has tabulated the above statistics in an extensive study of the condition of the eyes of the inmates of sixty penal institutions including sixteen juvenile reformatories, eleven intermediate reformatories and thirty-three prisons where glasses have been ordered for patients with defective vision, concurs in the opinions of Dr. F. L. Christian, who has been senior physician to the Elmira Reformatory for many years and who says: "The general progress of the men after receiving glasses was greatly im-

proved and far better results were obtained than previously, and that the records show that improved vision was in nearly all cases followed by not only better work at school and trades, but, also, better demeanor."

If the results are so noticeable in this class of individuals of twenty years or thereabouts, how much more may we expect from the correction of these defects in children of the primary grades who are at that plastic age when slight influence have such great effects?

In conclusion I would say that the excellent work which has been done by various examining boards in this direction should be applauded and encouraged and that it should not only include the routine examinations of all school children's eyes and ears as well as a general physical examination, but should include a special examination of the exceptional children so that statistics of value may be compiled which concern these children alone, and from which proper deductions can be drawn.

And in the meantime we should keep in mind that while the percentage of physical defects dwindle as the grades advance, vision stands in a class by itself, increasing rather steadily with the higher grades; starting, according to Gulick and Ayers, at 20.2% defective in the second grade and increasing to 32.3% in the eighth grade.—*Pediatrics*, May, 1909.

PNEUMONIA—HOW TO AVOID ITS DANGER POINT.

Dr. J. Madison Taylor, in an Article in the September Issue of the Monthly Cyclopedia, Thus Sets Forth the Views of Sajous:

Sajous teaches that the main period of danger coincides with the stage of engorgement. The affected area becomes, he states in his work on the "Internal Secretions," intensely congested and the capillaries between and towards the air-cells, are greatly distended. They evidently pour their contents into these air-cells, for they and the terminal bronchioles are more or less filled with red and white corpuscles, epithelial cells, etc., and blood-plasma. During this period, we know, there is greatly increased frequency of the respirations, which may vary from 40 to 60 per minute in adults,

and 60 to 100 or more in children. There is marked oppression, a "grunt" being more or less audible at each expiration. In plethoric individuals, the dyspnoea is especially intense. Now, how explain this phenomenon? This is where text-books fail, and where ajous researches supply life-saving information.

He has pointed out, (*New York Medical Journal*, February 20 and 27, 1909) that the adrenal, thyroid and pancreatic secretions jointly supply to the blood all its immunizing constituents. Of all these, however, that produced in greatest amount is the adrenal secretion (the amboceptor in the immunizing triad), which, as every one knows is the most powerful blood-pressure raising agent known. The toxin having induced a violent auto-protective reaction, the adrenal product not only causes a general rise of blood-pressure, but this is especially marked in the diseased portion of the lung, where the immunizing process is carried on with the greatest vigor. Hence the intense respiratory symptoms, the dangerous interference with the heart's action which involves the familiar tendency to cardiac failure—a most dangerous phase of the disease. *The patient's circulation is practically blocked in the lungs.*

It is to the mastery of this stage that Sajous attaches the greatest importance. Proper measures at this time, he urges, and his opinion is now justified by the experience of many practitioners, prevent a fatal issue. The measures he advocates do not involve the need of special technical knowledge; they are the simplest possible kind and within the reach of any physician. They are (1) the free use of saline solution and (2) the use of cresote carbonate, *both begun at once, i. e.*, when the case is first seen.

As to the saline solution; his purpose is to replace the sodium chloride consumed with abnormal rapidity in pneumonia, and to compensate for the one-half ounce of this salt eliminated daily with the excretions (urine, sweat, tears, etc.) which is replaced only in part through the reduced diet. An adult patient who drinks not less than one quart of saline solution (approximately two teaspoonfuls of common salt to the quart of water, or milk, or water and milk), not only meets these drawbacks but it does more: By preserving the normal osmotic properties of the blood and preventing undue viscosity,

it facilitates greatly its circulation in the tissues, including the diseased lungs. Their engorgement is not only kept thereby within safe bounds, but the detritus (fibrin, broken down red corpuscles, leucocytes, etc.) is promptly transferred to the general bloodstream and converted therein into end-products which are readily and rapidly eliminated by the kidneys.

The *croscote carbonate* fills another all-important purpose; it enhances the bacteriolytic and antitoxic power of the blood and enables this blood to reach the nidus of infection with increased freedom—thus aiding the saline solution. It does this by depressing the sympathetic (which Sajous traced to the pituitary body), and thus causes dilation of all arterioles including those of the diseased area. Moreover, the dilation of these small arteries being general, the blood-pressure is lowered, thus antagonizing the general rise of blood-pressure which is in part responsible for the pulmonary engorgement which it is our purpose to antagonize. Full doses 10 to 15 grains of *croscote carbonate* (best administered, though an oil, in capsules) at short intervals, *i. e.*, every two or three hours from the start, give the best results.

In strong plethoric individuals, the arterial tension and therefore the pulmonary congestion are such that additional measures are necessary to relieve the lungs and the heart. Sajous recommends *veratrum viride* or the bromides in full doses. Both of these drugs depress the vasomotor center and by thus causing the great splanchnic area to contain more blood it depletes the peripheral organs including the lungs.

This treatment has saved many valuable lives, and its benefits will be enormously extended when the senseless and murderous "expectant" plan will have dropped by the wayside, and logical reasoning on the use of remedies will have replaced empiricism.

*Drs. Lippincott and Duncan
have moved from the Arrott
Building to the Jenkins Build-
ing, opposite the Joseph Horne
Co.'s store, Pittsburgh, Pa.*

QUACK MEDICINES.—"It is a matter of regret that several religious newspapers should lend their aid and countenance to the impositions of quackery, by advertising patent medicines. The intelligent editors ought to know that the fundamental principle of a patent medicine is a fraud. It is an evil, too, of enormous magnitude in our country. Intelligent men, and especially ministers, who stand before the world as professed philanthropists, ought to exert their influence in opening the eyes of an injured community to the evil in question, and impress upon all men who value health, or who feel an obligation to its author, that when they need anything in the medicinal way, the first thing they should take is *advice*.—*New York Evangelist*.

"Forcibly impressed with the sound sense and morality contained in the above opinion, we shall endeavor to enforce and illustrate it at this time, by some facts and reasoning, which, we believe, will not be without profit to our readers. But before we proceed, let us ask, what would be the astonishment of the editor of the *Evangelist*, were he to be told that some of our editors of newspapers not only allow of the advertisement of nostrums, but so far connive with fraud, as to directly eulogize these compositions, on evidence which, in any affair of direct personal interest to themselves, they would declare as unworthy of credence! Nay, still further, and we speak with a knowledge of the facts—these same editors, some of them critics in literature, and squeamish censors of morals, who cry out quack, quack, at the idea of a short road to knowledge; and profess to hold in abomination any sentiment ever so little variant from lofty integrity—have, themselves, not only become the trumpeters of quackery, but refused to give insertion in their papers, to a temperate correction of its misstatements, coming from a known and responsible quarter. Heroical "slashers" of remote or of feeble disturbers of the social system, and voluble declaimers against contingent or doubtful evils—these exquisite sentimentalists have no compunction in countenancing ignorance, and giving currency to an imposture, at their elbow—the most usual effect of which, taking history as our guide, is to wring from the poor their hard earnings, and to convert medicable into incurable disease, with its train of domestic distresses and bereavements."

Doesn't the above sound good and modern? Almost good enough to have been written by the editor of the *Critic and Guide*. But it wasn't. I have just discovered it in an old volume which I had picked up in an antiquarian book store. It is volume I of the *Journal of Health*, published in 1829! And so 80 years ago our good ancestors had to struggle with the same problems that are engaging our attention now.

Nothing new under the sun.—*Critic and Guide*.

To have what we want is riches, but to be able to do without is power.—*George Macdonald*.

The West Virginia Medical Journal.

ANAPHYLAXIS.

S. L. JEPSON, A.M., Sc.D., M.D., *Editor.*

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Editorial

If Journal fails to reach you by the 10th drop us a card.

TO SUBSCRIBERS.

Your subscription is past due. Kindly remit. The postal regulations require us to cut you off after four months' delinquency.

A Christmas Wish for Our Readers.

I wish that all your skies be blue,
Your hands filled full of all life's flowers,
Your paths all soft, your friends all true,
Your pleasure sweet in all your hours.
Too much to wish? Perhaps it is,
But could I wish you less than this?
I will wish more—that God will send
Just what His love perceives you need.
Then be it thorn or flowers, dear friend,
You will thereby be blest indeed.

This is the name given to the hypersensibility to a toxin, especially to that contained in the sera now becoming so popular in medical practice. It is well here to remark that the principle causing the serious effects occasionally reported resides in the serum itself and not in the curative content, whatever this may be. During the past few years a number of cases of poisoning have followed the use of serum, some of these from the horse serum alone, others the diphtheria or other antitoxin. In the *N. Y. State Medical Journal* for September last, Dr. H. F. Gillette of Cuba, N. Y., has collected thirty such cases, and we here summarize these, that our readers may appreciate the fact that the sera that now seems so promising in their therapeutic results are not entirely devoid of danger, and that they may exercise the greatest care in their use, and avoid their employment in unsuitable cases.

No. 1. Male aged 51, had bronchial *asthma* for 40 years. Worse when about horses.

Received 2,000 units antitoxin globulin for *asthma*, for which it has been lauded as a cure. Very soon felt a prickling sensation in the neck and chest, said he could not breathe, and respiration quickly ceased. Pulse at wrist remained regular and full for some time after. Face was mildly cyanotic and edematous. A tonic spasm occurred before death. Autopsy failed to reveal any condition to account for fatality. Bronchial tubes normal.

No. 4. Man aged 34, since childhood had *asthma* when about a horse. Took an immunizing dose of 2,000 antitoxin units. Soon face and scalp itched and burned terribly. Complained of breathlessness. Lips, face and neck were swollen and cyanotic, and itching over whole body. Breathing labored and froth poured from mouth. Had a slight convulsion and breathing ceased, the heart beating for some time after. Dead in five minutes after injection.

No. 5. Boy aged 14, had suffered with bronchial *asthma* for years. Took 2,000 antitoxin units for diphtheria, and in five minutes was dead.

No. 15. A physician with severe attack of *asthma* gave himself a dose of horse serum,

Edema, urticaria, respiratory failure, with death in five minutes.

No. 16. An adult was given a dose of horse serum for bronchial *asthma*, and death resulted in five minutes, with the usual symptoms.

No. 22. Male aged 33, a subject of *asthma* for some years. Mild diphtheria. Took 2,000 units antitoxin. Edema, stoppage of respiration and death in five minutes.

No. 24. Female aged 30, severe *asthma* from childhood. For this took 2,000 units horse serum (presumably antitoxin). Face and neck edematous, this extending to nose, mouth, throat, larynx, bronchial tubes. Cyanosis and impaired respiration. Artificial respiration, stimulating hypodermics and oxygen failed to relieve, and death came in thirty minutes. Pulse regular, strong and full after respiration had ceased.

No. 27. A boy subject to *asthmatic* attacks was given an immunizing dose of antitoxin, and death came shortly after.

No. 28. Young woman of 18, subject to *asthma* for years, took an immunizing dose of antitoxin. Suffocation and speedy death resulted. Autopsy showed lungs and heart "in extreme spasm, such as might accompany an attack of asthma."

No. 17. A boy of 13 years, subject to *bronchial catarrh*, took mild diphtheria, was given 3,000 units of antitoxin. Death almost immediately.

Case 2. Male aged 31, with a history of *asthma*, took 2,000 antitoxin units for diphtheria. Cyanosed in five minutes; heart feeble, dyspnea severe, urticaria and marked cutaneous irritation. Morphia $\frac{1}{4}$ gr., atropia 1-100 gr., and in fifteen minutes adrenalin 1-100 gr. Recovery. No *asthma* since.

No. 6. Male aged 54. *Asthma* for twenty years. Took 6,000 units of serum globulin for diphtheria, and repeated the dose in twelve hours. In twenty-four hours after last dose had severe dyspnea and edema of throat. Final recovery. No relief of asthma.

No. 10. Physician with *asthma* for six years. For this took 2,000 units antitoxin. In ten minutes felt terrible dyspnea and a sense of impending death. Edema of throat and larynx most severe. Obtained no relief for eighteen hours. Recovery. No relief from asthma.

Nos. 20 and 21. *Asthmatic* children. Took

a dose of antitoxin, and went into a collapse but recovered.

No. 32. Woman aged 40, bronchial *asthma* for sixteen years, with mitral insufficiency and emphysema, for the asthma was given 2,000 antitoxin units. Immediate anxious feeling, great depression, cyanosis and complete collapse. Pulse 140 to 160 and feeble. Respiration shallow. After artificial respiration and active stimulation, improvement with final recovery.

No. 26. A boy subject to *asthma* for many years took an immunizing dose of antitoxin. Immediately had intense dyspnea, cyanosis of lips, face, eyes and hands; pulse faint and rapid, respiration diminished, sibilant rales over lungs; urticaria on face. Nitroglycerine and oxygen used. Improvement in fifteen minutes, complete recovery in twenty-four hours.

No. 30. Man aged 28 who had *acute coryza* with at times some *asthma* when about a horse, took for diphtheria 2,000 antitoxin units. Intense dyspnea with urticaria followed. Some hours later took 4,000 units more without so great reaction. Between the doses took calcium lactate. Recovery. No asthma since.

No. 13. Woman eight and one-half months pregnant, history of *hay fever*, had subacute, polyarticular *rheumatism*, and was given ten units antistreptococcal serum daily for three days, then every two or three days. On fifteenth day and after seventh dose, reaction occurred, and she exclaimed: "I feel so queer. I cannot breathe. I am dying." Surface congested, cyanosis general, edema of head, arms and legs enormous. Pulse feeble and rapid, and respiration feeble. Well next day, with some improvement in rheumatism.

No. 3. Child of six years with a history of *cardiac dyspnea*, for diphtheria took 2,000 units antitoxin. Collapse, but subsequent recovery.

No. 11. A physician who could not be about a horse without *sneezing* and *irritation of eyes, nose and throat*, took immunizing dose of 1,000 units antitoxin, and immediately began to sneeze and experience irritation of eyes, nose, throat, larynx and bronchi, with intense dyspnea. Eyes greatly swollen; also face and scalp edematous. Itching over whole body. On fourth day, having been better, feet and glottis became edematous.

Severe reaction at site of injection. Final recovery.

No. 25. Male aged 18, a subject of *bronchitis*, took immunizing dose of 1,000 units antitoxin at 10 p.m. In fifteen minutes jumped up in great distress, eyes protruding, face red, then white and profusely perspiring, respiration very labored and forty per minute, pulse 128 but strong and full. Sibilant rales over chest. Stimulants and morphia followed by slow improvement. Next day body covered with urticaria.

No. 7. Boy of 10 years with diphtheria, took 4,000 antitoxin units. In a moment clutched his throat with both hands; face pallid and anxious; pain in head and was breathless; cyanosis of lips, face, ears and neck; froth coming from mouth. Pupils dilated, eyes staring. Death in five or six minutes after the injection. Heart acted long after the breathing ceased.

No. 8. Child of 13 months took 600 units of antitoxin for diphtheria. Within ten or fifteen minutes pulse went to 180, respiration to 44; general unrest with some cyanosis for ten hours when death occurred.

No. 12. Male aged 25. Mild diphtheria. Pulse and temperature normal. Took 2,000 antitoxin units. Soon felt heat in cheeks, face flushed, and respiration ceased. Artificial respiration and tracheotomy failed to revive, and death came quickly.

No. 18. Child of 5 years took an immunizing dose of antitoxin. Respiration ceased and death occurred in five minutes.

No. 19. Man aged 29, of neurotic ancestry, took immunizing dose of 800 units antitoxin, and died in thirty-five minutes.

No. 29. A strong child of 7 years was given an immunizing dose of antitoxin and died in five minutes.

No. 9. Child of 6 years took immunizing dose of 600 units. Soon complained of weakness and dyspnea. Health continued to fail for a year. Loss of appetite and weight. In next five years did not become as stout as before.

No. 14. Male adult with rheumatism took five to ten units of antistreptococcic serum every three days, then every two to four days. At the tenth dose general edema, cyanosis and difficult breathing occurred. Recovery, with marked improvement of rheumatism.

Of the thirty cases here collected in which serious symptoms followed the injection of serum, sixteen proved fatal, almost all of these in a very few minutes; also one case of protracted ill health. Of the total number, seventeen of the patients were asthmatic, and five others had some form of respiratory affection, making twenty-two of the thirty cases, and of these ten proved fatal. Of the eight others reported seven were fatal. The serum was given for asthma in six cases with four deaths; for diphtheria in twelve cases with six deaths; as an immunizing agent in ten cases with six deaths; and for rheumatism in two cases, with improvement in both. Thus the lives of ten persons who were free from diphtheria were sacrificed in the effort to cure asthma, or to prevent diphtheria which might never have occurred. While we have no disposition to criticise the use of the serum in any of these cases, yet the results shown are calculated to make us pause; and if isolation be at all possible, should we not separate the well from the sick rather than take even the smallest chance of facing a disaster? Certain it is that the serum should never be resorted to, in the absence of diphtheria, in any case of asthma or other serious bronchial embarrassment, unless indeed, the patient himself, being informed of its dangers, should insist upon its use.

How are the serious results here reported brought about? Evidently primarily through the central nervous system, the serum directly depressing the respiratory centers. This view is held by Rosenau and Anderson, who have carefully investigated the subject, and it is indicated by the fact that in a majority of reported cases the pulse continued full and strong after respiration had ceased. Again, the urticaria and accompanying edema probably acted as a causative factor in bringing about the embarrassment of respiration. We have seen the former come on almost immediately after the ingestion of fish. The reporter of one case in this series remarks: "During this tremendous explosion it was evident to me that the patient had a sudden development of urticaria in the greater and lesser air passages, with real mechanical obstruction. * * * I know of no better name for the attack than acute asphyxiation caused by sudden development of urticaria." J. Solis-Cohen "thinks it possible that the

urticaria and edema which affect the mucous membrane of the mouth and pharynx may extend to the smaller bronchi, with an exudate which mechanically blocks the air cells."

It should be remembered in this connection that diphtheria antitoxin, to say nothing of the other sera, has been used in very many thousands, perhaps millions of cases. Doubtless many serious results have occurred of which we have heard nothing; but allowing for all these, the bad results must be comparatively exceedingly few; and the lives saved have been so very numerous that no one should think of abandoning the remedy in diphtheria, however careful he should be in its use. Whether or not we should depend on other remedies in mild tonsillar diphtheria, each one must determine for himself, holding in mind the legal responsibility that rests upon the physician in the treatment of all his cases. We again suggest, as we have before done in these columns, that if anything suspicious presents in any patient with diphtheria, as asthma, embarrassment of respiration or extreme nervousness, the injection should be administered very slowly, and the greatest care be exercised to avoid injecting a vein, although E. Schreiber, who purposely uses antitoxin intravenously in diphtheria, has thus administered 10,000 units with none but the best results.—S. L. J.

The December number of the *American Journal of Surgery* will be an extra large Philadelphia issue, devoted to contributions from leading surgeons of that city. Among these will be: "A Consideration of the Diagnosis and Treatment of Retro-Displacement of the Uterus," by E. E. Montgomery; "Tumors of the Urethra in Women," by Barton Cooke Hirst; "Roentgen Treatment of Malignant Diseases," by Charles Lester Leonard; "The Control of Hemorrhage During Pregnancy," by Edward P. Davis; "The Diagnosis and Treatment of Ectopic Pregnancy," by F. Brooke Bland; "The Conservation of the Middle Turbinate Body," by William A. Hirschler; "Cyclodialysis," by Walter L. Pyle; "Polypoid Growth of the Rectum and Report of a Recent Case," by Lewis Adler, and papers by Ernest LaPlace, William Campbell Posey, H. M. Christian and John A. McGlinn.

* * *

CHANGE IN MEDICAL COURSE.—In the opening of the medical course of the University of Michigan, a change is made from a four to a six-years course in this department. Heretofore the six-years course has been optional, but from this time on it is made obligatory.

The President of the American Gynecological

Society has appointed a committee to report at the next annual meeting in Washington, on the Present Status of Obstetrical Teaching in Europe and America, and to recommend improvements in the scope and character of the teaching of Obstetrics in America.

The committee consists of the Professors of Obstetrics in Columbia University, University of Pennsylvania, Harvard, Jefferson Medical College, Johns Hopkins University, Cornell University and the University of Chicago.

Communications from any one interested in the subject will be gladly received by the Chairman of the Committee, Dr. B. C. Hirst, 1821 Spruce street, Philadelphia, Pa.

* * *

On October 27th a monument was unveiled at Wilton, Conn., to the memory of Dr. J. Edward Turner, who founded and built the first inebriate asylum in the world. Dr. L. D. Mason, President of the American Society for the Study of Alcohol and other narcotics, delivered the dedicatory address. Dr. H. O. Marcy delivered a historic address on Heroes and Martyrs in Medical Science; and Dr. T. D. Crothers a memorial address on Dr. Turner's Life and Work. Other addresses were made, including one by Dr. Benton, of West Virginia, who was a member of the Committee on Arrangements.

* * *

Dr. Tom A. Williams, of Washington, D. C. specialist in nervous diseases, 1758 K street, has resumed practice after a lengthy vacation in Europe. While abroad he was made an Associate Member de Medicine Mentale Clinique de Paris, and Membre Correspondente de le Societe de Neurologie de Paris.

DR. LYDSTON AND THE AMERICAN MEDICAL ASS'N.

We believe that our readers are entitled to know what is going on in the medical world; and as many of them may not have seen the numerous pamphlets and papers issued by Dr. Lydston, of Chicago, in violent denunciation, especially of the editor of the *Journal of the American Medical Association*, but also of the general management of the affairs of the Association, we have concluded to print the following communication recently received from the author. Heretofore we have avoided any allusion to the course of Dr. Lydston, because his papers were filled with bitter personal denunciation, and were open to the charge of having sprung from a desire to inflict punishment upon an individual, possibly for personal reasons. In the paper here printed, mild in comparison with some earlier ones, occur these unnecessary and impolitic phrases: "political despotism;" "selfish and despotic political ring;" "Czar and his minions;" "power-drunk and money-mad;" "a cabal of self-seeking politicians;" all leaving the impression that the writer may still be influenced by considerations other than the welfare of the American Medical Association. But in his paper are presented certain suggestions that look to the betterment of our national medical organization. These should be calmly considered, entirely apart from the personality of their author. Some of

them we regard as eminently wise, and the Association can not possibly lose anything by looking them squarely in the face, and incorporating in our organic law such of them as may meet with approval after deliberate discussion. Nor can the Association gain anything by completely ignoring suggestions whose adoption gives promise of improved results in the conduct of its affairs.

Heretofore Dr. Lydston's bulletins have received but scant courtesy because, it is presumed, of the bad temper shown in them. Had their writer a tittle of the tact of Dr. Cormack whom he criticizes, he might ere this have been seen some fruits of his labors. Simple denunciation seldom brings about a reform. Few intelligent men can be *driven* to do things, even such things as may be considered desirable. We suggest to Dr. Lydston, granting that he has an honest desire to elevate the character and improve the management of the American Medical Association, a decided change of policy; and a change of leadership even might sooner accomplish the ends desired.

The editor of the Association's Journal has been endorsed by the Lincoln County (Nebraska) Medical Society, the Omaha-Douglass County Society, the Nebraska State Medical Association, and, we believe, the Illinois State and one or more Chicago Medical Societies. This action should forever close the book of history touching the editor's past professional career. Let us deal with the present and future alone, and strive together honestly and earnestly, but in the best of good humor, to enhance the interests of the American Medical Association whose permanent prosperity all should seek. If the suggestions, or any number of them, contained in the paper here presented are such as give promise of leading to this desirable end, they should be considered just as cheerfully as if they originated with the editor himself, or the trustees of the organization. We ask for the paper here presented the close perusal of all our readers.—*Editor.*

THE RUSSIANIZING OF THE AMERICAN MEDICAL PROFESSION.

MY CONTENTIONS PROVEN.

By FRANK LYDSTON, M.D.,

Professor of Genito-Urinary Surgery in the Illinois State University, Medical Department, Chicago.

The entire profession is aware of the battle I have been waging against the political despotism which now controls the American Medical Association. The independent medical journals and the independent medical societies are our only recourse in the battle for liberty and reform. In furtherance of the reform movement, I submitted a paper to the Mississippi Valley Medical Association. In this paper I endeavored to prove that something was rotten in the medical Denmark, and that American medicine is ruled by a selfish and despotic political ring, which gives the rights of the membership at large not the slightest consideration. Fair play, I claimed, was

a word unknown to the vocabulary of the medical Czar and his minions. My paper was put on the preliminary program. Later, the program committee objected to it on the ground that "The Russianizing of the Profession" probably was an attack on the sacrosanct powers of the American Medical Association. (How did they ever guess it?) The committee demanded a copy or abstract of my paper. This I refused to submit to them, stating, however, that my paper was "as strenuous an attack as I knew how to make on principle, on the political ring which controlled the American Medical Association."

The paper was put on the permanent program—No. 30, next to the last paper on the last day of the meeting. Its rightful place was No. 17, on the afternoon of the second day. Having put the paper on the program, no committee had a legal right to exclude it. This is obvious to any one who knows the simplest principles of law. Noting the crooked work of the program committee, I at once telegraphed Dr. Arch Dixon, of Henderson, Ky., who had been assigned No. 17, and asked for his place on the program, which he kindly gave me. The Executive Committee then promptly convened and excluded my paper altogether and asked me to read the paper independently. I consented, with the proviso that I should change the title to "Despotism in American Medicine." I then asked the Chairman of the Committee of Arrangements, if there was any objection to my friends' plans, and he replied that there was not. My friends engaged and paid for a room at the Southern Hotel, the Association headquarters, and the paper was announced. When the time set, 3 p. m., arrived, my friends were informed that they could not have the room, as all the rooms were under the control of the Committee of Arrangements. A room was finally engaged at the Planters' Hotel and the address delivered. I submit to the profession the following questions, viz:

First. Am I right in contending that free speech and liberty of opinion are denied the rank and file of the American Medical Association?

Second. Is the American Medical Association, as at present conducted, a despotism?

Third. Is the Mississippi Valley Association, of which I am one of the oldest members, a free and independent association, or a satellite of the American Medical Association?

Fourth. Is there anything in my contentions which I have not a right to advance as a member of the American Medical Association and a free-born American citizen?

Fifth. Is the American Medical Association American?

Sixth. Is there anything in my contentions to which any fair-minded man could not listen, or which is not conducive to the best interests of everybody save the political machine which runs the American Medical Association?

(Abstract of paper rejected by the Mississippi Valley Association October 12, 1909, at St. Louis Meeting.)

The average American doctor is either too busy or too indifferent to safeguard his own interests, hence he has ever been the dumping ground of

the gold brick industry. The most colossal gold brick ever handed him was the scheme of reorganization of the American Medical Association in 1902. This was speciously fair and full of promise, on the surface, but seemed to conceal the designs of a cabal of self-seeking politicians whose chief ambition was power, place and political prestige for themselves.

The Constitution and By-Laws under which the American Medical Association is now operating, was written by two men—the third did not count—Drs. Simmons and McCormack. The provisions of this document gave multiple offices and despotic power to the chief factor in reorganization, who, strange to say, was formerly an advertising newspaper specialist and is a "regular" by virtue of a diploma obtained by "arrangement." The two men who wrote the Constitution and By-Laws hold the only high-salaried offices of the American Medical Association. Their combined salaries amount to \$17,310.05 per annum. One of them holds three offices, Editor, Secretary and General Manager, and has the power and temperament of a Czar.

The Constitution and By-Laws of the American Medical Association was irregularly adopted, as shown by Dr. W. H. Sanders, (Medical Record, June 10th, July 1st and 15th, 1905). Some of the state machines, following the example of the parent Association, threw legal restrictions to the winds and reorganized with total disregard of membership rights. All protest was smothered by exclusion from the Journal of the American Medical Association, which is controlled by the Czar and his machine.

Power is always corruptive, and grows by what it feeds on, hence it was but natural that the machine which now controls the American Medical Association should have grown more and more despotic as time went on. Abuse of power was to have been expected and has occurred. Members,—even whole societies—have been robbed of their rights. One man, Dr. H. B. Young, of Burlington, Iowa, was declared ineligible to read a paper and illegally expelled from the American Medical Association in 1904 because he opposed the plans of the machine in Iowa. "Harmony" in the American Medical Association, it seems, consists in submission to the will of the machine. "Unification" apparently means submission to one man power.

The Secretary General-Editor-Manager of the American Medical Association has abused his power. He has abrogated the rights of members and has persecuted those whose policies differed from those of his machine. He has tried to injure the private business and credit of members of the American Medical Association. He has prostituted the Journal to his private animosities and to vulgar, everyday policies. He has dealt partially with the friends of the machine and opposed representation of the rank and file. He has published offensive advertisements without rebuke. He has used his position for the political preferment of himself and satellites. As matters stand, the rank and file have no medium of protest or criticism. In all of his overt acts, the Czar of the American Medical Association has had the support of the machine which he constructed.

The American Medical Association has degenerated, under the present regime, into a huge money-making enterprise with all the earmarks of a trust. The walking delegate of the American Medical Association has added the quality of trades unionism by his advice to the laity, not to employ physicians who are not members of the local branch of the American Medical Association.

Quality, rather than numbers, should be the criterion of success in medical organizations. Better a clean, self-respecting association of 5,000 members than one of 50,000 run on the principles of monopoly, politics and money making. The reports of the business of the American Medical Association to the membership at large are absurd, and would not be tolerated by business men. We have a business of \$500,000 per year and an expense account of over \$300,000, yet itemized accounts are never rendered. Worse than this is the fact that nobody but the Treasurer is under bond. Possibly the present machine is "chaste as ice and pure as snow," but who can say who will follow the present officials? Those who venture to criticise the machine are ridiculed and slandered by the machine organs. It seems that the rank and file are not permitted to voice their sentiments. The King can do no wrong. But the rank and file are waking up and things must change. The American Medical Association must reform its machine or a new and democratic association will be the answer to the questions which the rank and file are insistently asking. The control of the American Medical Association must revert to the members, to whom it rightfully belongs. It must become "American" in deed and principles as well as in name. It should return to the high ideals of our medical forefathers and cease striving for monopoly—monopoly which can only be unjust, oppressive and restrictive of our liberties, both as physicians and men.

My contentions for reform in the American Medical Association are as follows:

First. The Constitution and By-Laws should be amended so that the reins of power will be taken from the hands of the Secretary.

Second. The offices of Business Manager, Secretary and Editor should be separated.

Third. The offices of Secretary and Editor should be filled by regularly educated medical men of clean professional records who are not cogs in the present machine. There is always a possibility of a change of names and not of masters.

Fourth. The personnel of the Board of Trustees should to a certain extent be changed. Some of the present incumbents are mere wheels and cogs in the machine.

Fifth. The number of Trustees should be increased. The American Medical Association has outgrown the present Board. The Trustees should serve but one year.

Sixth. There should be at least three local Trustees, acting as a supervising business committee. At present there is but one whose chief function apparently is to endorse the plans and actions of the Secretary General-Editor-Manager. Three men would be harder than one for the machine to handle, and would enhance the possi-

bility of some hard-headed, square toed man having a finger in the pie.

Seventh. The President, Secretary, Trustees and other important officers should be elected by ballot of the members in attendance. The nominations should be made on the first day and the voting done at the place of registration on the succeeding days. This would put a premium on attendance. The stay-at-homes and those who were too lazy to vote would thereby have themselves to thank if things went wrong.

Eighth. Provision should be made for a limited number of nominations for each office by petition.

Ninth. Bonds should be provided for all officers upon whose shoulders rests financial responsibility. At present only the Treasurer is under bond.

Tenth. Full itemized accounts of our business and financial affairs should be rendered the members yearly. The machine of the American Medical Association is power drunk and money mad, and sooner or later the notorious insurance scandals are likely to be duplicated by something nearer home. Human nature, be it essentially corrupt or primarily pure, requires a check system. The weak ones in the regime may not always resist temptation; the strong ones will not live forever, and who can guarantee the strength or honesty of their successors? We have established a "Kingdom of the Dollar" that is all our own, and in that kingdom hungry-eyed graft sooner or later will crowd himself onto the throne and sit beside ambition. *Remember, that we have a business of about \$500,000 per year and an expense account of over \$300,000.* Both items are rapidly increasing.

Eleventh. A membership committee should be appointed to hold office only one year. At present the Secretary is here absolute dictator.

Twelfth. A certain amount of space in the columns of the Journal should be set apart for free criticism, queries and comments by the rank and file. Criticism of the policies and methods of the Association should be especially invited. There is at present an alleged department of query and comment. This department is a joke. If you do not think so, send in a kick against the machine and see what will happen to it. Ask Dr. Young and the members of the Dubuque and Des Moines County Societies.

Thirteenth. The Editor should not be the business manager of the Journal, but a cultured, scholarly, scientific regular physician who devotes his time solely to editorial work. Under proper conditions and restrictions and a suitable salary, the present Editor would make a good business manager, if he were not allowed to obtrude himself into the ethical, political, editorial or professional limelight. Exit Czar and enter employe. Speed the day!

Fourteenth. The initiative and referendum should be adopted as a protection for the suffrages of the members at large.

Fifteenth. Provision should be made for fairness in elections. They should be so arranged that no less than two candidates would be nominated for each office. This would in future prevent

the choking off of nominations and the machine selection of officers.

Sixteenth. No member should be expelled without a fair trial and a full hearing, the proceedings being published *verbatim et literatim* in the columns of the Journal. This plan will obviate such damnable outrages as that perpetrated by the General Secretary-Editor-Manager machine upon Dr. Young.

Seventeenth. The Constitution should provide that no person holding an office of trust or legislation in the American Medical Association or in a State Association shall be eligible to serve as a member of either a State or National House of Delegates. *I again assert that the American Medical Association is un-American in its present operations, and call attention to the disquieting political spectacle of the Treasurer and Trustees of the American Medical Association—men holding offices of financial trust and responsibility—serving as delegates to the body which elects them and voting for themselves.* In the American Medical Association a man may serve as Treasurer or Trustee, Delegate and Elector in both the State and National electoral bodies and vote for himself twice. Beginning with the council of his local society, he may vote for himself three times.

Eighteenth. To strike directly at the root of the political evils which have cast their malevolent spell over the American Medical Association, delegates from subsidiary societies should be elected by direct ballot of the attending members. The governing body of the American Medical Association rise higher than its source. At present the fine work of the Association machine is begun in the State societies. It is here that the first blow is struck at our professional liberties. The little cogs and wheels should receive an application of democratic grease if we are to hope for proper regulation of the major machine.

Nineteenth. If we are to continue to have a "House of Lords," let us carry out our British imitation to its logical ultimate;—by all means let us have a House of Commons. If we wish to pretend an American virtue though we have it not, let us have a House of Representatives as well as a Senate. Give us also a Presidential veto.

A MILD CRITIQUE.

Editor West Virginia Medical Journal:

DEAR EDITOR:—Permit me as a graduate of the University of Berlin and for several years an interne at the Charite hospital of that city to answer the criticism expressed by Dr. Frank L. Hupp, in his "Letter from Berlin", and published in the November issue of this Journal, about the "errors" committed there during the performance of some operations which he witnessed.

The doctor seems to take it for granted that gloves, and especially rubber gloves, are a *conditio sine qua non* for all aseptic operations, and was therefore utterly amazed at the grave error committed by the chief surgeon of Prof. Hildebrand's clinic in omitting them. But while we admit that in certain septic cases or whenever the surgeon's hands are not quite intact gloves are necessary in order to protect the surgeon from infection, we are decidedly opposed to their use in aseptic cases for the following reasons: First,

the contact of gloves as a heterogeneous substance, no matter if rubber, silk or cotton, is harmful to the living tissue; secondly, they may become more easily infected during an operation; and lastly they impair the delicate touch of the hands. The very fact that the assistants and "the man presiding at the instrument tray" wore rubber and cotton gloves respectively tends first to show that they were intentionally omitted by the chief surgeon, and secondly that one kind of gloves has no advantage over another kind and therefore are left to suit the individual taste. Thanks to our modern antiseptics we are fully able to sterilize our hands thoroughly, and even in less time than was thought necessary at the glorious period of Lord Lister's phenol spray.

The doctor criticises further the imperfect mode of shaving the operative field, asserting that in one case "it had been hacked, mutilated, and was a seat of traumatic, pustular eczema", which he attributes to a dull razor. I fail to see, however, why the pustular eczema (which, by the way, usually requires more than 24 hours to develop) should be attributed solely to a dull razor; it is rather to be supposed that a charity patient (as they all are who are admitted to the Charite) might have been afflicted with eczema before having been admitted to the hospital, and in consequence thereof the salutary scratches made by the razor were due to the eczema and not vice versa. Besides, could the doctor with his casual glance at the patient be certain that it really was eczema? Might it not have been some other skin disease, e. g. milium, acne vulgaris, etc., which is so prevalent among those classes of patients?

His criticism of the baskets, "which have seen better days", surely no one will take seriously. A hospital like the Charite, where as many as 30 to 40 operations are sometimes performed in a single forenoon, could not be expected to renew the baskets after each sterilization merely for beauty's sake. And even the Germans with their generally well cultivated sense of beauty ought not to be blamed for not having extended it to the baskets in an operating room used exclusively for charity patients.

That no anaesthetic was used in the special harelip operation which the doctor witnessed, was certainly quite *lege artis*, for according to his description of the technic it must have been a simple fissure of the lip, and in these cases no narcosis is needed.

In conclusion I wish to say that, to quote "schmerzen" instead of Schmerzen is just as absurd as to mistake pain for pain, and that the appropriate motto written on the wall of the Allgemeines (not "Algemeines") Krankenhaus in Hamburg which, as the doctor tells us, was so sadly disregarded by the surgeons of the Charite, ought to have reminded him of the equally appropriate one of Boetius: "Si tacuisses, philosophus mansisses".

Yours very truly,

DR. M. LEON.

Mannington, W. Va., Nov. 15, 1909.

State News

IN MEMORIAM.

Dr. L. R. Charter.

In West Union on September 28th Dr. L. R. Charter, one of the charter members of our State Medical Association, died at the age of almost 93 years, the oldest member of both the State and American Medical Associations. Dr. Charter was born in Springfield, Mass., on October 10, 1816. After teaching school for a few years he studied medicine in Cooperstown, N. Y., where he enjoyed the friendship of Daniel S. Dickinson and J. Fenimore Cooper, two of the nation's most distinguished men. Attending medical school at Albany one term, he graduated at Woodstock, Vt., in 1841, and then took a course of lectures at Pittsfield, Mass., and began practice at Guildford, N. Y. He came to West Union in 1845. He was the first superintendent of schools in Doddridge county, has served as mayor of West Union, as magistrate, United States Commissioner, and for 15 years as United States pension examiner. He was formerly very regular in attendance at the annual meetings of the State Medical Society, and was once a candidate for the presidency. Dr. Charter was twice married, and has left a number of sons and daughters to mourn his death.

From early manhood Dr. Charter was an active and consistent member of the Methodist Episcopal church, being one of five men who purchased the ground upon which the first Methodist Episcopal church was built in West Union.

His private life was clean and pure and he was a gentleman of the highest type. He was affable and pleasant and had a kind word for all. He was public spirited and he had the welfare of the community at heart. Those about him he inspired with a reverence for things sacred. His influence and his counsel were always exerted for the upbuilding of the church and of the material, educational and spiritual interests of the community. In the minds of the most intimate with him there could be no doubt that he regarded the Christian life as the principal thing for which to strive.

The present writer met Dr. Charter at the Boston meeting of the American Medical Association. At that time he was in his ninetieth year. One older member was present, namely, Dr. Garcelon of Maine, then over 90 years old. Dr. Charter attended the meeting of the State Association at Clarksburg in June, 1908, thus manifesting his interest in his chosen profession to the last. But three charter members of our State Association survive, Drs. Dent, Brownfield and Sharp.

* * *

Parkersburg, W. Va., Nov. 23.—A permanent organization of the West Virginia Anti-Tuberculosis League was secured at a convention held here today. In the absence of the president, Mrs. Dawson, wife of ex-Governor Dawson, Dr. Harriett B. Jones, of Wheeling, presided. Ex-Governor Dawson took part in the proceedings and

drafted the constitution, which was adopted. The following officers were elected:

President—Miss Ethel Ruffner, of Charleston.
Corresponding Secretary—Dr. Irene Bullard, of Charleston.

Recording Secretary—Dr. W. W. Golden, of Elkins.

Assistant Recording Secretary—Dr. W. H. Yeakley, of Keyser.

Treasurer—A. M. Seott, of Charleston.

* * *

Dr. Trimble, of Barbour county, has located at the town of Orlando. Dr. Trimble is a well equipped young physieian, and we wish him much suecess in his new field.

* * *

Dr. R. V. Moss.

As the result of a paralytic stroke, Dr. R. V. Moss died at the home of his nephew, A. R. Woodburn, in Moundsville, recently. The deceased, who was visting here, was formerly a resident. The remains were removed to his home at Barboursville for interment.

* * *

Dr. John L. Cooper.

Dr. John L. Cooper, one of the most prominent physicians in the northern part of the State, died at Charleston, in which city he had been visiting his daughter, Mrs. Wise. The deceased, who was 72 years of age, was born in Wellsburg and spent most of his life there. Within the past four years three of his sons, Dr. Joseph Cooper, John J. Cooper and Ashley Cooper, have preceded him to the other shore. The deceased has been for many years a member of the Wellsburg Presbyterian church, and an elder in that ongregation. The remains will be interred in Wellsburg.

* * *

Dr. J. M. Houston, recently of Sherrard, has re-located in Moundsville, his former location. Dr. Cox, formerly of Sherrard, has resumed practice there.

* * *

Dr. R. U. Drinkard, a Johns Hopkins alumnus, is the latest addition to the medical profession of Wheeling. Like all progressive men, he immediately connected himself with the local County Medical Society.

* * *

Dr. C. A. Wingerter was a guest of the Me-Keesport, Pa., Academy of Medicine, and one of the speakers at the annual banquet on the evening of November 18th. The theme assigned to the doctor was "The Medical Academy."

* * *

The Marshall County Medical profession has arranged for lectures on the tuberculosis problem as follows:

December 6—History and cause of consumption, and changes in tissues affected by the disease—Dr. O. F. Covert.

Tuberculosis of the bones, joints and glands—Dr. Schwinn.

December 7—Conditions that predispose to consumption—Dr. Hall.

Legislation in relation to tuberculosis—Dr. Jepson.

December 8—For women only—Dr. Harriet B. Jones.

December 9—Country sanitation, drainage, food contamination and bovine tuberculosis—Dr. W. P. Bonar.

Tuberculosis of the lungs—Dr. Wingerter.

Tuberculosis from an economic standpoint—Dr. W. Streibich.

December 10—City sanitation, garbage, sewerage, flies, public spitting and the fly as a disseminator of disease—Dr. McCullough.

Management of tuberculosis—Dr. Bone.

It is hoped that the other speakers have had more notice of which is expected of them than has "ye editor," who as yet has not been consulted touching the lectures, although his name appears on the printed program.

Society Proceedings

MINUTES OF THE FORTY-SECOND ANNUAL SESSION

Of the West Virginia State Medical Association, Held in Elkins, October 6, 7 and 8, 1909.

HOUSE OF DELEGATES.

TUESDAY, OCTOBER 5TH, 8:00 P. M.

The House of Delegates was called to order in the Court House at 8:00 P. M., Tuesday, October 5th, by President Howell. The roll call showed the following members present:

A. S. Bosworth,	G. D. Lind,
H. L. Carter,	G. C. Rodgers,
W. S. Robertson,	J. W. Hopkins,
G. A. MacQueen,	H. H. Young,
J. E. Rader,	F. T. Ridley,
J. C. Irons,	P. A. Haley,

R. E. Venning.

The secretary read his report as follows:

*SECRETARY'S REPORT.

The following committee was appointed to report upon the recommendations therein, namely: Doctors J. C. Irons, J. E. Rader, E. W. Smoot, G. A. MacQueen, and L. W. Talbott.

The treasurer's report was read by Dr. Nicholson, as follows:

*TREASURER'S REPORT.

The report was received and referred to the council for audit.

The report of the Committee on Malpractice Defense was read by Dr. W. W. Golden, received and referred to a committee consisting of Doctors H. H. Young, C. A. Wingerter, and F. T. Ridley.

WEDNESDAY, OCTOBER 6TH, 11:00 A. M.

On motion of Dr. Jepson, no member shall speak longer than five minutes.

Dr. H. G. Nicholson made a verbal report for the Committee on Public Policy and Legislation,

*These reports lost in printing office.

and asked that the committee be continued through this session.

Dr. Jepson reported for the Committee on Publication and same was referred to the council for audit.

Dr. O. F. Covert made his report as delegate to the American Medical Association.

The Committee on Secretary's Report made the following recommendations:

"Your committee, to whom was referred the suggestions of the secretary, in his report, respectfully recommend as follows:

(1) Owing to the labor and expense in having the minutes printed and bound, and learning that bound volumes of the transactions can be secured for perhaps one-fourth the cost of the former, we recommend the purchase of the bound volumes of transactions at a price not to exceed \$20.00.

(2) We recommend the printing of 2000 copies of revised Constitution and By-Laws.

(3) We recommend emphasizing the duties of the *councilors* when elected by reading their duties, and thus (or otherwise) impress them with their responsibilities and thus secure better service.

(4) As the Malpractice Defense, etc., is under consideration by another committee, we defer to said committee.

Signed: J. C. IRONS,
G. A. MACQUEEN,
E. W. SMOOT,
J. E. RADER,
Committee."

The report was received and the committee discharged.

On motion, a committee consisting of Doctors Walden, Young, and Rodgers was appointed to adjust salaries of the secretary and treasurer for five months from May to October, 1909.

THURSDAY, OCTOBER 7TH, 9:30 A. M.

Dr. Jepson offered a resolution amending Article XII, Section II, which was referred to the general meeting.

On motion, the changes recommended in the by-laws were taken up by section and voted upon.

The sub-committee appointed to report upon the salary of secretary and treasurer for the months in excess of their regular year, reported as follows:

"The sub-committee appointed to report upon the salary of secretary and treasurer for the months in excess of their regular year, recommend that the secretary receive \$100.00 and the treasurer \$50.00 for their extra service.

(Signed) H. H. YOUNG,
J. G. WALDEN,
Committee."

The council reported as follows:

"Board of Councilors met Thursday morning at ten o'clock, Dr. Linsz in the chair.

The report of the editor of the JOURNAL, Dr. S. L. Jepson, was received and adopted.

Moved by Dr. Linsz that we donate to the editor of the JOURNAL, out of the general fund,

sufficient amount to make his salary \$1,000.00 for the year ending July 1, 1909,—

\$ 261.66
738.34

\$1000.00

and that the salary of the editor of the JOURNAL be \$1000.00 for the ensuing year, which amount shall include the net proceeds from publication of the JOURNAL.

Report of Councilors on local societies:

REPORT OF COUNCILORS.

Salary for secretary for ensuing year, \$200.00 and \$100.00 for clerk hire.

Salary for treasurer reduced to \$50.00 for ensuing year.

Election of officers:

Chairman—Dr. Linsz.

Secretary—Dr. Haley.

Motion by Dr. Venning that the councilors have examined into the election of officers for the ensuing year, and found it entirely correct and legitimate.

Moved by Dr. Benton that we re-appoint Dr. Jepson, editor, and Drs. L. D. Wilson, Lind and Wingerter, assistant editors of the JOURNAL for the ensuing year.

The report was received and, with the exception of the salary of the treasurer (which the House of Delegates fixed at \$75.00), their report was adopted as read.

FRIDAY, OCTOBER 8TH.

The election of officers resulted as follows:

President—T. W. Moore, Huntington.

First Vice President—C. L. Holland, Fairmont.

Second Vice President—James McClung, Richmond.

Third Vice President—A. L. Grubb, Berkeley Springs.

Secretary—A. P. Butt, Davis.

Treasurer—H. G. Nicholson, Charleston.

Councilors—1st District, G. H. Benton; 2nd District, J. C. Irons; 3rd District, B. B. Wheeler; 4th District, L. O. Rose (one year), A. S. Grimm (two years); 5th District, J. E. Rader.

Delegates to the American Medical Association—A. S. Bosworth and C. A. Wingerter. Alternates, C. S. Hoffman, H. D. Hatfield.

The Committee on the President's Address reported as follows:

"Your committee begs to report that the president's address should be commended to the earnest attention of all the members of the Association because of the excellent ideas and suggestions contained in it.

Special attention is deserved for its eloquent insistence upon the need of our maintaining the highest standard of professional conduct towards each other at all times.

Its convincing plea for the united action of a harmonious profession in the furthering of the good, both of the public and of our colleagues, should be taken to heart by the rank and file, and is recommended to their earnest consideration.

The splendid suggestion concerning the education of the public in every community in the State, by means of public lectures on subjects of which the laity should have exact knowledge, is

recommended to the component societies for action.

Upon the House of Delegates and the General Meeting is urged the very great importance, as suggested in the address, of living up to the strictest letter of our organic laws. Every law may in its enforcement work a hardship in particular instances; nevertheless, the only safe road to travel along the line of strict enforcement. If a law is useless or harmful, the best way to demonstrate that fact is by keeping the law active until it is repealed, and not allowed to remain a dead letter upon the statute books.

Respectfully submitted,

(Signed) CHAS. A. WINGERTER,
J. M. MILLER,
O. F. COVERT,
Committee."

The report was received and the committee discharged.

The report of the sub-committee on Malpractice was presented by Dr. Wingerter, as follows:

"Your committee hereby recommends that the report of the Committee on Medical Defense be printed in circular form and a copy be sent to each of the component local societies, with a request that each of such societies discuss the general plan outlined, vote thereon, and forward the result of such vote to the chairman of the Committee on Medical Defense appointed at the annual session of 1908.

(Signed) H. H. YOUNG,
CHAS. A. WINGERTER,
FRANCIS T. RIDLEY,
Committee."

The report was received and the committee discharged.

On motion, the president was authorized to appoint a committee on Tuberculosis Sanatorium.

Dr. Wingerter offered the following resolution:

"Resolved, That the West Virginia State Medical Association gives its hearty endorsement to the West Virginia Society of Social Hygiene, in its purpose to promote the cause of Social Hygiene, and that we will co-operate with its aim."

On motion this resolution was adopted.

Parkersburg was selected as the place of meeting next year.

V. T. CHURCHMAN, *President.*
T. W. MOORE, *Secretary.*

APPOINTMENTS BY THE PRESIDENT.

Scientific Work—The President and Secretary

PUBLIC POLICY AND LEGISLATION.

First District—J. W. McDonald, Chairman, R. W. Fisher.

Second District—A. M. Fredlock, W. Holmes Yeakley.

Third District—H. G. Nicholson, J. E. Robins.

Fourth District—C. E. Rose, W. H. Young.

Fifth District—J. R. Bloss, J. Howard Anderson.

MEDICAL EDUCATION.

J. McK. Sites, Chairman; S. L. Jepson, C. N. Slater.

MALPRACTICE DEFENSE.

W. W. Golden, Chairman; G. A. Wingerter, J. E. Cannaday.

PUBLICATION.

S. L. Jepson, Chairman; L. D. Wilson, G. D. Lind, C. A. Wingerter.

ON TUBERCULOSIS SANITORIUM.

Harriet B. Jones, Chairman; T. L. Hood, A. A. Shawkey, T. Jud McBee, E. W. Smoot.

FRATERNAL DELEGATES.

Maryland—Howard Osburn; alternate, J. N. Simpson.

Pennsylvania—H. R. Johnson; alternate, M. Virginia McCune.

Ohio—R. H. Powell; alternate, J. T. Thornton. Virginia—V. T. Churchman; alternate, F. T. Ridley.

Kentucky—L. T. Vinson; alternate, Tunis Nunemaker.

Mississippi Valley—L. H. Forman; alternate, H. Lon Carter.

West Virginia Pharmaceutical Association—H. C. Scaggs, O. F. Covert.

Council on Legislation A. M. A.—Frank LeMoyné Hupp.

Public Address—G. A. Aschman.

Oration in Medicine—W. H. Sharp.

Oration in Surgery—C. R. Enslow.

KANAWA COUNTY SOCIETY.

This society has issued a printed program of work covering the period from November 2 until June 21. We give it in full, as it may contain hints of use to other societies.

November 2—Enlargement of Prostate, R. C. Bryan, Richmond, Va. Discussion opened by J. E. Cannaday, Charleston.

November 23—Diagnostic Methods in Gastric Disorders, G. B. Capito, Charleston. Discussion opened by B. S. Preston, Charleston.

December 7—Gall Tract Surgery, C. L. Bonni-
field, Cincinnati. Discussion opened by H. G. Nicholson, Charleston.

December 21—Constipation, W. W. Tompkins, Charleston. Discussion opened by J. M. McConihay, Charleston.

January 4—Meningitis—W. F. Shirkey, Malden, W. Va. Discussion opened by P. L. Gordon, Charleston.

January 18—Peritonitis, Stuart McGuire, Richmond, Va. Discussion opened by G. C. Schoolfield, Charleston.

February 1—Nephritis, Acute and Chronic, E. W. Mitchell, Cincinnati, O. Discussion opened by W. W. Tompkins, Charleston.

February 15—Asthma, J. W. Moore, Charleston. Discussion opened by V. T. Churchman, Charleston.

March 1—Rheumatism, Thomas McCrae, Baltimore, Md. Discussion opened by W. A. McMullan, Charleston.

March 15—Phthisis, G. A. MacQueen, Charleston. Discussion opened by W. R. Hughey, Charleston.

April 5—Valvular Heart Diseases, C. O'Grady, Charleston. Discussion opened by S. S. Staunton, Charleston.

April 19—Pneumonia, C. A. Ray, Leewood, W. Va. Discussion opened by H. H. Young, Charleston.

May 3—Management of Abnormal Labor, G. C. Schoolfield, Charleston. Discussion opened by A. A. Shawkey, Charleston.

May 17—Anaemia, H. L. Robertson, Charleston. Discussion opened by G. H. White, Charleston.

June 7—Displacement of Uterus, W. S. Gardner, Baltimore, Md. Discussion opened by R. T. Davis, Charleston.

June 21—Infant Feeding, James Putney, Charleston. Discussion opened by E. A. Davis, Charleston.

OHIO COUNTY SOCIETY.

Woman's Medical Organization.

We recently learn that the women physicians present at the Clarksburg meeting last year formed a State organization. The officers elected were as follows:

President—Dr. Harriet B. Jones, Wheeling.

Vice President—Dr. Zenia E. Bond, Salcm.

Secretary—Dr. E. M. Chalfant, Shinnston.

At the recent Elkins meeting the following met and continued the same officers:

Drs. Harriet B. Jones, Wheeling; Phoebe G. Moore, Mannington; Mary V. McCune, Martinsburg; Susa A. Price, Marlinton; Mary J. Fortney, Hundred, and Estalee M. Chalfant, Shinnston.

There are said to be thirteen women physicians in the State. A note from the secretary of the Woman's Medical Society says:

"The members of this society will also be members of the State Medical Association, and will hold their meetings at the same time and place."

But we are pained to note that not all are yet within the ranks of the State Association. It should be the first duty of this young organization to gather into the fold all the women doctors in the State. It will be unlucky for the thirteen to remain without some protection.

Reviews

TEXT-BOOK OF MODERN MATERIA MEDICA AND THERAPEUTICS. By A. A. Stevens, M. D., Professor of Therapeutics and Clinical Medicine, Woman's Medical College, Philadelphia. Fifth revised edition. Octavo of 675 pages. Philadelphia and London: W. B. Saunders Company, 1909. Cloth, \$3.50 net.

This work has been long before the profession, and that it has proven to be a very acceptable book is demonstrated by the appearance of a fifth edition. An introductory chapter deals with definitions of different preparations of drugs, their preparation, incompatibilities, methods of administration and dosage. The author does not follow the alphabetical method in treating of drugs, but classifies them according to their action. The

physiological action of each drug is concisely given, and its action on the different systems; also its toxicology, contraindications, dosage and therapeutic applications. The author has the art of putting facts clearly and briefly. Remedies other than drugs are given careful consideration, as electricity, massage, the Nauheim baths, Roentgen rays, etc. We regret to note the absence of any mention of psychotherapy. The concluding part of the work—150 pages—is devoted to "Applied Therapeutics", in which diseases are briefly treated. Among the smaller works on the subject, this is certainly one of the most satisfactory. We like it because it contains no waste material. We long for the time when half the drugs even here considered shall be discarded.

TRANSACTIONS OF THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA, 1909.

This is a handsome bound volume of 700 pages, in which many valuable medical papers lie buried, when they might have been given to the profession in a live Journal. But few State associations now publish an annual volume. We believe all should publish a monthly journal instead. This is the trend of the times. The Alabama *Medical Journal* is called "the organ of the State Association," but is it owned by the Association?

WEEKLY PUBLIC HEALTH REPORTS, Vol. XXIII, Part 2, 1908.

This book is issued by Surgeon General of the United States Public Health and M. H. S., and consists of statistics of deaths and other reports made to the above department from this and other countries. The book contains also some valuable papers by officers of the service, bearing on public sanitation.

PRIMER OF SANITATION. By John W. Ritchie, Professor of Biology, College of William and Mary, Va. Published by The World Book Co., Yonkers, N. Y.

We have examined this little book with some care, and are impressed with its value. It could well be substituted for many books on Physiology now used in the schools, and which contain a mass of material of little or no use to any pupil. Not so this book. It imparts in a very plain way, and with many illustrations, facts of value as to the causes and modes of prevention of disease. Every family should have a copy.

VISCERAL SURGERY IN ABSTRACT. By A. Stewart, M. D.

ARTHIROSTEOPEDIC SURGERY—Surgery of the extremities and skeleton. By Stewart L. McCurdy. Each \$1.00.

These two books are of the "Vest Pocket Abstract Series," published by Medical Abstract Publishing Co., Pittsburgh, Pa. The amount of information packed into these books is surprising. They are most valuable for quick reference in emergencies, to refresh one's memory prior to an examination or surgery, or as reviews of the subjects considered.

MORTALITY STATISTICS. Bulletin No. 104, Census Bureau.

This is advanced information from the forthcoming Census Report. It shows the general death rates, causes of deaths and occupational mortality of the registration area. The death rate for 1908 in this area was only 15.4 per 1000 population, showing last year to have been one of remarkably low mortality.

THE ENZYME TREATMENT FOR CANCER.

By W. S. Bainbridge, M. D.

This valuable report is published by authority of the Committee on Scientific Research of the New York Skin and Cancer Hospital. We hope to give the conclusions reached in the next issue of the Journal.

PAMPHLETS RECEIVED.

Twentieth Annual Report of the Sheltering Arms Hospital, Hansford, W. Va. J. Ross Hunter, M. D., Sup't.

Number patients in house, May 1, 1908.....	35
Number patients entered during the year....	713
Number of out patients treated.....	60
Deaths, 47; discharged, 711.....	758
Number remaining.....	50
Average number of patients per day in hospital	34+

STUDIES UPON LEPROSY.

V. Report on Treatment of Six Cases of Leprosy with Nastine. By Drs. W. R. Brinckerhoff and J. T. Watson.

VI. Leprosy in the United States of America in 1909. By W. R. Brinckerhoff, M. D.

Four cases were unaffected by the nastine, two showed "slightly encouraging results."

Report VI. shows the presence of leprosy in our States as follows:

Louisiana, 50; Florida, 20; California, 24; Minnesota, 16; Texas, 12; Massachusetts, 8; New York (City), 4; South Carolina, 3; Washington, Wisconsin, New Jersey, Missouri, District of Columbia and Virginia, each 1. Total, 139.

Dr. Adam Hammer, Surgeon and Apostle of Higher Medical Education. By J. M. Ball, M. D.

Magnesium Infiltration. By John Aulde, M. D.

Multiple Stricture of Small Intestine—A Case. By Drs. W. V. Hayes and W. S. Bainbridge.

The Enzyme Treatment of Cancer—Final Report. By W. S. Bainbridge, M. D.

Simple Refraction for Family Physicians. By Leartus Connor, M. D.

A New Preparation of Bismuth. By W. H. Birchman, M. D.

The Rational System of Medical Education. By Leartus Connor, M. D.

Methods and Objects of State Examinations. By W. T. Councilman, M. D.

Needs, Methods and Value of Medical College. Inspection by Dr. N. P. Colwell.

Blood Transfusion. By J. D. S. Davis, M. D.

Evils of Proprietary Medication—Responsibility of the Medical Press. By Dr. W. W. Golden.

Medical Outlook

ALCOHOL AS AN ANTIDOTE TO CARBOLIC ACID—Dr. H. J. Novack, of Philadelphia, in the *Monthly Cyclopaedia and Bulletin*, by experiments on dogs shows that carbolic acid in the stomach is not neutralized by alcohol, but the latter is positively injurious.

When a large amount of phenol has been taken and alcohol is given; while the poison is still in a free state, death will be much hastened, just as in the dog. The alcohol in this case acts like an oil in phosphorus poisoning, by increasing absorption. The alcohol mixes with the free phenol in the stomach and, acting like pure alcohol except to a less degree, forces the phenol already imbedded in the mucous coat of the stomach into the circulation, following which the remainder of the contents are absorbed, death rapidly ensuing. Should the free acid in the stomach be first removed and then followed by alcohol, the result would depend upon the quantity of phenol already imbedded in the mucous coat of the stomach. This quantity when large, upon diffusion and rapid absorption, would result in death; but, if not enough to be dangerous to the system when absorbed, alcohol would be of great benefit by hastening the elimination of the poison in a diluted state. Even then there is great danger to the kidneys.

The importance, therefore, of first removing whatever poison there is in the stomach before using alcohol cannot be too strongly urged. This is best accomplished by lavage. Some believe lavage to be contraindicated on account of the corrosive action of the phenol upon the stomach and the danger of perforation; but it must not be forgotten that particularly phenol, of all corrosive poisons, limits its destructive progress and, therefore, does not weaken the stomach to such an extent as to make the passage of a stomach tube dangerous.

Many solutions can be used for lavage in phenol poisoning, but by far the best results are obtained from a solution of the two most well known and best antidotes for this poison, namely, albumin and magnesium sulphate. To every eight or ten ounces of water, a few grains of sodium chloride are added and the white of one egg dissolved, then enough magnesium sulphate is added to saturate the solution. A clear solution results and when a drop of phenol is added to it in a test tube, a uniform white precipitate will immediately occur. Care should be taken not to add too much albumin in making this solution, as lavage will become difficult due to the clogging of the stomach tube by the albumin coagulated by the phenol in the stomach.

The phenol exerts its energy upon the albumin in this solution more thoroughly and rapidly than upon albumin alone. It combines feebly with the magnesium sulphate chemically, is mildly astringent and does not force the poison through the albuminous film into the system, as does alcohol. This solution is of not much benefit when left in the stomach together with a poisonous amount of phenol, but for lavage it cannot be excelled. Although the albumin is coagulated by the phenol,

still it does not combine with it chemically and is a means of bringing up the free phenol.

Alcohol is of great value externally when used early, but late the destruction of tissue is not prevented, although the appearance is better.

On account of the repellent and solvent properties of alcohol, it is dangerous to be left in the stomach together with the phenol.

The advised treatment is first lavage with some solution as the magnesium-sulphate-albumin mixture, followed by lavage with a solution of alcohol as a clearing agent.

WHEN TO AMPUTATE THE INJURED—EDWARD DEMOSS, M. D., of Nashville, Tenn., in a paper read at Nashville Academy of Medicine and published in the *Southern Practitioner*, thus summarizes the situation:

"Recently injured limbs demanded primary amputation can be divided into two groups: (1). Those whose general condition is good, the symptoms of shock slight, and in whom the loss of blood has been limited. Amputation may be done in such cases in two, three or four hours after injury. (2). Cases severely shocked belong to the second group, and if the efforts to bring about reaction are futile, the operation will be fatal. However, if reaction begins to develop, it may improve and become complete or satisfactory under anaesthesia by ether and a reasonably rapid amputation. Fowler says that "amputation should be performed as soon as the patient reacts sufficiently from the shock to bear the anesthetic." In my observation, if reaction has commenced in severe injuries, it will increase under ether.—G. D. L.

SURGICAL TUBERCULOSIS—R. LUNSTALL TAYLOR, B.A., M. D., Baltimore, in the *Virginia Medical Semi-Monthly* for January, has an excellent article on this subject. The following is the author's summary:

1. The X-ray is by all odds the best aid to the clinical diagnosis of tubercular bone disease.

2. The subcutaneous injections of large doses of tuberculin (one to five milli grams) in children, is to be condemn for diagnosis as unnecessary with the other means at our disposal, because harmful and possibly dangerous. Syphilis and leprosy also respond to these large doses.

3. Conjunctival or ophthalmo-tuberculin may cause corneal ulcer and serious eye inflammations in two per cent of the cases and is, therefore, not to be used from choice.

4. The Von Pirquet skin reaction is quite reliable, safe and valuable, especially in conjunction with clinical symptoms and the X-ray in children.

5. Tuberculin T. R. in doses of from 1-1000 to 1-500mgm and the fresh air treatment should be used as a routine in a tubercular bone and joint cases in an endeavor to immunize the patient.

6. Thorough fixation traction in all acute cases and in the spine, hyperextension in addition, are of the greatest importance treating the local disease.

7. Bier's hyperemia and Beck's bismuth paste are valuable additions and adjuvants to treatment.

8. Tuberculous secondary abscesses should not

be opened unless there is some decided reason therefor, and, if opened, should be immediately sutured tight after the pus is evacuated. Otherwise, a secondarily infected sinus will surely result with its train of unfavorable symptoms.

9. Operations on the tubercular joints of children should be avoided if possible; not so with adults.—G. D. L.

TOTAL ANURIA FOR TWENTY-THREE DAYS WITH RECOVERY—This remarkable case is reported in the *Journal of the New Jersey State Society* by Dr. W. D. MINNINGTON, of Newark. Mrs. M., aged 34, two years before had twins; in three days a chill with fever of 106, pain in right lumbar region. Suppression of urine for three days, when albuminous urine was passed. In 14 months had another attack of pain and anuria for 11 days. On 12th day much pus-laden urine was voided. Convalescence was slow both times. In September last, sudden pain occurred in same region, and was followed by complete suppression of urine for 23 days. Dr. Ill was called, patient was sent to hospital for observation; catheterization repeatedly failed to bring any urine. Diagnosis determined the absence of one kidney with "a very much enlarged and fluctuating right kidney."

"An incision was made in the right lumbar region beginning at a point below the last rib and outer edge of the erector spinae muscle, running downward and forward toward the iliac crest. From the pelvis of the kidney about 500 c.c. of thick foul smelling pus was evacuated which was under great tension. Four phosphatic calculi were also removed, three of these were taken from the renal calyces, while the fourth was lodged firmly in the ureter and extracted only with considerable difficulty through the upper ureteral orifice without injuring the ureter. Drainage was provided for by means of a "horseshoe" drainage tube and gauze. Three of the calculi were almond shaped but larger, the fourth was triangular in shape. The bacteriological findings showed large numbers of colon bacilli in the pus. Improvement set in rapidly and continued uninterruptedly.

For the first day drainage was very profuse, but there was no evidence of any urine. On the second day drainage was less profuse and about a half ounce of bloody fluid was obtained by catheter. On the third day the discharge from wound had a decided urinous odor. Fourth day—voided frequently in amounts of from one to four ounces, passed 29 ounces in all for the 24 hours. From this time on increasing quantities were voided daily. Beginning with the tenth day the daily output varied between 40 and 50 ounces.

Patient was discharged well on the 29th day."

The writer cites cases reported by others in which the urine was suppressed for periods from 11 to 28 days, but usually ending fatally. One case recovered after 13 days of anuria. Among the older writers a number of cases are quoted as interesting but unreliable, in which anuria is said to have continued for 22 weeks, 6 months, 8 months, and one in which the patient, instead of urinating vomited fluid with a urinous odor periodically for 8 years.—S. L. J.

A NEW SIGN OF PREGNANCY—In the *Charlotte Medical Journal* is noted a new sign of pregnancy pointed out by Hertzl and which he calls "hypertrichosis," which manifests itself by an abundance of hair "in the place where the hair ought to grow," but by its growth in places usually devoid of hair. In one case of a primipara of 26 years, the hair in the usual places was much more abundant than normal, and in addition a marked growth extended from the symphysis pubis to the ziphoid along the linea alba. There was also a marked growth of hair on the face, several long hairs being on the chin. The entire body also was covered with a well marked growth of lanugo hairs. This hypertrichosis developed early in pregnancy, and is usually well marked by the third month of pregnancy. In a case of uncertain diagnosis, this sign may in exceptional instances give aid to the physician. Further observations in ordinary pregnancy seems necessary to determine the value of the sign.—*S. L. J.*

VICARIOUS MENSTRUATION FOLLOWING HYSTEROPENY WITH OVARIOTOMY—*DR. LIEGENSPECK*, in *Muenchener Med.izinische Wochenschrift*, reports a case of a woman of 26 who after undergoing the operation of fixation of uterus with removal of both ovaries, continued to menstruate, at first every four weeks and then every three weeks and finally with shorter intervals until there was a continuous discharge attended with very bad symptoms, resembling a traumatic peritonitis, retention of urine, tenesmus and pain. So great was the annoyance that he earnestly considered the propriety of again setting the uterus free. A year after the original operation the womb was set free. Six years later the patient came again, this time troubled with vicarious menstruation from the mammary glands.—*G. D. L.*

Members of the State Medical Association

Name.	Postoffice.	Name.	Postoffice.
Abel, W. C.	West Union, Doddridge.	Bombarger, G. L.	Victoria, Preston.
Abercrombie, J. W.	Wheeling, Ohio.	Bonar, W. P.	Moundsville, Marshall.
Abbott, J. G.	Piedmont, Mineral.	Bond, Xenia E.	Salen, Harrison.
Ackerman, Gregory.	Wheeling, Ohio.	Bond, W. C. D.	Waverly, Wood.
Adkinson, B. H.	Corley, Braxton.	Booher, W. T.	Bethany, Brooke.
Albert, C. W.	Hinton, Summers.	Bosworth, A. S.	Elkins, Randolph.
Albin, A. O.	Charles Town, Jefferson.	Bosworth, J. L.	Huttonsville, Randolph.
Alexander, E. W.	Wheeling, Ohio.	Bosworth, J. W.	Philippi, Barbour.
Alkire, J. P.	Everson, Marion.	Bosworth, Perry.	Huttonsville, Randolph.
Allen, J. J.	Wheeling, Ohio.	Bowcock, J. McCue.	Monongah, Marion.
Allen, S. P.	Webster Springs, Webster.	Bowers, H.	Sugar Grove, Pendleton.
Amick, A. L.	Charleston, Kanawha.	Bowles, Wm. C.	Milton, Cabell.
Amick, W. D.	Glen Alum, Mingo.	Boyd, John R.	Oakvale, Mercer.
Amos, C. F.	Mt. Clare, Harrison.	Boyers, C. F., Sr.	Fairmont, Marion.
	(Moved to Mesopotamia, Ohio.)	Boyers, C. F., Jr.	Fairmont, Marion.
Anderson, J. H.	Marytown, McDowell.	Boyers, W. F.	Fairmont, Marion.
Anderson, Maury.	Ward, Kanawha.	Boynton, E.	Millersville, Pa. (G.-H.-H.-M. Soc.)
Armbrrecht, E. L.	Wheeling, Ohio.	Brandebury, H. A.	Huntington, Cabell.
Arbuckle, J. A.	Elkins, Randolph.	Brasgonier, R. K.	Keystone, McDowell.
Arnett, C. T.	Clarksburg, Harrison.	Brashear, C. B.	Wellsburg, Brooke.
Arnett, U. G.	Henderson, Mason.	Brock, L. S.	Morgantown, Monongalia.
Aschman, G. A.	Wheeling, Ohio.	Brown, H. M.	Union, Monroe.
Aultz, L. L.	Griffithsville, Kanawha.	Brown, Homer H.	Richwood, Nicholas.
Aultz, O. L.	Charleston, Kanawha.	Brown, R. J.	Sutton, Braxton.
Austin, S. C.	Madison, Boone.	Brown, Robt. L.	Parkersburg, Wood.
Babb, W. M.	Keyser, Mineral.	Brown, W. A.	Hambleton, Tucker.
Baber, J. H.	Finlow, Fayette.	Brown, W. W.	Shenandoah J'n., Jefferson.
Baird, Reed McC.	Wheeling, Ohio.	Brownfield, G. H.	Fairmont, Marion.
Baker, Jas. A.	Shirley, Tyler.	Browning, J. E.	Whitesville, Boone.
Baker, F. W. L.	Burlington, Mineral.	Bruce, G. W.	Moundsville, Marshall.
Banks, McRae C.	Raleigh, Raleigh.	Bruns, W. F.	Ceredo, Wayne.
Barber, T. L.	Charleston, Kanawha.	Buffington, E. S.	Huntington, Cabell.
Barker, O. D.	Parkersburg, Wood.	Burden, Frank.	Paw Paw, Morgan.
Barlow, C. A.	Benwood, Marshall.	Burgess, T. D.	Louisa, Ky. (Mingo Soc.)
Barlow, P. D.	McMechen, Marshall.	Burgess, W. H.	Williamson, Mingo.
Barnett, A. B.	Wheeling, Ohio.	Burk, J. A.	Crawford, Lewis.
Barrow, A. L.	Kilsythe, Fayette.	Burwell, Nathaniel.	Shepherdstown, Jefferson.
Barrows, J. E.	Ravenswood, Jackson.	Burt, A. M.	Elkins, Randolph.
Bates, C. S.	Smithfield, Wetzel.	Bush, A. B.	Weston, Lewis.
Bates, C. S.	Folsom, Harrison.	Bush, S. Warren.	Morgantown, Monongalia.
Beard, C. Y.	Cheyenne, Wyo. (Lewis-Upshur Soc)	Butt, A. P.	Davis, Tucker.
Bee, A.	Cairo, Ritchie.	Caldwell, J. R.	Wheeling, Ohio.
Bennett, E. C.	Richwood, Nicholas.	Camden, Rolla.	Parkersburg, Wood.
Benton, G. H.	Chester, Hancock.	Campbell, Henry J.	Huntington, Cabell.
Best, D. B.	Wheeling, Ohio.	Camobell, H. M.	Parkersburg, Wood.
Biddle, J. S.	New Haven, Mason.	Campbell, J. A.	Wheeling, Ohio.
Biggs, J. D.	Holden, Logan.	Campbell, W. A.	Davis, Tucker.
Bigony, J. F.	Hinton, Summers.	Cannaday, J. E.	Charleston, Kanawha.
Bird, B. W.	Princeton, Mercer.	Cantle, H. C.	Austen, Preston.
Bitner, E. H.	Martinsburg, Berkeley.	Capito, G. D.	Charleston, Kanawha.
Blair, S. F.	Parkersburg, Wood.	Carr, Hugh.	Fairmont, Marion.
Bloss, J. R.	Huntington, Cabell.	Carter, H. L.	Danville, Boone.
Boggs, Preston.	Franklin, Pendleton.	Carwell, U. M.	Hendricks, Tucker.

Name.	Postoffice.	Name.	Postoffice.
Casto, A. H.	Sandyville, Jackson.	Eakle, O. O.	Tesla, Braxton.
Casto, C. E. T.	Parkersburg, Wood.	Easley, E. M.	Bluefield, Mercer.
Casto, D. C.	Parkersburg, Wood.	Echols, W. E.	Richwood, Nicholas.
Casto, P. C.	Spencer, Roane.	Edgell, A. M.	Smithville, Wood.
Casto, V. L.	Ripley, Jackson.	Edgell, L. L.	Keyser, Mineral.
Chafin, J. A.	Baileysville, Mingo.	Elliott, T. H.	Gauley Bridge, Fayette.
Champe, I. P.	Charleston, Kanawha.	Ellis, J. E. R.	Grafton, Taylor.
Chaney, T. H.	Montrose, Randolph.	English, J. W.	McDowell, McDowell.
Chenoweth, J. F.	Simpson, Taylor.	Enslow, C. R.	Huntington, Cabell.
Churchman, V. T.	Charleston, Kanawha.	Eskey, L.	Wheeling, Ohio.
Clark, L. H.	Kyle, McDowell.	Etzler, W. C.	Wheeling, Ohio.
Clay, C. E.	Martinsburg, Berkeley.	Evers, Florence B.	Martinsburg, Berkeley.
Cobun, L. W.	Morgantown, Monongalia.	Fadeley, J. M.	Pt. Pleasant, Mason.
Cochran, C. S.	Follansbee, Brooke.	Falconer, H. S.	Fairmont, Marion.
Cole, I. D.	Academy, Pocahontas.	Fairfax, H. R.	McComas, Mercer.
Coleman, H. M.	O'Keefe, Mingo.	Farley, A. A.	Matewan, Mingo.
Coleman, J. E.	Fayetteville, Fayette.	Farley, H. H.	Logan, Logan.
Cook, Macdonald.	Big Creek, Logan.	Farley, H. R.	Elkhorn, McDowell.
Cook, T. G.	Academy, Pocahontas.	Farley, W. F.	Holden, Logan.
Cook, W. E.	Algoma, McDowell.	Fawcett, W. P.	Alderson, Monroe.
Cooper, J. E.	Cameron, Marshall.	Few, S. D.	Parsons, Tucker.
Cooper, O. O.	Hinton, Summers.	Fisher, M. O.	Parkersburg, Wood.
Copeland, C. E.	Charleston, Kanawha.	Fisher, R. W.	Morgantown, Monongalia.
Corbin, M. L.	Ellenboro, Ritchie.	Fitch, F. A. W.	Huntington, Cabell.
Corder, J. W.	Clarksburg, Harrison.	Fittro, E. B.	Salem, Harrison.
Cornett, B. F.	Bluefield, Mercer.	Flowers, A. O.	Clarksburg, Harrison.
Covert, O. F.	Moundsville, Marshall.	Flowers, E. N.	Clarksburg, Harrison.
Cox, B. B.	Morgantown, Monongalia.	Fogle, F. M.	Rowlesburg, Preston.
Cox, J. A.	Morgantown, Monongalia.	Folk, John.	Bridgeport, Harrison.
Cox, J. E.	Stanaford, Raleigh.	Foreman, L. H.	Buckhannon, Upshur.
Cox, N. B.	Shinnston, Harrison.	Fortney, C. S.	Hundred, Marshall.
Cracraft, L. K.	Elm Grove, Ohio.	Fortney, Mary J.	Hundred, Marshall.
Cracraft, W. A., Jr.	Wheeling, R. F. D., Ohio.	Fox, Geo. W.	Ansted, Fayette.
Craft, J. H.	Princeton, Mercer.	fox, J. A.	Hinton, Summers.
Crittenden, T. B.	Horton, Randolph.	Fox, J. Francke.	Bluefield, Mercer.
Crow, H. M.	Morgantown, Monongalia.	Frame, A. N.	Parkersburg, Wood.
Culp, I. J.	Farmington, Marion.	Fredlock, A. M.	Elkins, Randolph.
Cummings, Edward.	Hinton, Summers.	Friedenwald, E. B.	Charleston, Kanawha.
Cummings, W. R.	Guyandotte, Cabell.	Frissell, C. M.	Wheeling, Ohio.
Cunningham, J. L.	Pickens, Randolph.	Fulton, W. S.	Wheeling, Ohio.
Cunningham, W. H.	Blue Jay, Raleigh.	Gardner, M. E.	Dunlevie, Pocahontas.
Cure, M. D.	Weston, Lewis.	Garred, B. P.	Hernshaw, Kanawha.
Currence, Louise J.	Clarksburg, Harrison.	Gaston, Wade.	Parkersburg, Wood.
Curry, A. W.	Ronceverte, Greenbrier.	Gaston, Wm.	Clarksburg, Harrison.
Curry, W. C.	Flemington, Taylor.	Gates, M. A.	Ronceverte, Greenbrier.
Dailey, W. F.	Terra Alta, Preston.	Gaydosh, M.	Wheeling, Ohio.
Dalbey, W. M.	Wheeling, Ohio.	Gibbens, P. A.	Morgantown, Monongalia.
Daniels, H. W.	Elkins, Randolph.	Gillespie, Thurman.	Wheeling, Ohio.
Dare, F. T.	Wellsburg, Brooke.	Glancey, P. H.	Parkersburg, Wood.
Davis, Edwin A.	Charleston, Kanawha.	Glass, Earl F.	Wheeling, Ohio.
Davis, Eugene.	Charleston, Kanawha.	Glass, M. W.	Wellsburg, R. F. D. No. 4, Brooke.
Davis, Geo. H.	Chester, Hancock.	Gochenour, Geo. S.	Moorefield, Hardy.
Davis, G. R.	Price Hill, Fayette.	Godbey, M. V.	Charles Town, Jefferson.
Davis, Owen.	Beckley, Raleigh.	Goff, J. J.	Parkersburg, Wood.
Davis, R. T.	Charleston, Kanawha.	Goff, J. M.	Hazelgreen, Ritchie.
Davis, W. M.	Bridgeport, Harrison.	Goff, L. C.	Elkridge, Fayette.
Davidson, W. J.	Parkersburg, Wood.	Goff, T. N.	Kenova, Wayne.
Davison, I.	Flemington, Taylor.	Goff, W. P.	Clarksburg, Harrison.
Deem, Hamlin.	Lubeck, Wood.	Goings, H. C.	Thacker, Mingo.
DeForest, W. C.	Clarksburg, Harrison.	Golden, W. W.	Elkins, Randolph.
Dempsey, W. E.	Charleston, Kanawha.	Goodman, H. L.	Thayer, Fayette.
DeBell, A. W.	Powellton, Fayette.	Gordon, P. L.	Charleston, Kanawha.
Denham, Cecil.	Weston, Lewis.	Graham, Jas. A.	Fairmont, Marion.
Dent, Wm. M.	Newburg, Preston.	Green, W. H.	Camden, Lewis.
Dew, F. R.	Adamston, Harrison.	Gregory, J. L.	Charleston, Kanawha.
Dew, R. H.	Salem, Harrison.	Gribble, O. S.	Beverly, Randolph.
Dickey, J. L.	Wheeling, Ohio.	Grier, Jno. A.	Sistersville, Tyler.
Dickerson, H. B.	Ansted, Fayette.	Grimm, A. S.	St. Marys, Pleasants.
Dolin, A. J.	Foster, Boone.	Grose, Ed J.	Lansing, Fayette.
Doneho, Robt. S.	Fairview, Hancock.	Grove, J. B.	Petersburg, Grant.
Dowler, M. A.	Glendale, Marshall.	Grubb, A. L.	Berkeley Springs, Morgan.
Downing, T. F.	Wheeling, Ohio.	Gruber, M. F.	Helvetia, Randolph.
Douglass, E. H.	Petroleum, Wood.	Guilford, S. W.	Marlinton, Pocahontas.
Dove, Wm.	Horton, Randolph.	Guthrie, J. A.	Huntington, Cabell.
Doyle, J. H.	Grafton, Taylor.	Guthrie, L. V.	Huntington, Cabell.
Draper, Sam.	Logan, Logan.	Haley, P. A.	Charleston, Kanawha.
Draper, S. A.	Logan, Logan.	Hall, C. H.	Elkins, Randolph.
Drinkard, R. U.	Wheeling, Ohio.	Hall, E. T. W.	Freemansburg, Lewis.
Drinkwater, W. G.	Gormanian, Grant.	Hall, H. M.	Wheeling, Ohio.
Duffy, J. J.	Rosbyrock, Marshall.	Hall, R. W.	Moundsville, Marshall.
Dunham, R. W.	Bemis, Randolph.	Halterman, C. W.	Clarksburg, Harrison.
Dunlap, W. V.	Rush Run, Fayette.	Hamilton, E. M.	Belington, Barbours.
Dupty, E. S.	Parral, Fayette.	Hamilton, Geo. M.	Correctionville, Iowa.
Durrett, J. J.	Fairmont, Marion.	Hamilton, M. F.	Mannington, Marion.
Dye, J. A.	Minnora, Kanawha Soc.	Hamrick, R. A.	Dorfee, Clay.
Dye, Victor Hugo.	Sistersville, Tyler.	Haning, N. A.	Wheeling, Ohio.
Dyer, O.	Franklin, Pendleton.	Hankins, J. L.	Century, Barbours.
Eagle, A. B.	Martinsburg, Berkeley.	Hanna, U. H.	Spruce, Pocahontas.
Eakin, Byron W.	Carlisle, Fayette.	Hannah, Alex.	Sardis, Harrison.
		Hannan, W. H.	Levels, Hampshire.

Name.	Postoffice.	Name.	Postoffice.
Hansford, J. H.	Pratt, Kanawha.	Johnson, J. B.	Laneville Tucker.
Harden, B. F.	Wellsburg, Brooke.	Johnson, J. P.	Wellsburg, Brooke.
Hardy, Irvin	Davis, Tucker.	Johnson, S. B.	Franklin, Pendleton.
Hare, O. S.	Bluefield, Mercer.	Johnston, W. L.	McDowell, McDowell.
Harless, W. Frank.	Clothier, Boone.	Jones, A. P.	Pennsboro, Ritchie.
Harloe, W. W.	Matoaka Mercer.	Jones, E. C.	Exchange, Braxton.
Harris, L. N.	Mill Creek, Randolph.	Jones, Frederick W.	Montgomery, Fayette.
Harris, T. A.	Parkersburg, Wood.	Jones, Harriet B.	Wheeling, Ohio.
Harris, T. G.	Mineral, Harrison.	Jones, II. C.	Bluefield, Mercer.
Harrison, B. E.	Cottageville, Jackson.	Judge, H. L.	Wellsburg, Brooke.
Haskins, T. M.	Wheeling, Ohio.	Judy, W. J.	Kerens, Randolph.
Hatfield, A. J.	Madison, Boone.	Kahle, C. E.	Sistersville, Tyler.
Hatfield, E. R.	Elverton, Fayette.	Kalbaugh, Z. T.	Piedmont, Mineral.
Hatfield, F. P.	Parkersburg, Wood.	Keever, L. F.	Parkersburg, Wood.
Hatfield, H. D.	Eckman, McDowell.	Keever, W. S.	Parkersburg, Wood.
Hatfield, S. D.	laeger, McDowell.	Keiffer, B.	Jacksonburg, Wetzel.
Haught, F. T.	Morgantown, Monongalia.	Keim, P. S.	Elk Garden, Mineral.
Haynes, F. L.	Sun, Fayette.	Kelly, A. O.	Wallace, Harrison.
Haynes, R. A.	Clarksburg, Harrison.	Kelly, J. H.	Parkersburg, Wood.
Haynes, W. N.	Boomer, Fayette.	Kelly, M. B.	Wheeling, Ohio.
Hawes, Chas. M.	Huntington, Cabell.	Kelly, W. C.	Morgantown, Monongalia.
Heath, C. Frank.	Weston, Lewis.	Kemper, A. J.	West Milford, Harrison.
Henderson, O. J.	Montgomery, Fayette.	Kent, O. A.	Huntington, Cabell.
Hennen, L. S.	Moundsville, Marshall.	Kerr, W. W.	Volga, Barbour.
Henry, C. O.	Fairmont, Marion.	Kessler, J. C.	Colven, Webster.
Hereford, W. D.	St. Albans, Kanawha.	Kidd, J. W.	Burnsville, Braxton.
Hersey, J. R.	Wheeling, Ohio.	Killey, J. C.	Vivian, McDowell.
Hicks, Chas. F.	Welch, McDowell.	King, W. P.	Weston, Lewis.
Hicks, I. C.	Huntington, Cabell.	Kirk, J. B.	Elkhorn, McDowell.
Hicks, Jas. O.	Central City, Cabell.	Klase, W. N.	Carbondale, Fayette.
Hicks, W. D.	Huntington, Cabell.	Knott, S. T.	Shepherdstown, Jefferson.
Highberger, W. T.	Maysville, Grant.	Koimer, W. A.	Sullivan, Raleigh.
Hildreth, E. A. II.	Wheeling, Ohio.	Kornmann, L. F.	Clarksburg, Harrison.
Hildreth, E. A. III.	Wheeling, Ohio.	Ladwig, O. W.	Evenwood, Randolph.
Hill, F. W.	Fairmont, Marion.	Langfitt, Frank V.	Salem, Harrison.
Hill, E. A.	Clarksburg, Harrison.	Lanham, T. F.	Grafton, Taylor.
Hinzman, W.	Troy, Gilmer.	Lantz, J. O.	Hartmansville, Grant.
Hirst, H. P.	Lectown, Jefferson.	Lantz, Percival.	Alaska, Mineral.
Hoff, M. M.	Philippi, Barbour.	Lawson, S. B.	Logan, Logan.
Hoffman, C. S.	Keyser, Mineral.	Leahy, Wm. J.	Mannington, Marion.
Hoffman, O. H.	Thomas, Tucker.	Lee, C. B.	Glen Jean, Fayette.
Hogg, C. C.	Huntington, Cabell.	Leeson, D.	Adamson, Harrison.
Holden, W. H.	Clarksburg, Harrison.	LeFever, Edgar B.	Bunker Hill, Berkeley.
Holland, C. L.	Fairmont, Marion.	LeMaster, A. J.	Bedington, Berkeley.
Holroyd, S. R.	Athens, Mercer.	Lemon, C. W.	Claremont, Fayette.
Holsberry, F. S.	Bower, Braxton.	LeSage, Isaac R.	Huntington, Cabell.
Hood, T. M.	Clarksburg, Harrison.	Lewis, Geo. E.	Chester, Hancock.
Hoover, M. T.	Palmer, Braxton.	Lind, G. D.	Richwood, Nicholas.
Hopkins, J. W.	Fayetteville, Fayette.	Link, W. S.	Parkersburg, Wood.
Horgan, Edmond J.	Jenningston, Tucker.	Linsz, H. P.	Wheeling, Ohio.
Hott, David	Morgantown, Monongalia.	Littlefield, J. R.	Albert, Tucker.
Houston, I. N.	Moundsville, Marshall.	Long, D. J.	Piedmont, Mineral.
Houston, J. M.	Moundsville, Marshall.	Lott, H. H.	Masontown, Preston.
Howard, E. W.	Fairmont, Marion.	Louchery, D. C.	Clarksburg, Harrison.
Howell, Fleming	Clarksburg, Harrison.	Love, Robt. W.	Moorefield, Hardy.
Howells, G. L.	Worthington, Marion.	Lovett, G. G.	Bulltown, Braxton.
Hudkins, O. L.	Flat Woods, Braxton.	Lovett, J. M.	Huntington, Cabell.
Hudson, C. W.	Parkersburg, Wood.	Low, M.	Parkersburg, Wood.
Huff, Ford	Parsons, Tucker.	Lucas, C. C.	Kerneysville, Jefferson.
Hupp, F. L.	Wheeling, Ohio.	Lucas, J. B.	Maybeury, McDowell.
Hughard, J. E.	Cliff Top, Fayette.	McBee, T. Jud.	Elkins, Randolph.
Hughart, J. R.	Burnsville, Braxton.	McCarty, J. Louis	Berwind, McDowell.
Hughey, Wm. R.	Charleston, Kanawha.	McClelland, J. O.	Wright, Raleigh.
Hume, B. L.	Barboursville, Cabell.	McClung, Jas.	Richwood, Nicholas.
Hume, W. W.	Beckley, Raleigh.	McClung, P. W.	Elizaheth, Wirt.
Hundley, G. A.	Masontown, Preston.	McClung, T. C.	Roncoverte, Greenbrier.
Hunter, J. O.	Red Sulphur Springs, Monroe.	McCollum, J. R.	St. Marys, Pleasants.
Hunter, J. Ross.	Hansford, Kanawha.	McComb, J. J.	Ona, Cabell.
Hunter, W. L.	Red Sulphur Springs, Monroe.	McConihay, J. M.	Charleston, Kanawha.
Hutchins, W. S.	Wheeling, Ohio.	McCoy, O. D.	Wheeling, Ohio.
Hutson, H. E.	New Milton, Doddridge.	McCullough, J. C.	Moundsville, Marshall.
Hyer, John E.	Curtin, Nicholas.	McCune, M. V.	Martinsburg, Berkeley.
Irons, J. C.	Elkins, Randolph.	McCuskey, L. H.	Pleasant Valley, Marshall.
Irvine, A.	McDowell, McDowell.	McCutcheon, L. D.	Richwood, Nicholas.
Irving, G. B.	Coopers, Mercer.	McDonald, J. E.	Logan, Logan.
Jackson, J. A.	Roncoverte, Greenbrier.	McDonald, J. W.	Fairmont, Marion.
James, Hugh Sawyer.	Putney, Kanawha.	McElfresh, Edward.	Point Pleasant, Mason.
Jamison, J. A.	Fairmont, Marion.	McFerren, Sam.	Falling Spring, Greenbrier.
Jamison, W. C.	Fairmont, Marion.	McGlumphy, W. G.	Moundsville, Marshall.
Jarrell, K. M.	Clear Creek, Raleigh.	McGovern, A. M.	West Union, Doddridge.
Jarvis, C. C.	Clarksburg, Harrison.	McGuire, F. E.	Mt. Hope, Fayette.
Jeffers, G. D.	Parkersburg, Wood.	McGuire, Jno. P.	Clarksburg, Harrison.
Jennings, Geo. A.	Sistersville, Tyler.	McGuire, T. J.	Parkersburg, Wood.
Jepson, S. L.	Wheeling, Ohio.	McGuire, Wm. C.	Huntington, Cabell.
Jett, J. C.	Bluefield, Mercer.	McIntire, G. L.	New Martinsville, Marshall.
Johnson, C. C.	Meadowville, Randolph.	McIntosh, E. R.	Elkins, Randolph.
Johnson, C. F.	Pruntytown, Taylor.	McJones, George.	Island Branch, Kanawha.
Johnson, G. W.	Terry, Raleigh.	McKinney, L. L.	Burnsville, Braxton.
Johnson, H. R.	Fairmont, Marion.	McLain, W. H.	Wheeling, Ohio.
		McLaughlin, J. M.	Webster Springs, Webster.

Name.	Postoffice.
McMillen, R. M.	Wheeling, Ohio.
McMillen, W. A.	Charleston, Kanawha.
McNeer, Lewis C.	Dante, Va. (Mercer Soc.)
McNeilan, M.	Parkersburg, Wood.
McSherry, J. W.	Martinsburg, Berkeley.
Mackin, R. D.	Grafton, Taylor.
MacQueen, G. A.	Charleston, Kanawha.
Mahood, C. F.	Alderson, Fayette.
Malcolm, M. P.	Lewiston, Kanawha.
Maloy, J. S.	Shinnston, Harrison.
Mankin, J. W.	Thurmond, Fayette.
Manning, G. W.	Dobbin, Grant.
Manson, R. H.	Minden, Fayette.
Marshall, L. J.	Charlestown, Jefferson.
Martin, A. Y.	Winfield, Putnam.
Martin, C. A.	Mahan, Fayette.
Martin, E. B.	Augusta, Hampshire.
Martin, J. E.	Bluefield, Mercer.
Martin, L. O.	Parkersburg, Wood.
Marsh, W. A.	Margaret (R. F. D. 25) Harrison.
Mason, S. M.	Clarksburg, Harrison.
Matheny, Benj. F.	Meadowbrook, Harrison.
Matson, F. L.	Hundred, Wetzel.
Mayer, D.	Charleston, Kanawha.
Mayer, Joe.	Winfield, Putnam.
Maxwell, C. H.	Morgantown, Monongalia.
Megraill, W. P.	Wheeling, Ohio.
Meighan, T. H.	Wheeling, Ohio.
Michael, W. S.	Morgantown, Monongalia.
Michaels, J. F.	Fellowsville, Preston.
Micou, M. T.	Bluefield, Mercer.
Miller, Jas. I.	Kenova, Wayne.
Miller, Jos. L.	Thomas, Tucker.
Miller, J. M.	Halltown, Jefferson.
Miller, R. B.	Hinton, Summers.
Miller, R. W.	Martinsburg, Berkeley.
Miller, W. D.	Weaver, Randolph.
Monroe, J. A.	Wheeling, Ohio.
Monroe, Mary B.	Wheeling, Ohio.
Montgomery, L. C.	Montgomery, Fayette.
Moomau, F.	Franklin, Pendleton.
Moomau, Glenn.	Petersburg, Grant.
Moore, C. L.	Harding, Randolph.
Moore, J. W.	Charleston, Kanawha.
Moore, S. G.	Coalton, Randolph.
Moore, T. W.	Huntington, Cabell.
Morgan, C. G.	McMechen, Marshall.
Morgan, D. P.	Clarksburg, Harrison.
Morgan, E. H.	Eagle, Fayette.
Morris, A. L.	Ansted, Fayette.
Morris, J. S.	Charleston, Kanawha.
Morrison, Lon C.	Hurricane, Putnam.
Morrison, M. T.	Sutton, Braxton.
Moser, W. C.	Morgantown, Monongalia.
Moss, V. R.	Barboursville, Cabell.
Mossman, E. J.	Point Pleasant, Mason.
Murphy, F. B.	Philippi, Barbour.
Musgrave, D. E.	Standard, Kanawha.
Myers, J. W.	Wheeling, Ohio.
Neal, Hugh W.	Glady, Randolph.
Neal, S. H.	Elkhorn, McDowell.
Neal, Wm. E.	Huntington, Cabell.
Nedrow, J. S.	Bruceston, Preston.
Nedrow, W. C.	Bruceston, Preston.
Neill, Wm.	Charles Town, Jefferson.
Nichols, A. B.	Wheeling, Ohio.
Nicholson, H. G.	Charleston, Kanawha.
Noome, A. J.	Wheeling, Ohio.
Nunemaker, Tunis.	Williamson, Mingo.
Nutter, R. B.	Enterprise, Harrison.
Nutter, T. L.	Clarksburg, Harrison.
Oates, T. K.	Martinsburg, Berkeley.
O'Brien, John.	Marting, Fayette.
Oesterling, H. E.	Wheeling, Ohio.
Ogden, C. R.	Clarksburg, Harrison.
Ogden, Geo. R.	Flemington, Taylor.
Ogden, P. B.	Shinnston, Harrison.
O'Grady, Chas.	Charleston, Kanawha.
Osborn, J. J.	Wheeling, Ohio.
Osborn, Robert Linn.	Clarksburg, Harrison.
Oshurn, Howard.	Rippon, Jefferson.
Owen, B. A.	Greenville, Monroe.
Owens, H. K.	Elkins, Randolph.
Owens, Wm. T.	Mt. Clare, Harrison.
Oyster, L. C.	Lumberport, Harrison.
Palmer, Gist.	Wellsburg, Brooke.
Palmer, Joseph.	Wellsburg, Brooke.
Palmer, W. N.	Hinton, Summers.
Parsons, A. M.	Branchland, Lincoln.
Parsons, E. H.	Piedmont, Mineral.

Name.	Postoffice.
Tauley, D. F.	Jeffrey, Boone.
Pearcy, C. L.	West Union, Doddridge.
Peck, B. W.	Lester, Raleigh.
Peck, C. R.	Clarksburg, Harrison.
Peck, D. C.	Grafton, Taylor.
Peck, Nelson.	Clarksburg, Harrison.
Peck, S. P.	Hinton, Summers.
Peery, Thos. E.	Bluefield, Mercer.
Pence, G. L.	Hinton, Summers.
Perry, O. L.	Elkins, Randolph.
Perry, R. G.	Jarvisville, Harrison.
Perry, W. F.	Halltown, Jefferson.
Peters, A. L.	Rivesville, Marion.
Peters, C. C.	Flat Top, Mercer.
Peters, E. F.	Maybeury, McDowell.
Pettit, J. G.	Weston, Lewis.
Petty, B. L.	Peytona, Boone.
Phillips, F. M.	Charles Town, Jefferson.
Phillips, Geo. W.	Blacksville, Monongalia.
Pickering, W. D.	Topin's Grove, Jackson.
Pifer, J. L.	Buckhannon, Upshur.
Pittman, J. J.	Charles Town, Jefferson.
Plant, E. B.	Wheeling, Ohio.
Poole, A.	West Union, Doddridge.
Post, Arthur T.	Clarksburg, Harrison.
Post, S. H.	Romains Mills, Harrison.
Post, W. H.	Masontown, Preston.
Powell, R. H.	Grafton, Taylor.
Pratt, C. E.	Wheeling, Ohio.
Pratt, S. A.	Kingwood, Preston.
Preston, B. S.	Burnwell, Kanawha.
Preston, C. B.	Burnwell, Kanawha.
Preston, G. D.	Eckman, McDowell.
Price, H. D.	Parkersburg, Wood.
Price, R. C.	Morgantown, Monongalia.
Price, Susan A.	Marlinton, Pocahontas.
Price, S. W.	Scarbro, Fayette.
Price, W. H.	Chattaroy, Mingo.
Prichard, Karl C.	Huntington, Cabell.
Prickett, J. T.	Parkersburg, Wood.
Proudfoot, M. H.	Rowlesburg, Preston.
Putney, Jas.	Charleston, Kanawha.
Pyle, J. L.	Chester, Hancock.
Quaintance, R. W.	Rend, Fayette.
Queensberry, G. O.	Hinton, Summers.
Quimby, A. J.	Wheeling, Ohio.
Rader, J. E.	Huntington, Cabell.
Rankin, B. S.	Funnelton, Preston.
Ransom, B. B.	Harper's Ferry, Jefferson.
Rappold, J. M.	Bandra (Texas).
Ravenscroft, J. H.	Rambleton, Tucker.
Ray, C. A.	Charleston, Kanawha.
Reed, R. J.	Wheeling, Ohio.
Rex, L. E.	Wheeling, Ohio.
Rexroad, C. W.	Harrisville, Ritchie.
Reyburn, J. A.	Ravenswood, Jackson.
Reynolds, J. H.	Huntington, Cabell.
Reynolds, O. E.	Guyandotte, Cabell.
Rhinehart, A. B.	Terra Alta, Preston.
Richmond, J. Edw.	Colliers, Brooke.
Rickey, J. W.	Moundsville, Marshall.
Ridley, Frances T.	Bluefield, Mercer.
Riedy, J. A.	Monongah, Marion.
Riggs, C. W.	Cameron, Marshall.
Rinehart, G. M.	Cassville, Monongalia.
Ritter, D. Ed.	Marshallville, Harrison.
Ritter, W. E.	Clay, Kanawha.
Robertson G. C.	Clendenin, Kanawha.
Robertson, H. L.	Ward, Kanawha.
Robertson, W. B.	Mammoth, Kanawha.
Robertson, W. S.	Charleston, Kanawha.
Robins, J. E.	Charleston, Kanawha.
Robinson, B. O.	Parkersburg, Wood.
Rodgers, G. C.	Elkins, Randolph.
Rogers, Weaver B.	Marble, Minn. (Harrison Soc.)
Rohrbough, C. L.	Belington, Barbour.
Roller, R. D.	Eccles, Raleigh.
Rose, E. E.	Hinton, Summers.
Rose, L. O.	Parkersburg, Wood.
Row, W. D.	Huntington, Cabell.
Rowsey, J. H.	Huntington, Cabell.
Ruble, A. F.	Elm Grove, Ohio.
Rudasill, D. J.	Kingwood, Preston.
Rupert, L. B.	Nuttallburg, Fayette.
Rupert, L. D.	Frankford, Greenbrier.
Rusmisl, C. C.	Gassaway, Braxton.
Rusmisl, J. A.	Gassaway, Braxton.
Rutherford, A. G.	Thacker, Mingo.
Ryan, D. M.	Indian Mills, Summers.

Name.	Postoffice.
St. Clair, W. H.	Bluefield, Mercer.
Sameth, J. L.	Welch, McDowell.
Sammons, J. L.	Calis, Marshall.
Sands, W. H.	Fairmont, Marion.
Sanns, Harry V.	Le Sage, Cabell.
Sarver, C. B.	Charleston, Kanawha.
Sayer, D. A.	New Haven, Mason.
Schoolfield, E. R.	Wevaco, Kanawha.
Schoolfield, G. C.	Charleston, Kanawha.
Schwinn, J.	Wheeling, Ohio.
Scott, B. F.	Terra Alta, Preston.
Scott, C. J.	Parkersburg, Wood.
Scott, Chas. M.	Bluefield, Mercer.
Shaffer, J. S.	Cannellton, Fayette.
Shanklin R. V.	Gary, McDowell.
Sharpe, J. T.	Charleston, Kanawha.
Sharp, W. H.	Parkersburg, Wood.
Shawkey, A. A.	Charleston, Kanawha.
Shelton, C. J.	Williamson, Mingo.
Shepherd, W. S.	Slab Fork, Raleigh.
Sheppard, J. M.	Falls Mills, Va. (Mercer Soc.)
Sheridan, C. R.	Maysville, Ky.
Shields, Thos. K.	Triadelphia, Ohio.
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Sites, J. McK.	Martinsburg, Berkeley.
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Spangler, C. W.	Jared, McDowell.
Spencer, Walter R.	Huntington, Cabell.
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Steele, S. M.	Weston, Lewis.
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Stephens, W. B.	Bramwell, Mercer.
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Swann, P. H.	Huntington, Cabell.
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Thayer, A. H.	Grafton, Taylor.
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Vean, H. H.	Richwood Nicholas.
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Original Articles

THE PUBLIC AND THE PHYSICIAN.

C. S. Hoffman, M.D., Keyser, W. Va.

(The Public address delivered at the West Virginia State Medical Association at Elkins, W. Va., Oct. 6, 1909.)

LADIES AND GENTLEMEN, MR. PRESIDENT AND MEMBERS OF THE MEDICAL ASSOCIATION:

I appreciate the compliment which this annual occasion is intended to confer upon the one who is selected to deliver the public address. I have found it no small matter to select a subject that will be of sufficient interest to be entertaining. Being neither of a theoretical nor a poetical temperament, I have tried to select a practical subject, which I hope will be of interest, even though I rehearse matters that are probably familiar to us all. I have selected the subject of "The Public and the Physician," and as the scope is too wide to be embodied in one short paper, I shall refer to a few of the thoughts that can be embraced under this head.

The present is a period great for organizations; combines are being formed all over the world; labor is organizing; trusts are organizing; new societies are being constantly organized. The women, even, are organizing their societies and circles, and lately the negroes are organizing their societies, or orders. I am not here to con-

demn these organizations. They claim that it is all in the interest of humanity and I know that they are great benefactors, but these societies are quite restricted in their benefactions, confining their work principally to their own members, and then only when in good financial standing. "Dues unpaid or in arrears not beneficial," is the rule. A brother only when in good financial standing. Efforts for the betterment of humanity confined principally to members of their lodges and their families only. So restricted are they that passwords and signs and grips must be used to prevent the spread of the beneficial influence to any outside of the order. They do their good in a limited manner. But I am here to present to you by way of contrast an organization, or an association, as wide as the world; an order with open doors; no secret sessions, nor countersigns, nor private grips; an order whose only aim is to relieve suffering humanity wherever found; an order in which neither creed nor color is recognized; an order which spurns the idea of greed for gain; an order of men and women whose ambition has been to outrival each other in suggestions and inventions to assuage the sufferings of pain or disease, and then, after discovering the appliances or treatment, scatters this knowledge broadcast over the world; the only compensation asked is that it may be the means of doing good. This order I introduce to you as the association of medical men who are now gathered in your town. I know this is not the general idea of the public, but nevertheless it is true.

Are you aware that of all the medical and surgical instruments invented by doctors not one of them carries a patent? Is there any other body of men in this world who would do this? Is there any other field where gain could be made so readily? Job said, "All that a man hath will he give for his life." If the making of money was the only trade of the medical profession the ground would afford fertile soil. Physicians as a rule are good livers, but candidly, unless a doctor has an inheritance or marries a rich woman, did you ever hear of one accumulating great riches? I am not referring to any one of those gentlemen who occasionally enter the profession boasting that he is in it only for the money that he may accumulate. Occasionally we find these men in the field, but they do not come in by the beaten paths, generally climbing up some other way. The Bible describes these climbers as thieves and robbers, and most likely it is correct.

The practice of medicine is a high calling. In fact, I know of no higher, or one which demands more self-sacrifice, and the man who enters it with no other motive than greed is a reproach, "and the physician to whom the scientific and humanitarian aspect of medicine means nothing; the man who practices solely for what he can make; the man who finds no interest in medicine outside of that which he puts in his pocket; that man is on a level with the conscienceless quack and the sooner he leaves the profession the better for it and the public." And yet notwithstanding what I have said in its favor, are you aware that the medical profession is the most abused of all professions. Did it ever occur to you that it is the only profession, or body of men and women, who are working for their own extinction as a profession that the public may live; that in the urging of the enactment of the laws for the prevention of disease and pestilence it is urging the enactment of laws for its own destruction. Will any other profession do this? Do they do it? And I want to mention one other of its merits which should be the glory of every physician. The medical profession stands pre-eminently above all other professions or organizations for honor, not like other organizations regarding the virtue of the home sacred only among its own members; it is of a higher

order; and in no other profession is the honor of women so highly esteemed, or so sacredly guarded, or so rarely violated.

There is a prevalent idea with the public to some extent, and I know not why, that some sort of mystery surrounds the field of medicine. In ages past, when a doctor's only capital was his wise and mysterious look, and when his only stock of drugs consisted of one metallic pill, and when a lady patient of refinement remarked, after taking it, that she was afraid it would not accomplish the desired result, he remarked that he was sure it would, as he had given the very same pill to fifty-six other patients before she took it and it had not failed with them and therefore he felt sure it would not fail in her case. When medicine was based on an idea of this sort it behooved a doctor to look wise and mysterious, but for years past medicine has been coming away from this mysticism. The public is becoming educated; the profession is becoming educated; and today this medical meeting in your city has for its only aim the advancement of knowledge for the public's good, and these meetings are not held behind closed doors, but all the public are invited to attend. The whole of the benefit is not for the physician but for you and your children, and those of this state who are not able to attend this meeting.

The oily tongue and the owlish wise appearance of a doctor has no place in the medicine of today, but is the capital of the patent medicine vender, the deceiver, or quack. There is, as it should be, no mystery in medicine, and yet how easy it is to assume an impressive air, to appear something which we are not, to try to impress the public with wisdom we do not possess. There are, I am sorry to say, a few of this class of physicians, and I presume there always will be. The churches and secret orders are very careful in the selection of their members, and every one is tested before admitted, but with all their vigilance undesirable members do occasionally get in; and so with the medical profession, but I feel thankful this is the exception. Honesty is the best road to success; it may take a little longer; it may require a little more explanation, but it is safer and surer of its results. The highest duties of the physician should be the avoidance of mystery in

medicine, and the practice of truthfulness and simplicity with his patients.

Medicine is based on a solid foundation; it is a practical art; its foundations are sure. At present we know but little of what we expect to know in the future. There is a vast field before us; new discoveries, new appliances and new treatments are being brought forth every day. Medical progress in the last few years has been the astonishment of the world, until again the time of visible miracles seems upon us, and the dawn of the millennium almost come. For are not the blind now made to see; the deaf to hear; the lame to walk; and the poor have the gospel preached unto them. There is no need of misconceptions upon the part of the public, or misrepresentation on the part of the profession, as each year finds us nearer the revealed truth. But somehow, from time immemorial, the art of medicine has been connected in the mind of man with the supernatural. The subject of scrofula, or local tuberculosis, which is now so generally engaging the attention of the public, only a few centuries ago was named King's Evil, from the superstitious idea that it was a disease which could be cured by the touch of a king. Should there be no other remedy in America for the cure of this malady than the touch of royalty few could be cured?

Notwithstanding all our efforts to educate the public by "precept upon precept and line upon line," just as we feel we are stepping to a higher plane, disassociating the material from the immaterial, we find the tendency of a large mass of the public to return to that which is supernatural, for are we not now confronted with a cult whose followers call themselves Christian Scientists; Faith Healers; and later still Emmanuelists. These people tell us there is no such thing as disease or pain; that it is all imaginary, a condition of the mind. Perhaps it is a condition of the mind with them. Insanity manifests itself in various forms. While I have no patience with this class of delusionists, my heart aches for their little children. Only a short while ago a little boy, in my neighborhood, the son of one of these fanatics, fell and broke his thigh. The father, realizing that his faith was insufficient to set the bone, called a physician. This physician after first get-

ting all his appliances ready, proceeded to give the little fellow chloroform in order to reduce the fracture, to which procedure the father objected, saying, "his religion forbid it, as the suffering was only of the flesh;" and when, after reducing the fracture, the doctor wanted to put on extension to prevent shortening, the father objected to that, saying, "their religion forbade it." Such stupid, ignorant, superstition! Such barbaric treatment to these little sufferers, in these days of our boasted enlightenment, is a burning shame; and yet, should the medical profession of this state appear before your state legislature with a petition in the interest of these little children to prevent the repetition of such child cruelty as I have mentioned, it would be looked upon with suspicion and referred to as being in the interest of class legislation, and against the freedom of man's religious liberty. While I care not how much torture these deluded sectarians may desire to inflict upon their own persons, there should be a rational law to protect their children from needless torture and homicide.

It is astonishing what blind faith is manifested upon the part of the public in certain dogmas of medicine. This faith is similar to that of the savage in their medicine man. The different medical dogmas are possibly more numerous than the different religious denominations, and each is followed by the masses as ignorant of the fundamental principles, and contended for equally as vigorously. I am glad to say that the society which honors your community on this occasion is not founded on dogmatical teachings, but has for its source of information the whole realm of medicine; embracing the whole field; selecting the grain from the chaff and then discarding all but the whole grain. We are not allopaths; this was intended by some of our dogmatic professional brethren who preach what they do not practice nor believe as a slur upon our profession. We are nothing more than plain, hard working regular doctors; nothing else. Somehow there is rather a prevalent idea that physicians are not honest; that they are disingenuous. With an intelligent physician it is the physician's duty to be the cyan nothing is farther from the truth; embodiment of hope, what interest has he in concealing the truth when asked for it?

You are the patient, and you are paying for the physician's opinion. I often have patients coming to me saying that they believe they have consumption, or heart disease, or some other serious malady; that they have consulted other physicians who have told them they have not, but that doctors won't tell a patient the truth about themselves. I want to say here that the great mass of intelligent physicians are honest, and while I am not here in the interest of the past age, at this age, when we know that so many of the diseases which were once considered incurable are now curable, and for their cure we must have the intelligent co-operation of the patient, our only hope for cure lies in the patient having an intelligent knowledge of his condition that he may assist the physician in the treatment. To be truthful, it is not always necessary that a doctor should tell the patient all he may anticipate or fear, if he is not asked the direct question. Mother Nature is a wonderful curer of diseases, for many of us have often seen cases get well which from the conditions and complications we had regarded as hopeless. The people in their intense anxiety regarding their friends often exert an influence to make physicians untruthful, for is it not often the case that as soon as a physician enters the home of the sick, and often before he has examined the patient, for some member of the family or one of those officious friends to ask the doctor what is the matter with the patient? Reasonable people know it is impossible for a doctor to know what is the matter with the patient without an examination, and sometimes then impossible; as it may take several days before the disease so develops itself to be capable of a correct diagnosis. If the physician is young in practice, the fear of his not being able to retain the entire confidence of the family under the circumstances as I have stated it, may to a limited extent induce a tendency to untruthfulness. To illustrate what I mean; some time ago a physician of good qualifications wanted to know of me what I told my patients when I was called to see them and could not tell just what was the matter with the case on my first visit. I replied that I frankly told them I did not know. His answer was, that probably I was so far advanced that I could do this,

but it would never do for him to tell them he did not know, as they would ask for another doctor to take the case at once; consequently, he would have to hatch up something to tell them. Exercise more patience with your physician and you will find him truthful. Wait until the disease is formed before you insist on knowing the minutia. And if you want good work let your physician feel that he has your confidence. No patient ever gained much by the too frequent changing of physicians or a surfeiting of consultations. No one knows your constitutional frailties and is so capable of successfully treating you as the family physician.

I am sometimes afraid the idea of the family physician is passing away, as we very often hear members of families remark that they have no regular physician, they just employ the first one they run across. This kind of doctoring may suit some people, but from my experience as a physician, if I were the patient it would not suit me. If you want the best medical service, after close observation and inquiring, select the physician you think comes nearest to your idea of what you think a physician should be. Never select a physician who does not belong to some good medical society. Then, after selecting your physician, tell him that you expect him to be your regular family medical advisor, and not only tell him so but make him such, and my word for it you will receive better service than the family who employ the first physician they come across. For is it not the family physician who knows the constitutional tendencies and idiosyncrasies? He who has had the care of the household; who has been the counsellor of the family; who has attended at the birth of the children and watched their growth and development; who has noted the strain of life upon the parents; is it not reasonable that he, the family physician, should be more capable of treating the constitutional conditions than anyone else? At this age new duties now devolve upon the family physician, as the trend of medicine is to educate the public; who shall be the family instructor? Where or how can the public be better taught advanced hygiene than in their own homes, and who can do this better than the family physician? We often talk about specialists; they are all

right in their places; medicine is too broad a field to be encompassed by one mind; but I am positively sure that often patients go away from home at much expense to consult specialists in certain diseases who would receive far better treatment under the care of the family physician. Not always is it the case because a doctor claims to be a specialist on certain diseases that he is more qualified to treat the case than the family physician. While I believe in specialists, I am a firm believer in the all-round, up-to-date, careful and progressive family physician; and while I am satisfied that there are some good specialists who have never done general practice, I am positively sure that the man who adopts specialism after a period of general practice is far better equipped for his work. It seems to me that the public in the rural districts somehow conceive the idea that "nothing good can come out of Nazareth;" that for the best in medicine one must resort to the distant cities. And there are some physicians too, who, probably influenced by a spirit of jealousy, refer their cases to far-off places for treatment at great expense and trouble, when equally as competent treatment could be secured nearer home and with much less cost. These large city institutions are not entirely infallible, as many of us know, and the physicians of West Virginia who have had much personal experience in this line cannot help but return to their Mountain State with a new-born confidence and pride. The time has passed when the physicians and the medical institutions of this state can be looked upon as belonging to the pristine period; for the physicians of this state are now the peers of any; the medical society of this state now ranks with the foremost; and the school of medical learning at the university of our state, as well as the hospitals of the state, have so forged to the front in the last few years, that they can be referred to by all of us with confidence and pride. Should some of you, however, entertain an idea different from what I have here expressed, let me refer you to two country young men (whose names are familiar to every physician), residing in a town not so large as this beautiful city of yours; and yet these two country doctors, with only a small hospital, are the amazement of the world; and so famous

have they become that eminent surgeons from large hospitals all over the world wend their way to the small town of Rochester, Minnesota, to see these country doctors perform the most wonderful operations. What has been accomplished in this small western town can be accomplished in other small towns, and we of this state should rally to the support of our home institutions. While I would not detract one iota from the large centers of medical learning in the cities, for are they not great institutions and entitled to great honor?

I would, however, refer you to the fact that not all the great discoveries in medicine or operations in surgery have come through these institutions. In a small village in Jackson County, Georgia, on the 30th day of March, 1842, by Crawford W. Long, a country doctor, the first recorded administration of ether was made. Nothing but eternity can reveal the good to suffering humanity this discovery has done. In a little town in the rural part of Kentucky, in a little office surrounded by a howling mob crying that he was about to murder a woman, and prepared to attack the surgeon if he failed, the stout-hearted Ephraim McDowell, in December, 1809, performed the first recorded operation for the removal of ovarian tumor. Nothing but eternity can ever estimate the number of years this has added to the lives of women, counting not the relief from suffering. The names and deeds of the noble country pioneers in medicine grow larger as I reflect upon them, but I only intended to refer to them in the support of my statement.

To the physicians of West Virginia let me say, don't underestimate your capacities. Don't think because you reside in West Virginia that your capabilities are any less than those of the physician with no more opportunities, but who resides in a city outside your state. The fact that a physician may be a professor in a certain institution does not insure him against mistakes. I have seen as gross errors made in these large institutions as I ever saw made by physicians in West Virginia. Should we be more familiar with the physicians and surgeons of our state, and watch more carefully the work they do, we would probably all see just as many

successes, and perhaps fewer failures than are recorded by these larger institutions outside of our state. I am not much of an egotist, I wish I were more so, but I am justly proud of the physicians of this state, and the medical society of this state. Let us as physicians continue to work together to upbuild each other in our own estimation, and in the estimation of the public. And to those of the public who are my hearers let me say, don't be knockers against the medical profession of your state. They are sacrificing almost everything that is dear to them for your good. After paying your physician's bill there is yet much left unpaid which money cannot compensate. The services of a physician cannot be estimated in dollars and cents. The man who sacrifices upon the altar of his profession practically all the pleasures of life; who adopts a profession so exacting that its devotee must deny himself the pleasure of his home, of society, of recreation, of rest at night, or who has not a moment of time he can count his own; a profession which requires all this and more too cannot be estimated in gold. And yet there are people in every community who count all this as nothing. There is no profession whose generosity to the public is as unbounded as that of medicine. A stranger gets hurt in your community. All hasten to summons the doctor. When he arrives the public withdraws entirely from the case except to criticise the doctor if he does not act the Samaritan, and provide for all of the injured one's wants, and often he does, giving not only his services entirely free, but also buying the medicine and often providing a home for the unfortunate. In one of our western towns a preacher of a poorly paid circuit was very sick; on his recovery and upon the last visit of the physician the very grateful wife insisted upon the physician presenting his bill; looking around the scantily furnished room, he drew from his pocket a \$20.00 bill and presenting it to her said: "Here is my bill." Will any other profession do that? You may say that this is only one instance, but I can furnish you proof that almost the same thing is being repeated over and over in our own state.

The medical profession has burdens of its own, and the public should be grateful enough not to saddle on it anything extra,

yet how often we hear the excuse put up, that on account of sickness and large doctor bills, persons were unable to meet their honest financial obligations. I will admit that a doctor's bill is a hard one to pay, for when the plans for the year are made, no consideration is estimated for sickness; consequently when it comes the earning capacity is stopped while the expenses are increased. I am not complaining where this excuse is justifiable, but generally it is not the truth. At a church meeting which I attended only a few weeks ago one of the excuses sent in by a member for not being able to meet his church obligations was much sickness and large doctor bills. Upon investigating this case we found the person had made a \$7.00 doctor bill during the year and had paid only \$4.00 on it, and the service was for a child with a sore foot who had never been confined in bed. A patient of mine some time ago was bewailing his financial condition to a friend, and stated that in the last five years he had paid me over seven hundred dollars in doctor bills. Upon investigating his account I found he had paid during that time only \$47.00. In this connection I am reminded of the old woman who for a long time employed a physician without compensating him for his work. Again sending for him with one of her usually hurried calls, she upbraided him because he was rather slow in responding, and wanted to know of him if her money was not as good as that of any of his other patients; to which he replied that he did not know, as he had never seen any of it. In the majority of these excuses about doctor bills the poor doctor usually fails to see any of the money in question.

Are you aware that the medical profession, for the amount of service rendered, is the poorest paid of all the professions? Let a doctor send in a bill of two or three hundred dollars for medical services and notice how quickly a howl will go up from the patient, his friends, or the public, and if not from this source, from the lawyers who settle the estate and whose possible reason for complaint is that there will not be ample left for their meager services. Did you ever hear anyone say a lawyer's charge was too high? I know a lawyer who raised a howl because a physician charged him \$125.00 for performing an

abdominal operation, and yet this same lawyer had no compunction in asking a fee of \$500.00 additional to his regular commissions in settling an estate, which paid only 5 per cent on the dollar to the creditors, because this lawyer had to go a few miles out of town for a day or two to make a settlement. Some time ago a case of much notoriety was before the public where a doctor sued the estate of a very wealthy man for \$25,000.00 for a continued period of medical services. Many unkind remarks were published against the physician for the enormous charge, but when the lawyer sent in his bill for \$100,000.00 for settling up the estate, everything was entirely satisfactory, no complaint.

(To be concluded in February Issue.)

ENLARGEMENT OF PROSTATE.

R. C. Bryan, M.D., Richmond, Va.

(Read at Kanawha Co. Medical Society, Nov. 2, 1909.)

Mr. President and Members of the Kanawha Medical Society:—Before considering the subject to be presented to-night, I shall take this occasion to thank you for the opportunity you have given me to address your body, and the courtesy you have extended in asking me to participate in your society meeting.

To consider the prostate in detail, following its morphology, histological structure and development, from early life to the time it assumes a pathological significance, would, I fear, be of but comparatively little interest and benefit to us all. This information is found in the appropriate text-books. The idea of an original paper essentially must be that it is a personal contribution to the literature already known. It is the writer's experience, ideas, and conclusions, drawn from the close observation of clinical material, private and hospital, which, honorably recorded, accurately and fearlessly brought forth, offers to bear the test of minute analysis and scientific investigation.

"For all experience is an arch where through
Gleams that untrodden world, whose margin
fades
Forever as we move."

However, we must refer now and then to some of the anatomical and histological points, if only to refresh our memory, or

to draw out certain facts which would bear upon the development of a train of symptoms. The prostate, then, a small gland, normally about the size of a horse chestnut, is so situated around the outlet of the bladder, incorporating the urethra, that in the case of its hypertrophy the pressure upon this physiological tube, sooner or later, by mechanical interference, attracts the patient's attention to himself, and to the fact that something is wrong. Benign intra-abdominal tumors the size of one's fist, fibroids for instance, may be carried for years, giving rise to no symptoms, provided they do not interfere with the functional activity of their neighbor. At that instant, however, that the pressure produces congestion, or by virtue of the size of the tumor, squeezes upon and inhibits proper elimination, a train of symptoms develops, dependent upon the location of the tumor and the structure encroached upon. Such is the case with the prostate. The old man pays but little attention to the increased demands for urination; he considers this one of the phenomena of advancing years, as much so as wearing spectacles or the inability to perform any strenuous athletics. There must be something more beside this frequent urination, and these are (1) haematuria and (2) dysuria. One of these two calls the attention of the unfortunate man to the fact that he needs medical attention. Just here the following explanation may be offered. It is not intended to insist that both the patient and the surgeon are led to diagnosis only, by blood in the urine or painful urination. The question of voiding the urine is directly dependent upon the muscular potentiality of the bladder wall. Nearly every one of those present have been called to draw off the urine collected back of an engorged prostate or old stricture. The patient has noticed for some time past that he makes his water more frequently than do his friends. From embarrassment, modesty, dread of declining sexual activity, or fear of the surgeon, the condition is not referred to; he allows it to go on. At that instant, however, that, by reason of indulgences, constipation, violent exercise or cold, an ultra-acute prostatic engorgement or venous congestion along the deep urethra is set up, the weakening propulsive power of the bladder is overcome and acute retention is ushered in. The

pain, anxiety, and distress of the patient are now sufficiently great for him to know that there is something radically wrong. He does not need the cardinal symptoms of haematuria or dysuria to attract his attention to the fact that something is awry; he knows it, and is only too glad to undergo any procedure which promises relief. Only recently an old gentleman of 66 or thereabouts, was visiting the writer. On preparing to retire, a large rubber sheet was spread out, a thick towel was placed over this protection and the whole put in bed, and the old gentleman was about to lie down, explaining that "this was his scheme to catch the urine which trickled away all night". A catheter was used and a large amount of ammoniacal urine was withdrawn, giving the old fellow better sleep than he had for a long time. Many of us doubtless have noticed that the demands for urination of the prostatiker, although pronounced by day, are essentially *nocturnal*, as opposed to the *diurnal* frequency of stricture. It has also been noticed that the daily output of urine is greater than in the normal subject. The changes in the kidney which lead to it may be the result of advancing age, backward urinary pressure, commencing atheroma or chronic congestion, set up by reflex irritation at the neck of the bladder, or all of these together. It is not that any extraordinary amount of urine is manufactured during the night. It is, however, that the congestion is greater, that, the periodic expulsion is less in amount, and consequently occurs more frequently. For the levator ani, which swings like a hammock antero-posteriorly in the lower pelvis, holds the sides of the prostate in its meshes. So intimately are they interlaced that some of the fibres have received the name of levator glandulae prostatae. While walking, this muscle gently massages the margins of the prostate, and hurries along the stagnating blood into the iliac veins of the pelvis. At night, when at rest, this massage stops. Peri-congestion means central congestion, the gland becomes succulent and larger, the gateway is more effectually blocked, the bladder rapidly fills, and the overflow which goes on all night, is like the horse-trough which, already brimming full, leaks over as fresh water runs in.

The prostatic plexus may be mentioned here. It is of great significance. It is formed in front by the dorsal veins of the penis meeting some smaller veins from the anterior surface of the bladder and *cavum Retzii*. As it passes backward it divides, surrounds the prostate and runs in the sheath outside of the appropriate capsule of the gland. It is into this plexus that the highly developed and numerous venous channels of the prostate empty, piercing the capsule in their course. These prostatic veins intercommunicate freely, are found particularly well developed in the submucosa of the vesical neck, and in old age, at times, attain an enormous size. They are accurately fitted with valves; with marked distention and congestion, however, the valves disappear, thrombosis occurs and phleboliths are found in and about the organ. (Specimen shown.)

The haematuria already referred to, is due to the rupturing of a small sub-mucous intra-vesical capillary, by either pressure-necrosis, stone, thrombosis or actual muscular effort. As an instance of this latter the writer had under observation four years ago, a carpenter, 54 years old, who had always enjoyed good health, but who had been having for about a year past, this nocturnal polikiuria. Shortly after lifting a heavy beam he felt faint. Resuming his work he soon noticed that he was unable to make his water. A physician was called and the catheter proved useless. The writer performed a suprapubic cystostomy, a large blood clot (the capacity of the bladder) was scooped out, a well developed horse-collar overgrowth, from the middle lobe was enucleated, and syphonage established, the patient going on to a good recovery. (Specimen II. shown.) This man did not know he had an enlarged prostate, he did not know anything was the matter with him, he would have continued in ignorance of his condition but for the hemorrhage. Being posterior to the cut-off muscle, it was an internal bleeding and so copious and free, that it stopped only when the hydrostatic pressure in the bladder was equal to that in the oozing vessel. This meant that the bladder was dilated to a large capacity, for here was an excellent opportunity for nature to drain the neighboring tributaries into this leak, suck out and decongest the engorged prostate and temporarily,

anyway, do away with the resistance against which the bladder had been making a losing fight for so long a time.

To illustrate the recurrence of growths in the prostate. This same patient returned for operation again last week. For about a year past he had been having difficulty in making his water, the demands at night becoming so imperious of late, that he again came to seek surgical relief. Examination revealed an interesting condition. By rectum no enlargement could be felt, the urethral length was practically normal, the residual urine was 16 ounces. A cystoscopic view showed a tumor springing from the right lobe which, acting as a resisting buttress, had effectually and obstinately blocked the outlet of the bladder. Perineal section was performed and the tumor about the size of a hazel-nut removed, per urethram, and urinary drainage established. At the present writing the patient is up and walking around and much pleased at being able to control his water and make it at will. The bladder will ultimately regain its tone, and if no further recurrence occurs, he should enjoy comparative comfort for years to come.

The usual type of prostatic haematuria is, however, the leaky one. A smaller vessel is ruptured, oozes into the bladder, stops shortly, but discolors the urine. These patients remark upon the irregularity of the haematuria, its painlessness and the inconstancy of the amount. This clinical form of haematuria is not to be confounded with the terminal haematuria of a crack or fissure at the internal os, for in this instance, each act of urination is painful, the flow of blood is constant for a day or more (until the fissure heals) and is of about the same amount each time, of a bright red scarlet color. And finally this vesical haematuria of prostatic engorgement, is not to be confounded with the haematuria of carcinoma prostaticae. Here the clinical picture is much the same, but differs in that when once inaugurated, it continues to a greater or less degree constantly. The urine is foul and nasty, and possesses cellular elements which are readily recognizable. It is now stated that carcinoma of the prostate is present in 1.4 per cent of all cases of enlargement, but the writer's run of cases would put the figures much lower. Here attention may be called to the clinical

picture of cancer. Starting in the substance of the gland, there is no suspicion of its presence, until from pressure necrosis it is signalized by hemorrhage, for it would be difficult indeed to establish clinically carcinoma of the prostate of such size that it interfered with urination, and yet had given rise to no loss of blood.

The finger in the rectum finds a hard, fibrous, immovable, irregularly enlarged tumor. The notch is no longer decided, it is rounded out and the groove is lost. The finger swept about this tumor notices here and there irregularities in the contour, and variations in the surface consistency, lymph glands in the concavity of the sacrum and about the internal abdominal ring may be felt to be enlarged. The base of the bladder, too, seems to be more fixed, and no longer enjoys the movability of a normal vesical floor. The procedure is painful, the patient complains of the discomfort, and examination of the urine immediately afterwards shows a moderate hemorrhage has again burst out. This is not the hemorrhage of stone, a crack, or yet of a submucous intra-vesical rupture. It is the oozing into the bladder cavity of necrosing areas, from mechanical violence and insults. The writer would call attention to an illustrative case.

Mr. A. B. W., 63, minister, for several months had noticed blood in the urine. He had only occasional pain and that train of symptom-complexes of frequent urination, which necessarily would be dependent upon congestion about the internal sphincter, and a mild grade of cystitis from a non-specific infection. Cystoscopy was abandoned, no picture could be obtained on account of the persistent oozing. The age, clinical picture, immovability of the prostate, constant hemorrhage and cellular elements gave a good clue to a positive diagnosis. A supra-pubic cystostomy was performed, a tumor the size of a child's fist was found near the outlet of the bladder, springing from the prostate; it was cut off flush with the niveau, the base burnt with the actual cautery, syphonage established and the wound forced to stay open by firm gauze packing. Dr. A. L. Gray, of Richmond, applied the X-ray every day directly on the stump by means of Piffard's sleeved tube. The cicatrix rapidly became smaller. With difficulty the wound was kept large enough to admit this tube, so that after 24 treatments the patient was allowed to go home. The operation was performed in January, 1906, nearly four years ago, and although there has been recently a return of the trouble characterized by bloody urination, the writer feels that the parochial activity of this "brother of the cloth" has been appreciably prolonged by the surgical and X-ray ordeal to which he subjected himself.

The direct application of the X-ray upon bladder tumors through a generous supra-pubic opening, brings this class of malignant growths as much under the influence of the Roentgen irradiations as if they were on the surface of the body. What the future has in store along this line for gastric, pyloric, caecal, cervical, in fact intra-abdominal, malignancies, it is impossible, at the present time, to say.

On account of the frequency of enlargement of the prostate, for Sir H. Thompson asserts that it is found in one-third of the number of those who pass 60 years of age, and that one in every ten of this number sooner or later seeks radical advice, there have been many ingenious and far-reaching manoeuvres surgical procedures and innovations in the treatment of this disease. But the enlargement of the prostate is not inflammatory. The course which it pursues, the symptoms to which it gives rise, and the histological changes which it undergoes are entirely different from those that occur in inflammation.

It is essentially and primarily a fibro-adenoma resembling to a certain degree the normal structures of the gland. Now the glandular overgrowth predominates and the organ is large, succulent and spongy. And now the stroma is to the front, and the gland is hard and firm. Again, the rate of growth may be uniform, there being a gradually increasing enlargement which spreads out equally in all directions; more frequently, however, the adenomatous tissue prevails and the direction of growth is upward and backward, as would be determined by the line of least resistance, or away from the posterior layer of the triangular ligament and pelvic floor. This direction of growth of the prostate upwards and backwards, is of great importance. Posteriorly is the bas-fond, holding the stagnating pool of urine, which only under the most favorable conditions is ever evacuated; here the opportunities for infection are developing, the large dilated veins between the rectum and the prostate have lost their tone, the valves no longer hold, and with the lymphatic channels plying between the lower gut and the base of the bladder become surcharged with the bacterium pyogenes of Clado and Albanan or the bacillus coli, the resisting barrier in the vesical submucosa gives way, and infection is inaugurated with

its epiphenomena of classical insults to the entire bladder wall. We readily establish an analogy with the benign tumor growths of uterine origin. That both these organs, the prostate and the uterus, should be liable to tumor formation and enlargement, during the latter half of the reproductive period, when the first flush of sexual activity is waning, is of great significance in many ways, but is not sufficiently potent to command an absolute analogy. The growths which spring from the uterus are a fibromyoma, while those from the prostate are fibro-adenoma. The true histological analogue of the uterus is not the prostate, but the verumontanum, the uterus masculinus. Enlargement of the prostate may bear the same relation to the testes that fibroid disease of the uterus does to the ovaries. But the fact that they bear the same relation to two different organs, is no proof that they bear any relation to each other. The writer does not believe that any theory has yet been advanced which satisfactorily explains the overgrowths of the prostate. Why is it that fibroids are so common in the negro woman, and that the enlarged prostate is so seldom seen in the negro male? Surely no race is more active in exercising their horizontal privileges than this, the African. If sexual excess is responsible for uterine growth, why not for prostatic enlargement?

To a more or less degree something of a delicate balance-wheel of mutual dependence and co-operation, seems to have been established between the testes and prostate, as we believe exists between the ovaries and the uterus. It is certain, from the facts of human study, as well as from comparative anatomy, that the normal development of the prostate is partially dependent upon that of the testes and vasa deferentia. If the testes are removed in early life, the prostate does not grow. If the vas deferens is not developed upon one side of the body, the prostate upon that side often fails too, even though the corresponding testicle is present. If the testis is removed after puberty, in a certain number of cases, the prostate shrinks and atrophies to a varying degree. Based upon this development and knowledge was vasectomy, and castration have been tried to reduce the enlarged organ. The question whether the influence which the testes possess over the normal and abnormal growth of the prostate, is

exerted through the medium of the nervous system, or by virtue of some unknown chemical product which they form and discharge into the circulation, is of great practical importance in connection with the success of unilateral orchidectomy. If it could be proved that each testicle had sole control, or a strong influence over its half of the prostate, removal of one testicle or vas deferens might not infrequently control an unilateral enlargement.

In animals, the prostate is from the first and remains bilateral; the two lobes are separated by quite a distance, they lie on either side of the base of the bladder, or one on each side of the body. In man, this is not so. They start as two separate developments, but in the process of growth they ultimately fuse in the middle line, and their individuality is lost by an intimate intermingling of the ducts, blood and nervous supply.

All of this is very interesting anatomically; it is still, as we have said, in the developmental stage. Here unfortunately the exact pathologic analogies do not obtain in experimental work on animals. Furthermore, castration is known to be followed by profound mental disturbances in quite a large percentage of cases. If then this is experimental, as such it must be, is attended by uncontrollable neuroses, gives a mortality rate of 20 per cent. and at the time of operation it cannot positively be predicted whether the outcome will be the desired shrinkage of the prostate or not, the writer would most earnestly commend to your consideration the radical operation for removal of the gland, which is the appropriate, primary and mechanical cause of the retention of urine.

At a meeting of the Medical Society of Virginia some two years ago the following classifications of prostatic hypertrophy were made.

1. Enlarged prostate, characterized by a moderate frequency of urination.

Examination, bladder healthy.

Residuum, 2 ounces or less and other organs normal. General health excellent.

2. Enlarged prostate, characterized by catheter life or overflow.

Examination, bladder tired out and infected.

Residuum, large amount and musty. Kidneys and heart compensation. General health fair; able to attend to work.

3. Enlarged prostate (really No. 2 plus systemic infection) characterized by chronic retention or incontinence.

Examination, bladder and kidneys infected.

Residuum, capacity of the bladder, kidneys and heart not compensating, confined to house or bed, febrile reactions, prostration, uro-sepsis, uraemia.

This first class but seldom come to the operating table nor is it desirable that they should. Attention to the diet and bowels, insertion of a good-sized, cold sound 30-34 F., a careful urethral and vesical irrigation, expression, warning about sexual or alcoholic indulgences, urinary antiseptics, and a bi-monthly report to the surgeon in charge, is sufficient in the greater majority of cases to stave off the evil day of operative intervention, but they are constantly under the surgeon's eye. The catheter, rectal examination and mensuration give an accurate intelligence of the progress and resistance of the growth.

Sooner or later, however, uncontrollable complications begin to arise, merging slowly but surely with an imperceptible daily or even weekly significance. The healthy clean bladder, the small residuum, the three-hour frequency, the comparative comfort of the first category, begins to show a few shreds and clouds in the heretofore clear horizon. The frequency becomes slightly greater, the imperiousness of the desire is commanding, the nocturnal calls are more pressing, or even acute retention is set up, rectal tenesmus, transient orchitis, and febrile outbursts may show themselves now and then. It is right here the duty of the surgeon who has carefully followed the prostatic growth and history, to recognize the losing, hopeless battle the bladder is fighting in this, the second stage of the hypertrophy, and insist upon surgical procedures. To his experienced eye, the weakening bladder power, infection, replacement fibrosis, followed by dilated ureters and pelves, heart complications and uro-sepsis, are foreseen, the horoscope is read in the temperature chart and bounding pulse. And radical removal should be given out as the most effectual, permanent and legitimate control we have at hand for relief from this prog-

ressive involvement which can lead to but one termination. "For the mortality rate of prostatectomy is not as great as that of catheterism."

Some years ago the writer had the opportunity to witness some of the work of the suprapubic school in London and Vienna, and being much impressed by the ease of access, the visual field, and the gratifying outcome, decided to follow the same route. In consequence the first nine cases were attacked by this method. Of these, one died. Then the opportunity was had to follow the perineal removal as performed by some of the American surgeons. A careful anatomical study was made, many dissections carried out, notes compared, many factors minutely weighed, such as the direction of growth, backwards; the type of growth, usually adenomatous; the relative accessibility; the fact that the lateral lobes are usually involved; the depth of gland from the surface of the body; the reflections of the peritoneum; structures to be transversed; fat subjects; those with approximated tuber ischii; (narrow pelvis), dangers to the rectum, to the peritoneum, to the urethra, to the bladder, drainage; hemorrhage; sepsis; death rate; and after a careful consideration, weighing the anatomy on the one hand, and the results of each route on the other, the perineal method has been unhesitatingly adopted as the general operation, the suprapubic being done in those instances where indicated, such as middle lobe overgrowths, the ball-valve, horse collar enlargements, or when a small growth is complicated by a large stone.

It would be just as appropriate to say that all prostates should be attacked by the suprapubic or perineal route alone, as it would be to say that all amputations must be done solely by the antero-posterior flap method and no other. There can be no one rule for every operation. Emergencies, erratic conditions and pathological anomalies find their way into the human body when they are not to be found in the text book.

The prostate is outside the peritoneal cavity, its neighbors, the rectum and bladder, are the terminal reservoirs of the body, communicate with the outer world, and are rich in blood supply. They are, furthermore, movable and easily displaced. Were the pelvic floor cut away, and attachments

severed, the floor of the bladder and the lower gut could easily be pulled beyond the outlet of the pelvis. The significance of this is evident. No vital structures are found in the perineum; it may therefore be cut into without fear. Excepting possibly the internal pudic artery; this at times leads to severe or even fatal hemorrhage. When cut it retracts. Bear in mind the anatomical fact that it may be caught along the inner border of the tuberosity of the ischium as it leaves the cover of that bone to spread out in the perineum. We have already said that the prostate in the course of its hypertrophy spreads backwards, but it is *under* the bladder, *not in it*. That part which appears to be in the bladder is the projection of the growth upwards. It is and must be covered with the vesical mucosa. The outlet of the bladder through the prostate, is like a tunnel running through a mountain. The mountain may be taken away yet the tunnel remains. To attack the urethra from above means that the mountain and tunnel both are taken away (Specimen III. shown), leaving a big hole to be filled up by some reparative process later on. To attack it by the perineal method means that the prostate is taken from around the urethra, the urethra is left intact, not damaged, the cavity of the bladder is not opened, the entire operation is below, outside of the urinary tract. In total enucleations the vasa deferentia are ruptured; this makes no difference anyway. Young leaves a bridge in selected cases to carry these ducts. Sexual potentiality at this time of life is not to be reckoned with, but rather ignored. What we are aiming to accomplish, is the relief of mechanical pressure, and the best way to do it.

In selected cases of ball-valve or middle lobe overgrowths, the suprapubic method may be elected. This is the rarer form of enlargement, the urethra is not damaged, no hole is made in the base of the bladder, the right angled scissors snips it away and the wound heals kindly. (See Specimen IV.)

In that form, characterized by a bar or a dam at the internal sphincter the Bottini or Chetwood modification of the Bottini instrument may be favorably employed. The writer has had no occasion to use this method in his series of cases.

In the more usual type of prostatic hypertrophy, the bilateral lobar, perineal

attack is to be unhesitatingly recommended. The writer prefers the inverted Y, to the median or the bischial incisions. The dissections are easily carried out, the control of hemorrhage is easily effected (remember the internal pudic). Young's retractor is now put through the membranous urethra into the bladder and opened up, the prostate is drawn down into the wound, the rectum is held out of the way by a large flat retractor, the fascia and surrounding layer of muscles are shoved to one side, the recto-urethralis is severed, and the sheath formed by the recto-vesical fascia is now incised into the median line. The finger is inserted between the sheath and the capsule of the gland, and the stripping cleaving process begun. The finger goes quickly up to the retractor and follows it backwards; this means that we are working below the urethra, that tube is never burst into, it remains inviolate. First one side and then the other is shelled out, if taken away entirely the vasa deferentia come too. They can be left by a bridge of prostatic tissue supporting them. This is, however, to be discouraged. The operation is performed to remove the gland, not to leave any of it behind. The prostatic veins already referred to are uninjured; they are in the meshes of the sheath, but an empty sheath, the sheath cavity, is now left, the contents have been removed, this shell is left alone. It soon shrinks and atrophies away. (Specimen V.) One small $\frac{1}{4}$ inch gauze strip is run into the cavity, the remainder of the wound is nicely brought together with buried cat gut, a catheter is sewed in for urinary drainage, the patient returned to bed, syphonage established.

This sounds like mighty easy and plain sailing. Is there anything easier than an uncomplicated hysterectomy in which there are no adhesions, the uterus freely movable and a thin tissue-paper-like belly wall, and is there any operation much more harassing and difficult than a hysterectomy thro, a thick, greasy abdomen complicated by dense adhesions, intraligamentous infiltrations, ovarion and tubal displacements? Such is the case with the prostate. The writer can hardly adjust the difficult anatomy of the parts to the statement of certain contributors that the operation may be done with a scalpel through a button hole incision in six minutes. For in those instances of stout subjects, when the accumulated

fat in the ischio-rectal fossae has had possibly some influence too, in wedging the prostate upwards away from the surface, when the condition of contracted pelvis obtains, when the rectum, large dilated, bulging, curves forward under the prostate, when the loss of blood is annoying though not serious, when the prostate is hard, dense, fibrous, the line of cleavage is not accurately and readily determined, and the retractor is unable to draw the organ down into the field of vision. The operation under these conditions is one of the most difficult in the entire surgical domain to perform.

Even *with* these difficult operations to carry out, *with* the advanced age of the patient up to 87, (the last of subjects to be selected for a surgical ordeal), *with* the back pressure, vesical and ureteral, pelvic, and renal; with the cardiac and arterial changes and degenerations, *with* the distressing local manifestation and constitutional involvement from poisons, destined to be expelled and not to be absorbed, *with* the insult of general anaesthesia added to an arterial tension bordering on the explosive—the death rate by the suprapubic method according to Mr. P. J. Freyer in a series of 644 cases is 6 per cent, and according to Dr. Young by his perineal route in 128 cases, no deaths.

No such record obtains in the field of any other series of major operations. The significance of these figures is self-evident and forcible. They cannot be twisted around to suit temporizing, medical, dilly-dallying—uoltices, catheterizations and rectal irrigations. Tersely translated they read "Operation".

In conclusion the writer would add:

1. Prostatic hypertrophy is present in every fifth man over 55. Ten per cent of this number require operation.
2. The operation of choice is the perineal; in selected cases, the suprapubic.
3. The mortality is not as great as that following the operation for appendicitis, despite the age.
4. The thickened arteries, the tired heart and confused kidneys should be prepared for the ordeal by two weeks' preparation.
5. Age is no contra-indication.
6. The mortality from prostatectomy is not as great as that of catheterism.
7. In desperate cases drain the bladder.

wait for reaction and re-establishment of centres, which if favorable, proceed radially.

No case is too desperate to be given the benefit of drainage.

9. Wash out with water and not drugs. The use of spartein sulph. is not to be encouraged.

10. The after treatment is that of any major operation.

11. Do not get the old men up too soon after operation; let them rest.

12. Remember, that there are other conditions to be seen to besides the bladder.

THE ARITHMETIC OF MILK MODIFICATION.

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(Read at Annual Meeting of State Medical Ass'n, Oct., 1909.)

The vast majority of physicians who have given attention to the artificial feeding of infants are agreed that the percentage method of milk modification (or American method as it is frequently designated) offers the most reasonable solution of the difficult problem.

Therefore I shall presume that the following propositions are established, needing no demonstration.

1. Woman's milk is a perfect food for the developing infant.

2. When for any reason woman's milk cannot be employed, cow's milk offers the best available substitute.

3. To render cow's milk suitable for the purpose it must be so changed (modified) as to adapt it to the digestive capacity of the human infant.

4. The physician who desires the highest success in infant feeding must think and work in percentages.

While there is agreement as to the advantages of percentage modification, in practice the method is by no means universally adopted. Certainly this condition of affairs is regrettable. The practitioner acknowledges the paramount advantages of the method; nevertheless he does not employ it, when called upon to prescribe an artificial food for his young patient. The explanation of this enigma is not difficult. The general practitioner does not employ the method for the reason that he fails to

grasp the fundamental mathematical principles upon which the method is based. In other words he is unable to make the arithmetical calculation necessary to obtain the required percentages.

In their text books of pediatrics the writers entirely fail to explain clearly the arithmetical process involved in the calculation of milk formulas. They have rendered a simple subject needlessly complex, or, in the endeavor to simplify the matter, have presented rules of thumb impossible to be retained in memory.

Failing to explain the arithmetical process for the calculation of milk formulas, the text books advise the employment of a feeding card, "which can easily be carried in a pocket book, and can therefore always be at hand when needed,"* or of algebraic equations, which must likewise be copied on a card and carried in the pocket book, or else numerous worked out formulas are given to which the physician can refer at his leisure.

Obviously all such methods are poor makeshifts. What is needed is a clear comprehension of the fundamental principles of the subject, and a sufficient familiarity with the arithmetical process to calculate easily and quickly any desired formula without referring to feeding card, algebraic equations or similar device. Such knowledge can be acquired readily by anyone who has mastered the "rule of three" and will give to the subject a few hours of study. In reality the process of calculating milk formulas is exceedingly simple. There is required an acquaintance with mathematics no greater than that involved in the writing of an ordinary prescription.

A knowledge of the percentage composition of milk and of cream is the first requisite for the accurate modification of milk.

Average good milk from a mixed herd of grade cows has the following composition:

Fat,	4 per cent.
Proteids,	3.5 per cent.
Sugar,	4.5 per cent.

Cream is simply milk that contains an excess of fat. From a quart of average milk that has been rapidly cooled immediately after being drawn and "set" for five hours, there may be skimmed about six ounces of cream giving on analysis—

*"Pediatrics," by Thomas Morgan Rotch—5th edition, page 186.

Fat, 16 per cent.
 Proteids, 3.2 per cent.
 Sugar, 4 per cent.

This represents the so-called "gravity cream", or "16 per cent cream", which is conveniently used in the preparation of modified milk.

In demonstrating the method of calculating milk formulas we assume that the cream contains 16 per cent fat and the milk 4 per cent fat.

By mixing gravity cream and milk in varying proportions a number of creams having fat percentages between those of cream and milk may be obtained. In the several creams the ratio of fats to proteids will be different as shown in the following table:

16-per-cent cream	16% F	3.2% P	F:P = 5:1
13 " " "	13% F	3.3% P	F:P = 4:1
10 " " "	10% F	3.3% P	F:P = 3:1
8 " " "	8% F	3.5% P	F:P = 2½:1
7 " " "	7% F	3.3% P	F:P = 2:1
5 " " "	5% F	3.5% P	F:P = 1½:1
4 " " milk	4% F	3.5% P	F:P = 8:7

In other words, 16-per-cent creams contains five time as much fat as proteids, 13-per-cent cream four times as much fat as proteids, etc.

We shall use the term *appropriate cream** to indicate the cream in which the ratio of fat percentage to proteid percentage is the ratio desired in the modified milk. If an appropriate cream be diluted with water, the fat and proteids will always bear the same relation, whatever be the degree of dilution.

If one part of 10-per-cent cream be mixed with one part of water, we have a dilution of one in two (1:2), and the percentages of fat and proteids in the mixture will be exactly one-half of those in the 10-per-cent cream—i. e., the mixture contains 5% F. 1.65% P. Similarly if one part of 10-per-cent cream be mixed with two parts of water, we have a dilution of 1:3, and the mixture will contain 3.3% F. 1.1% P. In each of the dilutions the ratio of fat to proteids remains the same as in 10-per-cent cream:

$$F^{10} : P^{3.3} = F^5 : P^{1.65} = F^{3.3} : P^{1.1} = 3 : 1.$$

Theoretically there are an indefinite number of appropriate creams. Practically those in which the ratio of fat to proteids is represented by simple multiples are found to answer all requirements.

In order to determine the percentage of fat in mixtures of cream and milk in various proportions, we proceed as follows: Multiply the percentage of fat in the cream and the milk by the number of parts of each, and divide the sum of the products by the sum of the parts.

For example, what is the percentage composition of a mixture of one part of cream containing 16-per-cent fat and two parts of milk containing 4-per-cent fat?

$$1 \text{ part cream} \times 16\% F = 1 \times 16 = 16$$

$$2 \text{ parts milk} \times 4\% F = 2 \times 4 = 8$$

$$\text{Adding } 1 + 2 = 3 \text{ sum of parts}$$

$$16 + 8 = 24 \text{ sum of products}$$

Dividing sum of products by sum of parts

$$24 \div 3 = 8$$

Hence the mixture contains 8-per-cent fat. In other words, by mixing one part of 16-per-cent cream with two parts of 4-per-cent milk, we obtain an 8-per-cent cream, which is the appropriate cream for all milk formulas in which the ratio of fat to proteids is 2½:1 (F⁸:P^{3.3}=2½:1).

Similarly we may obtain other appropriate creams.

*The term appropriate cream was first used by Dr. Daniel R. Brown, *Journal A. M. A.*, Feb. 16,

Appropriate Creams	Obtained by mixing	Ratio of fat to Proteids.
16-per-cent cream	F ¹⁶ :P ^{3.2} = 5:1
13-per-cent cream	F ¹³ :P ^{3.3} = 4:1
10-per-cent cream	F ¹⁰ :P ^{3.3} = 3:1
8-per-cent cream	F ⁸ :P ^{3.5} = 2½:1
7-per-cent cream	F ⁷ :P ^{3.3} = 2:1
5-per-cent cream	F ⁵ :P ^{3.5} = 1½:1
4-per-cent milk	F ⁴ :P ^{3.5} = 8:7

Exactly the same process may be used in calculating the percentage of proteids and of sugar in the appropriate creams. However in the practice it is not necessary to make these calculations. Since the difference between the proteid percentage of 16-per-cent cream and the proteid percentage of 4-per-cent milk is only 0.3 per cent ($P^{3.5} - P^{6.2} = P^{0.3}$), we assume that the proteid percentage of all intermediate creams is 3.3 per cent, representing a fair average. The error introduced by this assumption is exceedingly minute and may well be disregarded for the sake of simplicity in calculation. In the same way, since the difference between the sugar percentage of 16-per-cent cream and that of 4-per-cent milk is only 0.5 per cent, and since small variations in the amount of sugar affects so slightly the digestion and nutrition of an infant, we assume that all creams contain 4 per cent of sugar.

The method of calculating milk formulas can be understood from a concrete illustration.

Problem: We wish to feed a baby with a modified milk mixture containing—

Fat,	3 per cent
Proteids,	1 per cent
Sugar,	6 per cent

eight feedings a day, five ounces at each feeding.

Determine the whole quantity of food by multiplying the number of feedings by the amount in each feeding. $8 \times 5 = 40$ ounces.

Determine the appropriate cream by considering the ratio of fat to proteids in the desired formula.

$$F^3 : P^1 = 3 : 1$$

Hence the appropriate cream is 10% cream since in 10% cream

$$F^{10} P^{3.3} = 3 : 1$$

Determine the degree of dilution of the appropriate cream required by dividing the fat percentage of the appropriate cream by the desired fat percentage—

$$10 \div 3 = 3 \text{ I-3}$$

Determine the number of ounces of appropriate cream required by dividing the total quantity by the degree of dilution—

$$40 \div 3 \text{ I-3} = 12 \text{ ounces}$$

Hence we require 12 ounces of 10-per-cent cream.

Since 10-per-cent cream is obtained by mixing one part of 16-per-cent cream with

one part of 4-per-cent milk. 12 ounces of 10-per-cent cream is obtained by mixing 6 ounces of 16-per-cent cream with 6 ounces of 4-per-cent milk. In other words, we determine the actual amount of cream and of milk by first considering the number of parts of cream and of milk necessary to produce the appropriate cream, and then taking the same proportional parts of the number of ounces of appropriate cream required.

Thus to obtain 40 ounces of a food $F^3 P^1$ we require

16-per-cent cream	6 ozs.
4-per-cent milk	6 ozs.
Water to make	40 ozs.

But in such a mixture the sugar has been reduced in the same proportion as the fat and the proteids. The percentage to which the sugar has been reduced is found by dividing the sugar percentage of cream by the degree of dilution—

$$4 \div 3 \text{ I-3} = 1.2 \text{ per cent.}$$

The next step is to estimate how much milk sugar must be added to the mixture to bring up the sugar percentage to the desired 6 per cent. The percentage deficiency in sugar is determined by subtracting from the desired sugar percentage the percentage to which the sugar has been reduced by dilution.

$$6\% - 1.2\% = 4.8\%$$

Therefore we must add to the mixture 4.8% sugar. The actual number of ounces of milk sugar to be added is determined by multiplying the total quantity by the percentage deficiency in sugar.

$$40 \times 4.8\% = 40 \times .048 = 1.9 \text{ ounces.}$$

Hence our final formula becomes:—

16-per-cent cream	6 ozs.
4-per-cent milk	6 ozs.
Milk sugar	1.9 ozs.
Water to make	40 ozs.

To illustrate further the process of calculating milk formulas we shall give the solution of two additional problems, omitting explanatory remarks.

Problem: To prepare a food $F^{3.5} P^{1.75} S^{6.5}$ 7 feedings, each 5 oz.

$7 \times 5 = 35$ ozs. (say 36 ozs.)	Total quantity
$F^{3.5} : P^{1.75} = 2 : 1$	∴ 7% C—Appropriate cream
$7 \div 3.5 = 2$	Degree of dilution
$36 \div 2 = 18$	Quans. appropriate cream 18 ozs.
7% C=1 part 16% C+3 parts 4% M	
∴ 18 ozs. 7% C=4½ ozs. 16% C+13½ ozs. 4% M	
$4\% \div 2 = 2\%$	
$6.5 - 2 = 4.5\%$	Sugar deficiency
$36 \times 4.5\% = 36 \times .045 = 1.6$ ozs.	Quantity milk sugar

Hence to prepare the food we require—

Cream 4½ ozs.
Milk 13½ ozs.
Milk sugar 1.6 ozs.
Water to make 36 ozs.

Problem: To prepare a food F² P^{0.5} S⁵,
10 feedings, each 2½ ozs.

10 × 2½ = 25 ozs. (say 26 ozs.) Total quantity
F² : P^{0.5} : S⁵ = 4 : 1 . . 13% C Appropriate cream
13 ÷ 2 = 6.5 Degree of dilution
26 ÷ 6.5 = 4 ozs. Quan. appropriate cream
13% C = 3 parts 16% C + 1 part 4% M
.4 ozs. 13% C = 3 ozs. 16% C + 1 oz. 4% M
4 ÷ 6.5 = 0.6% Sugar deficiency
5 - 0.6% = 4.4%
.4% = 26 × .044 = 1.14 ozs. Quantity milk sugar

Hence to prepare the food we require—

Cream 3 ozs.
Milk 1 oz.
Milk sugar 1.14 ozs.
Water to make 26 ozs.

In the demonstration of our method of calculating milk formulas, the assumption was made that cream contained 16% fat and milk 4 per cent fat. However, exactly the same method may be applied to cream and milk of any fat percentage. Let us suppose that we are working with a very rich milk containing 5 per cent fat and with a 20 per cent cream. We proceed to determine the appropriate cream in exactly the same manner as in the case of 16 per cent cream and 4 per cent milk—

1 part cream × .20% F = 1 × 20 = 20
2 parts milk × 5% F = 2 × 5 = 10
(20 + 10) ÷ (1 + 2) = 30 ÷ 3 = 10
Hence the mixture contains 10 per cent fat.

Having determined the number of parts of 20 per cent cream and of 5 per cent milk necessary to produce the desired appropriate cream, the remainder of the calculation presents no variation.

The percentage of fat in milk and cream is the most variable factor and the one upon which the calculation of formulas is based. Therefore in every case it is desirable to have an accurate determination of the fat percentage in the milk and the cream to be employed. By means of the Babcock Milk Tester fat percentage can be estimated in a few minutes. The test is easily applied and no previous training in chemical manipulation is necessary. The complete apparatus costs \$4.50, and should be part of the equipment of every physician, who proposes to direct the artificial feeding of infants.

A determination of the proteid percentage is not so necessary, since the proteid percentage varies but little from the average 3.5 per cent. An approximate analysis of the proteids can be made by a simple

method devised by Doctor Thomas R. Boggs.*

We have found it exceedingly useful to check results by making a determination of the fat and the proteids in the resultant modified milk mixture. Thus one can be certain that the baby is receiving the necessary quantity of nutriment. Accurate methods are always more satisfactory than haphazard methods.

In conclusion we make the following claims for our method of calculating milk formulas:

1. It is easily understood and therefore easily retained in memory.
2. It renders unnecessary the use of artificial aids, such as feeding cards, algebraic equations, etc.
3. It is elastic, in that it is applicable to all varieties of milk and cream.
4. It is sufficiently accurate for practical purposes.

END RESULTS IN FRACTURES OF LONG BONES.

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(Read at Annual Meeting of State Medical Association, October, 1909.)

When a physician takes charge of a patient with a fracture he assumes a duty and responsibility that are not discharged until he secures for that patient the maximum degree of function and the minimum amount of deformity compatible with the nature of the injury. Grave errors are frequently made in these cases by the attending physician, indicating that the treatment of the case terminates with bony union and the removal of the splints. The period of time required for proper treatment of a fracture may vary anywhere from three or four weeks to as many years, depending upon the severity and location of the injury, the patient's constitutional equipment, and the treatment employed. The patient or his friends should be so advised early in the case.

The importance of the subject is very apparent when we meet a cripple and consider his physical disability and the decrease in his earning power. One bad result in the

*Boggs, John Hopkins Bulletin, 1906, Vol. 17, pp. 342-343.

treatment of fractures may end in a suit that brings reproach and humiliation to an otherwise successful professional career.

We have no accurate statistics as to the frequency of fractures or the results obtained. The casualty hospitals of the large cities furnish about the only data we have on the subject, and here the record usually terminates at the end of a few weeks when the patient is discharged from the hospital. We do not find our leading surgeons publishing a full list of their cases with final results, number of sequelae and subsequent earning capacity of patient.

Both sexes and all ages are susceptible to these injuries. No occupation or social status offers immunity.

Senn claims that fractures constitute one-sixth of all injuries that come for treatment; that three-fourths are of the long bones, and that those of the upper extremity are twice as frequent as those of the lower.

Parker reports that 106 out of 250 skeletons examined showed evidence of fracture, or 42.4 per cent. The large majority involve the long bones.

Keen reports 38,627 cases of fracture of all kinds occurring at the Boston City Hospital, of which 45.50 per cent were of the upper extremity and 35.60 per cent of the lower extremity, or a total of 81.10 per cent fractures of the extremities.

I have been greatly surprised, since I began using the X-ray on all cases of old fracture that come under my observation, to find so small a number of perfect anatomical results, and even more greatly surprised at the large number of cases that have imperfect functional results. I refer to patients who have passed the immediate results of the injury, and who were examined for scientific curiosity. The impairment of function is seldom sufficient to render those who have sustained fractures incapacitated for any manual labor, but often it requires a change of occupation and great depreciation in the wage-earning capacity. In all cases that I have examined where the injury occurred after adult life, there was decided evidence of the seat of the fracture, either by over-riding of the fragments, angulation or vicious callus. I have seen no instance where the fracture was within two inches of a joint with a perfect functional and anatomical result. I realize that I have seen and examined too

few cases to draw any definite conclusions, and that what appears in a skiagraph to be far from perfect may and often does give the patient an excellent functional result.

The average layman considers that "setting a fracture" means replacing the fragments to their normal positions as perfectly as one could adjust the ends of a broken stick. Successfully replacing the fragments of a broken bone—the femur, for instance—under the conditions usually present, and being sure that the fragments are replaced, that there is no overriding, angulation or rotation of the fragments, no interposition of soft tissues or broken bone that may interfere with proper union, I consider a very difficult and often impossible task. But it should be our unceasing attempt to get the broken fragments as nearly returned to their normal symmetry as possible, for by so doing we cannot but improve the functional result.

The introduction of the Roentgen ray should do as much in the treatment of fractures as the introduction of the principles of asepsis has done in other branches of surgery. By the proper use of the X-ray we can diagnose with certainty many otherwise obscure conditions; notably fractures complicated with dislocations, comminuted fractures and injuries about joints simulating fractures. But in using the fluoroscope or skiagraph we should carefully examine the sound limb, and take two or more views in different directions, or false deductions will result. The physician should preserve the skiagraphs for reference, but should exercise great discretion in regard to furnishing the patient copies; being ever mindful that the defects are often magnified and need expert interpretation, and that they may cause dissatisfaction in an otherwise contented patient. They may not always be an unmixed blessing in a damage suit in the hands of the average juror.

The results in simple fracture have not materially improved in recent years; on the contrary, thanks to aseptic surgery, the compound variety has lost many of its former terrors. There are too many sequelae of a more or less permanent nature; such as oedematous swellings, undue muscular atrophy from non use and pressure of splints, adhesions of muscles, fascia and tendons, vicious callus and non-union, shortening and limitation of motion. Skia-

graphy has taught us that these conditions are almost invariably due to lack of proper reduction of the fragments or inadequate after treatment.

As confirmation of the failure of our present methods to fulfil requirements, we find some of the leading surgeons, notably Lane of London, advocating open operation in all simple fractures of long bones; and it may not be amiss to note that he has enlisted many able followers, though few so enthusiastic as he.

However much opposed you may be to the open method of treatment, you can but see that there is a great advancement in that direction. The open method is rapidly pushing the time honored splints and pulleys to the wall. The patella and olecranon were the first thus attacked, and results have seemed to justify many in practicing and advocating the open procedure in all cases where perfect aseptic technic can be secured. The pendulum may swing too far in this direction, as it has done in other branches of surgery, before a happy medium is reached.

In conclusion:

1. Fractures should be recognized as major operations and the prognosis directed accordingly.

2. That human adaptability in restoring function to injured parts often leads one to believe that he has secured better results than is really the case, and that even then too many finally have physical defects that reduce their earning powers.

3. That we should instruct the laity that "setting a fracture," especially by the closed method and without the aid of the X-ray, is not an exact science.

4. That the X-ray is of inestimable value in the treatment of fractures, but I think its use should be confirmatory, and that the skiagraph needs careful study to prevent false interpretation.

5. I have no panacea to recommend for these sequelae that I think occur too often: no special operation or suture to advise, but think the open method has come to stay, and should be used or advised in all cases where pain persists; where the skiagraph indicates spicula of bone or soft tissue between the fragments; or where the ordinary efforts at reduction fail, and when perfect aseptic technic can be observed. And I

feel sure that this method will meet with universal approval as soon as a more suitable fixation suture material is devised.

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THE ESSENTIAL CHARACTER OF HYSTERIA.

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Our regrettable reliance upon the *ipse dixit* of a great name is again illustrated by the reorganization now occurring in our ideas on hysteria. The present trend of the clinical concept of hysteria has turned, under the guidance of Babinski, towards ideas which were placed in the background by the clinical picture of the "grande nevrose" drawn by Charcot. That is to say, the earlier conception of Bernheim has received its due, and most neurologists in France at least, have acceded to the proposition that a "hysterical symptom is one susceptible of production by suggestion and of removal by suggestion-persuasion." Bernheim, however, now considers the phenomenon of suggestibility to be normal, and the emotional attacks (les crises de nerfs) are for him the only hysteria.

In actual practice, in English speaking countries at least, the heresies of Charcot have had little influence, except perhaps among a few neurologists. The reason for this I shall not attempt to explain.

But let me recall an experiment which Joire conducted in the early nineties with a girl named Marie. During hypnosis, it was suggested that she see her name written upon a translucent card. She was then asked to trace the letters she saw, and did so thus "M-a-r-i-e." She was again hypnotised, and the experiment repeated, but at this time the surface of the card which she had seen was turned away from her against a window, so that any letter would appear reversed as they were seen through the card. She was again asked to trace what she saw and did so as follows—e-i-r-a-M. She must therefore have perceived that the card had been reversed, for she acted in conformity with that idea, but she did not really *see* the letters; for had she done so, they would have appeared as when the name is seen in a mirror. This conclusively proves that she had only the

idea of the reversed letters, which she tried to portray to the best of her ability. She had no sensation; it was not an hallucination. The ease with which she perceived that the card had been reversed indicates how cautious one should be in having recourse to metaphysical explanations of phenomena.

Bernheim, too, showed in 1886 that the amaurosis and dyschromotopsis in hypnotic states were not sensory defects but that they were indeed simulated, as he believed, unconsciously. Again, the credulity of some observers that cortical areas could be inherited during hypnosis by striking the skull over them with a hammer should not have been possible in face of the critique of Jules Soury, who showed that the function under experiment went into abeyance in conformity with the observer's belief about cerebral localization. For instance, Rainaldi's patients lost the power of smell and taste during hypnosis when they were tapped over convolutions O1 and O2, while other observers produced this effect only when tapped over the uncus. Similar differences were evidenced in other areas, as Soury biting said "in conformity with the text-books read by the observers."

Such considerations should long ago have undermined the fantastical superstructure which hysteria became, but it was not until last year's discussion at the Paris Neurological Society that the real destruction of the earlier hypotheses can be said to have occurred. There it was unanimously decided "that among the phenomena usually included in hysteria, there is a special group of symptoms which can disappear under the influence solely of suggestion or persuasion; in particular, certain kinds of convulsive fits, paralyzes, contractures, anesthesae, hyperaesthesia: of modifications of the special senses and of difficulties of speech; as well as certain respiratory, digestive, and other troubles." The genesis of these is fully discussed by the present writer in *International Clinics* of October, 1908. They are most easily induced in states of suggestibility exaggerated by organic disease, which diminishes critical power, the faculty of awareness, which does not concord with suggestion. It is very difficult for the observer to avoid suggesting that in which he believes. Hence, the constancy with which the stig-

mata were found; but Babinski has not during the last ten years seen anaesthesia in cases not previously examined medically. The medical manufacture of hemia-aesthesia is illustrated by the case of traumatic neurosis, in which Dupinet saw another expert actually call forth a hemianaesthesia which had not been present before. This experiment is not too difficult to be repeated in almost any hospital ward. The nervous crises which formerly made of the Salpetriere a pandemonium no longer occur there, because the suggestion of their occurrence no longer obtains.

The finding of causative suggestions in other hysterical manifestations is entirely proportional to technical skill in the search.

It is pretty clear by now that suggestion has no influence over the tendon reflexes, the true cutaneous reflexes, the circulatory and trophic functions, the disorder of which may produce dermatographia, urticaria and their eruptions, ulcers, oedema, hemorrhage, or gangrene. Nor can the temperature, nor the secretions of urine, saliva, and sweat be influenced by suggestion, except in so far as they are called into action by emotion. Mobility of humour is a commonplace in hystericals; and this mobility is amenable to suggestion, hence it is theoretically possible to affect the secretions indirectly, by suggestion through the emotions. But positive facts in demonstration of this have not yet been convincingly adduced. In numerous cases hitherto presented, trickery cannot be excluded. Medico-legal literature teems with mythemantic cases, such as that of the man who confessed to concealing a syringe in the rectum, and in whom, in a moment of excitement, an evacuation revealed two. The number of those cases which "could not possibly have had access to any means of provoking their symptoms" only indicated the looseness with which such negative evidence is accepted; as, for instance, in a case of alternating mydriasis which I observed in Babinski's clinic, for though the patient's father indignantly repudiated the mere statement thereof, it was found that his daughter had been placing in her eye drops of an atropine solution filched from her employer. Of course, mythomania, a type of moral degeneracy, for of lack of adaptation, a weakness which resorts to trickery, may be and generally is accompanied by the sug-

gestibility; so that academically speaking, a deliberately produced lesion simulating spontaneous disease which the patient is trying to imitate may deserve the term hysteria; for, of course, imitation is one of the forms of suggestion. These considerations are applicable to many cases of so-called neurasthenia, very often to the traumatic neurosis and frequently to the false gastro-pathies. The false neurasthenic is a creature also wounded in *amour propre*, solaces himself by retirement from further wounds; he is a simulator, more or less unoconscious, and is curable by a removal of his unreal belief. Similarly, a traumatic neurasthenic tenaciously clings to the false fixed idea which holds him in disaccord with the environment, until he achieves the solatium he craves. Sometimes, however, the old man of the sea takes so strong a hold that he cannot be cast off; like the widow, he has nursed his grief until it becomes stronger than he. The gastric neurotic, too, must be cured by the destruction of his erroneous fixed belief in his digestive incapacity. All of the foregoing false fixed ideas are hysterical, as they have arisen in suggestions, whether these originated directly from an injudicious physician, a too sympathetic friend, or indirectly from the gossip of neighbors or the store of the patient's memories. And all are curable by suggestion, or better, by persuasion. The latter is constituted by the patient's awareness of the steps traversed; whereas in suggestion, he does not know how the newer idea has been implanted in his mind; for it is inculcated either by authoritative assertion or insinuated while his attention is distracted elsewhere: in either case, received without critical examination.

More careful investigation of the psychoneuroses has now shown that many of the annoying, harassing, indescribable sensations which make life a misery to certain people have nothing to do with hysteria. They are cenesthopathies, that is, disordered impressions from the organs not derived from without; they are somatopsychic affections. Common in the psychoses, they may be quite monosymptomatic, and even unaccompanied by hypochondriasis. They are in no sense hysterical.

Another important group of symptoms not derived from suggestion have been lately placed together by Janet under the title

of psychasthenia. He has shown how unamenable to suggestion these are. The crises of agitation these patients often undergo have been labeled hysteria countless times. They are essentially different, as is the whole clinical picture. The main differentia are:—

"Firstly, as to fixed ideas, their duration in hysteria tends to be long, for though they are easily buried and forgotten, they are resuscitated with great ease and infallibility; whereas in the psychasthenic the fixed ideas are very mobile, but keep recurring voluntarily and indeed become cherished parts of the individual, and are far more difficult to eradicate than those of the hysterical. Secondly, hysterical ideas are evoked by well defined and not numerous associations, 'suggestions'; in the psychasthenic they are often evoked by apparently irrelevant associations, which are searched for by the patient; thus the (*points de repere*) are very numerous, cannot be predicted with certainty, and are often mere excuses for crises of rumination. Thirdly, the hysterical ideas tend to become kinetia, whereas the psychasthenic's constant state of uncertainty causes him to oscillate between 'I would' and 'I would not.' Inhibition is too strong to allow an act, but not strong enough to dismiss the obsession."

As to the crises, those of hysteria cannot be distinguished from those of psychasthenia or epilepsy, except by the property of being produced and removed by suggestion; for the foregoing criteria demonstrate the invalidity of the distinctions formerly drawn by Janet and others with regard to loss of consciousness, amnesia automatism and power of arrest. Recently, Ernest Jones has insisted upon the need formerly expressed by Janet of studying the mentality between the crises in order to appreciate their significance; and this necessity remains true, although the disassociation hypothesis on which it is based is by no means beyond criticism. Walter Scott has recently attempted to rebut it in a case cured by suggestion without regard to the sejunction of hypothetical buried complexes; and although his case and argument do not convince, I believe that the synthesis only awaits the labors of men of ability and clinical experience equal to that of such men as Jung, Morton Prince, Sidis, etc.

The criterion of suggestibility makes nec-

essary a revision of the conclusions of Hoche and Heilbronner on hystero-epilepsy. They believe that even fixed pupils and sphincter relaxation may occur in simple hysteria.

But it is now pretty clear that reflex iridoplegia indicates an organic disease, or at least, if temporary, a profound intoxication, which may produce also marked suggestibility which, however, is unrelated to the pupil fixation. But sphincter relaxation may occur during profound emotion, as in the terror-stricken dog reported by Fere, in which an agorophobia had been contracted from his mistress. The tendency to the loss of sphincter control during profound emotion is a commonplace; and the reinforcement of this by suggestion can very easily prevent the inhibition by which civilized people and domestic animals counteract the emotions which might lead to unpleasant effects. There is a partial loss of consciousness, an insanity if you will, during the first access of every emotion. Thus in the emotion accompanying blushing, timidity inhibits voluntary activities; during laughter, the voluntary control is much diminished; the state of consciousness during such emotions has been shown by Sir Author Mitchell to be analogous with that in dreams, during which auto-suggestions dominate the mind. That hetero-suggestions also are influential in sleep and dreams has been proved by the experiments of Morly-Vold and Vasomide and Vurpas. These observers, by stimulating the auditory, tactile and other senses, provoked dreams in accordance with the stimuli used; thus a string tied round the ankle caused the patient to dream that a wild animal was lacerating his foot, and so on. All these states are marked by lack of voluntary control, which connotes exalted suggestibility, that is to say, hysteria. This, then, is the relation between facile emotionalism and hysteria. Emotionalism is not hysteria, except in so far as it favors suggestibility. No one is a greater prey to emotionalism than the psychasthenic; but as Janet has shown, his suggestibility is much diminished; for though he suffers profoundly on account of his emotions, it is on account of their incompleteness and failure of fruition in act.

The principle is simple enough, but is much complicated by the fact that phobias,

and other psychasthenic symptoms may occur in hystericals by imitation (which of course is merely a form of suggestion) or as a consequence of organic states. I have now under observation a patient who is at the same time claustrophobic and agorophobic on account of a single fainting attack during cardiac enfeeblement due to an attack of influenza. She is in one sense of the word a psychasthenic; it is phobia by suggestion. Phobias were cured by suggestion and therefore were probably of the hysterical type in the instructive case recently reported by Dr. Scott. The psychoanalysis, not published in the report, is still more striking in this regard. An example of obsessions induced by suggestion and repeatedly cured thereby was related of a kleptomaniac by Bernard Leroy at the Congress of Geneva. Irrisistible impulsions derived from suggestion caused this woman in turn to fall violently in love with an officer whom she did not know; to passionately long for the death of her husband and indeed to make all the preparations for compassing his death, until culmination of her preparations so horrified her that she recoiled and was cured of that obsession at the moment; and finally the intense longing to steal, which she satisfied by robbing the counters of the department stores.

Hysterical tic can usually be cured rapidly. For examples I must refer to an article in the January issue of *Surgery, Gynecology and Obstetrics*. The diagnosis of these pseudo-psychasthenics must be made by the absence of sentiment to incompleteness with the various "manias" to which it leads, and by the uncritical irrisistibility and absence of struggle of the obsessive ideal and impulsive acts of the false psychasthenic.

The comprehensibility of hysteria, and the simplification of the treatment made possible by the foregoing facts, adds enormously to the precision, and hence the power of the therapist; and will remove from our profession the hitherto deserved stigma of inattention to, and ineptitude in face of, the numerous patients suffering from functional diseases of the nervous system and hysteria who have fallen a prey to the charlatan and pseudo-scientist in such vast proportions; it will put an end to the posing of ecclesiastics as mental healers, of metaphysically absurd cults, which undermine the collective intelligence; and

lastly, it will give confidence to medical men in their capacity to take their due part in the field of psychic enquiry avidly pursued by the laity of the twentieth century.

Correspondence

LETTER FROM INDIA.

From Dr. L. D. Wilson.

BOMBAY, INDIA, Nov. 15th, 1909.

Dear Dr. Jepson:

I believe I promised you an occasional letter for the JOURNAL, but after the first stage of our journey, life became so strenuous that anything like connected writing was out of the question. However, I shall do the best I can, trusting that the editorial blue pencil will not spare what may be deemed uninteresting or trite.

The good ship Cleveland—18000 tons—of the Hamburg-American Line, started with us on the morning of the 16th of October for what is expected to be a good long journey. About 24,000 miles of sailing and something like 4,000 miles of land travel is the sum total of the proposed itinerary. Sea travel is at best monotonous. Getting acquainted with fellow-travelers and mild indulgence in various "deck games" and "bridge" are about all that the situation offers. Our voyage was smooth and pleasant until the first stage of the trip was reached. This was the Madeira Islands, which we reached Oct. 24th. Funchal is the landing port. It is quite a city, having a population of about 25,000. As the land rises quite rapidly from the sea shore, the city has a rather attractive appearance as it is approached. The houses peep out from among the trees far up the mountain side. These islands rise up out of the sea to a height of five or six thousand feet, and except just at the base are quite steep. Almost all kinds of sub-tropical vegetation flourishes in them. The chief product formerly was the well-known Madeira wine, but owing to some disease of the vines the industry has very largely declined. Sugar has taken the place of largest production. The climate, especially in winter, is very mild and equable. It formerly was a great resort for invalids, and is still much sought by them.

The streets of Funchal are all paved with

hard volcanic cobble stones, some not larger than a small egg, and these are put down so smooth and solid that it is sometimes slippery walking on the sloping roadway. The principal mode of transportation is by oxen and sleds. These are as numerous as cabs and carts in other cities, and travel about at quite a brisk pace. The sleds intended for passengers are equipped with a fancy canopy top and cushioned seats. A mountain railway takes one up the mountain about a mile; and the proper way to come down is to coast down one of the cobble-paved lanes on a sled. These sleds travel very rapidly. Two attendants go with each one to guide and regulate the speed. These sleds hold two persons each, and are carried from the bottom back up to the top of the slides on the men's backs.

After nearly a day spent in this interesting place, we steamed away for Gibraltar, which we reached on the 26th. This place is so familiar that nothing need be said about it. An interesting place it is, historically, and as a great fortress guarding the harbor and the entrance to the Mediterranean. After almost a day here, we set sail near sunset for Naples. About 9 a. m. of the 29th we passed between the islands of Ischia and Capri, and swinging around to the northward entered the beautiful bay of Naples bathed in magnificent sunshine. This is one of the fine sights of the world, and has been the subject of more literary rhapsody than almost any other. To ascend the high hills back of Naples and look out over the city and bay, with Vesuvius in the distant back-ground, is an experience one is not likely to forget. As we had but a few hours here, we were soon off for Port Said, the western end of the Suez Canal. On the 30th we passed through the Straits of Messina, steaming in close to the city that was so destructively visited by an earthquake about a year ago. The ruin wrought is distressing to see. On the opposite side of the strait is Reggio, similarly wrecked. As we pass out of the straits into the open sea, we go between the ancient and far-famed Scilla and Charybdis. The passage did not seem to be at all troublesome, but to a small sailing vessel one could easily see that adverse winds might bring disaster. On the 31st we passed Crete, and on Nov. 2nd crept into the entrance of the canal at Port Said, passing the fine statue of de Les-

seps—the engineer who constructed the canal—that stands at the entrance. This is said to be the wickedest spot on earth. We did not see much of this, as we at once took a train for Cairo. For about forty miles the road follows along the canal, and at Ismailia turns off toward Cairo. From Ismailia our route is through a region of ever increasing fertility. Irrigation canals enable the productiveness of the soil to be exploited to the limit. Three crops a year are the usual routine, cotton and corn being the chief crops. We passed several important towns, among which is Tel el Keber, the scene of Lord Wolsley's battle. We reached Cairo about noon.

To write about this great city would require a volume. Its cosmopolitan population, its bazaars, its age-old monuments, museums, can be but barely mentioned. After a day in the city we took a drive through the beautiful avenue of Acacias, about eight miles to the Pyramids of Gizah. These stupendous monuments have been so often described that I shall not say more than that they are so impressive and solemn that one is awed into silence before them. The Sphynx, which stands near by, simply adds, if such could be, to the solemnity and hush that seems to fill the soul as it realizes the vastness and venerableness of these hoary works of the long by-gone race. Towering over a vast expanse of sandy desert, they seem to give added emphasis to that sense of lonesome desolation that seems to pervade the entire region.

But I must close, as we are soon to start from here. Will write you something of India next.

L. D. W.

NORWAY IN WINTER:

A CLIMATE FOR INVALIDS.

An interesting scientific account of the peculiar advantages of the Norwegian climate has just been published from the pen of Dr. A. Magelssen, under the title of "To Norway for Health."

Dr. Magelssen is one of the well-known men of the medical profession in Europe, and an authority on climatic conditions. He is the author of a treatise on "The Relation of Climate to Health" and his writings in this direction are well known and appreciated especially in Germany and France. In the United States Dr. Magelssen has met with a favorable reception, the Smithsonian Institute as early as 1895 awarding him honorable mention for his scientific writings and research work. A recent issue of the literary section of the *New York Times* has this to say of Norway as a recreation ground:

"Dr. A. Magelssen of Christiana contends that

the world needs a recreation ground. Up North, in a delightful country, free from unrest and worry, is an ideal playground and health resort.

"It may come as a surprise to many readers that Dr. Magelssen recommends, and very strongly, the Winter season as the peculiar curative and upbuilding one. Not only in Europe, but in America as well, has Norway been considered a very cold and therefore uninviting country in the Winter. Nothing can be more fallacious, so the author says, and backs up his statement by evidence from eminent medical authorities. Norway is not really a cold country—that is to say, if the temperature be actually lower in the mountains than in the neighboring lowlands. Denmark, for instance, it is a brisk cold, accompanied by was complete, due, in the opinion of the operator, sunshine and undisturbed by wind, free from dampness, and therefore conducive to health and well-being.

"Dr. Magelssen advises those who have visited Norway in the Summer time only to come back in Winter and to make a long stay. He gives glowing descriptions of the glorious out-door life to be had in the snow, with its innumerable possibilities for sport and recreation under a clear sky, in bracing and pure air.

"There are many sanatoriums open for guests all the year around. A distinction is made by the author between sanatoriums and hotels as hotels only. All will be benefited by some weeks' stay in the mountains, but to those suffering with nervous diseases or with lung trouble a season in Norway should prove particularly healing. There are special sanatoriums fitted with every modern improvement for the proper treatment of tuberculosis. Such patients are not received at the other hotels, however." F. LEM. H.

A BACTERIOLOGICAL TRAGEDY.

A gay Bacillus, to gain him glory,
Once gave a ball in a laboratory;
The fete took place on a cover glass,
Where vulgar germs could not harass.
None but the cultured were invited
(For microbe cliques are well united),
And tightly closed the ball-room doors,
To all the germs containing spores.
The Staphylococci first arrived,
To stand in groups they all contrived:
The Streptococci took great pains
To seat themselves in graceful chains.
While somewhat late and two by two,
The Diplococci came in view.
The Pneumococci, stern and haughty,
Declared the Gonococci naughty,
And would not care to stay at all
If they were present at the ball.
The ball began, the mirth ran high,
With not one thought of danger nigh.
Each germ enjoyed himself that night,
With never a fear of the Phagocyte.
'Twas getting late (and some were "loaded,")
When a jar of formalin exploded,
And drenched the happy dancing mass
Who swarmed the fatal cover glass.
* * * * *

Not one survived, but perished all
At this Bacteriologic ball.

—J. Lee Hagadorn, M.D., Los Angeles, in
Southern Calif. Practitioner.

The West Virginia Medical Journal.

S. L. JEPSON, A.M., Sc.D., M.D., *Editor.*

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WHEELING, W. VA., JANUARY, 1910.

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All communications to this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notices of deaths, removals from the State, changes of location, etc., are requested.

Our readers are requested to send us marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

CONTRIBUTIONS TYPEWRITTEN.

It will be satisfactory to all concerned if authors will have their contributions typewritten before submitting them for publication. The expense is small to the author—the satisfaction is great to the editor and printer.

ADVERTISEMENTS.

Advertising forms will go to press not later than the 20th of each month.

Advertisements of proprietary medicines must be accompanied with formulae. Rate cards sent on application.

REMITTANCES

Should be made by check, draft, money or express order or registered letter to Dr. S. L. Jepson, Ch'n of Pub. Com., 81 Twelfth Street, Wheeling, W. Va.

Editorial

If your JOURNAL does not reach you by the 10th, drop us a card.

VIVISECTION.

Recently have been issued from the press of the *American Medical Association* five pamphlets, entitled *Defense of Research Pamphlets*. The purpose of these is to demonstrate scientifically to persons capable of reasoning, that immense benefit has resulted to the human race from experiments on animals. These experiments have met with much opposition both in Great Britain and this country, from a set of people whose feelings are so sensitive that they look with horror on the hypodermic injection of a mouse or a guinea pig, but forget to consider the vast amount of human suffering to relieve which is the purpose of these experiments.

The first and largest of the pamphlets referred to is by Dr. Jay Frank Schamberg, its subject being *Vaccination and Its Rela-*

tion to Animal Experimentation. The author is a widely known specialist and writer on Dermatology, who acquired a very large experience in the acute exanthemata in the Municipal Hospital, Philadelphia. He gives a splendid summary of evidence of the mighty good accomplished by vaccination, the discovery of which, for its benefits conferred upon humanity, stands without a rival in the history of medicine. It would be little short of insulting to preach the benefits of vaccination to an intelligent physician, and yet it still has opponents. As early as 1802, says Schamberg, the British House of Commons made a favorable report on its protective powers. "In 1807 the Royal College of Physicians made a favorable report to the House of Commons." In 1804 a royal commission in Denmark unanimously determined that vaccination prevented small-pox. In 1856, of 542 physicians officially addressed, 537 testified to the efficacy of this wonderful preventive measure. No scientific society has ever given an adverse opinion. In 1893, after almost a century's experience, England's Royal College of Surgeons testify:

"We consider the evidence of its life-saving power to be overwhelming, and we believe, from evidence equally strong, that the dangers incidental to the operation, when properly performed, are infinitesimal."

Schamberg proceeds to show that much of the good in the virus we now have, and in the operation as at present practiced, has resulted from the experimental employment of animals.

Pamphlet II is by Dr. E. L. Trudeau, and deals with *Animal Experimentation and Tuberculosis*. The author, when himself a subject of tuberculosis, organized the Adirondack Cottage Sanitarium many years ago, and it has proved a blessing to himself and multitudes of patients. His fame is world-wide, and his testimony in this pamphlet that "animal experiment has taught us all we know of the complex, defensive mechanism by which the living organism resists the progress of bacterial infection, and often ultimately heals the lesion and attains acquired immunity," should carry conviction to all minds that are open to the truth. As one grand result of the studies and experiments of Trudeau and other unselfish medical men the world over, the death-rate from pulmonary tuberculosis is

steadily falling, and in the past forty years has had a decrease of 40 to 50 per cent in different countries. Alas, however, in bringing about this result in the human family, a few guinea pigs, mice and rabbits have been made to suffer and possibly die. There is encouragement in Trudeau's hope that the ultimate control of tuberculosis will be accomplished by knowledge acquired by animal experimentation, by a more thorough and comprehensive application of the knowledge already thus won, and also by "the discovery of some specific method of immunization or treatment—a goal that can be attained only through continued and painstaking studies on animals."

In pamphlet III—*The Role of Animal Experimentation in the Diagnosis of Disease*—Dr. M. J. Rosenau, of the Marine Hospital Laboratory, demonstrates the benefits that have resulted from animal experimentation in the study of tuberculosis, typhoid fever, cholera, hydrophobia, plague, diphtheria, tetanus, septicemia and pyemia. He quotes Trudeau thus:

"Everything that has a direct bearing on the prevention of tuberculosis, everything that has changed mankind's attitude toward it from one of apathy and hopelessness * * to the growing hope of ultimate conquest, we owe to animal experimentation."

From Rosenau himself we quote:

"It may interest the zoophilists to know that the sacrifice of a few dogs and rabbits in the study and prevention of rabies has been the means of saving the lives of many times their number of dogs, horses, cattle and other animals from this disease."

How many cases of hydrophobia in the human family have also been thus indirectly prevented is perhaps of less interest to this class of peculiar people. Rosenau also testifies that it was by animal experimentation alone that a knowledge was acquired by sanitarians that "plague is transmitted from rat to rat and from rat to man through the agency of the flea." The mode of infection thus ascertained, it became comparatively easy to institute preventive measures; and great honor is due to the sanitary officers under Surgeon-General Wyman, for the good work instituted and carried out against the plague in California, in spite of the long opposition of the local authorities.

Space is not permitted for further comment upon these valuable pamphlets, the remaining two of which bear the titles:

Animal Experiment and Cancer, by Jas. Ewing, M.D., of New York, and *The Ethics of Animal Experimentation*, by Prof. Angell of the University of Chicago. The set can be had for 23 cents from the publishers.—S. L. J.

A FEW WORDS TO OUR MEMBERS.

The State Medical Association has at last gathered within its folds more than one-half of the licensed physicians of the state. The writer was a member of the organization when an annual meeting gathered but thirteen members, and these were compelled to violate the constitution by illegally electing two new members in order to have a quorum. We now have 150 to 200 in attendance at our meetings. But we are not satisfied. Of the 800 outsiders we should have at least 500 in the State and local societies. At the opening of the new year is the time to make an active and persistent effort to add to our membership. Too much should not be expected from the secretary, although he is the big man of the society. We suggest that a committee on new members, of which the secretary shall be a member, be appointed in every local society, and that this committee *at once* approach every eligible non-member within their respective bounds. Every day that such action is deferred lessens the prospect of gaining new members, since those who join our organization now secure a full year's membership. Send for samples of the JOURNAL for prospective members. We are printing a large edition of this issue.

Mr. President, will you attend to this suggestion at your next meeting!

Another point that should receive attention is the collection of membership dues. The sooner this is done the better. Last year the secretary and editor sent out at least three duns before the year closed. This is the duty of the local societies. The collections should be made in January, so that we can know how many copies of the JOURNAL to have printed. A number drop out each year, and as we can not know this for months if collections are delayed, the JOURNALS that go to these are at our cost. We should know by February how many members to provide for. Kindly see that

immediate payment is made by all the members. They will then feel greater interest in the society.

We desire to suggest also that our advertisers be patronized when you are needing any of the things advertised. If we fail to prefer our patrons, how can we expect to hold their patronage?

D. Appleton & Co. have favored us for years. They are publishing many of the best books in the market. Let them hear from you.

Max Woche & Son Co. is one of the oldest and most reliable firms of instrument makers in the country. Cincinnati is convenient to us. This is the only house of the kind that puts money into our treasury. Why not give it a liberal return?

So we may write of Parker, Davis & Co., whose goods are well known to be thoroughly reliable, and the house is strictly ethical in the conduct of business. Why prefer houses which advertise to the public on fences, trees, barns and in other ways common to the patent medicine venders

Space will not permit us to name our other advertisers, all of whom can be commended. Study them all and patronize them all when in need of their products.

Finally, cannot you, dear reader, find some good advertising for us in your locality or by correspondence with the houses with which you deal. Our own state certainly has firms whose business should be made known to our readers through the JOURNAL. Any member sending us acceptable advertisements will receive the same commission we give to our regular agents. Look about you, especially you who are resident in the larger cities, and try to help the Association in this very necessary part of its business. The receipts last year from advertisers exceeded those from membership dues. We hope for a thirty per cent increase this year, but cannot secure this without the co-operation of our members. It will be very painful to the editor if the generosity of the Association in putting him on a salary entails a loss. Thus far the JOURNAL has been self-sustaining, and our mailing list is larger than ever. A few more good ads. will keep us in good shape financially. Will you not help us in finding them? We will do our part, and shall be "de-lighted" if, at the close of our fiscal

year, we are able to report a balance in the treasury.

Keep all of these suggestions in mind and put them into action, and accept our best wishes for a prosperous and happy year.—
S. L. J.

Mr. Secretary: Tell us what your society is doing. Also send us local items of interest. We all want to know what "you all" are doing.

Owing to the protracted illness of Dr. Barber of Charleston, Dr. H. G. Nicholson has leased his sanitarium, and will conduct it in the future. He has added a department for the administration of the Pasteur treatment for hydrophobia. So far as we know, this is the only one in the state, and it should be patronized.

26 EAST 62ND STREET,

NEW YORK, Dec. 16th, 1909.

Editor W. Va. Medical Journal:

Dear Sir:—I notice an article in the September issue of your JOURNAL, giving a description of a suture, claimed to be NEW, by Dr. R. M. McMillen of Wheeling, W. Va.

This suture was devised by myself, and has been used by me for the past ten years, and I have had the honor paid me by having it called after my name.

Trusting you will make this correction, and see that I am given proper credit for same, I remain,

Yours very truly,

WM. TOD HELMUTH.

MEDICAL EDUCATION.

A special conference on Medical Education and Legislation will be held at the Congress Hotel (formerly the Auditorium Annex), Chicago, Monday, Tuesday and Wednesday, February 28, March 1 and 2, 1910, the session to begin at 10 o'clock Monday morning.

On Monday, February 28th, the Council on Medical Education will hold its Sixth Annual Conference. A report will be presented showing the present status of the medical colleges in the United States and another report giving practical tests in state license examinations. Other important topics bearing on medical education will be discussed.

On Tuesday there will be a Joint Conference on Medical Legislation, at which the essentials of a model medical practice act will be considered.

On Wednesday the Committee on Medical Legislation will hold its Annual Conference, discussing a National Bureau of Health, vital statistics, pure food and drugs, expert testimony, and other live topics.

State Licensing Boards and State Medical Associations are most cordially invited to attend

this conference and to participate in the discussions.

COUNCIL ON MEDICAL EDUCATION,
N. P. Colwell, Secretary.

COMMITTEE ON MEDICAL LEGISLATION,
Frederick R. Green, Secretary.

CHICAGO, ILL., DEC. 1, 1909.

OPEN MEETINGS OF COUNTY, DISTRICT
AND OTHER LOCAL MEDICAL
SOCIETIES.

(Extract from the minutes of the House of Delegates of the American Medical Association, Atlantic City, N. J., June 10, 1909.)

WHEREAS, The American Medical Association, not only as one of its declared purposes, but by numerous lines of activity, many of them connected with the Section on Hygiene and Sanitary Science, stands committed to the education of the public with respect to the nature and prevention of disease; and,

WHEREAS, The demand for such popular education with respect to tuberculosis, cancer, typhoid fever and other decimating diseases has become urgent; therefore, be it

Resolved, That all county, district and other local medical societies be, and they are hereby, requested to hold annually one or more open meetings which the public shall be invited to attend and participate and which shall be devoted to a discussion of the nature and prevention of disease and to the general hygienic welfare of the people.

DR. C. A. L. REED'S RESIGNATION.

Dr. Reed of Cincinnati, who has for seven years very acceptably and efficiently filled the position of chairman of the Committee on Medical Legislation of the Am. Med. Ass'n, has resigned this place on account of pressure of private business. This extract from his letter is worthy of very careful consideration:

"I must ask for the privilege of tendering a few final words before I can accept exemption from further sacrifices incident to relations that I have sustained with pleasurable devotion for the last seven years. During that time, by virtue of its splendid organization, the medical profession has been able to assist in the accomplishment of important reforms. Among these reforms may be mentioned the improved status of the medical profession in the governmental organization of the Isthmian Canal Zone, the reorganization of the Army Medical Corps, the passage of the Pure Food and Drugs Act, the recognition by the government of the heroic services of physicians, the defeat and resulting retirement from office of important personages whose influence was inimical to the welfare of the people along lines represented by the medical profession, the promotion of a sentiment in behalf of state licensure in medicine and the preparation of a model act to that end, the education of the public on questions of medical legislation, the development of a strong public demand for the creation of a broader and stronger national public health service, and, finally, the development of an organization by which the influence

of the entire medical profession can be brought to bear on great questions of legislation and public policy.

It is to be remembered, however, that all great reforms have been and must be effected to the embarrassment if not actual injury of unworthy interests that are thereby prompted to efforts at retaliation. Such efforts are in progress at the present time. Unworthy and discredited manufacturers of impure, adulterated and misbranded foods, fraudulent drugs and spurious liquors are to-day conspiring with certain equally unworthy and discredited members of the profession to blacken the character of its honored leaders, and thereby dis-integrate its organization. The paid representatives in Congress of selfish and sinister enterprise, the jealousy of ambitious members of the public services outside of the medical profession, together with the ignorant and venal pretenders in medicine, are endeavoring to break down the reforms by which they have been adversely affected. In this way the Pure Food and Drugs Act is being insidiously annulled by vicious interpretations that are foreign to the purposes of the people and the Congress in enacting the measure. An effort is being made to re subordinate the medical service in the Isthmian Canal Zone to authority that has no technical qualification for the supervision of its functions. Discredited officials are endeavoring to re-establish their power. Ignorance and superculture, allied under the guise of cults, are endeavoring to break down the medical practice acts of the states. Mercenary and merciless enterprises, antagonistic to the welfare of the people, are conspiring to defeat the movement for a national department of public health.

To overcome these antagonisms, to maintain the reforms already realized, and to accomplish other reforms, the necessities for which are flagrantly apparent in our national life, is to-day the first obligation of the medical profession both to the people and itself. Its natural guardianship of the public welfare cannot be ignored or evaded. It can discharge that duty only by an intelligent *esprit du corps* made effective through the instrumentality of far-reaching, well-disciplined and courageous organization. To this end the officers and committeemen of our national body should be unstintedly supported in their altruistic work; the state associations should be strengthened; but, above all, the county societies, the units of strength and efficiency, should exemplify in the highest degree the principles of complete organization and disciplined co-operation.

After a consensus has been reached on any question in any county, every member should become the teacher of the public on that question in his respective locality. The public intelligence thus enlightened, public conviction may find expression in public action, if need be at the polls. The medical profession must carry weight, not only by the wisdom of its councils, but by its actual power with the people as the natural conservator of their physical welfare and their normal efficiency. In the exercise of its prerogatives, the county medical societies should hold open meetings to which the public are invited and before which questions of profound general con-

cern should be discussed and appropriate action taken. These questions should pertain to every phase of protection against disease-producing influences in water, food, habitation and personal hygiene. The whole agitation, while not disregarding the defense of existing reforms, should, however, be largely concentrated in the immediate future in behalf of action by the Congress to establish an improved national public health service—a measure which, in every form of practical legislation, I am authorized to state has the cordial support of President Taft."

State News

PROSECUTING A QUACK.

CLARKSBURG, Dec. 6, 1909.

Editor W. Va. Medical Journal:

The profession in Clarksburg have had some legal experience with quackery which may prove of interest to the readers of our JOURNAL. Therefore I take the liberty of sending you an abstract of the case, with the hope that it may encourage the regular profession in other localities to action against impostors.

About eight months ago a man by the name of Zimmerman came here from Mannington, W. Va., and located in an office on Main street, evidently thinking this city a fertile field for his work, as it was not long before he sent for his family, rented a house near the business center of the town, hung out his shingle and settled down with an air of perfect security.

His sign read as follows: "Dr. H. E. Zimmerman, Neuro-Magnetic Healer." Hand bills were distributed proclaiming his wonderful abilities in relieving and curing diseases pronounced incurable by the regular profession. All without medicine.

The local profession became greatly interested in this remarkable man with supernatural ability, and not much time elapsed after the curer of all ills had become comfortably located before Dr. H. V. Varner, County Health Officer, and Dr. C. W. Halterman, member of the State Board of Health, called upon him to know why he had not registered his license, and if having none why he should be practicing medicine. It was explained to him that his practice was unlawful, and that if he persisted in following it he would be brought before a court of justice.

He insisted that he was not practicing medicine, and failed to take heed of the warning thus given him.

In the meanwhile several parties had interviewed Zimmerman, receiving his advice and treatments, and these were secured as witnesses, and in August last a warrant was issued and the case tried before a justice. Witnesses testified that he promised to treat their ailments. One witness, a young man, went to Zimmerman suffering with dyspepsia and hay fever. He was promised a cure for his diseased stomach, and his nasal affection was diagnosed as worms in the bones of the nose, which would need scientific manipulation and strong medicine. In this case he offered to prescribe. Another witness

stated that Zimmerman gave him one treatment for his stomach. He explained that Zimmerman required him to assume a reclining position without removing any of his clothing. He was then touched on different parts of the body by the hands of the operator. After this Zimmerman said he would apply the magnet or thud. He requested witness to remain perfectly quiet with eyes closed and to hold his breath, then he waved his hands over witness's body from head to foot, making wild, strange gestures in the air.

The question in the case hinged on what constituted the practice of medicine. Several physicians were sworn and all agreed that anyone who publicly professes to be a doctor and claims to treat the sick is practicing medicine.

The attorney for the defendant claimed that his client was not practicing medicine, and called upon him to take the stand. Only a few questions fired at Zimmerman by the prosecuting attorney (previously coached on some medical terms) brought out the fact that Zimmerman knew nothing of medicine, and was an ignoramus and fakir of the worst type.

He claimed he took instructions from A. J. McMillan of Zanesville, Ohio, then moved to Mannington, West Virginia, and later to Clarksburg. This was the first time he was ever molested. Although he had Dr. H. E. Zimmerman on his sign, he stoutly denied being a doctor and practicing medicine. When asked to explain his treatments, he said that all diseases were caused through the nerves not working properly, and that in practicing his art, if the stomach was out of order, he acted as a magnet and would send currents from his body down one nerve and up another to the diseased part, and put the nerves in good condition, which would cure the disease. When questioned in regard to surgical and obstetrical cases, he denied ever taking such cases.

The justice held him for the grand jury under two hundred dollars bond.

It was noticed the day after the trial that he erased from his sign the letters Dr.

The case was brought before the criminal court, and although the defense fought hard they failed to shake the damaging evidence of the State, which proved that the man was actually practicing medicine without a license, and had in one case offered to prescribe for a patient; his own circular proclaiming him a doctor, and that he treated all ailments, chronic and acute, was strong evidence in favor of the prosecution. The jury rendered a verdict of guilty, and he was fined fifty dollars and costs.

The defense had a number of witnesses summoned, but from some cause or other failed to put a witness on the stand, not even risking Zimmerman himself, who would certainly have fallen a victim before the terrific broadsides of the prosecution, who were well supplied with ammunition.

The witnesses were no doubt summoned by the defense merely to impress the jury, and not with the idea of using them.

The State summoned and put on the stand an Osteopath to bring out the point that, although he depended upon scientific manipulation, members of his profession were required to pass an

examination in the State before being allowed to practice.

The defense endeavored to bring out a nice point here which, however, failed to impress the jury. They brought out the fact that only a year has intervened since it was required of the graduates of Osteopathy to take an examination in this State. They then stated that the Neuro-Magnetic School was young and should be allowed to follow the practice of its teachings until recognized by the State and a separate board of examiners be appointed, as was the case in the School of Osteopathy.

In closing I would suggest that some investigation should be made of this man A. J. McMillan of Zanesville, Ohio, from whom H. E. Zimmerman has a signed certificate which states that he took a course of instruction in Neuro-Magnetic Healing.

Furthermore, I wish to mention that too much praise cannot be given to Dr. Varner, County Health Officer, and Dr. Halterman, member of the State Board of Health, also to William F. Morris, prosecuting attorney, for their intelligent and systematic investigation and prosecution of this quack.

C. N. SLATER,

Secretary Harrison Co. Med. Soc.

NEW PHYSICIANS

Licensed at the last meeting of the State Board of Health:

Name J. B. Millard, School of Graduation, Louis. & Hosp. M. C., home address or previous location, Williamson, W. Va.

E. E. Edwards, Hill Hosp. & Med. Col., Wagersville, Ky.

W. J. Smith, Univ. of Louis., Canada, Ky.

J. W. Lambert, Univ. of Louis., Valleyhead, W. Va.

H. W. Keatley, Md. Med. College, Spring Hill, W. Va.

R. R. Bunner, Md. Med. College, Fairmont, W. Va.

J. A. Duff, Md. Med. College, West Port, Md.

J. E. Hunt, Md. Med. College, Ohiopyle, Pa.

E. H. Ball, Md. Med. College, Buchanan, Ky.

W. J. Davidson, Medico Chirurgical, McKee's Rocks, Pa.

S. Trimble, Balto. Med. Col., Flemington, W. Va.

C. B. Bailey, Univ. of Chattanooga, Cyclone, W. Va.

C. P. Reed, Western Pa. Med. Col., Homer City, Pa.

C. C. Baldwin, Univ. of Pittsburgh, Greensburg, Pa.

J. L. Sivert, Univ. of Nashville, Huss, W. Va.

C. H. Fair, Georgetown Univ., Warrenton, Va.

L. J. Simonton, Georgetown Univ., Washington, D. C.

M. H. Maxwell, Georgetown Univ., Coketon, W. Va.

H. E. Gaynor, Georgetown Univ., Parkersburg, W. Va.

A. A. Wall, Leonard Med. Col., N. Braddock, Pa.

T. C. Smith, Howard Univ., Washington, D. C.

E. J. Smith, Howard Univ., Washington, D. C.

G. P. Evans, Col. P. & S. (Balt.), Glen Jean, W. Va.

N. M. Yost, Ohio Med. Col., Huntington, W. Va.

Dr. W. N. Klase of Carbondale, W. Va., died recently after a rather long illness. The Doctor had malignant disease of the cecum and adjacent ilium. At a rather late stage of the disease an exploratory laparotomy was performed, but no removal of the growth was attempted.

* * *

Drs. Schoolfield and Young of Charleston have recently been defendants in a malpractice suit brought by a young man by the name of Thomas Hall. The plaintiff had a fracture of both bones of the forearm which was treated by the doctors, a malunion resulting. Damages were asked for to the extent of ten thousand dollars. The doctors were well sustained by the local profession. The jury failed to agree, all except one being in

favor of a verdict for five thousand dollars damages. The jury finally made an award of five hundred dollars in behalf of the plaintiff. Judge Burdette of the circuit court, however, reversed the decision of the jury on the ground that the evidence preferred by the plaintiff was insufficient. This is the only malpractice suit of recent years to be tried in the vicinity of Charleston.

* * *

Dr. Keatley of Louisville, a graduate of Maryland Medical College, has located at Spring Hill, near Charleston.

* * *

Dr. Backus, formerly of Vaughan, has located in South Charleston.

* * *

Dr. U. G. McClure, recently of South Charleston, has charge of the mine practice at Putney. The coal mines at this place are operated by the Campbell's Creek Coal Company of Cincinnati. This company is in the notable minority of those who have paid any attention to the sanitation of mining towns, they having spent, during the past few years, twenty thousand dollars in that way. The water supply is, perhaps, the best of any town in the Kanawha valley.

* * *

The Kanawha Medical Society adopted the plan of having an address made by some prominent specialist at every other meeting. By this means the attendance has been much improved. So far the speakers and their subjects have been: Dr. Robert C. Bryan on prostatic hypertrophy, and Dr. C. L. Bonifield, gall-tract disease. At the meeting of January 18, Dr. Stuart McGuire of Richmond will deliver the address. At the last meeting of the county society Dr. Charles O'Grady was elected President, Dr. H. G. Nicholson Vice-President, Dr. H. L. Robertson Secretary, and Dr. B. S. Preston Treasurer.

* * *

Dr. John W. Moore, who was married to Miss Daisy Preston of Lexington not long since, has returned from his wedding trip and resumed the practice his profession in Charleston.

* * *

The friends of Dr. T. L. Barber will regret to learn that he is quite ill with pernicious anemia. He has been losing strength for some time, and late last summer he took a trip to England, hoping to be benefited by the sea voyage.

* * *

Dr. Burns, recently a resident of Jefferson County, W. Va., and a graduate of Johns Hopkins Medical School, has located in Wheeling.

* * *

Drs. Hupp and Wingerter of Wheeling recently lectured on tuberculosis at Cameron—Dr. Jepson was prevented from filling a like engagement by duties nearer home. Dr. Harriet B. Jones was on the program for an address on tuberculosis before the Belmont County (O.) Farmer's Institute, which convened the last week in December at St. Clairsville.

* * *

At the last meeting of the Southern Surgical and Gynecological Association which convened at Hot Springs, Va., Dec. 14th, Dr. J. E. Camaday read a paper on "Extraperitoneal Drainage After Ureteral Anasomosis."

Society Proceedings

The following reports, which should have appeared in the Minutes of the House of Delegates, were mislaid in the editor's—not the printer's—office, and have since turned up:

SECRETARY'S REPORT.

The reports from the county societies came in very slowly this year, probably due to the late date of meeting. To date we have 809 members, a few more than we had last year. New societies have been organized in Boone and Pendleton counties, the latter through a visit of Dr. Venning, and Logan was practically reorganized with ten members this year where they had only two last year,—thanks to Dr. Rader. A great many of the societies show a healthy increase. This is notably true in the Barbour-Randolph-Tucker, in the Cabell, and in the Nicholas-Webster societies. Dr. Lind has visited most of the societies in his district, and I think has done some excellent work.

Last year the secretary was ordered to collect the minutes of all the meetings in book form. I had a book prepared for this purpose and, under Dr. Jepson's directions, a young lady started to copy same, but we found the expense would be tremendous, and decided that it would be cheaper to purchase bound copies of the transactions, which I think it will be well to do, and have kept on file in the secretary's office. After consulting with President Howell this was deferred until acted upon by the House of Delegates.

The Committee on Constitution and By-laws has thoroughly revised same and they were printed in the September, 1909, JOURNAL. There are some minor changes to which attention should be given, but on the whole I think they can remain as printed. At least 2000 copies should be made up in bound form for distribution from the secretary's office.

Permit me to again remind you of the duties of the councilors, which I think should be read in the House of Delegates on the morning of the election, so that each gentleman accepting this office may fully appreciate what is expected of him.

If our membership is to continue increasing we should adopt one of the systems for malpractice defense that has been tried in some of the states and found to be a strong inducement to new members.

Respectfully submitted,
T. W. MOORE, *Secretary.*

Huntington, West Va., October 4, 1909.

TREASURER'S REPORT.

CHARLESTON, W. VA., Oct. 5, 1909.

West Virginia State Medical Association to
T. L. Barber, Treasurer.

May 11, 1908—By balance brot. for'd 1907-1908.....	Dr.	Cr.	
			\$1475.71
May 11, 1908—By balance from Secretary for 1908 dues.....			368.00
May 11, 1908—By balance from Secretary for 1909 dues.....			1562.00
May 11, 1908—To check T. W. Moore, salary and stamps, 1907-1908			\$ 322.34

May 11, 1908—To check T. L. Barber, stamps, 1907-1908.....			5.00
May 26, 1908—To check J. W. Graham, typewriting, etc.....			1.95
June 23, 1908—To check Lohmeyer, Goshorn & Patterson, bond			10.00
July 28, 1908—To check S. L. Jepson, editor JOURNAL.....			500.00
July 28, 1908—To check Swan Printing & Stationery Co....			8.00
Aug. 10, 1908—To check Swan Printing & Stationery Co....			7.25
Sept. 3, 1908—To check Swan Printing & Stationery Co....			10.55
Mch. 17, 1909—To check S. L. Jepson, editor JOURNAL.....			294.00
Apr. 15, 1909—To check Swan Printing & Stationery Co....			23.00
Apr. 15, 1909—To check T. W. Moore, stamps			16.75
July 14, 1909—To check Swan Printing & Stationery Co....			27.50
Aug. 2, 1909—To check S. L. Jepson, editor JOURNAL.....			500.00
Aug. 2, 1909—To check Lohmeyer, Goshorn & Patterson, bond			10.00
Sept. 8, 1909—To check T. W. Moore, stamps			20.47
Sept. 8, 1909—To check J. E. Rader, organizing Logan Co..			7.00
Sept. 29, 1909—To check T. W. Moore, salary 1908-1909.....			300.00
Sept. 29, 1909—To check T. W. Moore, stamps			24.22
Sept. 29, 1909—To check Swan Printing & Stationery Co....			23.55
Sept. 29, 1909—To check Whitehead & Hoag Co., badges....			41.12
Oct. 5, 1909—To check T. L. Barber, Treasurer			100.00
Oct. 5, 1909—To balance in bank			1153.01
			<hr/>
			\$3405.71
			\$3405.71

Audited and found correct.

H. P. LINZ, *Chairman of Council.*

P. A. HALEY, *Sec'y.*

REPORT OF PUBLICATION COMMITTEE.

Receipts.

From membership dues.....	\$794.00
From subscriptions	33.30
From advertisements	928.63—\$1755.93

Expenses.

Publishing of JOURNAL.....	\$890.30
Postage and expressage.....	51.04
Commission on advertisements.	20.00
Reprints to authors.....	3.00
Printing circulars	2.25
Subscription returned to member	1.00
Office assistance	50.00—\$1017.59

Balance

\$ 738.34

S. L. JEPSON, *Ch'm.*

Received and adopted.

H. P. LINZ, *Chairman.*

P. A. HALEY, *Sec'y.*

BRAXTON COUNTY SOCIETY.

SUTTON, W. VA., December 28th, 1909.

Editor of the West Va. Medical Journal:

The Braxton County Medical Society met at Burnsville, W. Va., November 9th, 1909. The meeting was one of the most successful and enjoyable of any within the history of our society. We had with us Dr. S. M. Mason of Clarksburg, who participated in the discussion of the various questions before the society. The society gave Dr. Mason a vote of thanks for his presence and wise suggestions. A banquet was given by the local physicians of Burnsville which will not be soon forgotten by those present. The officers elected for the ensuing term are as follows: President, Dr. M. T. Morrison of Sutton, W. Va.; Secretary and Treasurer, Dr. J. W. Kidd of Burnsville, W. Va.

I desire to say that we have succeeded in getting all the physicians, with the exception of one or two who have recently moved to our county, to join our society. I feel confident we will be able to add the names of the two just mentioned to our list at our next meeting. You will, no doubt, hear from our society often in the future, as Dr. Kidd, our new secretary, is peculiarly fitted for work along that line.

Very respectfully,

M. T. MORRISON, *Secretary.*

FAYETTE COUNTY SOCIETY.

The Fayette County Society held its regular monthly meeting at Thurmond, Dec. 7, 1909.

The attendance at the meetings is excellent, and bespeaks much success for the coming year's work. The members, individually and collectively, are working as a unit to make the society the banner one of the state.

At this meeting an order was passed whereby we will have with us such men as we can secure from Baltimore and neighboring cities to bring the society into closer touch with the latest medical research and practice.

The society prides itself upon the excellency of its papers. The subject is selected by the writer, and always proves timely and of much interest, being as a rule chosen from the active work of the writer. This meeting was favored by papers from Drs. Gilman R. Davis, J. E. Hughart and B. B. Wheeler.

The membership of the society is now the greatest of any time since its organization, and our growth is steadily going on as new men come into the field. The following applications for membership were received: Drs. G. S. Heartley, W. E. Brice, and J. A. Riffe. The renewal of Dr. R. W. Timberlake of Page was received.

Resolutions of respect for Dr. W. N. Klase, who died at his home on Dec. 2, were passed and the usual disposition of the same made.

The following officers for the ensuing year were elected: Dr. J. W. Hopkins, President; Dr. W. Lee Weaden, Vice-President. Secretary and B. of C. remain unchanged.

H. C. SKAGGS, *Sec'y.*

HARRISON COUNTY SOCIETY.

Dr. John Folk entertained the members of the Medical Society and their wives at an oyster supper on Thursday, November 18th, 1909, at his commodious residence at Bridgeport, where nothing was overlooked that could add to the pleasure of the guests.

The house was beautifully decorated with palms and flowers, which were tastefully arranged to show to advantage.

The menu was very elaborate and delightful music was rendered by the Bridgeport band.

Dr. C. W. Halterman, Vice President of the Society, acted as toastmaster, and added new laurels to his already well established fame as an after-dinner orator. Dr. Louchery made an appropriate eulogy on Dr. Late, deceased, who once owned and occupied the Folk mansion, and who for years practiced medicine in that vicinity. He was a man high up in his profession, and not only was he greatly respected and admired by his fellow-physicians, but he was likewise regarded with reverence by the laity.

All those called upon answered to the toastmaster with wit and brevity, and all enjoyed themselves immensely.

The party after giving Dr. Folk a cordial farewell, left on the last electric car for Clarksburg, arriving there shortly after midnight.

Those present were: Dr. and Mrs. D. C. Louchery, Dr. and Mrs. C. W. Halterman, Dr. and Mrs. B. F. Shuttleworth, Dr. and Mrs. C. T. Arnett, Dr. and Mrs. Wm. Gaston, Dr. and Mrs. H. V. Varner, Dr. and Mrs. W. C. DeForest, Dr. C. N. Slater and Miss Ross, Dr. George Faris and Miss Wilkinson, Dr. Lynn Osborn and Miss Parnell, Dr. A. T. Post and Miss Shuttleworth, Dr. W. M. Davis and Miss Coffman, Drs. Louise J. Currenee, E. N. Flowers, S. M. Mason, G. L. Howell, L. F. Kornman, Thomas L. Nutter, R. B. Nutter, J. F. Williams, T. M. Hood, J. B. Winfield, C. C. Jarvis, E. B. Fittro, John Folk, Mrs. C. R. Ogden, Mrs. E. L. Garrett, Mrs. John Duncin, Mrs. Frank Davison, Mrs. Nora F. Martin, Mr. A. D. Fitzhugh.

Dr. Folk is a bachelor, but it is sincerely hoped by all his guests that he will soon see his folly, and cast aside his robes of bachelorhood for those of a benedict. His tying the nuptial knot at any time would elicit no surprise. We wish him well.

C. N. SLATER, *Secretary,*
Clarksburg, W. Va.

OHIO COUNTY SOCIETY.

May 10th, 1909. (23 present.) Dr. Wingerter lectured on Locomotor Ataxia. Dr. Frissell thinks that occupations have much to do with the condition. Modern pathology, histology and bacteriology have thrown much light on this matter, and will greatly aid in its conquest. Dr. Noome said that we might well have an annual address on each of several subjects, namely, locomotor ataxia, infant feeding, appendicitis, cerebral surgery, intestinal obstruction, typhoid fever, fractures, the X-ray, therapeutics, etc., to frighten away those who are not thoroughly up to the minute on these matters. The time has passed when one man can cover the whole field. The new neurology and the new psychology are doing

systematic and fruitful work. We must work along physiological lines. Dr. Osburn said the general practitioner must be able to diagnose all cases, but he may slip up, and is most apt to do so in old families. Rheumatism misleads many of us. Rheumatism with deafness is suggestive of locomotor ataxia. We should always be on the watch for rare and unusual diseases. Dr. Walden said the physiological aspect of neurology put forth by the lecturer has given him a new light on the study of the nervous system. He detailed some technical methods of detecting ataxia. He does not see much help at present for the victims of locomotor ataxia along therapeutic lines. The terminal stage is a most distressing picture. Dr. Taylor said that each of these meetings devoted to the nervous system had been fruitful of new knowledge to him. Dr. Hersey said the diagrams of the lecturer illustrating his points had been most helpful. He discussed the periods of the disease with regard to the mortality. He said the reason the posterior ganglion degenerates is that there is no neurilemma for a part of the posterior radicular nerve. Surgeons have made the mistake of operating for a pyloric obstruction, or have done a resection of the knee-joint in cases of locomotor ataxia. Dr. Gaydosh called attention to the danger of mistaking locomotor ataxia for surgical cases. He reported a case operated on for gastric crisis. Dr. Spragg finds it hard to believe that inflammatory symptoms are always absent. Dr. Gillespie said that the lecture took him back to his student days; he thinks that locomotor ataxia may be properly called a disease of the spinal cord. Dr. Wingerter closed the discussion.

CHAS. A. WINGERTER, *Secretary*.

May 17th, 1909. (23 present.) Dr. Hupp exhibited a case of gonorrheal rheumatism of the right knee-joint of eight years' duration, treated by Bier's hyperemic method; freedom from pain and mobility of the joint resulted from two months' treatment. He presented also a case of tubercular knee-joint cured by the same means. Dr. Noome noted that Bier's treatment is a highly technical method, and must be properly applied. In the presence of an effusion the fluid must first be removed by aspiration. He discussed the cause of pain in inflammatory troubles and its relief by the Bier method. Prognosis in all cases must be guided by the tissues involved, and consideration whether there is a synovitis, an arthritis or an osseous involvement. Dr. Wingerter discussed the theory that attributes the relief of symptoms to the increase of bacteriolytic forces in the blood-stream. Dr. Hupp thinks that pain is probably relieved by transudation of serum and dilution of toxins, which are then more readily absorbed. He cannot agree with the thought that in inflamed joints the benefit is obtained by formalin-glycerine injections rather than the Bier treatment. Dr. McLain reported a case of varioloid. Dr. Jepson reminded us that the deferring of diagnosis in cases of small-pox is criminal. We should report all doubtful cases to the health officer, who has to carry the responsibility in this matter, and thus relieve ourselves.

CHAS. A. WINGERTER, *Secretary*.

Reviews

A TEXT-BOOK OF OBSTETRICS; INCLUDING RELATED GYNECOLOGIC OPERATIONS.—By BARTON COOKE HIRST, M.D., Professor of Obstetrics in the University of Pennsylvania. Sixth Revised Edition. Octavo of 992 pages, with 847 illustrations, 43 of them in colors. Philadelphia and London: W. B. Saunders Company, 1909. Cloth, \$5.00 net; Half Morocco, \$6.50 net.

The author of this work has for more than twenty years been obstetric physician to large maternity hospitals, and a teacher of medical students. He is therefore fully equipped for the work here set forth. This book has been a standard for years, and this, the sixth edition, brings with it many improvements. It is divided into sections, with the titles Pregnancy, Physiology and Management of Labor and the Puerperium, Mechanism of Labor, Pathology of Labor, Pathology of the Puerperium, Obstetric Operations, The New-born Infant.

The writing is clear and concise and the text well illustrated. All operations required for any complication or consequence of labor are fully described and pictured. This seems a very natural arrangement, and yet it is neglected in a number of otherwise excellent treatises.

The chapter on puerperal sepsis is full and thorough. The author advocates gentle curettage with irrigation in every case. The first irrigation must be with antiseptic solution, and future ones, which may be needed several times a day, with sterile water.

This work of Hirst is one of the best before the profession, and it can be recommended as in all respects worthy of the confidence of physicians.

AMERICAN MEDICAL DIRECTORY—Second edition, 1909. A Register of legally qualified physicians of the U. S. and Canada. Am. Med. Ass'n Press, 535 Dearborn Ave., Chicago.

This is a splendid volume of nearly 1800 pages, with fine paper and half morocco binding. The list of names in each state is preceded by the medical laws of the state, the names of the State and County Boards of Health, the officers of the State Medical Associations and the Constituent Societies, the State institutions and the local hospitals and sanitariums. The reading pages are free from advertisements. The book is not free from errors. No such work ever can be, since deaths, removals and new physicians can not be promptly traced. But it is by far the best work of the kind within our reach, and all who have use for such a book should order it.

Incidentally we note that West Virginia has 1621 physicians. Over half of these (819) are members of the State Medical Ass'n. Three-fourths of the remainder should be.

MEDICAL GYNECOLOGY.—By S. WYLLIS BANDLER, M.D., Adjunct Professor of Diseases of Women, New York Post-Graduate Medical School and Hospital. Second Revised Edition. Octavo of 702 pages, with 150 illustrations.

Philadelphia and London: W. B. Saunders Company, 1909. Cloth, \$5.00 net; Half Morocco, \$6.50 net.

This is a book emphatically suitable for the general practitioner. Few books have been received with such general favor as was the first edition of this work. This, the second edition, has many improvements. It discusses all diseases of the female met with in practice, gives their non-surgical management, and points out where the surgeon should be called in. Dysmenorrhea, leukorrhea and pelvic pain, while only symptoms, we are glad to see receive full consideration, the many causes being traced, and appropriate treatment suggested for each. Gonorrhoea and syphilis, so prolific in the production of female diseases, receive very extensive consideration, over eighty pages being given to them. Pregnancy and Abortion and Ectopic Gestation each receives a chapter's treatment. These seem to us rather to belong to works on Obstetrics. Under carcinoma is no mention of the local use of acetone after curettement. This is no doubt a useful application, diminishing odor and discharge, and having some influence over the progress of the disease. On the whole this is a most excellent work, and it is certainly at least equal to the best book on Medical Gynecology now before the profession.

THE PHYSICIAN'S POCKET ACCOUNT BOOK, by J. J. TAYLOR, M.D., bound in full leather, 24 pages of practical instructions for physicians, 216 pages of accounts. Price \$1 per copy; published by The Medical Council, 4105 Walnut St., Philadelphia, Pa.

This book is without doubt a most complete and at the same time simple and thoroughly efficient account book. Furthermore, it is absolutely legal and can be presented in any court of justice. It does not make use of any hieroglyphics, but everything is entered in plain language, and any judge can understand it.

The book contains 24 pages of business instructions for physicians, which have been found very useful and correct in a long and varied practice, under the headings of "Importance of a Due Bill," "Fees," "Billing and Collecting," "Cautions," "Statute of Limitations," "Form for Wills," "Dying Declarations," "Saving and Investing," "Instant Treatment of Poisoning," etc. It also contains an average fee bill which has been found to work out correctly in practice.

The book contains 216 pages for accounts, of which eight pages are devoted to alphabetic index, 146 pages are devoted to regular accounts, 32 pages to short accounts, 24 pages to cash accounts, and eight pages to birth, death, and vaccination records.

HYGIENIC LABORATORY—Bulletin No. 52. U. S. P. H. & M. H. S. Report No. 3 on The Origin and Prevalence of Typhoid Fever in the District of Columbia.

This is an exhaustive study of the prevalence of typhoid fever in Washington City. It was noted several years ago, after the completion of a very expensive filtration plant, that typhoid did not diminish as much as was expected. Drs.

Rosenau, Lumsden and Kastle have been since trying to trace its causes. They find that 21.80% of cases originate outside of the District, 7.82% are traceable to milk, 17.14% are attributed to contact, and the remainder (53.24%) are unaccounted for. In cold weather, the whites have more of the disease than the colored proportionately. It prevails somewhat more among males than females. Washington is "a true endemic center." The disease has "a fairly uniform distribution throughout the city." A majority of cases occurred in houses of good sanitary condition. Not much importance is attached to flies as carriers of contagion. Most of the cases occurred in families without servants. "Contact is one of the major factors in the spread of the disease." The part played by the water can not yet be definitely stated. "Disinfection of excreta of patients is frequently inefficient or neglected." These are some of the conclusions arrived at by the authors of this valuable report.

THE ENZYME TREATMENT FOR CANCER—By W. S. BAINBRIDGE, A.M., Sc.D., M.D. This is the report on investigations with reference to the treatment of cancer at the N. Y. Skin and Cancer Hospital, where a thorough test of the treatment by trypsin and amylopsin was made. Some of the conclusions are as follows: Injections of trypsin seem in some cases to liquify cancerous tissue, but its growth continues. The tendency of trypsin to disintegrate the tissues may be a menace to life (a) by eroding large blood vessels (b) by overwhelming the system with toxic products. The injection of amylopsin in some cases seems to diminish cachexia. "The enzyme treatment, as administered according to the suggestions of Dr. Beard, plus important details of regime, does not check the cancerous process."

PAMPHLETS RECEIVED.

MONTHLY BULLETIN OF ILLINOIS BOARD OF HEALTH.

This number deals exclusively with Pellagra in Illinois, and it goes into the subject exhaustively, presenting many new facts. Italian and French sources of information have been searched, and much valuable information is presented, accompanied with many half-tone illustrations. The document is a very valuable one, and is an excellent illustration of the good work State Boards can do, but which many of them do not.

SUMMARY OF TRANSACTIONS OF THE PUBLIC HEALTH AND MARINE-HOSPITAL SERVICE.

This shows the good work done by this Service in the study and control of the plague, typhoid fever in the District of Columbia, tuberculosis, rabies, pellagra, hook-worm disease, leprosy, yellow fever, etc.

THE TREATMENT OF HOOK-WORM DISEASE, by C. W. STILES, Ph.D., U. S. P. H. & M. S. Service.

HOOK-WORM DISEASE IN RELATION TO THE NEGRO, by C. W. STILES, Ph.D.

THE PROPHYLAXIS OF PELLAGRA, by S. C. H. LAVINDER, M. H. Service.

PUBLIC HEALTH REPORTS—DECEMBER.
 Reflex Aural Neurosis Caused by Eye-strain—Cases by Sam'l Theobold, M.D., Baltimore.
 The Methods and the Object of State Examinations, by W. T. Councilman, M.D., Boston.
 Tuberculin Therapy, by H. B. Weaver, M.D., Asheville.
 Two Hundred and Fifteen Cataract Operations, by Samuel Theobold, M.D., Baltimore.
 Operation in Old Fractures, by A. M. Glanann, M.D., Baltimore.
 The Roentgen Ray in Therapeutics, by A. C. Geysler, M. D., New York.
 Catarrhal Deafness and Its Treatment, by A. C. Geysler, M. D., New York.
 Intestinal Exclusion by End-to-end Anastomosis for Artificial Anus, by J. J. Buchanan, M.D., Pittsburg.
 Urethral Transplantation, by J. D. S. Davis, Birmingham, Ala.
 Clinical Diagnosis of Tuberculosis of the Tonsils, by Lee M. Hurd, M.D., New York.
 Surgical versus Medical Treatment of Certain Ovarian Diseases, by J. Allison Lodges, M.D., Richmond.

Medical Outlook

TREATMENT OF DRUG AND ALCOHOL HABITUES WITH HYOSCINE.—Dr. H. V. Riewel of Cleveland describes this treatment, the nature of which may be gathered from the details of one case:

Mr. J., high-school principal, 34 years old, had been addicted to the use of morphine for eight years, beginning in 1899 when it was administered to relieve the pain of gall-stone disease. Moderate anæmia and slight tenderness on deep pressure over the gall-bladder. The morphine taken had consisted of four grains per dose by hypodermic four times daily, making sixteen grains every 24 hours. An initial dose of calomel grains 3, followed by Rochelle salts one ounce, was given. Special nurse day and night during the first week. Regular hospital vigilance during the second week. Active treatment began June 2, 1908, at 4 p. m., when a single hypodermic was given, consisting of hyoscine hydrobromate, grain 1/200; atropine, grain 1/600, and strychnine, grain 1/200, in distilled water. This was repeated every 1½ hours for eight doses. Then one-half this dose was given for the six succeeding periods of 1½ hours each. This was followed by twelve full doses at 1½ hour intervals ending the active treatment with two half doses. The last hypodermic of hyoscine was given June 5th at 2:30 p. m. Altogether during the active treatment, which last sixty-nine hours, 1/4 grain strychnine and 1/24 grain atropine were administered.

After the first week patients as a rule eat heartily and sleep normally; the appetite becomes ravenously usually about the tenth day. Those who complain of insomnia may for one or two

nights, after first four days' active treatment, be relieved by any suitable hypnotic: trional, grains 20, or chloral and bromides, of each grains 15, for one or two doses at bed time. There is no craving for the drug nor pain nor suffering from its withdrawal at any time during or after treatment. Occasionally one finds a patient who sleeps most of the time during the three days of active treatment. These should not be pushed to the stage of mild delirium described on the bedside record. This delirium referred to, should be carefully controlled since too large doses at this time will create a wild almost unmanageable delirium with attempts to crawl up the wall, etc. This, however, can be controlled at any time when the patient becomes unmanageable, by giving 1/4 grain of morphine, which will not in any way interfere with the results of treatment.

In mild delirium, the delusions and illusions are altogether quite pleasant, leaving no bad effects. In this patient, who had been a soldier in the Spanish War, while looking intently at the figures on the wall paper, they suddenly became transformed into troops of marching soldiers. He would look at the chandelier watching turners' and acrobatic performances.

A quite common illusion is mistaking a white counterpane for black broadcloth which the patient is buying for his wife and children for clothing. Sometimes the sheet is torn into shreds in making endless yards of cloth for purchase. A smoker will reach into space for his pipe which, when he is about to grasp it, suddenly disappears.

Conclusions.—1. The hyoscine treatment will eliminate the desire of drug and alcohol habitues for these drugs, thus eliminating the element which prevents the patients abstaining by force of will power.

2. That having lost the desire they do very well without intoxicants or the drugs as shown by the increase in appetite, gain in flesh and their general improvement.

3. The question of relapse lies entirely in the sincerity and environment of the patient.

4. The favorable alcoholic addicts are those who earnestly desire to discontinue the use of intoxicants and are willing to change their mode of living and environment; but who cannot until relieved of the craving for liquor.

5. Relapse in both drug and liquor cases is not due to a desire nor suffering after the treatment, but to their curiosity to test the necessity of total abstinence, or to the temptations of social life.

6. That a single dose of the drugs or drink of liquor, even after one year of total abstinence, is very apt to start the craving resulting in a condition which is no better than before the treatment.

7. This method may prove a valuable treatment for apparently hopeless cases of opium poisoning. Interesting experiments along this line might be carried out.

8. The one contraindication for this treatment is the presence of Bright's disease.

9. That no case should be treated unless put to bed and watched by competent nurses day and night during the first week.—*Monthly Cyclopedia*, September.

LARGE URETHROVESICAL CALCULUS.

—In the *N. Y. Medical Journal* of Feb. 2, Dr. S. E. Earp of Indianapolis reports this interesting case: Patient a woman aged 47 years, with locomotor ataxia for 15 years. For five years after she became an invalid the bladder was washed out at regular intervals, and catheterization was necessary several times a week and sometimes every day. Five years ago and to the present time the discharge from the bowels and bladder were involuntary. For three years there was retention of the urine, and the daughter who was familiar with catheterization was unable to pass the catheter on account of an obstruction, but no physician was notified of the fact.

At these times of retention there was some pain, but by experience it was found that the urine dribbled away when the patient assumed a position on her left side, and that pain would then be relieved. Since the patient had been an invalid for so many years it was not thought necessary to call the attention of a physician to this condition. On account of the involuntary discharge from the bowels and bladder the patient used a pad supported by bandages at all times. During a visit to the daughter July 28th, 1906, Mrs. B. used these words in directing her conversation to me: "Last night I had intense pain in the region of my privates, and asked that my cloth be loosened, and the pain became more intense, and when loosened the second time the pain was still greater, and I asked my daughter to apply a dry napkin. When the cloth was removed a hard substance came away with it, which you will find in that paper on the table."

Upon examining it, it was evident that it was a phosphatic stone. I made an examination of the patient and found negative information regarding the uterus, vagina, and rectum. The vulva showed three slight lacerations, and the urethra was dilated one and one-half inches and admitted my index and second fingers without pain. The external portion of the urethra was severely lacerated in several places from which there was some hemorrhage. The steilate laceration of the meatus, extending down into the urethra, was evidently caused by the great size and angular lines of the upper part of the calculus retarded in its passage, for a considerable time, by the pad. An examination of the parts made August 13th, showed the lacerations entirely healed, yet contraction of the parts was so slight that it was still possible to insert the index and second fingers into the urethra without any pain

* * * Upon examining the history of the case it would appear that the calculus had been in the urethra for at least three years and perhaps dating before a time when the daughter found an obstruction during an attempt at catheterization. As far as I can learn, this is the largest urethral calculus of which there is any record. I showed the specimen to Dr. W. N. Wishard and the following are his measurements: circumference four and one-eighth inches, length three inches, greatest diameter one and one-eighth inches. Its weight is 845½ grains.

Miscellany

THERE IS A REAL FRATERNITY AMONG MEDICAL MEN.—Many would like to have the world believe otherwise. Every now and then one hears some blatant critic air his views to the effect that medical men have no use for each other and take their chief delight in disagreeing or belittling each other's work or skill. Nothing could be further from the truth. It is true doctors do disagree. Progress and the nature of their work demands that they should. But in great vital matters of science or ethics no body of men on earth are so thoroughly in accord. There is some skepticism which absurdly no one would abolish as it offers a safe check to too great enthusiasm and optimism. Likewise there is a sturdy conservatism that constantly makes its influence felt in medical circles. This, too, fulfils a valuable mission in counteracting human tendencies to radicalism. On the whole, however, in each of its epochs the science of medicine has struck a fair balance, always carrying the truth a little nearer to the goal of accuracy. Withal, while honestly competing with each other, every medical man has been ready to help his colleagues when help was sought in the right way. Whenever an honorable medical man has been unjustly attacked has he ever lacked colleagues to stand by him?

No class of men meet in conference so often for comparing views and opinions, and it is safe to say that the members of no other profession are so intimately familiar in a personal sense with each other and those who are rightfully looked upon as leaders. Summed up briefly, every medical man realizes that he is one of a great band of earnest workers in a field that requires a true fellowship. For the greatest possible efficiency each and every one of us is dependent on each other. In the highest sense, therefore, we are brothers associated together in a common service, a service that by its very nature creates a common bond of aspiration and effort. Individual instances of hatred, injury and dissension are frequent enough, without a doubt, but we insist these are the exception, and the average medical man has genuine regard and respect for his fellow workers. There is a true medical fraternity, and Aesculapius is its Prophet!—*American Medicine.*

TRANSPLANTATION OF BLOOD VESSELS.—C. C. Guthrie, in the *American Journal of Physiology*, states that a segment of cat's aorta transplanted between the ends of the divided common carotid artery of a dog was ascertained by direct examination at the end of fifty days to be adequately performing its new circulatory function, and apparently to be in good condition; while a segment of rabbit's aorta similarly placed in another dog showed similar results at the end of thirty-one days.

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Original Articles

THE PUBLIC AND THE PHYSICIAN.

C. S. Hoffman, M.D., Keyser, W. Va.

(The public address delivered at the West Virginia State Medical Association at Elkins, W. Va., Oct. 6, 1909.)

(Continued from last month.)

There now exists, and probably has always existed, an antagonistic spirit on the part of the public toward the medical profession. As a minister said to me in the church meeting referred to, that somehow there seems a disposition to knock at the medical profession. Very few people take into consideration the time and money expended to secure a medical education, and the expenses thereafter, and the fact that of all the professions that medicine is the most exacting and the least compensating. For wherever there is sickness or suffering there you find the physician, regarding himself as nothing that he may relieve disease and pain, and often without any compensation whatever for it. You think it is all right when all of your lawyers close their offices for one month in the year and enter into a league that they will do no legal work for the month, in order that they may take their annual vacation. You think it all right for your ministers to do the same, closing their churches and pastoral work to the sick from four to six weeks a year that they may have their needed vacation.

The stores of your town close at an earlier hour on certain days of the week that the employees may have a chance for recreation and diversion. But what would be your sentiment should the physicians of your town ask for these privileges. Are you considerate enough to arrange your work so that your calls upon your physician may be such that he may enjoy some of these privileges? In every community there is a class of unfortunates who wallow in their filth and mire for a certain season and then come to a period when they need the attention of a physician, and should a physician refuse his services on an occasion of this nature, when he knows that it means hours of self-sacrificing vigilance on his part without any compensation, what would be the condemnation he would receive from the public should he fail to respond and render his services gratuitously? Or take, for instance, the last illness of any poverty-stricken person; when all others refuse him credit the public expects the doctor to continue to give as faithful services as though he was receiving large remuneration for his work. This is no fancy picture I am drawing. The public exacts burdens of the medical profession which they themselves would not touch, and I am proud to say, that not a single instance of the neglect of one of these unfortunate or poverty-stricken cases can be charged to the medical profession. Can any other organization boast of the same? The prevalent idea that physicians should expend their labors on the poor and these unfortunate cases gratuitously, is just as rational as that the

grocer or the butcher or the lawyer should furnish them of their stock free.

The relations between the public and the physician should be of the most cordial nature; there should be no misconceptions; their interests should be mutual. One is dependent upon the other. As the whole aim of physicians is to cure disease and prevent its spread, so the aim of the public should be to unhold, encourage and assist the physician. The demands of the public upon the physician are getting greater, and yet, considering how much the public owes to the medical profession, how slow they are to adopt their suggestions. For a committee of physicians from this medical society to appear before your state legislature with any measure for safe-guarding the interests of the commonwealth, they are met at once with suspicion and opposition; and yet so many of the comforts you are now enjoying are due to the careful forethought and persistent urging by physicians upon your legislature. But so fraught is this state with what is called "political pull," that it is only by the greatest persistence that these laws are finally passed, and then often in a way that they are entirely different from the ones originally intended. So unjustly suspicious is the public that in my town when the doctors urged upon the public the healthfulness of having a pure system of water conveyed from a beautiful mountain spring, and do away with the wells in the town, suggesting that it would diminish if not wholly prevent the local annual endemic of typhoid fever, which usually prevailed in our midst, some of the citizens said that they should go very slowly and enquire very carefully into the matter, as it was against reason and different from all other business men for physicians to advocate a measure which was against their financial interests. Did you ever stop to consider that the physician, from the very nature of his calling, is more or less of a public character? Your national, state, city and local communities must depend on him for advice in sanitary measures. A few years ago yellow fever made its appearance in one of our large cities, threatening the destruction of many lives, and not until the national health department, under the supervision of Dr. Wyman, with his able corps of assistants, came to the rescue, were

its ravages stayed and the disease eradicated.

However much may be unjustly said derogatory to the medical profession, no civilized community would feel safe without the residence of a physician in its midst. In fact, the physician is as much the capital stock of a town as any other invested capital, and often the community is estimated by the reputation and character of its physicians. If this is true in reference to our local condition in a state of freedom from national or international strife, how much greater must be their influence in conditions of warfare. While the venturesome may expose themselves to risk in the quest of gain without the thought of sickness or injury, what army would be willing to engage in warfare without its corps of physicians and its medical supplies? At the siege of Metz, by Charles the Fifth, one of the most noted events was the entrance of that father of French surgery, Ambroise Pare, into the beleaguered town. The soldiers of the garrison were discouraged from suffering with wounds and illness and longed for him in whom they had boundless confidence. By the connivance of an Italian captain, Pare eluded the vigilance of the besiegers and passed through their lines into the fortress. The news of his entrance spread rapidly. The soldiers turned out voluntarily to give him a triumphant reception, greeting him with the cry, "We have no longer any fear of death, even if we should be wounded, for Pare, our friend, is among us." General Sherman said that "War is hell," and while the nations are vieing with each other to invent implements of warfare of the most destructive nature, thanks to the medical profession, its aim is to invent that which counteracts the effects of these implements of torture, and alleviates the pain and suffering, and restores life to those injured thereby.

It is estimated that under normal conditions a man or woman should live in a reasonable degree of health and capacity to work, beyond the age of seventy years. Instead of that the average of human life in this country is less than half of seventy years, and the large proportion of the years of man's life is made unproductive by preventable diseases. A large portion of the untimely deaths is due to hereditary dis-

eases, and most of the remainder to maladies which might be avoided by care and prudence. In the United States no less than twenty-eight thousand persons die each year from typhoid fever, and in addition to this mortality no less than two hundred thousand persons are stricken with the disease each year, and recover after an illness averaging over sixty days. If one half of these people were productive workers to the extent of, say, two dollars a day, we have a loss of six million dollars a year in cases that recover, besides the tremendous loss from the fatal cases, not counting the enormous amount of human suffering. Another disease, and one of the most costly of all in human life is consumption, or tuberculosis. This is regarded as a preventable disease, and yet it is permitted to carry to the grave no less than one hundred and sixty thousand persons in the United States each year, and invalid seven hundred thousand more. There is nothing occult in dealing with typhoid fever and consumption as far as the method of prevention is concerned. Scientific men all over the world know how these diseases can be prevented, and how to deal with consumption in its earlier stages and prevent contagion. To put the machinery to work is what is required, and it takes the strong arm of the government to do it. It takes public authority to enforce the purity of the water supply to prevent typhoid fever. It takes the authority of the law to enforce reasonable regulations in sweatshops and factories, and in the removal of cases, where there is danger of transmitting the disease, to prevent the spread of the great white plague. What is our own state doing to prevent this disease which is annually consigning twenty-five hundred of its inhabitants to the grave, besides invaliding ten thousand others, entailing an estimated loss to this state of not less than ten million dollars a year? What, I ask, is our legislature doing to prevent the spread of this disease? In the year nineteen hundred, when I was president of this medical society, I advocated before it in my address the establishment of a hospital in this state for its consumptives. This matter was taken up by the physicians of this state and almost ever since has been brought by them before the legislature with urgency. Finally at the extraordinary session of the West

Virginia state legislature in nineteen hundred and eight, a tuberculosis commission was appointed to make investigation and report at the next meeting of that body. This committee, after visiting various other states in which such hospitals are located, making a thorough examination and witnessing the good accomplished, returned with a favorable report and urged upon the members of the legislature and the governor of the state the expediency of establishing a hospital for consumptives in this state. I regret to have to tell you the legislature turned down the report of this committee, giving as a reason for doing so a lack of funds, but a few days later generously appropriated thirty thousand dollars to purchase a suitable ground for rifle target practice for the militia of this state. I opine it will be many years before our militia will be required to defend our state against a foe worse than the one now invading it in the form of the Great White Plague. So communicable is this disease that the doors of every hospital in the state are closed against its unfortunate victims, who, left alone, deprived of the aid so readily bestowed upon the other sick, die in their own homes, usually amid indescribable surroundings, forming additional foci for the spread of this dreaded disease. The only excuse which can be made for our state tolerating such a condition of expense and disease is the fact that we have always been used to it. Should the legislature of this state impose upon its citizens a direct debt of this magnitude for any purpose whatever, there would arise a cry of distress from the tax payers all over the state surpassing that in the history of Ahasuerus, or of the Ninevites at their prophesied destruction. The victims of these dreaded diseases and their friends are crying out in their distress, like Rachel weeping for her children and refusing to be comforted, because our state legislature declines to assist.

My friends, doctors are made of the material which knows no defeat, and although death may wrest its victims from them at times, they are ready to make a more courageous fight in the next battle. So I feel that I can safely predict that this matter will never be given up by them until it is so persistently urged upon the legislature that relief will come. The experience

in Cuba, Mexico and Panama with yellow fever has shown that a disease which has been constantly present for more than three centuries can be entirely eliminated at a small expense. In referring to this matter of the eradication of yellow fever my mind goes out in sad remembrance of that noble character who gave his life that others might live. The celebrated Dr. Elliot, late president of Harvard, said not so long ago that "The scab is a good type of an American hero." On the afternoon of August 29th, 1908, surrounded by most brilliant street decorations, a quarter of a million spectators lined both sides of Fifth avenue, New York, for over three miles to pay a tribute of praise to the American victors in the recent Olympic games in the London Stadium against the nations of the world. The winning athletes rode in automobiles, escorted by fifteen thousand United States troops, besides civic and athletic bodies; while acting mayor McGowan and a committee of prominent citizens presented the awarded medals to the champions at the termination of the parade. Johnny Hays, who won the famous Marathon race, received an especially vociferous ovation. All this demonstration was in honor of a man who had the distinction to win a foot race. In contrast to the above I would refer you to a hero. On September 16th, 1907, in Washington, D. C., surrounded only by his family and a few friends there died a man; no man took his life from him, he laid it down of his own accord for his fellow men; no quarter of a million spectators ever lined the streets on both sides for three miles to pay a tribute of praise to his name; no body of fifteen thousand United States troops ever paraded the streets to do him honor. But by his voluntarily offering himself as a sacrifice the argosies of commerce can sail the seas today without flying the yellow flag of pestilence, and no longer can it be said today that the work of the Panama Railroad is ballasted with the skeletons of the unfortunate victims who worked upon it. But today, through this man's sacrificial offering, the Panama Canal is being constructed by workmen who are enjoying as good health as the workmen in the United States, and yellow fever, once among the worst scourges of the world, has been routed from its strongholds. All this and more too was accom-

plished by this hero, Dr. James Carroll.

"Not him who has the largest store
 Ingathered of life's wealth I praise,
 But him who loveth mankind more;
 Who from the world-wide brotherhood,
 Withholdeth naught of heart and brain
 To show the Christ in man again."

During Napoleon's retreat from Moscow, General Ney commanded a captain to protect the rear of the army with his company. "And how long shall I remain?" asked the captain. "Until you die," was the answer, and as the captain was never heard of afterwards, the supposition is that he obeyed his commander's orders.

In every pestilence which has invaded lands and countries, and when all who could have fled from the diseased districts, there is no recorded case of a doctor leaving his post of duty, but he stands like the captain referred to and protects the unfortunates who remain behind, conscious of the fact that in so doing he is probably laying down his life for his fellow man. Talk of heroes; men who have sacrificed their lives for the public; and I will refer you to an almost innumerable host of physicians who have laid upon the altar of sacrifice almost everything dear to them, in order to aid mankind, and have done it without compensation or thought of reward or public praise.

The public can never estimate the good which comes to it through the medical profession. If vaccination were suspended for a few years the dread small-pox would soon make its appearance in all its malignancy, leaving the majority of its surviving victims hopelessly blind or deaf or disfigured for life. But thanks to Dr. Jenner, so attenuated has its poison become by vaccination as often to render its diagnosis in doubt. If the discoveries of Pasteur were eliminated we would be hopelessly at the mercy of hydrophobia and septic surgery; besides diseases which affect our animal and industrial thrift. Koch's discovery of cholera and tuberculosis germs has been the means of saving the lives of thousands, and thereby indications now point to the almost total annihilation of these diseases. Through the research of Behring and others the use of antitoxin in diphtheria has reduced its mortality of probably thirty

per cent to two per cent or less, and a disease which used to be one of the most dreadful scourges of the world, destroying at times whole families, and in which treatment was almost without avail, is now treated with confidence. And by the work of Gorgas and others the tropical malarial districts, which were once the terror of their inhabitants, are rendered so salubrious that the President of the American Medical Association devoted his entire address to "The Conquest of the Tropics for the White Race." Time will not permit me to refer to other of the many great achievements by medical men, all of which have been given to the world free and with no thought of public recompense, only that they may benefit mankind.

Naturally you would ask what are the physicians of West Virginia and of the West Virginia State Medical Association doing; are they forging ahead? When I joined this society in the year 1894 it sometimes took hustling to get a quorum, but each year its membership has been increasing and its borders enlarging, until today our membership numbers over 800, and we shall never rest satisfied until every physician of the state is with us. As I looked over our last meeting at Clarksburg and noted its rapid growth, and as I listened to the papers read and heard the discussions following, noting their high character, and when I saw the advanced spirit of research developing in the physicians of this society, I felt proud that I was a physician of West Virginia and belonged to its Medical Society. To be a physician in the State of West Virginia not many years ago carried but very little influence either at home or abroad. But these days are now past. Through the foresight and struggles of the pioneers of this society we are now organized, and we can now approach our legislature on subjects of public good with a greater degree of confidence. The courts, corporations and municipalities throughout the state are beginning to respect our opinions regarding matters for the betterment of sanitation and public hygiene. Where once was practically a barren medical waste, hospitals have now sprung up where creditable work is being accomplished, and in addition schools for the successful training of nurses have been organized; post graduate courses of medical instruction have

been established in different parts of the state; a representative medical journal is now published, which is regarded by Journals outside of this state to be far in advance of its age, and as we come to know each other better, in the place of jealousy, malice or slander, has sprung up a friendly, healthy, creditable and stimulating rivalry, inspiring us to better work and a higher elevation of the profession. For all this we are indebted to the early struggles of the pioneers of this society; all praise to their names. It can truly be said that "the present leans on the past for its foundation, and the past depends on the present for its consummation." We are the heirs of their labors and it is required of us that we shall augment the inheritance we have received and pass it down augmented to those who shall come after us.

"Other men have labored and we have entered into their labors." The triumphs which we celebrate have been made possible by the thought and toil of those who have preceded us. Our present work would be impossible without theirs and theirs would be incomplete without ours. A great work is yet before us.

THE EARLY DIAGNOSIS OF GALL STONE DISEASE.

Oration in Surgery Before the West Virginia Medical Ass'n, October, 1909, Elkins, W. Va.

John Egerton Cannaday, M.D., Surgeon to Charleston General and McMillan Hospitals, Charleston, W. Va.

It is not my purpose to speak of the classic symptoms of gall-stone disease in its final, sometimes hopeless, stages. We are all perfectly familiar with them, but rather to call to mind the early cry of the human organism for aid, the cry that comes at a time when a stitch in time saves nine. It would seem that the average textbook writers of the standard works on the practice of medicine have had only in mind symptoms of terminal stages and dead-house findings when they wrote their chapters on the diseases of the gall bladder. These text books have been written by men we hold in high esteem, and rightly so, but in this one little essential they are

lacking. They will even presume to tell you that gall stones may be present in the gall bladder for years without giving any symptoms. They might as well say that there may be a symptomless stone in the urinary bladder. I grant that it is quite true that in the course of ordinary abdominal operations one will find a number of cases of unsuspected gall stones, but if in these cases we will go carefully into the anamnesis of the case and induce the patient to call to mind all the past incidents pertinent to their diseased life we will not fail to find plenty of symptoms easily attributable to incipient or even full-fledged gall stones.

A few of the more recent medical writers are widely awake to the fact that the early symptomatology of gall-stone disease has long been misinterpreted. Dr. A. O. J. Kelly, writing in *Osler's Modern Medicine*, says that, "the symptoms of chronic, long-continued or recurring indigestion are of the utmost importance as regards a diagnosis of gall stones." These symptoms are usually spoken of as stomach trouble, dyspepsia, etc., are often due to trouble outside the stomach, and the location of the trouble is frequently in the biliary passages. The attacks are often paroxysmal and may be severe. The medical profession must accept the fact that gall stones may exist for years and cause the patient a great deal of suffering without any evidences of gall-stone colic or jaundice. The sooner we get over this fallacy of waiting for colic and jaundice the better off our patients will be, and the late gall-bladder cases, with their high mortality, will become like the early appendix operation, of comparative rarity. Gradually the public will, through the aid of the physicians, become educated to the necessity of early diagnosis and early relief.

It is perhaps possible for gall stones to exist in elderly subjects without causing particular trouble, when the original infection has died out and when there has been considerable atrophy of the muscular coats of the gall bladder and bile ducts. Sometimes after nature has done a sort of rough cholecystectomy and shut off the gall bladder from further participation in the affairs of the body, the possessor will have few or no symptoms attributable to the gall

bladder, that sac having been cut off and assuming the relative importance of a foreign body elsewhere, encysted in the tissues.

In a case referred to me not long since there had been from time to time attacks of epigastric pain, diagnosed by the family physician as acute gastric dyspepsia. There was very slight tenderness on deep pressure over the gall-bladder region, yet on operation a hard, thickened gall bladder containing a number of good sized stones was found. In another case the patient had suffered for over ten years from recurring attacks of pain and tenderness over the region of the pylorus. A laparotomy disclosed the fact that the gall bladder was adherent to the duodenum and pylorus from former inflammatory storms in that region. Now and then one will find a patient having gall stones who has had no actual pain in the epigastrium or elsewhere, but only a feeling of discomfort in that part of the body.

At times the gall bladder may become adherent to the colon and perforation will take place so slowly that no particular symptoms will be produced; at the time there may, however, in this case be some colonic catarrh. The fact that pain subsides after attacks of gall-bladder colic certainly does not mean that a gall stone has passed into the bowel—it only means that the inflammatory changes associated with pain in the gall bladder have subsided. The early stage of gall-bladder disease is often confounded in diagnosis with ulcer of the stomach or duodenum.

We shall be amply repaid by a close and careful study of the initial symptoms of gall-stone disease, no matter how trivial they may seem to us, for there are thousands of sufferers who may be relieved. These earliest symptoms are referred to the stomach and not to the gall bladder or liver. There is a feeling of weight or distention in the epigastrium that is very annoying. This comes soon after meals, usually in half an hour or so, and is relieved by belching; vomiting does away with it entirely. Certain articles of food are almost certain to bring about so much discomfort that by and by the patient is found living on a very limited dietary. Moynihan says: "There is a sensation of great tightness which, if unrelieved, may be-

come acute pain, from which the patient obtains ease by bending the body forwards, by flexing the right thigh on the abdomen, or by loosening all the garments which fit tightly to the waist. While the discomfort lasts the patient may notice a 'catch' in his breath, and he finds, perhaps, that it is impossible to breathe deeply without feeling an acute stabbing pain at the right costal margin; there may be a feeling of faintness and nausea and rarely vomiting may occur spontaneously. After a more than usually severe attack of 'indigestion' the body and side may feel stiff for several days. A frequent and very characteristic early symptom of cholelithiasis is the occurrence during the attack of indigestion of a slight sensation of chilliness, especially in the evening, after a meal. The patient may shiver for several minutes and may hasten from the table to huddle over the fire. The sensation of 'goose flesh' is often experienced, and several patients have said that in the severer phases it was not unlike a very slight rigor, the chilly stage being followed by one in which the body feels hot and the skin begins to act freely." These are the group of signs aptly named by Moynihan, in one of his latest addresses, inaugural symptoms. Some have summed up this entire symptom group as "gall-bladder dyspepsia."

It is quite clear that these inaugural symptoms go often unrecognized, when we consider the fact that about every tenth human being and every fourth or fifth woman past middle age has gall stones. It is unusual and most rare for the requisite symptoms to be absent when stones are contained in the gall bladder. If the cystic duct is entirely closed and the gall bladder thick and atrophied the stones may at last become silent. But this at best is a smoldering volcano apt to erupt at any time.

The feeling of discomfort in the epigastrium may at times approach in nature pain, and may radiate to one side or the other; when more severe this pain may go to the right shoulder, and at times when the chest fills with air on inspiration a sudden stabbing pain cuts short the respiration effort. This diagnostic point is very characteristic of gall-bladder disease. Weight and fullness in the head, drowsiness, dull headache are often concomitant symptoms. There may be occasional attacks of mi-

graine, concentration becomes burdensome.

As to the advocacy of the Carlsbad or other treatment for this early stage of gall-tract disease I beg to decidedly protest. In the days of Montaigne it was held to be good practice to allow the latent urinary bladder stone to lie silent. This is a parallel instance with only a difference of locality. Gall-bladder calculi have far greater possibilities for danger to human life than calculi in other parts of the body, and the time will come when it will generally be considered bad practice to allow them to remain unmolested.

These cases of early gall stones are a constant annoyance to the patient in most instances. By constant care, the avoidance of indigestible articles of food, and daily doses of some laxative mineral water, the symptoms may be held back for a long time. But the trouble is not removed; there are many dangers, immediate and remote. Retrograde changes may be brought about in the gall bladder, liver and pancreas, all of very serious nature. The long continued irritation of the gall bladder not infrequently results in carcinoma. Perforation of the gall bladder or an acute suppurative cholecystitis may take place.

The chief arguments pro and con for drainage or removal of the gall bladder depends on the habit of the surgeon whether he operates early or late. When the gall-stone disease is in its beginning, the gall bladder is in almost normal condition and may easily take up its function again. The gall bladder that has been affected for years is often a mass of scar tissue, its muscular contractile function destroyed. The character of its mucosa is entirely changed. These last gall bladders we know are practically functionless foreign bodies.

As the matter stands there are two well defined courses open to us. We can by proper study of the inaugural symptoms make an early diagnosis and do an operation that is largely prophylactic in nature, or we wait for symptoms of terminal stages and so do a last resort operation, the mortality chances of which will be great. We have not even considered the untold amount of suffering that must be endured while waiting for the above mentioned terminal stage.

I recall another illustrative case. A wo-

man forty years of age had been suffering from what was considered some chronic stomach trouble for over five years. There was a great deal of distress and flatulence with but little pain. This patient was highly neurotic and some of her medical advisers had been of the opinion that her troubles were of a functional rather than organic nature. She had attacks of muscular cramps, shortness of breath, etc. Eventually operation was decided on and a number of stones were found in the gall bladder.

REPORT OF A CASE OF GALL STONES

J. E. Rader, M.D., Huntington, W. Va.

(Read at Annual Meeting State Med. Ass'n, at Elkins, Oct., 1909.)

Mrs. D., married, 62 years old, previous history negative, with the exception that about one month prior to this, she had an attack of cramp like pains, radiating over abdomen, accompanied by nausea and vomiting, and localizing in right iliac fossa, which left a tenderness in this region for two or three days, gradually disappearing, only to return again on the 10th of September, 1908, when I was again called to see her about 9 o'clock p. m. I found her suffering with severe pain, again radiating over abdomen, but not localized in any particular region. Tongue furred, nausea and vomiting, bowels constipated, temperature 100, pulse 85, right rectus muscle very rigid and extremely tender on pressure. Patient had taken previous to my arrival a dose of sulphate of magnesia, which in due time acted very satisfactorily. Contrary to my usual line of treatment in such cases, I gave her morphia sulph. gr. 1/4 and atropia sulph. gr. 1/150 hypodermatically, which relieved her in about 20 minutes, and applied ice cap over right iliac fossa.

Sept. 11th, 10 a. m.; patient slept very well the greater portion of the night. Condition very much the same as when I left her the previous night, except she was not suffering any pain and there was no nausea or vomiting, but complained of being very sore, tenderness and rigidity of right rectus more marked.

At 9 p. m., same day, patient restless and complaining of slight pain over region of appendix, very tender on pressure in right lumbar and right iliac regions; temperature 100.

Sept. 12th, 9 a. m.; patient passed a very restless night, suffering some pain, otherwise condition very much the same, tenderness and rigidity more marked; temperature 100.6. Operation advised.

9 p. m.; patient complaining of being very sore; tenderness and rigidity of right rectus so marked as to make deep pressure almost, if not quite, impossible; temperature 101.

Sept. 13th, 9 a. m.; patient had a very comfortable night, did not complain of any pain ex-

cept when moved. Tumor mass, which could be easily made out, extending down below McBurney's point; temperature 101.6.

9 p. m.; patient in very much same condition as in the forenoon, except a little more restless and a somewhat anxious expression. Tumor increased in size.

Sept. 14th, 9 a. m.; patient had a very restless night, temperature 101.6, tumor larger than on yesterday, tenderness more marked; family and friends finally consent to operation.

1 p. m., removed to hospital. 2 p. m., operation; a 2-inch incision was made almost directly over McBurney's point, as this was the most prominent part of the tumor; dissecting down to the peritoneum, which was opened. I discovered a greatly distended and inflamed gall bladder, which on introducing an aspirating needle was found to contain a quantity of serum and mucus, with some pus, and almost ready to rupture. After packing off the abdominal cavity with sterile gauze, the gall bladder was opened and found to contain, in addition to serum, mucus and pus, an enormous number of gall stones, from the size of a millet seed to a hazelnut. The number saved aside from several hundred (estimated at 1000), which made good their escape, amongst the dressings, in the basin and on the floor, was, by actual count, 2933, which added to the 1000 that made their escape brings the actual number of gall stones removed to 4000 minus 17 stones.

After removing the stones and irrigating the gall bladder with normal saline solution, the incision was extended upward and the gall bladder anchored with No. 2 cat gut to the parietal peritoneum and transversalis fascia. A No. 14 soft rubber catheter was introduced into the gall bladder for drainage, and held in place by a safety pin attached to dressings. The peritoneum and fascia were closed on each side of drainage tube and incision in skin left well open and packed with sterile gauze. The post operative treatment consisted in irrigating the gall bladder every day for a few days, and then every second or third day for three weeks, with normal saline solution. Patient left hospital in three weeks from time of operation and the opening in the gall bladder was allowed to close spontaneously, which it did completely in the course of about two or three months.

As the number of gall stones removed in this case appeared to me to be unusually large, the following questions, accompanied by a personal letter, were sent to fifty prominent American surgeons and eight prominent English surgeons for their consideration.

Question 1. What is the largest number of gall stones removed by you from any patient at one time?

Question 2. What is the largest number of which you have any record of being removed by any surgeon at one time?

To these questions replies were received as follows:

1. George Ben Johnson, Richmond, Va., Aug. 23rd, 1909.

Question 1. 500.

Question 2. Not answered.

2. A. Murat Willis, Richmond, Va., Aug. 23rd, 1909.

Question 1. 365.

Question 2. Not answered.

3. W. L. Rodman, Philadelphia, Pa., Aug. 18th, 1909.

Question 1. 970.

Question 2. Not answered.

4. J. Garland Sherrill, Louisville, Ky., Sept. 3rd, 1909.

Question 1. 600.

Question 2. 14,000.

5. H. R. Wharton, Philadelphia, Pa., Aug. 30th, 1909.

Question 1. 240.

Question 2. Not answered.

6. W. W. Keen, Philadelphia, Pa., Aug. 18th, 1909.

Question 1. 301.

Question 2. I am away from home and cannot refer to my card index. (Dr. Keen writes from Plainfield, N. H.)

7. A. J. Ochsner, Chicago, Ill., Aug. 23rd, 1909.

Question 1. 6780.

Question 2. Not answered.

8. H. H. Grant, Louisville, Ky., Aug. 27th, 1909.

Question 1. 254.

Question 2. I don't remember about this.

9. H. L. Burrill, Boston, Mass., Aug. 18th, 1909.

Question 1. Cannot answer accurately, but I am sure several hundred

Question 2. Not answered.

10. William J. Means, Columbus, O., Aug. 18th, 1909.

Question 1. 700.

Question 2. Have heard of larger, but have no record.

11. David Todd Gilliam, Columbus, O., Aug. 23rd, 1909.

Question 1. 366, beautiful specimens of almost pure cholesterin.

Question 2. Not answered.

12. Louis Frank, Louisville, Ky., Aug. 18th, 1909.

Question 1. 1040.

Question 2. Have no record of any larger number.

13. John A. Wyeth, New York City, Aug. 24th, 1909.

I regret that I am away from home and have not access to my records. I refer you to Professor Joseph A. Robertson of my staff at the Polyclinic.

NOTE.—Dr. Wyeth writes from Lake Placid Club, N. Y.

14. Joseph A. Robertson, New York City, Sept. 3rd, 1909.

Surgeon	Number of stones removed
Dr. Moynihan	2700
Dr. Frerichs	1950
Dr. Dunlop	2011
Dr. Morgagni	3000
Dr. Hoffinan	3646
Dr. Langenbuch	4000
Dr. Naunyn	5000
Dr. Otto	7802

I believe these figures are the largest that are in any reports up to the present time.

15. J. Shelton Horsley, Richmond, Va., Aug. 23rd, 1909.

Question 1. 474.

Question 2. Not answered.

16. Joseph Price, Philadelphia, Pa., Aug. 18th, 1909.

Question 1. 1400.

Question 2. Not familiar with the history of the subject.

17. Edwin Ricketts, Cincinnati, O., Aug. 23rd, 1909.

Question 1. 87.

Question 2. 1200.

18. J. F. Baldwin, Columbus, O., Aug. 18th, 1909.

Question 1. Counted 4000 and stopped, a few stones still being attached to the sponges.

Question 2. 7000.

19. Carl Beck, New York City, Aug. 19th, 1909.

Question 1. 1700.

Question 2. 3000.

20. B. Merrill Ricketts, Cincinnati, O., Aug. 23rd, 1909.

Question 1. 923.

Question 2. 8000.

21. Alex Hugh Ferguson, Chicago, Ills., Sept. 10th, 1909.

Question 1. Since receiving your letter have removed over 2000 from one case.

Question 2. Not answered.

22. J. M. T. Finney, Baltimore, Md., Sept. 8th, 1909.

Question 1. I do not remember the exact number, but am sure it was over 600.

Question 2. Not answered.

23. Roswell Park, Buffalo, N. Y., Aug. 18th, 1909.

Question 1. 3000.

Question 2. Not answered.

24. J. W. Chambers, Baltimore, Md., Sept. 1st, 1909.

Question 1. 1159.

Question 2. 7802. (By Otto.)

25. William F. Metcalf, Detroit, Mich., Aug. 27th, 1909.

Question 1. 978.

Question 2. This is the largest number of which I have any record.

26. C. H. Mayo, Rochester, Minn., Aug. 30th, 1909.

I have referred your letter to Dr. W. J. Mayo.

27. W. J. Mayo, Rochester, Minn., Aug. 25th, 1909.

Question 1. 5000.

Question 2. 10,000.

28. E. E. Montgomery, Philadelphia, Pa., Aug. 30th, 1909.

Question 1. 331.

Question 2. Not answered.

29. J. F. Binnie, Kansas City, Mo., Sept. 6th, 1909.

Question 1. Few surgeons count the number of calculi removed from gall bladders. I have found them in number like the "sands of the sea for multitude." Excuse haste. I have just returned from Europe and have much mail to answer.

30. Joseph D. Bryant, New York City, Aug. 31st, 1909.

Question 1. I do not recall greatest number.

31. J. Wesley Bovee, Washington, D. C., Aug. 30th, 1909.

I have no data at my command here, but will refer you to Dr. J. Shelton Horsley, Richmond, Va.

NOTE.—Dr. Bovee writes from Watertown, N. Y.

32. Charles F. Bevan, Baltimore, Md., Aug. 23rd, 1909.

Question 1. 160.

Question 2. Have seen reports of one case 1500, but have no direct knowledge.

33. John B. Deaver, Philadelphia, Pa., Sept. 2nd, 1909.

Answering your letter I beg to say that I have no records which will enable me to

answer your questions.

34. S. J. Mixer, Boston, Mass., Sept. 18th, 1909.

Question 1. 40,000, varying in size from a fine shot to a small marble.

Question 2. I know of no greater number being removed.

35. Maurice H. Richardson, Boston, Mass., Sept. 13th, 1909.

Question 1. 950.

Question 2. 35,000 to 40,000 by my friend and colleague, Dr. S. J. Mixer of this city.

36. Stewart McGuire, Richmond, Va., Sept. 17th, 1909.

Question 1. 562.

Question 2. I think there are cases on record, however, where the number has been over a thousand. I am sorry not to be able to give you reference.

37. J. Chalmers DaCosta, Philadelphia, Pa., Sept. 20th, 1909.

Question 1. 300. Quite frequently a solitary stone.

Question 2. Not answered.

38. Omar Pancoast, Baltimore, Md., Sept. 16th, 1909.

Question 1. 1050.

Question 2. 7802. In Moynihan's book on "gall stones."

39. Willy Meyer, New York City,

Question 1. Over 400.

Question 2. Not answered.

40. Robert T. Morris, New York City, Aug. 19th, 1909.

Question 1. Several hundred more than I ever take the trouble to count. Ordinarily 10 to 20 would be considered a large number, but sometimes we run across these exceptional cases of enormous numbers of stones.

Question 2. Not answered.

41. Russell S. Fowler, Brooklyn, N. Y., Aug. 27th, 1909.

Question 1. 450.

Question 2. Over 1000 by a Montreal surgeon; cannot place reference.

42. H. J. Boldt, New York City, Sept. 16th, 1909.

Question 1. If my memory serves me right, the number was 286.

Question 2. More than 300 by one of my assistants.

43. W. S. Gardner, Baltimore, Md., Sept. 25th, 1909.

Question 1. 750.

Question 2. I have no record of any larger number.

44. George W. Crile, Cleveland, O., Sept. 22nd, 1909.

Question 1. 1500.

Question 2. 1500. (Same case.)

45. John C. Munro, Boston, Mass., Sept. 28th, 1909.

Question 1. 1000.

Question 2. 1268.

46. B. Moynihan, 33 Park Square, Leeds, Eng., Sept. 15th, 1909.

Question 1. In one case over 7,000 from the gall bladder; in another over 3,000 from the common duct. The great majority of the stones in both cases were very small; about the size of mustard seeds.

47. J. Bland Sutton, 47 Brook St., Grosvenor Square West, London, Eng., Sept. 18th, 1909.

In December, 1908, a gentleman friend of mine had an acute attack of cholecystitis. He was very ill and I advised him to submit to operation. His business affairs were complicated and he deferred operative measures. Some weeks later he discharged 1320 gall stones with the feces. Many more were lost. He made an excellent recovery.

DIFFERENTIAL DIAGNOSIS OF GALL STONES.

L. H. Forman, M.D., Buckhannon, W. Va.

(Read at Annual Meeting State Med. Ass'n, at Elkins, Oct., 1909.)

The first drawing represents the liver, gall-bladder and ducts in their normal condition.*

The liver secretes from 20 to 27 ounces of bile each 24 hours, which is propelled from the liver into the gall-bladder by the muscular contractions of the large bile ducts.

The gall-bladder secretes a large quantity of thick mucus each 24 hours. This mucus and bile together are propelled into the duodenum in spurts, by the contraction of the gall-bladder.

The diameter of the cystic duct is one-tenth of an inch. The hepatic duct is one-sixth of an inch, the common duct is one-fourth of an inch, so any disease or ob-

struction of these small ducts will produce trouble. We will first take a case of jaundice in a very young person, not caused by gall-stones, but by gastro-duodenitis, which, as a rule, is brought on by colds, indigestion, typhoid fever, etc. The intestinal portion of the common duct becomes swollen and edematous and dams the gall back, which is then absorbed by the rootlets of the hepatic vein and carried throughout the system.

Symptoms.—Jaundice, mark you, without pain and with but slight stomach disturbances. The patient is given a cathartic, is dieted for two or three weeks and entirely recovers. How different from gall-stones!

The second drawing represents cholecystitis, with thick tarry gall.

Symptoms.—Acute, mild or severe paroxysmal pain, usually in right hypochondrium, less commonly in the epigastric region. This may be followed by nausea and vomiting, with more or less tenderness over the site of the gall-bladder. There is not apt to be any jaundice.

The third drawing represents gall-stones in the gall-bladder, and the nerve supply of the gall-bladder and ducts.

Symptoms.—History of previous attacks. The pain is of two types. Maybe a dull aching pain, due to increased tension and inflammation of the gall-bladder, or a sudden excruciating pain which is from a more intense tension and inflammation. Associated with one or the other of the foregoing symptoms is the referred pain to the stomach, around the waist at the inter-costal margin, to the back between the shoulders, and the pain may radiate to the right sub-scapular region—rarely to the left. Why do we have this referred pain? Because the nerve supply of the gall-bladder is from the *cystic* plexus, which is a branch of the *solar* plexus, located behind the stomach. A branch of this nerve also supplies the diaphragm. The cystic and common ducts are supplied by the lower dorsal and two upper lumbar nerves whose origin is also behind the lower part of the stomach. A posterior branch of this nerve also supplies the muscles between the shoulders and scapula region. So the origin and distribution of these nerves accounts for the deep-seated pain felt in the middle line, in biliary colic and the accom-

*Drawings were not sent to the JOURNAL.

panying spasms of the diaphragm. A full stomach may change the position of the stones in the gall-bladder, bringing on pain. The same may occur when the stomach is empty, and this accounts for the pain and colic often at night when the stomach is empty.

The fourth drawing represents impacted stone in cystic duct hydrops.

Symptoms.—The distended gall-bladder can usually be felt below the costal margin, but sometimes not tense enough to be felt. It moves with respiration. There is more or less tenderness, usually no jaundice.

The fifth drawing represents a stone in the common duct. A single stone may be so tightly wedged in the duct that no drop of bile can pass through it, or it may fit so loosely that bile may from time to time flow past it readily. (The ball-valve action.) The complete obstruction of the duct is rare.

Symptoms.—The cardinal symptom is jaundice. Pain may be present in the early stage but may soon disappear. There may be chills, followed by rise of temperature, this followed by sweating. There may be enlargement of the liver. The liver may reach to the umbilicus, or even below it, but this is rare.

DIFFERENTIAL DIAGNOSIS.

To discriminate between gall-stone disease, cholecystitis and many other affections producing pain, localized or general, within the abdomen and radiating to the chest and back, is often a matter of difficulty and sometimes impossible. The pain due to gall-stones or gall-bladder disease is often assumed by the patient to have its origin in the stomach and a diagnosis of indigestion, neuralgia, gastralgia is made, but in reality conveys no meaning whatever. In carcinoma the pain is persistent; there may be vomiting and other dyspeptic symptoms, with loss of flesh, skin pale in color, and usually the patient is past the middle of life, and there is absence of hydrochloric acid from the stomach.

In gastric or duodenal ulcer there is some relationship between the taking of food and the onset of pain. The pain begins one, two or three hours after meals, and is usually day after day of same duration. The tenderness and pain are centrally located and in about 50 per cent there is

hemorrhage which settles the diagnosis.

The "hunger pain" which is instantly relieved by the taking of food is especially significant of duodenal ulcer.

The pain and tenderness of appendicitis are generally confined to the right iliac region, though when the appendix is abnormally placed the pain may be in any part of the abdomen. Why is the pain in so many cases of appendicitis referred to the stomach and umbilical region, often misleading the physician in his diagnosis? The nerve supply of the appendix is from the superior mesenteric plexus, which is a branch of the solar plexus located behind the stomach, and as this nerve gives off branches to the small intestines in passing to the appendix it becomes clear why pain, due to disease of the appendix may be referred to the whole or any part of the abdomen.

In renal colic pain starts in the posterior lumbar region and radiates downward into the groin, into the inner aspect of the thigh and testicle, with frequent and painful urination.

In floating kidney there may be pain either steady or paroxysmal, from torsion or kinking of the vessels or ureter. A fact of great diagnostic importance is the disappearance of pain when the patient lies down. There is a kidney-shaped tumor that can be easily replaced when patient is in incumbent position. In some cases of abdominal disease it is impossible to make a positive diagnosis without an exploratory incision.

DIGITALIN.

H. H. Redfield, M.D., Prof. of Therapeutics, Illinois Medical College, Chicago, Ills.; Department of Medicine, Loyola University.

One of the alkaloids of digitalis purpurea, common name foxglove, a plant belonging to the natural order of scrophulariaceae, growing wild in Europe and in a cultivated state in this country, largely by the Shakers for the drug market. Dose of the standard granule gr. 1/67.

Regarding digitalis, Potter has this to say:—

"Much of the leaf found in our shops is of very poor quality, a large proportion being

inert; but whether this is due to our pharmacists, not to restricting the official drug to the wild plant, or to the careless treatment in gathering and drying, is not definitely known. When, however, the leaves are imperfectly dried, a process of decomposition sets in which destroys the active principles, and may produce new and poisonous ones. A similar decomposition is said to occur whenever the tincture of digitalis is mixed with a watery or syrupy solution. Certain it is, at any rate, that digitalis is one of the most unreliable drugs in respect of physiological activity of any particular sample or preparation. The seeds are known to contain the active principles in much greater proportion than the leaves, but they are never used."

A statement such as the above, coming from so eminent an authority on therapeutics as Dr. Potter, constitutes one of the strongest arguments that can be put forth to support the claims of active principle therapy, as those who have for years been making almost daily exhibitions of digitalin, and can testify to its absolute certainty of action and freedom from any of the unpleasant features of the tincture can certify.

The question of the exact composition of digitalis is one that has been the subject of a great deal of discussion, but the latest analysis of Schmiedeberg is the one which is most generally accepted as embodying the most correct and accurate determination of this heretofore much mooted question. In this analysis he points out five active principles which are contained in digitalis, as follows:—

Digitalin:—This occurs in an amorphous condition, is soluble in alcohol and water, and is the active ingredient in Homelle's French Digitaline, and is the digitalin formerly official in the United States and British Pharmacopeias.

Digitoxin:—This is insoluble in water, and only sparingly soluble in alcohol. It is the most active of all the active principles of digitalis, and is the principle constituent of Nativelle's Prize Digitaline.

Digitaloin:—Soluble in both water and alcohol.

Digitalinin:—Completely soluble in water but only partly soluble in alcohol. In its action it resembles saponin found in *leptandra virginica*, and it antagonizes digitalin,

digitoxin, and digitalin.

Digitin:—This to all appearances is entirely inert.

Of these active principles, the first three have a decided action upon the heart and circulation, the fourth is antagonistic to all the others, and all five are classed as glucosides, with the exception of digitin which is an alkaloid. Some disparity of opinion, however, exists at present regarding the classification of digitoxin and digitalin as glucosides, some authorities claiming that they are both alkaloids.

Physiological Action:—Digitalin is a cardiac tonic, stimulator of vascular system, motor-excitant, paralyzant, anaphrodisiac, diaphoretic, diuretic, and emetic. In large doses it acts as an irritant to the mucous membranes of the gastro-intestinal tract, producing severe gastric disturbances, nausea, vomiting and purging; the stools being profuse and of a bright green color. By lessening the blood supply to the tissues, it lowers body temperature, produces irregularity of the heart's action, vertigo, and a vibratory fringe of colors around the margin of objects looked at.

While digitalin slows the rate of the heart, it also increases the force of the heart. The cardiac motor apparatus is stimulated, likewise the inhibitory; it stimulates the vaso-motor center in the medulla, causing a constriction of the arteries, and greatly increasing arterial tension with an attendant rise in blood-pressure.

Digitalin no doubt owes its power as a diuretic to its action upon the general and renal circulation. By its action on the cardiac-motor apparatus the force of the ventricular systole is augmented, while at the same time by stimulating the vaso-motor center, and producing a general rise in blood-pressure, it re-establishes the osmosis in the kidneys which has been suspended owing to the decreased blood-pressure in the renal circulation, which action makes it, so far as vascular action is concerned, the diuretic par excellence.

Digitalin and Aconitine Compared:—Digitalin increases the inhibition and stimulates the cardiac muscle. Aconitine primarily stimulates but afterwards relaxes inhibition and depresses the cardiac mechanism. Digitalin raises arterial tension and blood-pressure. Aconitine lowers arterial tension and blood-pressure. Digitalin

arrests the heart in systole. Aconitine arrests the heart in diastole. Digitalin acts slowly. Aconitine acts very quickly. Digitalin finally paralyzes the heart by overstimulation. Aconitine eventually paralyzes the heart by direct depression.

Both of these active principles slow the heart, but otherwise they antagonize each other in their cardiac actions.

Therapeutics.—Phillips credits digitalin with special powers over blondes and persons of a sanguine temperament. Its principle use is based on its action as a heart tonic and diuretic.

The cardinal indications for digitalin are as follows:

A diseased condition of the heart, slow, irregular pulse, with a tendency to palpitation of the heart upon the slightest exertion.

In women who complain of sudden hot flushes, followed or accompanied by marked nervousness and weakness, the pulse is irregular and intermittent, conditions generally found during the climacteric period.

In dilatation of the heart, with an irregular action, slow pulse, great venous distension, and a general livid appearance.

It is indicated in weak heart without any valvular lesions.

In mitral disease, when the action of the heart is rapid, and the force weak and feeble, digitalin, by relieving the hyperemia of the pulmonary vessels, as well as the engorgement, affords the auricles sufficient time to empty themselves through the hitherto obstructed orifices.

In aortic disease prior to the establishment of a compensating hypertrophy, and when there is failure of the cardiac-muscle, digitalin gives relief.

It is the remedy of choice in dilatation of the right side of the heart.

It is extremely useful in those cases where the patient gives a history of a sensation as though the heart would stop beating if he moved.

At the onset of scarlet fever, the exhibition of digitalin will prevent the nephritic condition which so often occurs as sequel to this disease.

By raising the tone of the vascular system, digitalin is of great benefit in hemiplegia and congestive headaches.

Digitalin is indicated whenever the pulse

is irregular, slow, weak, intermitting every fourth or fifth beat, the face pale and anxious, with a purplish color, the veins of the ears, eye-lids, lips and tongue are distended; respiration is irregular and difficult.

In cardiac dropsy when the patient cannot lie down, there is great distension of the jugular veins, the face is livid and a loose cough is present. The quantity of urine is decreased, and contains albumin. There is dilatation of the left side of the heart, and a mitral regurgitant murmur is heard, with, in some cases, an involvement of the aortic valve. Digitalin is here useful.

It should be studied in all passive congestions which depend upon a general weakness of the cardiac apparatus with a general deficiency in vascular tone.

Contra-indications.—Simple hypertrophy of the heart; pericarditis; fatty degeneration of the heart; arterio-sclerosis in the aged.

Compare its action with that of convallamarin, strophanthin, adonidin, spartein, and cactin.

Selections

TYPHOID FEVER IN INFANCY AND CHILDHOOD.*

By **Le Grand Kerr, M.D.**,
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(Seney), the Williamsburgh and the
Swedish Hospitals in Brooklyn,
N. Y., Consulting Pediatrist
to the East New York
Dispensary.

That there are many cases of typhoid fever occurring in infants and young children which are not recognized as such, there can be little doubt. Because of former teachings the disease is even at the present time considered uncommon, although "overlooked" would be the better term. The aid offered by bacteriology helps us in the elim-

*Read before the Bergen County Medical Society in a Symposium on Typhoid Fever. October 12, 1909.

ination of doubtful cases, although its service in this particular is not as great as in the detection of atypical cases.

It is the correlation of a mass of circumstantial evidence that has compelled us to recognize a specific cause of typhoid fever and has markedly changed our former ideas in regard to the disease, and it is this same situation which ought to modify our methods of diagnosis.

It is not sufficient that we be concerned merely with a symptom complex and the ability to give it interpretation or satisfy ourselves in drawing certain conclusions from the changes which may have taken place in various organs of the body in the presence of this symptom complex. Our aim must be to determine beyond any reasonable doubt that the particular case with which we are dealing shows its morbid phenomena because of the presence of a specific pathogenic agent. Some of these morbid phenomena must be demonstrable if the case is to be considered as typhoid fever. In those rare instances—so rare that we may consider them anomalies—wherein there is an entire absence of demonstrable morbid phenomena which is attributable to a specific pathogenic agent and yet there remains the ability to communicate the disease, we cannot state that the case is one of typhoid. Recognition of such instances, however, are the product of modern bacteriological methods.

Even with the aid offered by the laboratory the diagnosis of the disease during childhood must be through the agencies of careful and skilled examination and observation.

As regards the symptomatology there is but one constant feature and that is a rise in temperature. In contradistinction to the disease as it occurs in adults, there is nothing peculiar about the temperature in children except that *its range is lower and its duration shorter*. Many have claimed that the onset of fever is somewhat sudden in childhood but at the same time admission is made that the cases have not been under early observation. My personal experience has been that with the exceptions already mentioned, the type and course of the temperature is similar in adults and children.

It might be well to mention in this particular that I have frequently noted that the

administration of internal antipyretics at the onset of typhoid fever (and less frequently during its course) results in an elevation of the temperature which is noticeable a few minutes after the ingestion of the drug.

Prodromal symptoms I consider of little or no value; they are so mild when present and are so lacking in suggestiveness that there is little knowledge gained by their detection except that the child is ill. Contrary to what might be expected, the younger the child the less prominent are prodromals and so one is very apt to encounter what appears to be a disease with an abrupt onset. It may be accepted as a safe guide that in the large majority of instances, the temperature exhibits a gradual rise during the first five to seven days with a subsequently sustained temperature for a varying period of a few days to one, two or more weeks, the longer periods being rarities.

According to the age and general nutrition of the child the pulse is a varying factor. In the very young or those weakened by malnutrition the rate is high and out of all proportion to the elevation in temperature, while in older children or well nourished ones, its rate is slower than proportionate to the temperature curve. Naturally after several days the radial pulse becomes soft and flaccid but is not a characteristic of typhoid.

Splenic enlargement is usually a very early accompaniment of typhoid fever, but in the diagnosis its absence must not be given too much weight. In no instance is it ever as prominent a feature as in the adult cases. It is frequently possible to map out the enlarged spleen after the second or third day of the disease, but later than this the demonstration is difficult or impossible because of the occurrence of tympanites. To be of real diagnostic value, splenic enlargement must be of recent origin; that is, we must be satisfied that it did not previously exist.

The demonstration of splenic enlargement is more apt to obtain late in the disease than early, because as the tympanites subsides the persistently enlarged spleen can be mapped out. In the very young, one cannot be satisfied with one examination for commonly the softness of the organ at first deceives the palpating hand.

Abdominal symptoms are not the same as in adults nor can similar values be given to them. There is usually more or less frequency of the stools and they are watery. The oft-described characteristic stool which is likened to pea soup, is not as common as the occurrence of a non-typical stool which, upon standing, shows a decided tendency to separate into layers. If the fluid portion of the stool is absorbed within the intestine, diarrhoea is not a feature and gurgling is easily elicited. The early occurrence of tympanitis has already been noted.

Roseolar papules are about as constant as in adult cases, but the diffuse erythema which occasionally precedes their appearance is misleading. These spots occur in crops as in later life. Catarrh of the finer bronchi is frequently present, but, on the other hand, is as frequently absent. Bronchitis is limited usually to the larger and middle branches of the bronchi, and accompanied by scanty secretion. Epistaxis may occur very early in the disease, but in my experience its occurrence is insignificant.

The tongue commonly presents a suggestive appearance, being at first coated with a transparent greyish coating which quickly becomes thickened and white and which is in sharp contrast to the much reddened borders. However, its manner of clearing is much more suggestive. The clearing is from the margins and tip and the tongue is soon clean in its anterior portion in a triangular shape with the apex toward the base of the organ. In other diseases there is a uniform clearing when it starts. Vomiting occurs in the very young just as it does in other severe conditions, but claims no special significance.

Contrary to the general impression, the younger the child the less prominent are the nervous symptoms. There may be dullness or a semi-stupor which is not persistent, but at most it is only common to find a hyper-excitability. In children as they approach the age of ten years the symptoms referable to the nervous system more closely approximate the adult type.

It has been necessary to speak of these many individual symptoms to reiterate what I stated in the beginning that the only constant feature of typhoid fever in infants and children is the rise in temperature.

From what has been said it will be seen that the diagnosis presents many difficulties.

With nothing suggestive about the prodromata the most frequent error is in mistaking it for some gastro-intestinal disturbance. At this period we have nothing to guide us save the history (of a definite etiologic factor affecting the stomach or intestines and in typhoid of an infection) and the fact that the pulse in typhoid does not correspond to the temperature. Here then is the most important time to determine the condition of the spleen. In fact, during the first few days we must make the diagnosis by exclusion, and even when excluding all local causes for the elevation of the temperature, we are still left in doubt as to which of the infectious processes is present. After three days, it is possible to exclude the acute infectious exanthemata, and influenza accompanied by slight catarrh may also be excluded because of the short duration of its active symptoms.

Differentiating tubercular meningitis is not so easy. This is so largely because we have been taught to suspect it more often in the very young than typhoid fever. But in this type of meningitis, headache is prominent early, the temperature is low, the pulse slow and irregular, the abdomen sunken or flat and the whole course progressive. A true difficulty is encountered in those cases of tubercular meningitis which run a course for several days or weeks without any appreciable cerebral symptoms. Such cases are probably due to an acute miliary tuberculosis with subsequent involvement of the meninges. It is in such instances that the occurrence of rose spots and splenic tumor are most welcome signs.

Acute miliary tuberculosis of the typhoidal type in older children is puzzling at first, but time and repeated examination soon clears up the uncertainty.

Ulcerative endocarditis is associated with splenic enlargement and a discrete eruption, but its rarity among children and the occurrence of marked remissions of the temperature with chills and sweating, make the diagnosis easy.

As long as there exists a doubt as to the diagnosis, there must be repeated examinations which include the Widal blood test. In no other way can we discover all cases.

The treatment in all cases must be mainly symptomatic: first, because of the neces-

sary delay in diagnosis; second, because of the usual short course of the disease, and third, because methods applicable to adult cases (tub baths, etc.) are not suitable during childhood. The question of diet is most important. Personally I am more and more in favor of a *partial* restriction of the administration of milk. My method has been to use the top 16 ounces of a quart bottle of milk and one pint of water, thus reducing the work placed upon the kidneys and digestive tract. I have not seen diarrhoea occasioned by this modification and certainly the digestion of it is better than of whole milk or a richer cream. To each ounce of the mixture there is added one-half to one drachm of sugar of milk to assist in energizing the child's system. Vegetable purees are an important part of the diet. The puree is made of any fresh vegetable, cleaned and cut very fine. This is completely covered with cold water and allowed to simmer until the vegetable is very soft (four to six hours). The liquid is then strained off through cheesecloth and re-boiled for five minutes. This is restrained and one pint of milk or eight ounces of cream added. Seasoning is added as desired and finally two teaspoonfuls of arrow root dissolved in a little cold water. Cereal gruels are made up in stock and at first are used diluted with water, but later cream is added if tympanites is not excessive. Such a diet with the addition of the whites (during the first week) or the whole egg (during the second week) given raw every eight or twelve hours, provides the necessary energy with a minimum of tax upon the digestive system.

With the reduction of the temperature comes an addition to the dietary and the return to solid food is made more rapidly than in adults. However, the return to a full milk diet is made with caution. Sponge baths should be given two or three times daily and if sweating is profuse an alcohol sponge bath should immediately follow each such occurrence. The toilet of the mouth must be rigorous to limit complications there. If you have ever observed the conditions which may obtain from neglect of the toilet of the genitals, you will never again allow neglect of these parts.

Pyrexia is best controlled by hydrotherapy. The height of the temperature, however, is not the only indication for its use,

but the effect that *any* temperature may be having upon the general condition of the child under observation. Each child must be individualized. In method preference should be given to the cool pack in children. Complications and sequelae demand the application of the general principles of treatment recognized as efficient in such conditions and need not be discussed here.—*Jour. of the N. J. Med. Society.*

Correspondence

LETTER FROM INDIA.

By Dr. L. D. Wilson, Wheeling.

DELHI, INDIA, Nov. 17th, 1909.

Dear Dr. Jepson:

In my letter from Bombay I omitted to say anything about the medical aspects of Cairo. As you all well know, the average Egyptian has, in the language of Mulberry Sellers, sore eyes. The universal prevalence of eye inflammations in former times has been greatly mitigated of late years. The enlightened policy of the British government in establishing hospitals and dispensaries for the care and treatment of the sick poor has, I am credibly informed, resulted in a very great diminution in the number of ophthalmic patients in the city. But through the country districts of the upper Nile, which are not able to have the advantage of these facilities, there is still a very considerable amount of these troubles.

It would be strange indeed if, in the land where the science of medicine had its birth, and where exist records of the establishment of hospitals some thousands of years before the Christian era, there should be no provision for the care of the sick. An impression prevails to some extent among the uninformed that there are no hospitals in Cairo; and some of our fellow-tourists, in an outgush of impractical philanthropy, thought we of the "World Tour" might distinguish ourselves by taking the initiative in starting a movement and fund toward the establishment of such an institution. Great was their surprise and confusion when one physician of our party stated that there were a number already in active service, supported by the govern-

ment, and of sufficient capacity to care for all applicants. Another stated that he had that morning visited the out-patient department of one of these institutions, and that fully a thousand patients were present for treatment. A large number of physicians were on duty, and everything was moving along in most approved style. So we didn't start a hospital.

We left Cairo by rail for Suez, where we were to rejoin our vessel which had passed through the canal while we were at Cairo. This canal was finished in 1869. It is 150 feet wide, 28 feet deep and 88 miles long, 11 miles of which are in a small body of water called Bitter Lake. The toll charged vessels for passing through is $8\frac{1}{2}$ francs, or about \$1.70 per ton. Our vessel is the largest that has thus far passed through, and it was barely possible for her to get through.

Before bidding adieu to Egypt I wish to advert to a few peculiar features that arrest the attention of the traveler. One of these is the camels. These animals are simply invaluable. They are seen everywhere, singly, in twos and threes, and in droves. They are horses and wagons all in one. They seem the very embodiment of patience, endurance and docility. They are loaded with every conceivable commodity. Some look like moving hay stacks, others like walking lumber yards. They carry corn, cotton, wool, building stone, brick, just anything and everything. They are valued, according to age and other considerations, at from \$50.00 to \$400.00. Another exceedingly useful little animal is the donkey. These little fellows, like their companions in industry, the camels, carry enormous loads compared with their size. A grotesque sight is to see a large turbaned countryman seated upon one of them, the man probably half as large again as the donkey, and the slim little legs of the animal skimming along at a quick trot. At the time of our visit the Nile was about at the height of its annual inundation, and large stretches of the country resembled our Wheeling Island when the Ohio is on the rampage. While the whole Nile delta is one vast fertile garden, everything west of the stream is a waste of sand. This comes right up to the bank of the river. It is quite certain that at one time, in the long ago, this region of fertility extended

very considerably to the westward; but the winds, by their force, have drifted the sand continually to the eastward, and gradually overwhelmed the entire region. The river itself seems to have interposed an effective barrier to any further encroachment by these desolating elements.

Leaving Egypt at Suez, we sail down the gulf of that name into the Red Sea. Here we experienced weather that may well be called hot. Although it was the 5th of November, the days and nights were like our July weather of a *hot* July. Why this is called the *Red* Sea seemed to be very satisfactorily explained by a phenomenon observed in the course of our passage through it. For miles and miles the surface of the water was covered with a film of sandy-red dust which was blown over the sea by great wind storms sweeping over the sandy desert. This gives the surface of the sea a reddish tinge, from which doubtless the name is derived. For four days we are in the Red Sea and its southern outlet, the Gulf of Aden. Then we turn eastward across the Arabian Sea to Bombay, which we reached on the morning of the 14th of November. Bombay is a great city of about 900,000 population. Except for the public buildings and institutions of a large city, there is little of interest here. It is a great commercial center, having developed greatly since the opening of the Suez canal. Malabar Hill and the "Towers of Silence" are interesting to visit. Malabar Hill is where the rich Parsee merchants live, and the "Towers" are the places where they dispose of their dead. These Parsees dominate the business of the city. They number about 60,000. They came into India from Persia long years ago, having been driven out of that country. Their origin is lost in mystery. They are Zoroastrians or sun-worshippers. Earth, fire and water are sacred and not to be contaminated; hence their peculiar and revolting method of disposing of their dead. The Towers of Silence are huge circular structures of brick or stone, forty or fifty feet high and sixty or more in diameter. These have but one small door admitting to the inside. Within the walls the space is covered with open-work iron grating. When a body is brought to the place it is taken in charge by persons who are especially set apart for this ser-

vice. By them it is taken inside and placed on the iron grating. As soon as it is left by the attendants, a flock of huge vultures, that are always seen perched on the tops of the walls or on the neighboring trees, swoop down on it, and in about half an hour nothing is left but the bones, which are dropped through the grating into the pit below. The Parsees, while very rich and influential in business, socially are ostracised by all classes.

TUBERCULOSIS BEING WIPED OUT.

One Institution or Organization Being Established Every Day.

During the year that has passed since the International Congress on Tuberculosis met at Washington, one institution or organization for the treatment or prevention of tuberculosis has been established every day, Sundays and holidays included, according to a bulletin of the National Association for the Study and Prevention of Tuberculosis. Fifteen new beds in hospitals or sanatoria have been provided also for every day of the year.

A year ago the rate of increase was one organization or institution every other day, only one-half as fast as now. Less than a year ago there were 40 consumptives for every hospital bed provided. To-day the number has been reduced to 30. Nearly 20,000 beds are now provided in institutions for the treatment of consumption, an increase of over 5,500. The number of special tuberculosis dispensaries in the United States has more than doubled, the number of anti-tuberculosis associations has increased 68%, and the number of hospitals and sanatoria 43%.

In one branch of anti-tuberculosis work, particularly emphasized by the International Congress, a signal advance has been made, that is, in the provision of hospital accommodations for advanced cases. In all parts of the country, state and municipal authorities have been urged to provide hospitals for dangerous cases of tuberculosis, with the result that over 1,000 beds have been established in the past year. At the present time there are, however, only 6,000 beds, and 75,000 advanced cases which ought to be in hospitals. Fully 75,000 others could be treated at home, but it would be safer for the community to segregate them in institutions. Every advanced case of tuberculosis is a center from which the disease spreads, and unless the patient is taught how to be careful in his habits, and unless he has the proper home surroundings, he should be in a hospital, where he will not be a menace to others.

The National Association for the Study and Prevention of Tuberculosis declares that at least 70,000 more beds in hospitals are needed for advanced cases of consumption. Until these are provided tuberculosis cannot be wiped out. If everybody in the United States gave \$5 to provide hospitals for the dangerous consumptives, sufficient funds would be procured to destroy forever the threat of tuberculosis from this country.

STATE BOARD STATISTICS FOR 1908.—Statistics based on the examinations by state licensing boards (given in *The Journal A. M. A.*, May 22) show that 7,770 candidates representing 137 medical colleges were examined during 1908, with 21.7 per cent of failures. There were 6,477 candidates who graduated during the last five years, of which number 17.3 per cent failed. Of the 796 who graduated previous to 1903, 31.5 per cent failed. Non-graduates were examined in seven states, the total being 494 with 56.8 per cent of failures. Of the 4,741 candidates who graduated in 1908 about 65 per cent took examinations in the states in which their colleges were located, showing that any state allowing low-grade colleges to exist is itself the chief recipient of the poorly trained output. The colleges of Illinois furnished 843 candidates with 12.9 per cent of failures. Pennsylvania furnished 700 candidates with 6.9 per cent of failures. The failure percentage for New York colleges was 3.2; for Maryland colleges, 24.2; for Tennessee colleges, 35.7, while for the Mississippi colleges it was 77.8 per cent.

All states, except New Mexico, require an examination of every applicant unless the candidate already holds a license from some other state. In the classification of colleges only 48 have failure percentages of less than 10 per cent, 29 have between 10 and 20 per cent, 46 colleges have over 20 per cent of failures and 15 are unclassified.

During 1908 altogether 7,360 physicians received licenses; 6,084 by examination, 184 under exemption clauses and 1,092 through reciprocity. Of those licensed under the reciprocity provision 225 or over 20 per cent received their original licenses in Illinois, the two next highest figures being 109 in New York and 94 in Iowa.

Prof. Irving Fisher of Yale University is of the opinion that if pure milk, pure water and pure air were to be used universally to the extent they are now used in certain individual places, life would be lengthened by an average of eight years.—G. D. L.

A CASE OF PRECOCIOUS MENSTRUATION.

—A. Stein, Konigsberg.—In a previous report Stein detailed a case of a child who began to menstruate at the age of 14 months. The child is now 3 years 6 months old and has had a regular period every twenty-eighth day. During the menstrual epoch she is depressed, irritable, and has dysmenorrhic pains and swelling of the breasts. In size the child greatly exceeds the average at her age; her breasts are well developed and show well-marked nipples surrounded by an areola; the outline of her limbs are rounded and pubic and axillary hairs have appeared. The voice is that of a 15-16 year old girl. Lately a tendency to masturbation has developed. Such early sexual development is ascribed to early hyperplasia of the ovary with ripening of its follicles. Usually hydrocephalus, ovarian sarcoma or rachitis is the cause. In this case a moderate rachitis existed, but has improved under treatment.

The West Virginia Medical Journal.

S. L. JEPSON, A.M., Sc.D., M.D., *Editor.*

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WHEELING, W. VA., FEBRUARY, 1910.

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All communications to this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notices of deaths, removals from the State, changes of location, etc., are requested.

Our readers are requested to send us marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

CONTRIBUTIONS TYPEWRITTEN.

It will be satisfactory to all concerned if authors will have their contributions typewritten before submitting them for publication. The expense is small to the author—the satisfaction is great to the editor and printer.

ADVERTISEMENTS.

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Advertisements of proprietary medicines must be accompanied with formulae. Rate cards sent on application.

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Should be made by check, draft, money or express order or registered letter to Dr. S. L. Jepson, Ch'n of Pub. Com., 81 Twelfth Street, Wheeling, W. Va.

Editorial

If the JOURNAL does not reach you by the 10th, drop us a card.

EDUCATION OF THE PHYSICIAN.

The average physician is not educated in the true sense of the term. He may be well posted in text-book lore, may have a great deal of personal experience which is of value to him, inestimable value, may have read a great deal of literature outside of his profession and yet not be educated. The educated man in any line of work is the man who can take up a medical journal or a magazine, and in ten minutes get out of it all there is in it of value to him. He is the man who can take a new text book on medicine, or any other book for that matter, and in five minutes find out whether the book is worth purchasing for his own use. He is the man who can run over his library and in half an hour find anything he wants to know on any par-

ticular subject, and digest it so that he can use the knowledge to serve the particular purpose in hand.

When a young man attending school, I heard a young lawyer make a speech, and among many points he made, one, only, remained with me. Although I can not begin to recall his words, the idea was practically as follows: The men who have done things in the world and have achieved greatness have not always been scholars, the latter, in fact, being exceptions, but men who knew how to find the knowledge required for any particular purpose. In other words, the world's greatest characters have been the practical men, the men who could use the knowledge they had, or the knowledge of other men for certain definite purposes.

But how can the physician acquire this practical knowledge, for knowledge which can not be used is not practical? In reality the fault lies away back in youth with the teacher and parent. There is too much cramming in our schools and not enough real teaching. The pupil who has simply learned to read words of one and two syllables can be taught how to use a book. All books should have an index, and you cannot begin too early to teach the use of it. Besides this, one should know how to run the eye over a paragraph, or column, or page, and catch ideas "on the fly," as it were. The physician who has not been taught this in school can teach himself. A little practice every day will enable him to become a rapid reader. The rapid reader is not the man who can pronounce the most words in the shortest time, but the man who can catch the greatest number of ideas in the shortest time as his eye rapidly runs over the printed pages. The practical reader is the one who can catch the greatest number of ideas in the shortest time, and at the same time decide in his mind what is of value to him and dismiss the other from his mind.

There is always a point to every story, and the one who sees it first is the smartest one of the lot. You have heard the story of the man who told a boy a story like this: A man once heard an owl hooting in the barn. He took his gun and went out. He saw the owl sitting on a beam over the hay mow. He fired, the hay caught fire and soon the barn was in a blaze. The

neighbors came. Great efforts were made to put out the fire, but to no purpose. The hay was burned, the grain was burned, the man's horses and cows were burned to death, his farming implements were all destroyed, and the loss was very great. The boy looked astonished, and all he said was: "Did he hit the owl?" That was a smart boy. He would have made a good physician with the necessary knowledge.

Physicians of West Virginia, I care not if you are seventy years old and must use glasses to read this, if you have not been a practical reader, you have not made a success, or if you have made a success, you have done it with too much effort, and you are now broken down or soon will be. You can read a little every day, and if you will read properly you gain every day. I know men who have large practices, who do much in their professions, and let their medical journals lie on their tables unopened for alleged want of time. It is not want of time, it is want of tact. Reading should be a man's greatest pleasure. If he can not read with pleasure his early education has been sadly neglected.

G. D. L.

Have you, Mr. President, appointed that Committee on New Members? And have you seen that it has started out in search for the lost ones? We are glad to report these new members: Drs G. B. Hedges, Martinsburg; J. H. Hodges, Harper's Ferry; Andrew S. Boggs, Gassaway; D. D. Hatfield, English; Jennings King and John T. Huff, Buckhannon; H. O. Rohrbach, Monongah.

Have you, Mr. Secretary, collected those annual dues from every member on your roll? Every member who has paid feels a greater interest in the society. Every month of delay renders it uncertain whether or not you are going to retain all your members. As you delay to collect dues, we are paying for the printing and mailing of JOURNALS that may be going to those who will allow their membership to lapse. *Get the money now.*

The Ohio County Society is amending its rules so as to require the payment of dues before March each year. Every society

should at once do the same. Then we will know by March who are to be our members for the year. The remainder of the year can be spent in searching for new members. The constitution of the State Association, as amended at our last meeting, requires the county societies to send all dues to the State secretary before March. This makes it obligatory on the local societies to make the same requirement. *Do it.* Get your members in the good habit of paying promptly, as they do other accounts. Any member who later changes his location can have his membership changed without expense. The laws provide for this.

REFRACTION BY THE GENERAL PRACTITIONER.

Nov. 13, 1909.

Dear Doctor:

At the late meeting of the Ophthalmic Section, A. M. A. (eleven hundred members), the undersigned were appointed a committee to promote a *working knowledge of simple refraction* among family physicians.

It has secured abundant evidence that such knowledge has been acquired and is now used by many physicians, so proving that all medical men can do likewise, if they so desire.

But that the practice may become uniform, it is necessary that the State Board of Registration require it for license and medical colleges teach it in course.

Recognizing its importance, the Michigan State Board of Registration, on Feb. 12, 1909, notified medical colleges that thereafter it would grant license to practice only to such applicants as demonstrated, on a living subject, with simple spherical lenses and test types, their working knowledge of simple refraction.

Your committee is confident that every State Board of Registration would make a like requirement, if it grasped the situation; and then all medical colleges would qualify their students therefor.

Recalling the fact that our system of medical education makes no adequate provision for training the family physician in simple refraction, and that it would be impossible for experts to meet the needs of all the people in this respect, it is plain that this class of cases had no source of relief other than the optician. But if the State Boards require a working knowledge of simple refraction for license, the needs of all the people will be fully met by qualified physicians, and the optician resume his normal vocation as a spectacle merchant.

Recognizing your great influence in medical affairs, and assuming your vital interest in enlarging the field of family practice, your committee confidently ask your active endeavor to persuade your "State Board of Registration" to require "a working knowledge of Simple Refraction" from each applicant for license.

Each member of your committee stands ready to assist you to a fuller understanding of the situation, or to co-operate with you in seeking its relief.

With thanks for your aid, and a report of your success, we remain, Dear Doctor,

Sincerely yours,

LEARTUS CONNER,
Detroit, Mich., Chairman.

A. R. BAKER,
Cleveland, Ohio.

J. THORRINGTON,
Philadelphia, Pa.

91 Lafayette Boulevard,
Detroit, Michigan.

(The above was received some weeks ago, and submitted to a local ophthalmologist of experience and skill. It met with his emphatic opposition. We confess that we sympathize with this opposition to the suggestion of the committee. A few opticians in every large community do refraction work, and a number of them do it quite well. Were every physician to acquire "a working knowledge of simple refraction,"—a rather indefinite expression—it would simply result in adding to the many incompetents already in the field, thousands more poorly equipped refractionists, not to the loss of the opticians, who will retain their patrons because working for less money, but to the loss of the skilled ophthalmologists. Why not rather have every State pass stringent laws requiring a thorough knowledge (not "a working knowledge of Simple Refraction") of refraction before anyone is permitted to meddle with the human eye?—Editor.)

REPORT OF COMMITTEE ON MEDICAL DEFENSE.

(This report was omitted from the Minutes because it was ordered to be sent to all constituent societies. Since, however, every member has not received a copy, it is thought best to print it in the JOURNAL that it may be carefully considered by all before action is taken.)

MR. CHAIRMAN AND MEMBERS OF THE
HOUSE OF DELEGATES:

At the urgent request of President Howell, I remained for another year on the Committee of Medical Defense as chairman. The members of this committee have had no opportunity for a joint meeting to give due consideration to the important subject of medical defense. I, therefore, beg leave to submit my personal studies and conclusions pertaining to this matter, and, with permission from the members of the committee, I offer the following as my report for the committee:

We all have some knowledge of the unfortunate position in which the physician is placed when attacked with a suit of alleged malpractice. By far the largest number of such cases are cases of black-mail pure and simple, and while it is gratifying to know that it is rather the exception than the rule that the physician fails to get a vindication at the hands of the jury, yet the damage done to his reputation and the financial loss incurred remain irreparable.

It is unpleasant to think that by far the largest number of suits for malpractice against members are traceable to the activities of some other physicians in the same or in a nearby community. An interesting fact is that after the suit is entered through their instigation, the instigators withdraw their support from the plaintiff and seldom have the courage to appear on the witness stand against their fellow practitioner. They are thus cowards as well as traitors. It seems that what they are after is not to mulct their fellow practitioner out of money, but to use the instituting of the suit as a basis for spreading damaging insinuations about his ability or conscientiousness. I happen to know several who in their determination to ruin a fellow practitioner have, among other things, resorted to the instigation of law suits against him, and when some of these suits were instituted, the following was a favorite formula made use of by one of them for carrying the news as far and wide as he could: "I feel sorry for Dr. A. Haven't you heard the latest? Why, he was sued for damages on account of malpractice in such-and-such-a-case. While the Dr. and I are not friendly, I hate to see any man in trouble. I don't believe all they say he did in that case, but, of course, 'where there is smoke, there is fire.' If I were in his place, I would compromise and be done with it." This state of affairs, of course, is wrong, and should not exist. Those, however, who know the kind of material of which certain portions of the profession are made and will continue to be made for some time to come, know that this will continue to be the case for a long time; and hence that long there will be need of defense.

It has always seemed to me that it is strictly within the province of the State

Medical Association to stand behind every one of its members in this matter and aid him, not only with its moral support, but also in a material way. Our county societies are necessarily too small to undertake it for themselves.

We now have the experience of several medical associations elsewhere, and the results achieved by them in this matter have proven highly gratifying. While on the face of it this would seem to be an enormous undertaking, practical experience has proven that this is not the case; for it has been found that when the plaintiff and his attorneys learn the fact that the defendant is backed by an organization with hundreds of members, their attempted attack is aborted in its incipency. Occasionally a case is pushed to trial, but the display of organized effort to defend the physician has a wholesome, deterring effect and discourages attacks upon other physicians.

The following State Associations are having plans of medical defense in operation: New York, Pennsylvania, Maryland, Iowa, Illinois, Wisconsin, Missouri, Kentucky, Massachusetts and Nebraska. In addition to these there are a number of county societies which are doing the same. Among these are Wayne county, Michigan; Lucas county, Ohio; Philadelphia county, Pennsylvania, and the Chicago Medical Society. I recently directed letters of inquiry to all the state associations providing for medical defense. What I asked particularly was whether their members were satisfied with it and what effect, if any, it has had upon increasing their membership. I herewith append the replies which have reached me so far.

At its annual meeting in 1903, through the efforts of the writer, the State Medical Association passed a resolution pledging moral and material support to its members in case of alleged malpractice suits against them. But no definite plan of procedure has been provided, nor any money appropriated for the execution of this resolution in a practical way. At every meeting since, I have agitated the matter but without any practical result. This, no doubt, is partly due to the fact that since that time we have had our hands full in perfecting our organization and making its membership active. We have reached a point now

where I believe the association can and ought to undertake to do the things that the county societies can not be expected to accomplish. Improved medical legislation is one of these things, but in this as you know, we have made a good start and have accomplished much. The next thing, to my mind, should be the matter of protecting members against malpractice suits. Apart from the direct benefit that would come to all of us from this, you can readily see the great help such an undertaking would be in increasing our membership. I am sure that many of the physicians who in spite of our efforts are now outside of our organization will hasten to join it on learning that it confers such a material benefit.

In order to facilitate your deliberations in this matter, I submit the following plan of Medical Defense, which is a combination of the plans of the Wisconsin Medical Society, the Philadelphia Medical Society and the Medical Society of the State of New York, slightly modified. If this or any similar plan is decided upon, it should be offered as an amendment to our By-Laws to be acted upon at this meeting.

AMENDMENTS TO BY-LAWS.

MEDICAL DEFENSE.

Article—.

1. The Committee on Medical Defense shall consist of three members specially elected for this purpose and the members of the Council ex-officio. The three specially elected members to constitute the Executive Committee. This Executive Committee shall be perpetuated by the House of Delegates by electing one member each year. The term of service of each member shall be three years, provided, that at the first election they will be chosen for one year, two years and three years respectively, the term of service to begin Jan. 1st, 1910.

2. The Executive Committee of Medical Defense at each annual meeting shall appoint an Attorney-at-Law for the term of one year, who, in addition to representing this Association in all suits for malpractice and threats against its members as hereinafter provided, will assist the prose-

cuting attorney in prosecuting illegal practitioners of medicine, and represent this Association in other legal affairs.

3. On and after January 1st, 1910, it shall be the duty of the Executive Committee to investigate all claims of malpractice against members, properly brought to their attention; and if in their judgment the case is one worthy of defense, to forthwith forward all papers connected with the case received from the applicant to the attorney of the Association; but they shall not pay, nor obligate the Association to pay a judgment, claim or settlement against any member.

4. The Executive Committee shall have charge of the Medical Defense Fund, which fund shall be secured as follows:

Each member of the State Association shall be assessed one dollar a year for this fund alone, to be paid with the regular State Association dues and shall be subject to warrants signed by the chairman and secretary of the Executive Committee.

5. The Executive Committee shall at each meeting of the State Association make to the House of Delegates a detailed report of all expenses incurred, and work done during the year ending the first of the month in which the annual meeting of the Association takes place.

6. No action shall be taken by the State Association to an act committed prior to January 1, 1910, or before the date of qualification of the accused as a member of the Association. Furthermore, no member shall be entitled to the privileges of defense by the State Association whose dues to the Association are not paid in advance as elsewhere provided in the Constitution and By-Laws, and such defense shall be granted only to members residing in West Virginia, and not to non-resident or affiliated members.

7. Any member desiring to avail himself of the provisions of this article shall proceed as follows:

He is to obtain a written statement from the secretary of his official, local society that he is a member of that society in good standing, and that he has paid his dues for the current year at the beginning of it and has paid all assessments. This statement he is to present to the chairman of the

Executive Committee of Medical Defense through the secretary of the State Association, along with an accurate and complete history of his treatment of the case from which the alleged malpractice arose. He is also to furnish a statement authorizing the Association through its attorney to defend the action and granting the Association and its attorney sole power to conduct the defense thereof, agreeing not to compromise or settle claim for damages for said alleged malpractice without the consent of the Association or its attorney. For this purpose the Executive Committee is to furnish the applicant suitable blanks.

8. The Executive Committee then is to act as provided in Section 3 and is to keep in touch with the progress of the defense, both in the preparation for and in the actual trial. It shall furnish all necessary legal services, all medical expert services, and pay all such necessary expenses connected with the case as the State Association's attorney-at-law will approve, provided, that nothing in this understanding between the State Association and its members shall conflict with united action in the defense by the officials of any corporation organized for this specific purpose with which the member may be connected, and, provided that when such connection exists, the State Association's share shall not exceed one-half.

WM. W. GOLDEN, *Chairman.*

Medical Society of the State of New York.

NEW YORK CITY, Oct. 4th, 1909.

Dear Doctor Golden:

Our Society is more than pleased with the result of the malpractice defense. We believe that it has been one of the greatest aids in securing new members. We find that members often distinctly say that they join to secure defense in case of alleged malpractice. We know that it has helped to diminish the number of law suits, especially of the blackmailing type, and we believe it one of the best things the State Society has ever done.

Trusting this will answer your question satisfactorily, believe me,

Yours very truly,

W. R. TOWNSEND, *Secretary.*

**The Medical Society of the State of
Pennsylvania.**

ATHENS, PA., Oct. 4, 1909.

W. W. Golden, M.D., Elkins, W. Va.

DEAR DOCTOR: Yours of September 28th came during my absence in Philadelphia attending the session of the State Society.

Our plan of medical defense seems to be working nicely and protects our members. Several cases have failed to come to trial, while two or three are still hanging fire. Thus far we have spent no money during the three years but will have some attorney fees to pay later. We pay our regular attorney \$100.00 per year for ordinary retainer and advice. This fee we have taken out of our regular fund and not out of the medical defense fund.

I do not know that our plan has secured new members for us, though it probably has helped both in securing and holding members.

Cordially yours,

C. L. STEVENS, *Secretary.*

**The State Medical Society of
Wisconsin.**

MADISON, WIS., Sept. 20, 1909.

Dear Doctor Golden:

Yours of the 28th, enquiring as to the results of our "Medical Defense" plan at hand. In reply I would say that the plan is almost universally approved over the whole State and has added materially to the strength of the County Medical Society and reorganization. Nearly all pay the extra dollar without any protest and it is now regarded as a part of the regular dues and hardly anybody thinks of it.

I think the effect on the membership has been most helpful. We certainly have lost none because of it and I think we have gained quite a good many. On the whole the sentiment is all but unanimous that it was a wise move, and we cheerfully recommend a similar action in sister state societies.

Yours fraternally,

CHAS. S. SHELDON, *Secretary.*

Illinois State Medical Society.

OTTAWA, ILL., Sept. 30, 1909.

Dr. W. W. Golden, Elkins, W. Va.

DEAR DOCTOR: Relative to your inquiries of the 28th, will reply in the affirmative to both. The members of our society are very well pleased by the protection given and I am certain that it has increased our membership almost one thousand. By this I mean it has been the determining factor in fully that number.

Very truly yours,

E. W. WEIS, *Secretary.*

Missouri State Medical Association.

KANSAS CITY, MO., Oct. 2, '09.

Dr. W. W. Golden, Chairman, Committee on Medical Defense, Elkins, W. Va.

DEAR DOCTOR: Your letter to Dr. Nicholson was referred to me. We are very much pleased with the undertaking to protect our members from civil malpractice suits. We have beaten or quashed some ten suits during the past year. I do not know whether this has increased our membership or not; it certainly should increase the membership of any association. Our mechanical organization is practically perfected. Outside the cities we have nearly every eligible doctor in the State in the association, hence, we have not looked for much of an increase in membership. I am forwarding you a copy of our constitution relative to the legal defense. We have succeeded so far in giving our members protection without an increase in dues. If I can be of any further service to you, I will be glad to have you call on me.

Cordially yours,

A. W. McALESTER, *Secretary.*

Nebraska State Medical Society.

LINCOLN, NEB., Oct. 30, '09.

Dear Doctor Golden:

We do not compel the members of our State Association to take advantage of the Medical Defense, it is left optional, this because several of our county organizations would drop out of the State Society. About one-third of our membership take the Medical Defense.

Yours very truly,

A. D. WILKINSON.

The Cincinnati Polyclinic at its annual election selected the following officers: Dean, Dr. Chas. F. Paul; Secretary, Dr. Otto Juettner; Treasurer, Dr. Louis J. Crouse; Librarian, Dr. E. S. McKee; Director of Clinics, Dr. A. F. Hussey; President of Board of Trustees, Dr. Chas. F. Souther. Dr. F. Hoeffler McMechen, anesthetist to St. Mary's and The Cincinnati Hospitals, was made anesthetist to the Polyclinic.

State News

Dr. H. K. Owens, of Elkins, was in Covington, Virginia, for a few days as the guest of his sister.

* * *

Dr. J. L. Cunningham, of Pickens, was in Elkins on business and paid a visit to the Children's Home of the West Virginia Humane Society.

* * *

Dr. Ford Huff, of Parsons, was in Buckhannon New Year's day with his father, who is one of the older physicians of the state.

* * *

Our State Association Secretary, Dr. A. P. Butt, of Davis, is in Philadelphia looking over the clinics.

* * *

Dr. Drinkwater, of Gornania, attended the January meeting of the Barbour-Randolph-Tucker Medical Society.

* * *

Dr. T. Jud McBea, of Elkins, was called to Morgantown the first of January by the sickness and death of his mother.

* * *

Dr. M. E. Gardner, of Durlevie, has located at Hendricks.

* * *

Drs. C. H. Hall and A. S. Bosworth, of Elkins, have been in Shrinston looking over their oil interests.

* * *

Dr. C. A. Clemmer, of Middle Brook, Virginia, spent a few days at Wildell and Gladys, his former locations.

* * *

Dr. M. S. Wilson, of Wilson, was in Randolph county recently looking over his lumber interests.

* * *

Dr. S. G. Moore, of Coalton, has a baby girl at his house, of whom he is very proud.

* * *

Dr. J. A. Arbuckle, of Elkins, was in Baltimore the first of January looking over the clinics.

* * *

Dr. J. Shotwell Smith, of Wheeling, who has been for some time in poor health, died on the 19th of January in the Haskins Hospital.

* * *

Drs. Harriet B. Jones, C. A. Wingerter and S. L. Jepson lectured in Wellsburg last month during the tuberculosis exhibit, which was quite well attended. Dr. Wingerter also lectured in Fairmont.

The next meeting of the State Board of Health for the purpose of examining applicants for license to practice medicine in this State will be held in the City of Wheeling, April 12, 13, 14, 1910. Headquarters of the Board, Hotel McLure.

* * *

Dr. T. A. Harris, who has been dangerously ill from a large carbuncle, is reported as recovering, and it is hoped he will soon be able to resume his place among the active members of the profession.

* * *

Dr. C. J. Scott, of Parkersburg, will soon leave for a trip around the world, to be gone about four months.

* * *

Parkersburg has had a number of recent accessions to the medical profession, among them Drs. M. Stone, Nelson Yeardeley, H. B. Fultz and Dr. Casto. The last named, recently at Belleville, is associated with his father, Dr. C. T. E. Casto. Dr. Adams has located at Lauckport, a suburb of Parkersburg. Dr. T. J. McGuire, after a winter spent in Texas, has re-located in Parkersburg, where he will resume practice.

* * *

Dr. Wm. McGuire, of Huntington, for a time dangerously ill with septicemia in St. Joseph's Hospital, Parkersburg, has recovered and resumed his practice at his home in Huntington.

* * *

Dr. C. W. Hudson, formerly of Parkersburg, is now residing in Alhambra, Cal., and reports his health much improved.

* * *

Dr. Shirley M. Prunty, lately located in Lubeck, Wood county, is about to remove to Little Hocking, Ohio, taking the place of Dr. Shipp, lately deceased.

* * *

As the result of the Christmas festivities and insane desire of young America to make a noise, Parkersburg has had two fatal results from tetanus following wounds of the hand from caps of toy pistols. See many similar cases reported in the lay papers.

Society Proceedings

AMERICAN PROCTOLOGIC SOCIETY.

Abstract of Proceedings of 11th Annual Meeting.

(Continued from October Issue.)

"FISTULA IN THE POSTERIOR ANAL COMMISSURE."

By J. COLES BRICK, M.D., Philadelphia, Pa. Who stated that the anatomy of the posterior anal commissure is of such peculiar arrangement that ulcers or fistulas, in this region frequently do not granulate in a proper manner.

The greater part of the external sphincter muscle arises from the coccyx, and after forming

the ano-coccygeal body of Symington, passes around the anus, forming a Y-shaped or triangular cul-de-sac at the posterior anal commissure, making this the weakest part of the anal circumference. The levator and muscle is separated from the coccygeus muscle by a cellular interspace, rendering possible an easy extension of pyogenic organisms.

In ulcerations or small fistulas in the posterior anal commissure, it is the writer's custom to make a triangular incision with the apex toward the anus, rather than an antero-posterior cut. In cases of fissure in this commissure, two incisions, one-eighth of an inch deep, are made down into the sphincter muscle on each side of the fissure, all fibrous tissue being removed from the fissure itself.

The physiological action is, that during defecation, the lateral fibers of the sphincter forming the triangular space are at rest, due to their division; thus saving distension of this space, and consequently no interference with healing.

* * * *

"MODIFIED TECHNIC IN RESECTION OF THE RECTUM."

By J. RAWSON PENNINGTON, M.D.,
Chicago, Ills.

Numerous illustrations were shown by the author, intended to serve as demonstrations designed and employed by himself and Dr. Gronnerud in resection of the rectum in a special case. The growth for which the method was employed extended upward from the upward border of the levator and muscle for about two and one-half inches.

A perineorrhaphy was first done, splitting the recto-vaginal septum back to Douglas cul-de-sac. The rectum was then dissected from its lateral and posterior connections upward until it could be pulled downward far enough to effect an end-to-end anastomosis, when the section, including the growth, was removed.

The incision was closed with buried catgut sutures, and silkworm-gut for the skin. The posterior vaginal flap covering up, as it did, the operating field, prevents the urine, vaginal and uterine secretions from coming in contact with the wound.

* * * *

"ABDOMINAL MASSAGE IN THE TREATMENT OF CHRONIC CONSTIPATION, ETC."

By T. L. HAZZARD, M.D., B.S.,
Pittsburgh, Pa.

The writer referred to the fact that general massage had been practiced from very ancient times until the present for the relief of fatigue and for the purpose of increasing the flow of fluids in the blood-vessels, the lymph spaces and juice canals, by which more perfect elimination of waste is obtained and better assimilation brought about. Two conditions, in his opinion, the relief of which will do away with two-thirds of the slight ailments as well as of some of the more serious ones. He began massage for the relief of chronic constipation and was much surprised to find the far reaching,

adventitious effects produced. Among others, for example, that the chalky deposit in the joints in articular rheumatism, under careful, patient, persistent manual therapeutics as applied to the bowels, will entirely disappear more often than not.

Mentioned no particular method, saying that any good text-book would give the technic sufficiently well. This manipulation is recommended not only for chronic constipation, but also for the relief of coprostasis, for which operation it is very frequently done.

After indicating more of the benefits and some of the dangers of the method, the writer said that if this treatment called for more time than the physician or surgeon could spare, it had better be left off altogether, although the patient would surely lose a very great benefit. The paper closed with the remark that doubters as to the very great advantages which will accrue to the sick, in many, many ailments, have but to practice careful and intelligent massage to be convinced.

* * * *

"INTESTINAL AUTO - INTOXICATION; ITS TREATMENT BY IRRIGATION."

By WM. L. DICKINSON, M.D.,
Saginaw, Mich.

During normal digestion, there are present in the intestine peptones, crystalline bodies, aromatic substances and ptomaines, which are toxic, but changed into less toxic bodies and eliminated by the stools. Whenever their number is very great, relief is obtained by a profuse intercurrent diarrhea, while the remaining toxic bodies, having been acted upon partially by the digestive mucosa, are changed in the liver, then enter the circulation, and being further changed by the antitoxic glands, finally are eliminated through the skin, kidneys and lungs.

Many patients have suffered for years, and perhaps the greater part of their lives from constipation, and the condition has been aggravated as they have grown older and more sedentary in their habits.

There are well-marked symptoms in the auto-intoxicated. Among the prominent are: a drawn expression; sunken eyes, frequently the so-called liver spots; often the patient is pot-bellied and the skin is dry and harsh; it is quite common to have the bowels greatly distended by gases, shortly after meals, necessitating the loosening of the clothing; the breath is frequently very offensive; the odor of the stools is sickening, while the stools are constipated, hard, lumpy, and of small caliber or semi-liquid and mushy, and upon examination mucus and membranes are found. Patients are often unable to concentrate their thoughts, and there is loss of memory. There is great fatigue, and depression of spirits. Pruritus, urticaria, eczema or furunculosis caused by intestinal auto-intoxication may be present.

These are not all the symptoms that may arise from intestinal auto-intoxication, but they are sufficient to emphasize the importance of the subject, and the necessity of having the intestinal discharges examined by a competent person be-

fore and during the treatment of the patient. An examination of the urine to determine the amount of indican present in cases of intestinal auto-intoxication can be made by any physician, but there are times when a laboratory examination must be made by an expert.

The treatment must of necessity begin with careful attention to the kind and amount of food taken. Vegetables should largely replace meats, and in fact the patient will gain faster if meat is not partaken of at all. There should be a liberal use of water internally, drinking between meals two to three quarts of water daily.

The treatment is not simple and is one that requires attention and generally a long time. The routine method is the administration of calomel gr. 1/10 and podophyllin gr. 1/24 repeated every hour for eight or ten doses, followed with rochelle salt one-half ounce in six ounces of hot water every two hours until the stools are watery. The colon should be distended with warm water containing half an ounce of soda sulphate to the quart. The patient should be in the knee-chest position. The water should flow slowly, fully distending the bowels, but not causing pain. This washing out of the bowel should be done daily for about one week, and the urine should be examined again for indican, and if it is found present, the indication is that there is need of another course of the calomel and podophyllin. The bowel should be made aseptic by the use of sulphocarbolate of zinc gr. x to one quart of water used by enemata, retaining as much of it as possible.

The treatment is to keep the intestines as clean as possible.

* * * *

"PERIRECTAL ABSCESS."

By J. A. MACMILLAN, M.D., Detroit, Mich.

Who called attention to the fact that in a large proportion of cases of perirectal abscesses the bacillus tuberculosis is present, and that next in importance, as an etiologic factor, is the gonococcus. A diagnosis is most difficult when the abscess is located above the levator ani. In this location it is frequently found to be complicated with some disease of one or more of the pelvic organs. In this condition it is sometimes necessary to make an abdominal incision both for exploratory purposes and to rectify the condition. In the treatment of the perirectal abscess, however, the drainage should always be from below.

* * * *

"DISEASE OF THE COLON DUE TO EXTRA-INTESTINAL CAUSES, WITH SPECIAL REFERENCE TO MEMBRANOUS COLITIS: ILLUSTRATIVE CASES."

By A. B. COOKE, M.D., Nashville, Tenn.

The intimate functional relations existing between the several viscera of digestion, which is recognized by all, was pointed out, but the writer stated that the anatomic relations of the alimentary tube and the frequency with which they are to be looked to for the explanation of many of its pathologic conditions have not received the serious consideration their importance de-

mands. He also called special attention to certain familiar diseases of the colon, which are often found to exist primarily because of these relations, and the mechanical irritation growing out of them.

Perhaps the most conspicuous of these which was cited is *membranous colitis*. The writer recalled the great divergence of opinion that has always prevailed as to the true nature and pathology of this malady, and notwithstanding the conclusions of such authorities as Osler, Tyson, Hemmeter and others, that the disease is a secretion neurosis, he takes the contrary view held by many other equally careful and competent clinicians, who hold that there are always pathological lesions that bear directly upon the colon, either from without, as by pressure from other misplaced organs, or by adhesions, or by some local irritant from within to account for these cases.

For present purposes the term membranous colitis is limited to that peculiar affection, which is characterized by the periodic discharge of mucus with membranes or casts from the bowel, and of which fecal stasis is always a prominent feature. With reference to this type of colitis, Dr. Cooke stated unequivocally that he had never seen a case in which he failed to find some gross pathologic condition of one or more abdominal organs as well as of the mucosa itself; and, furthermore, that the etiologic relation between the two has been clearly established in a number of cases by the prompt and permanent disappearance of the bowel trouble upon correction of the extra-intestinal condition, after all other methods of treatment had failed. From this experience he had been led to conclude that the primary causes of this particular variety of colitis belong in the main, if not exclusively, to a special class, viz., those which act mechanically. Most noteworthy in the list of such causes are enteroptosis, right movable kidney, peritoneal adhesions and extra-intestinal growths which occasion continuous pressure upon some portion of the colon.

He then discussed each of these causes in detail and supported his argument by the enumeration of well-illustrated cases.

* * * *

"NECESSITY FOR ROUTINE EXAMINATION OF THE RECTUM IN INTESTINAL DISEASES: ILLUSTRATIVE CASES."

By DWIGHT HENDERSON MURRAY, M.D., Syracuse, N. Y.

Dr. Murray's paper was one of special interest to the general practitioner and emphasized the necessity for rectal and colonic examinations in all cases of protracted diseases of the digestive tract, whether special symptoms are directed to the rectum and colon or not.

In many cases of gastro-intestinal disturbances the real cause may be found in the rectum or colon, if sought, though the patient gives no symptoms of such rectal trouble. These are amenable to local treatment.

A thorough examination, including rectal and bacteriological examination of the stools, should be made in every chronic intestinal case before

beginning treatment. He advised that the physicians should not treat patients who refuse to allow the necessary examination.

He reported illustrative cases, including so-called intestinal indigestion and dyspepsia, chronic diarrhea, cancer of the sigmoid and internal hemorrhoids.

A case of internal hemorrhoids where the attending physician had entirely neglected to examine the rectum had been treated by lavage seven months for so-called dyspepsia and dilation of the stomach without benefit, and was told that a gastro-enterostomy was the only hope of cure. After an operation for radical removal of the internal hemorrhoids, he was cured of his dyspepsia. A careful diagnosis would have saved this patient years of suffering.

The patient's life in one instance (possibly) and certainly the general reputation of the medical profession in all of the cases would have been better had the patients been carefully examined.

This neglect was found to be true not only of the physicians in this country, but of physicians in Europe, who had treated some of the cases in the list reported.

The author made a plea not only for local but bacteriological examination, claiming that every case of diarrhea, continuing for a longer time than is sufficient for nature to eliminate the irritating material that may be causing it, is due to a more serious disease.

There are many local conditions that cause a chronic diarrhea which would be eliminated by a simple operation or local treatment. When allowed to become chronic while depending upon oral medication, frequently the time when a cure could be effected had passed, and chronic invalidism or death may result.

BARBOUR-RANDOLPH-TUCKER SOCIETY.

ELKINS, W. VA., Jan. 18, 1910.

The January meeting was held in Elkins, at the Hotel Gassaway, on the 6th. A good number of physicians from each of the three counties were present.

The afternoon session was opened by the President, Dr. L. N. Harris, who read his annual address. It is not necessary to say his address was well received, as Dr. Harris is a man who writes good papers.

Dr. F. B. Murphy opened the subject of the effect of rheumatism on the heart. Dr. Irons read a voluntary paper on the Pure Food Law, and offered resolutions which were adopted by the society, and ordered sent to our representatives in Congress, endorsing the action of Dr. H. W. Wiley in his efforts on behalf of public health.

Evening session was opened at 8:30 with report of cases. Dr. Daniels, subcutaneous emphysema; Dr. Owens, subcutaneous emphysema; Dr. Bosworth, tuberculosis of testicle; Dr. Gruber, tubercular peritonitis; Dr. Irons, tubercular peritonitis.

Dr. Harvey G. Beck, of Baltimore, was then introduced, and addressed the society on the subject of pneumonia. Dr. Beck's address was well received and was everything that could be ex-

pected, and each physician showed his interest by discussing the subject.

This ended the scientific part of the program at 11 p. m. The society then repaired to the dining hall, where Manager Anawalt had prepared a "Roast Pig" and every other necessary of life. The doctors enjoyed this last session equally as well as the afternoon and evening sessions, and taking it all in all, the Barbour-Randolph-Tucker had one of the best meetings in the history of its organization.

T. JUD MCBEE, *Secretary.*

BROOKE COUNTY SOCIETY.

The Brooke County Medical Association met in the mayor's office January 21 and the meeting proved both interesting and profitable to all concerned. There were present Drs. F. H. and Colin Weirich, Joseph and Gist Palmer, J. B. Walkinshaw, Wm. Booher and J. P. Johnston.

Dr. T. H. Weirich read an excellent paper on "Apoplexy and Its Treatment" and gave many interesting experiences which he had met with during his long practice.

Dr. Colin Weirich's subject was "The Brain Centers," and has been favorably commented upon by the fraternity.

Dr. Wm. Booher, who was recently elected president of the association for the year 1910, to succeed Dr. J. P. Johnston, took the chair. Dr. Johnston made an interesting address in handing over the reins of government, and complimented the association on their success, and upon the fraternal and united efforts for the betterment of all, and tendered some very logical and fatherly advice. The doctor very fittingly closed with the following lines, the association having been organized for three years:

"Three times hath golden summer come and fled;
Three times hath pallid winter overspread
With snow and stamped with jagged seal of ice
The shrinking earth; and rosy spring hath thrice
In turn, with balmy breath, that seal dissolved,
Since you, the members of this association, banded
yourselves together
The healing art to solve."

Dr. Booher responded gracefully, and assured the association that he would remain the same faithful member and would fulfill his part to the best of his ability as president.

JOS. PALMER, *Secretary.*

CABELL COUNTY SOCIETY.

HUNTINGTON, W. VA., Jan. 14, 1910.

Editor W. Va. Medical Journal:

The Cabell County Medical Society met Jan. 13th at the Hotel Frederick. President Rader was in the chair and there was a large attendance. The evening was taken up in discussing the welfare of the society and ways to get the rest of the members of the profession in the county into the society.

At this meeting final action relating to the charges of unethical conduct preferred against Dr. Ira Clay Hicks was taken. As you know, these charges were based upon literature sent

out to members of the medical profession in various parts of the country, asking them to join the Knights of Modern Chivalry of Albany, N. Y. These letters were signed "Ira Clay Hicks, M.D." and many of them were printed on letter heads of the "W. Va. State Senate." This matter has been under investigation by the censors of the society for the past two months, and after careful investigation into the merits of the case, the resolution, which I enclose, was passed. This investigation showed that Dr. Hicks had made efforts to suppress the sending out of this literature as soon as he found out the unethical nature of the "Order." The society, as such, is very glad to report being able to exonerate Dr. Hicks, and we hope you will publish the resolution in the next issue of the JOURNAL, and if possible a personal letter to you which Dr. Hicks is preparing in which he states his connection with this order in detail.

RESOLUTION PASSED BY THE CABELL COUNTY (W. VA.) MEDICAL SOCIETY AT ITS REGULAR MONTHLY MEETING HELD JANUARY 13TH, 1910.

"Resolved, That the Cabell County Medical Society, after due consideration of the charges against Dr. Ira Clay Hicks, which have been thoroughly investigated, the following findings are submitted:

That we have investigated these charges and find them to be wholly untrue.

Dr. Hicks, having shown his good intentions in the matter by submitting his immediate resignation to the Knights of Modern Chivalry as director, as well as aiding the censors of this society in their investigation of these charges; in justice to Dr. Hicks we request that a copy of this resolution be printed in the JOURNAL of the W. Va. Medical Ass'n, and the Journal of the American Medical Ass'n, with the request that independent medical journals copy."

The question of the adoption by the State Association of some plan of defense in malpractice suits was brought up, but a final discussion deferred until the next meeting.

A committee was appointed to inquire into the feasibility of incorporating the society under the laws of West Virginia.

At a recent meeting of our society Dr. Steenberg read a paper on Eclampsia and I have asked him to have it typewritten and sent to you for the JOURNAL. He has agreed to do so. Dr. Spencer also read a report of a case of tetanus, and I am trying to get him to send this to you also, as it is of interest.

At this meeting Dr. J. E. Rader was elected president; Dr. W. D. Row, vice-president; Dr. LeSage was re-elected treasurer and myself secretary. Dr. G. W. Tooley was re-elected censor for a period of three years.

Wishing you and the JOURNAL a prosperous New Year, I remain,

Fraternally yours,

JAS. R. BLOSS, Secretary.

EASTERN PANHANDLE SOCIETY.

HARPERS FERRY, W. VA., Jan. 8, 1910.

Editor W. Va. Medical Journal:

A meeting of the Eastern Panhandle Medical Society was held at Harpers Ferry on Dec. 29,

1909, at which the following officers were elected:

President, Dr. B. B. Ranson; Vice-President, Dr. T. K. Oates; Secretary, Dr. J. H. Hodges; Treasurer, Dr. F. M. Phillips.

Yours truly,

J. H. HODGES, Secretary.

LITTLE KANWHA AND OHIO VALLEY SOCIETY.

Editor W. Va. Medical Journal:

As it has been some time since you had a report from us, I will include in this an account of the meetings of our society since November, 1909.

At our meeting in November the attendance was less than usual. Owing to the inability of our essayist, Dr. Link, to be present, Dr. C. J. Scott prepared a paper on the subject assigned for this meeting, "Chronic Suppuration of the Middle Ear, and How Can the General Practitioner Treat It." It was an instructive paper, which, while written by a competent specialist, was particularly prepared for the general practitioner. It was afterwards discussed by several of the members.

At the meeting in December a goodly number were present. Before the reading of the essay for the evening, President Harris asked some one to discuss the disease Pellagra. Dr. Sharp responded and briefly gave the history and location of the disease in Europe, of its discovery in this country, its etiology, symptomatology, prognosis, etc., based on his recent reading, no cases having been seen in this neighborhood.

Dr. Cunningham, of Marietta, read the paper of the evening, "X-Rays in Their Relation to Fractures and Dislocations." The conclusion was that the diagnosis of a fracture or dislocation was to be made principally by clinical examination, but if there was any doubt an X-ray picture should be made, as it was of great help, but not absolutely essential; that we must remember that a skiagraph was not a photograph of the tissues, but of shadows revealed by the X-ray.

Dr. Sharp reported a case of chronic retention of urine with incontinence associated with diabetes insipidus in a boy, age nine years. On use of soft catheter he drew off 36 ounces of urine; condition was of about a year's duration. Case to be further reported upon.

Regular meeting Jan. 6, 1910. Dr. Harris, president, absent on account of illness. Dr. Casto, vice-president, presided. Dr. Harris sent an address which was read, this being the annual meeting. Reports of secretary and treasurer were read. The secretary said there had been twelve meetings during the past year with an average attendance of twenty. The secretary filed a list of all physicians and their addresses in the counties of Wood, Ritchie, Jackson, Wirt and Calhoun.

Next business in order was the election of officers. In consideration of eight years of service to the society as president, Dr. T. A. Harris was elected president emeritus, his health preventing his continuing as active president. Dr. H. M. Campbell was elected president; Dr. C. E. T. Casto, first vice-president; Dr. A. Bee, of

Cairo, second vice-president; Dr. J. A. Reyborn, of Ravenswood, third vice-president; Dr. W. H. Sharp was elected secretary-treasurer; Drs. Jeffers, Hatfield and Stille were elected counselors from Wood; Dr. McClung, of Elizabeth, from Wirt; Dr. Wilson, of Pennsboro, from Ritchie, and Dr. Pickering from Jackson. Dr. Barber, of Wood, was elected recording secretary. Adjourned.

Shortly the society will take preparatory measures for entertaining the State Society in October, and we hope for and anticipate a revival of interest in our society matters from the State Society coming among us.

W. H. SHARP, *Secretary.*

MARION COUNTY SOCIETY.

FAIRMONT, W. VA., Dec. 30, 1909.

Editor W. Va. Medical Journal:

At the regular monthly meeting of the Marion County Medical Society, held Dec. 29, 1909, the officers for the ensuing year were elected as follows:

Dr. J. W. McDonald, president; Dr. J. A. Reidy, vice-president; Dr. H. R. Johnson, secretary; Dr. W. H. Sands, treasurer; Dr. J. A. Graham, censor; Dr. C. W. Waddell, delegate to State Association.

Report of the secretary shows a membership of 29 for the past year. Our weekly post-graduate meetings are well attended and interest is steadily increasing in this work.

Will endeavor to give you a monthly synopsis of our proceedings in this department.

With best wishes for a prosperous New Year, I am,

Very respectfully yours,

H. R. JOHNSON, *Secretary.*

Medical Outlook

BULLET IN BRAIN. REMOVAL AND RECOVERY.—DR. R. M. WICKLINE of Austin, Texas, in *Texas State Journal of Medicine*, reports this interesting case:

Noble Oakley, white, age 3 years, was shot in February, 1905, with a 22-calibre target rifle, the ball entering just above the inner margin of the orbit of the right eye. The skull splitting the bullet, a portion bounded back and was found on the floor; the other and larger piece was driven into the brain five inches, lodging one inch above and on a line with the posterior border of the right ear as shown by skiagraph.

The Doctor first saw the case in May, 1908, and located the bullet with the fluoroscope in the lateral but not in the antero-posterior position. In ten days he located the bullet at a depth of two inches in the brain. Patient when first seen had partial paralysis of left leg, being scarcely able to walk without support. Left arm and hand hung helpless, and there was marked spasticity in elbow, wrist and thumb. Patient nervous and restless while awake, but slept most of the time. On May 23rd the Doctor began operation by making a circular or horse-shoe flap

down to the periosteum. "I dissected the scalp back about half an inch all around. The periosteum was then incised in the center of the open space and peeled back on each side. The scalp and periosteum were then together peeled back, leaving the skull exposed. A small hole was made in the skull with a trephine. Dr. Vilbiss forceps were used to remove a circle of bone about one and a half inches in diameter. The dura was then opened. We met with practically no hemorrhage until at this point when it became alarming for a few seconds, but was controlled by packing with gauze. After the hemorrhage was controlled I began with a blunt-pointed needle to search for the bullet, which was located at a depth of two inches and extracted with but little difficulty. After all bleeding had stopped, the dura mater was brought together with No. 0 chromicized catgut. A small rubber drainage tube was inserted beneath the dura. The periosteum was brought together with catgut and the scalp with silk sutures, and the wound was dressed with iodoform gauze.

The patient had no rise in temperature, no pus, no cerebral hernia. The contour of the scalp was normal. The dressings were kept moist the first two or three days from oozing through the drainage tube. The wound was dressed on the third day and the tube was removed and a light packing of gauze substituted. The stitches were removed on the eighth day. Union was perfect by first intention. The patient was hard to control; in fact I could not keep him in bed after the second day without his crying very hard to get up, so of the two evils I thought for him to be up and quiet would be better than worrying and fretting in bed. So after the second day he was only in bed at night. Whereas, before the operation he would sleep from three to six hours every day; now he does not sleep at all during the day, but sleeps all night.

The result of the operation was marked improvement in every way. His leg seems now to be all right, although he is a little awkward in handling it, still he runs full tilt without falling. His arm has not recovered entirely, although he can raise it above his head and use it, but as yet very awkwardly. His mind seems to be entirely restored to its normal condition, which, of course, is the greatest triumph of all. I report this case, not only on account of its general interest, but because of its rarity. I can find no parallel cases on record, that is, where a bullet was removed from practically the center of the brain with recovery.

CASE OF EARLY MATERNITY—DR. R. H. CARVER, of Providence, R. I., (in *Providence Medical Journal*), reports with proof of genuineness, a case of very early maternity. E. D. was born in the Almshouse in Taunton, May 24, 1847. On the first day of February, 1858 she gave birth to a male child, "a nice, full-grown, plump baby, weighing 10 pounds good weight. These are facts against which there does not exist the shadow of a doubt." The reputed father was a lad 15 years old. The girl was believed to have been pregnant 24 days before she was 10 years old. The doctor who attended her said "she was sick a week at

the birth," but he had seen older and larger mothers sicker than she was.

This young mother was an illegitimate child, and was born in the Almshouse. She had another illegitimate son born when she "was about 18 years old, and she was several times an inmate of the Almshouse. The first child when last heard from was in the Taunton jail (in 1902). In 1901 he served a term in the House of Correction, New Bedford."

INFLUENCE OF FACTORY INSPECTION UPON PUBLIC HEALTH—HAROLD B. WOOD, M. D.

This is the title of a paper read before the Pennsylvania State Medical Society, September, 1909, published in *Virginia Medical Semi-Monthly*, issue of October 22.

Better laws are needed and better enforcement of the laws we have. The question of child labor is not only one of the effects upon education, but one of discipline, morals and health. In the Massachusetts inspections many minors were noticeably anaemic, emaciated and showed damaging effects from unhygienic surroundings. The elimination of dust in factories is an important duty of legal inspectors. There are more deaths from tuberculosis where metallic dust is not guarded against. The employes need to be educated in hygienic requirements. It is found that a large percentage of employes will not use respirators or goggles or work behind hoods or guards. They will blame the foremen for slight colds from drafts, but do not object to the more serious disorders produced by vitiated air. Inspectors are empowered to enforce sanitary conditions in bake-shops, but not in creameries and dairies and other places where danger of contaminating food products are just as great. More provision should be made to supply employes with good drinking water. There has been woeful neglect to legislate against factories contaminating streams with waste products.—G. D. L.

ERGOT—DAVID INGLIS, M. D., (*Detroit Journal*), Michigan State Medical Society, May, 1909.

The action of Ergot has been much discussed. The literature of its therapeutic action is enormous. Wood sums up its action by the statement that it increases blood pressure by stimulating the vaso-motor center in the medulla and acts upon the centers in the lower spinal cord which preside over uterine muscles so as to produce in the parturient womb violent uterine contractions and finally uterine tetanus. Inglis used ergot with success in a case of uncontrollable hiccough with turgescence of face and head, which had lasted eight days. He explains its action on the theory that it stimulated the relaxed fibers in the cerebral blood vessels. Headaches and insomnia due to cerebral congestion, he says, will yield to larger doses of ergot. He claims also that ergot not only produces tonicity of involuntary muscles, but maintains that condition and that some cases of epilepsy are due to vaso-motor disturbance. One case of epilepsy was given ergotin continuously for two years, with the result that the man is able to follow his occupation and has only an occasional nocturnal paroxysm. He has used it with

success in hay fever, which he thinks is due to sudden turgescence of the erectile tissue of the nose.—G. D. L.

BANDAGING THE EYES AFTER GENERAL ANAESTHESIA—By J. ALLEN JACKSON, M. D., in *Indianapolis Medical Journal*, February, 1909.

All of the cases in Philadelphia Hospital under care of the writer were subjected to this simple procedure. He summarizes results as follows:

1. In all cases patients rested more quietly.
2. Vomiting occurred in very few cases and when it did occur, was limited to a small amount of mucous and no further nausea.
3. Post operative vomiting in its truest sense was absent.

Jackson does not pretend to offer an explanation of the phenomena, but calls the attention of the profession to the matter with a view to further investigation. If eyes are irritated by ether he saturates gauze bandage with boric acid solution.—G. D. L.

DISAPPEARANCE OF GOITRE AFTER ADENOIDECTOMY—P. B. COBLE, M. D., in *Indianapolis Medical Journal*, reports a case in which a pronounced general enlargement of the thyroid disappeared after the removal of a large adenoid from naso-pharynx. He quotes Osler as saying: "The disease is regarded by some as a neurosis, in favor of which is urged the onset after profound emotion, the absence of lesions, and the cure which has followed in a few cases often operations on the nose."—G. D. L.

THE NEW STANDARD OF DIET.—Dr. I. J. Wolfe, of Kansas City, under the above caption, discusses the subject of the relative value of proteids and carbonaceous foods in a paper read before the Missouri State Medical Assoc. Dr. Wolf, as well as all the physicians who participated in the discussion, are of the opinion that the ordinary standard of diet is entirely too rich in proteids, not only that prescribed by physiologists, but that in actual practice among the people. "Even Voit," he says, "has made it clear that the ideal diet consisted of the smallest amount of proteid food, together with enough non-nitrogenous food to keep the body in a state of physical and mental vigor." Just how much this "smallest amount" may be has not yet been determined scientifically, but it is at least one-half less than the ordinary diet. G. D. L.

Miscellany

FUNCTION OF THE PHYSICIAN.

Victor C. Vaughan, M. D., L.L.D., of Ann Arbor, Mich., makes the following prediction in an address on the "Evolution of the Super-human:—"

Up to the present time, the medical student has been trained largely, if not wholly, with reference to the good of the individual who happens to be his patient at the time. This training must be modified, and the coming medical man must be

developed largely with a view to his relation to the public. His principal function must be to prevent rather than to cure disease. The physician's duties are to become more and more largely official in the sense that his services are to be rendered to the community, and not exclusively to the individual. I imagine that the time will come when people will go to the physician to find out whether they are really well or not, and not wait until they know they are ill. They will go for examination and advice rather than for treatment. Ultimately everyone will be examined twice or oftener each year, and no two consecutive examinations will be made by the same physician. A record will be kept of each examination and when the individual ultimately dies, a careful autopsy will be made upon every person. At first these things will be voluntarily done by intelligent people, and later others seeing its advantage will adopt the method. Finally, it will be compulsory with all, and will result in great good to the whole. The value of a custom of this kind in case of many of the infectious diseases, both to the individual and to the public is evident.—G. D. L.

"PATENT MEDICINES" IN MINNESOTA.

—Under a law of Minnesota a state medical board is constituted with directions to procure samples of all the "patent medicines" sold in the state and to subject them to a careful analysis. The results of each analysis are to be published in a weekly bulletin to be issued by the department. If the preparations contain opiates, alcohol or other deleterious substances, that fact will be published, together with the quantity.

A writer in the *British Medical Journal* thinks that an interesting essay might be written on the addition to medical remedies made by animals. It is said that it is to dogs that we owe the knowledge of the fever abating properties of bark, while to the hippopotamus is attributed the use of bleeding. The story as told in Philemon Holland's translation of Pliny is as follows: "The river-horse hath taught physicians one device in that part of their profession called Surgerie; for he finding himself overgrosse and fat by reason of his high feeding so continually, gets forth of the water to the shore, having spied afore where the reeds and rushes have been newly cut; and where he seeth the sharpest cane and best pointed, hee sets his body hard on to it, to pricke a certaine veine in one of his legs, and thus by letting himselfe blood maketh evacuation; whereby his body, otherwise inclining to diseases and maladies, is well eased of the superfluous humor; and hauing thus done, he stoppeth the orifice againe with mud, and so stancheth the blood, and healeth the wound."

GERMAN RACE SUICIDE—STEADY DECREASE IN BERLIN BIRTH RATE ALARMS NATION.—German statisticians point in alarm to the decreasing birth rate, most plainly observed in Berlin, and a pronunciamento against "race suicide," such as ex-President Roosevelt hurled at the American people, is expected from Emperor William.

In England the discovery of Germany's danger will come as a great relief, for one of the main

arguments of the agitation during the war scare in England has been to point out that the German housewife is providing seven children to the English wife's four.

As far as Berlin is concerned, there can be no doubt that the situation is serious. Every year shows a decreasing birth rate. In 1908 the total fell to 51,036, from 53,899 the previous year.

In 1898 about 29 children were born for every thousand population, whereas in 1908 the rate had decreased to 24. In 1878 the birth rate was over 44 to the thousand.

Another startling fact just brought to light is that in 1878 every fourth married woman bore a child; in 1908 every ninth.

In ten years the illegitimate births have increased out of all proportions to the natural increase in population.

In looking for an explanation some investigators blame the hard times. Others say the Berlin married women show growing dislike to large families.—Berlin cable to *New York World*.

EPILEPSY AND CHRISTIAN SCIENCE.—

There appeared recently in the *Denver Republican* an account of a laundry worker, a Christian Scientist patient, who had an epileptic convulsion in the Christian Science reading rooms, in Denver, in the following language: "The man, writhing on the floor, caused much excitement among the readers, and a call was hastily sent in, by the persons in charge, for the police surgeon. * * * The presence of the police surgeon allayed the fears of those present, and as the man was recovering from the attack, he was left in the room."

It would be interesting to know just what disturbed the readers of science. Was it the man? Was it his appearance? His actions? It could not have been the sickness from which he was suffering, since to those present he could not be sick—merely a visual error on his part. Was ignorance the basis of the fear? We would prefer not to think so. But as a matter of fact, an epileptic is neither dangerous nor in danger, during an attack, in ordinary circumstances; and if this fact had been known to those learned in the science, it is doubtful if resort to the police surgeon would have been necessary.

The "presence of the surgeon allayed the fears" in the reading room, places him somewhat in the position of a friend in need if *not* a friend indeed.

THE FINANCIAL PROSPECTS OF MEDICINE.—

For many years the physicians of this country have had to lament the fact that the practice of medicine is by no means as lucrative as it used to be and that the incomes now earned are inadequate. Many causes—overcrowding of the profession, improved hygienic conditions, and the springing up in the large towns and cities of a class of cheap physicians ("dispensary doctors") who run "cash practices" at ridiculously low fees, prescribing chemists, and the competition of the hospitals, to which there is an increasing tendency on the part of the public to resort—have been assigned for this. The *British Medical Journal* has recently published a remark-

able investigation which for the first time gives accurate statistics on the question of the overcrowding of the profession. As has been reported from time to time in THE JOURNAL, the annual increase of the profession has shown in the last few years a continuous fall. But no information was forthcoming as to whether the proportion of physicians to the general population was increasing at the same time, and it was impossible to say whether the overcrowding was on the increase. By taking the estimated population of the country from year to year, calculated by logarithms on the basis of the decennial increase ascertained by the census, and by taking the number of physicians in practice at the middle of each year as a mean between the numbers in the Medical Directory (which is issued at the beginning of each year) the *British Medical Journal* has furnished a reliable calculation on the point. The results are most instructive. They show that in 1881 the population of England and Wales was 26,000,000, and the number of physicians in practice was 15,308, a ratio of population to physicians of 1,700 to 1. In the following years this ratio shows a gradual fall, reaching 1,516 in 1891 and 1,381 in 1901. Then a gradual rise commenced, the figures being in the last seven years (1902-1908) 1,384, 1,389, 1,393, 1,393, 1,396, 1,401, 1,407. The increase in these years may be explained by the fact that in 1890 the length of the medical curriculum was increased from four to five years, thus becoming more arduous and more expensive. But the increasing pressure of overcrowding must also be a factor. It is unfortunate that the *British Medical Journal* did not push the inquiry a stage farther and instead of stopping at the number of possible patients per medico, investigate the question of the number of illnesses to each physician. As a whole the profession is in much inferior financial position to what it was twenty years ago. It has been calculated that the average annual income of the physician does not exceed \$1,000.

THE FUTURE OF MEDICINE IS IN THE HANDS OF THE REGULAR MEDICAL PROFESSION.—Just as sure as I can be of anything, so sure I am that the future, the great and glorious future of medicine, is in the hands of the regular medical profession. Regular medicine is not what it was a hundred or fifty years ago. We have broken the chains of authority, we no longer follow blindly the dicta of leaders, we investigate and analyze all statements regardless from what source they may come; heterodox opinions are now given space in almost all our journals, and what is of the utmost importance, in the profession itself there are thinking and fearless critics who are not afraid to point out our weakness, to ridicule our foibles and to guide us to the right path. And let us remember that all the accessory aids, which are required for the progress of medicine, i. e., the microscope, the bacteriologic laboratory, the physiologic laboratory, the chemical laboratory, all the physical instruments of precision, are in the hands of the regular profession and not in the hands of the quacks. And let us remember that every discovery of any importance within

the past half or three quarters of a century—anaesthesia, antiseptics and asepsis, diphtheria antitoxin, the x-ray, Finsen light, radium, anti-meningitis serum, the role of the mosquito in the transmission of malaria and yellow fever (a discovery which alone is worth billions of dollars to the human race), the isolation of the active principle of the suprarenal gland, the introduction of cystoscopy, the discovery of the tubercle bacillus, the gonococcus, the spirochaeta pallida—in short every discovery of importance either in sanitation, prophylaxis, medical and surgical treatment or in diagnosis of disease, has come from the hands of the regular medical profession or those directly connected with it. And let us also remember that the requirements for entering upon a medical career are becoming higher and stricter, the preliminary education is of a higher character and the course itself is longer and better in every respect.

Nil desperandum. The future of medicine is in the hands of the regular medical profession, and we are tolerant enough to take in everybody who is sincerely desirous of practicing scientific medicine, even if he happened to graduate from a sectarian college. But we do not want ignorant and presumptuous quacks.—*Critic and Guide.*

BIRTH OF QUADRUPLETS.—S. V. Wilking, M.D., Roanoke, Ind.—The birth of quadruplets is sufficiently rare (1 in 371,126) to make of interest the following data regarding a case of this kind:

History.—The mother, aged 36, Irish, weighed 125 pounds and was one of three children born singly. She had been married 14 years and this was her eleventh pregnancy. In all of her previous pregnancies she had gone to term with the exception of two, in which she aborted. Three of her children had been stillborn, one of these being a breech presentation.

The father, aged 40, American, was one of seventeen children, all born singly.

Labor was rapid and the delivery, which was exceptionally easy, occurred May 30, 1907. The weight and sex of each child was as follows: First, 2 pounds 15½ ounces, female; second, 2 pounds 12 ounces, female; third, 2 pounds 15½ ounces, male; fourth, 2 pounds 15 ounces, female. None of the infants had any visible malformation and development in each seemed complete. The fourth child lived two and one-half hours; the first, three hours; the third, thirty hours, and the second was still living six days after birth, with fair prospects.

The placenta after delivery was grossly in two parts, but later examination seemed to indicate that there was a membranous connection, probably torn during labor. The first (smaller) part presented nothing unusual except that it was smaller than the average placenta, weighing with the membrane, 11 ounces. The second portion weighed 22 ounces and was divided into two parts, the smaller resembling the one just described except that the membranous connection with the larger part was unbroken. The larger part of the second portion was itself divided into two parts connected by placental tissue—possibly a placenta succenturiata. There was a separate amnion for each child.—*Jour. A. M. A.*

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Original Articles

STERILIZATION OF CONFIRMED CRIMINALS AND OTHER DEFECTIVES.

James R. Bloss, M.D., Huntington,
W. Va., Assistant Physician W. Va.
Asylum.

(Read at Annual Meeting of State Medical Association, Elkins, Oct., 1909.)

The term "defective" has a meaning which I believe we are prone to overlook at times, namely, that there is something lacking which no amount of treatment or care can supply to the individual. True, a limited amount of improvement can be secured in certain cases by various training methods, regulation, etc., which will make the individual more useful so far as taking care of himself is concerned, and adding just that much to the commonwealth at large. But no amount of care and training can fit him or her to be a factor in the propagation of a strong and sturdy race. Now under the defective class of society come the idiots, imbeciles, the majority of the insane, and the greater portion of our paupers and criminals. In dealing with this subject it is intended to utterly ignore vasectomy and castration as a means of punishment, for as such I do not think these procedures should ever be employed; but to consider them from the standpoint of prophylaxis.

For almost four years my duties have been such that I have had the opportunity to constantly observe several hundred un-

fortunate individuals who have, because of their misfortunes, of necessity been the wards of society in one of our State institutions, and this observation has led me to think very much along the lines dealt with in this paper. It is my hope to be able to awaken a similar line of thought among the members of this association, which will lead to some definite steps being taken that will result in legislation dealing with this matter in West Virginia. It is, in short, to the prevention of "defect" rather than to the care of "defectives" that I would call your attention. Let it be understood that the good of the individual is to be considered as secondary to the welfare of society at large and to the preservation of the race. We must not forget that the habitual criminal, the ignorant degenerate, the imbecile and the insane share the ability to produce offspring along with the most cultured, wise and capable. The law with very few exceptions gives sanction to such procreation, being apparently indifferent to the results at which we, who have the opportunity to observe, stand appalled. These results are not alone seen in the rapid increase of defects and disease, but to one who studies the question earnestly, they are also apparent in the neurotic heredity which only too often has its direct outcome in the divorce court, in suicide, homicide and in criminality in all its aspects. The seriousness of this matter may be more apparent when I tell you that the reports of the Industrial Home for Girls, Reform School, the Penitentiary, the West Virginia Hospital for Insane, Second Hospital for the Insane and the West Virginia Asylum for the year

1908 show the State to have 3,397 persons under its care in these institutions. In his report for 1907-8 to the Board of Directors, Dr. Guthrie, superintendent of the West Virginia Asylum, calls attention to the fact that in a period of 38 years (from 1870 to 1908) the ratio of the insane persons under the care of the State had increased from one to each 2,135 of the total population to one to every 583. If this is not a matter demanding our deepest consideration then I know not what is. It is not alone to prevent those able from being taxed so heavily to support the unfortunate, for not one of us objects to giving our mite to this very charitable work of our commonwealth, (though I will say that the six institutions which I have just mentioned cost us for the years 1907-8 over \$1,044,345) that we should take steps to prevent the continual increase among the defective classes, but also because their lives are useless as units of the body politic, and in very many cases a menace to the laws and morals of society.

There is no denying the fact that heredity is a very powerful etiological factor in the production of degeneracy. In the preparation of this paper I consulted the reports of over 100 institutions in the United States and Canada having care of the degenerate classes, and in only 21 of them were there any statistics as to heredity. In a total of 23,592 admissions to these institutions the hereditary history was unknown in 8,432, leaving a total of 15,160 in which it was either admitted or denied; of these 15,160 heredity was admitted in 3,914, that is, in about 25%. An effort was made to gain a definite idea concerning the factor of heredity among the patients in the three institutions for the insane in this State, and letters were written to the superintendents asking information on this point. Dr. Steele, superintendent of the hospital at Weston, tells me, in reply to this inquiry, that the histories of his patients are so incomplete that he can give no approximate percentage. Dr. Lyons did not reply at all. In 223 admissions to the West Virginia Asylum during a period of two years there was an ascertained heredity in only 24.66%, the remainder either being unascertained or denied; however, after studying these cases and becoming more familiar with their family histories, I am sure that heredity is a very potent factor in at least half of the remainder. The superintendent of this insti-

tution, after twelve years of institution work, maintains that in from 50% to 75% of the defective classes heredity is a predisposing factor which we must not overlook. Four years of observation lead me to think that he does not place this percentage too high.

To cite you an example: Four children (idiots and imbeciles), all brothers and sisters, were sent to us from one of the county infirmaries; heredity is denied, as is pauperism, in these cases, yet it is our understanding that there are four more children in this family all in the same condition. In another family of seven children, six were idiots and imbeciles, and at the time when I last knew anything of the family the seventh was a babe in arms. Four of these seven have been or are now wards of the State. The parents in this last case are known personally and both are defectives. So here are two families, eight of whose degenerate offspring have cost the state from \$1,200 to \$1,300 per year and the harvest is not yet done, for they are still in the active child-bearing period. I could exhaust the time allotted to this paper in citing these cases to you, but what is the use? Each of you can prove these statements true throughout this and every other State. We have three institutions in this State taking care of the epileptics, the insane, idiots and imbeciles, to say nothing of the penitentiary, Industrial Home for Girls, and the Reform School. These three institutions are crowded to their capacity, and are being added to as fast as appropriations can be secured, and yet we can not accommodate anything like the number that we have applying for admission.

Gentlemen, something must be done about it, and to me the most practical solution is that vasectomy, a very simple and efficient remedy, should be adopted for male defectives and salpingectomy for females. We may legislate until we are black in the face about not permitting defectives to marry, may hedge marriage in with all manner of legal safeguards, but you do not stop the supply of degenerates. What are you going to do in a case where a woman's brother or her father is the father of her child? Send them all to the penitentiary or one of the asylums? Certainly! but why not destroy the ability to produce offspring in this particular branch of the human family? This is not a matter for sentiment,

but for cold, hard reasoning. The methods of the old Spartans were rather harsh, but the motive in permitting their defectives to be removed by wild animals challenges attention.

Vasectomy, which is not followed by any evil after effects, will prevent pregnancy, but will not cause the male to lose his sexual desire. My experience with the procedure as a therapeutic measure for masturbation has demonstrated this to me; therefore for rapists and other degenerates of this class castration is necessary for the protection of society; in females we must adopt salpingectomy or ovariectomy, a more serious operation, but does not the seriousness of the disease demand a very drastic therapy?

The State of Indiana has taken the lead in dealing with this matter, and I am indebted to Dr. J. N. Hurty, secretary of the Indiana State Board of Health, for the text of the Indiana law directed toward the limitation of the increase of the defective classes, and will here quote from a communication of his:

"The law effecting the problem from the marriage side was passed in 1905. 'No license to marry shall be issued except upon written and verified application. The form of application shall be supplied by the State Board of Health, and said board may revise same from time to time, as may be advisable. No license to marry shall be issued when either of the contracting parties is an imbecile, epileptic, of unsound mind or under the guardianship of a person of unsound mind, nor to any male person who is or has been within the last five years, an inmate of any county asylum or home for indigent persons, nor shall any license be issued when either of the contracting parties is afflicted with a transmissible disease. The marriage is illegal without a license and a penalty of \$100 fine lies against any county clerk for issuing a license contrary to law, and the same penalty lies against any person authorized to marry, who does so when the applicant has no license'.

Strongly enforced, this law without doubt, will reduce degeneracy in some degree, but will not greatly affect the evil. The second law aiming at the prevention of the creation of degenerates is as follows:

'A bill for an act entitled an act to prevent the procreation of confirmed criminals,

idiots, imbeciles and rapists; institutions where such persons are confined shall have the authority and are empowered to appoint a committee of experts, consisting of two (2) physicians to examine into the mental condition of such inmates'.

Whereas, Heredity plays a most important part in the transmission of crime, idiocy and imbecility; therefore,

Be it enacted by the General Assembly of the State of Indiana, That on and after the passage of this act, it shall be compulsory for each and every institution in the State, entrusted with the care of confirmed criminals, idiots, rapists and imbeciles, to appoint upon its staff, in addition to the regular institutional physicians, two (2) skilled surgeons of recognized ability, whose duty it shall be, in conjunction with the chief physician of the institution, to examine the mental and physical condition of such inmates as are recommended by the institutional physician and the board of managers.

If, in the judgment of this committee of experts and the board of managers, procreation is inadvisable and there is no probability of improvement of the mental and physical condition of the inmates, it shall be lawful for the surgeon to perform such operation for the prevention of procreation as shall be decided safest and most effective. But this operation shall not be performed except in cases that have been pronounced unimprovable.

Provided: That in no case shall the consultation fee be more than three dollars (\$3) to each expert to be paid out of the funds appropriated for the maintenance of such institution'.

'The majority of prisoners sooner or later enter a religious period. At such time, they usually consent to having vasectomy performed. With idiots, rapists and imbeciles, no effort is made to gain their consent'.

From the sentimental point of view an article recently published under the auspices of *The Chicago Society of Social Hygiene* sums the question up succinctly as follows:

"While the first, chief and only needed argument for the sterilization of defectives is the protection of society, yet the sentimental may find additional ground for demanding it in the rescue of myriads of criminals, imbeciles and other defectives not yet begotten, from the misery and disaster

that must otherwise attend them. Self-interest and altruism, the protection of society and true philanthropy, alike proclaim Indiana's epoch-making advance.

The average man, so soon as convinced that vasectomy is a trifling operation and that it does not impair sexual pleasure, heartily approves this method of race suicide for criminals and other defectives because of the obvious advantage to the community; the sentimentalist, who places unselfish love for the defective above the safety of his own family from the burglar and rapist, should be reminded that the greatest kindness that can be shown to the as yet unbegotten offspring of the feeble-minded of all kinds, is to help them to remain unbegotten". (Belfield.)

A thoughtful consideration of this subject brings us to the following conclusions:

First. The defective classes are multiplying much more rapidly in proportion than the total population.

Second. Stringent marriage laws will not control the increase of defectives, for marriage is not necessary to procreation and especially among irresponsibles.

Third. That vasectomy, which does not impair the sexual powers, fulfills every requirement for sterilizing males (other than rapists) and should be provided for by law.

Fourth. That salpingectomy should be provided for among defective females.

WHAT CAN THE MEDICAL PROFESSION DO TO PREVENT CRIME?

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(Read at Annual Meeting of State Medical Association, Elkins, Oct., 1909.)

< The criminals of to-day may be placed in two classes:

Those of apparently sound minds who have been driven to crime by the force of circumstances alone.

Those of unsound minds and those who have inherited from ancestors of unsound minds certain degenerate tendencies.

There was a time when perhaps the first class predominated. At present, I have no doubt that the second class is most numerous. Prosperity of the masses through good government, great natural resources, and the progress of invention and discovery,

has made the struggle for existence a less potent factor in the making of criminals. The ordinary motives for crime, hunger and want, are less in evidence than formerly. A man need not steal to-day to avoid starvation, nor use force to secure shelter from the elements. It is cheaper to earn a living than to steal it, and the perfectly sane man can see that this is true. The petty crimes have therefore diminished, but capital crimes are on the increase, and the cause must be sought in something innate in human nature, something inherited from ancestors, in other words, in human degeneracy, not in degeneracy of the race as a whole, but in the increase of the number of degenerate individuals through want of selection in mating for reproduction. ✓

We take extraordinary pains to improve the individual from generation to generation by education and training, but we take no pains, whatever, to improve the future generations by selecting the mates which are to become the parents of the future men and women. It is not so with our domestic animals and plants. The breeding of cattle, horses, sheep, swine and poultry, and even to some extent of cats and dogs, is a scientific business. The mates are selected with the greatest care. Defectives are not allowed to mate, and this artificial selection is kept up generation after generation until really wonderful results have been attained. The same method is applied to cultivated plants and the quality and quantity have been enormously increased. Of course, there is a certain natural selection going on. The defectives in many cases being unable to propagate, so that the race is slowly improving; but the progress is exceedingly slow as compared with the progress made in the artificial breeding of plants and animals.

Both insanity and capital crime are increasing in the United States. The records of the Chicago Health Department show that homicides in that city have increased from 28 per million in 1877, to 99 per million in 1907, or an increase of 350 per cent. in thirty years. The Illinois State Board of Charities has records which show that the insane and feeble-minded had increased in nine years from 600 per million to 2000 per million, or an increase of nearly 300 per cent. In the eight-year period from 1872 to 1879 there were thirty-two homicides per million in the United States.

In the eight-year period from 1899 to 1906, there were seventy-five homicides per million of population, or an increase of over 200 per cent. in twenty-seven years. The population of Texas in forty-five years increased 504 per cent. The insane increased in same period 6800 per cent. or in other words, the insane had increased thirteen times as fast as the total population. That crime and insanity are increasing in about the same ratio is certainly significant. There are other reasons, however, for believing that insanity is largely the cause of crime. In these days of scientific knowledge and enlightenment, there can be no excuse for deliberate murder. Most of the capital crimes are committed by men who are wholly or partially insane. Even those crimes which are committed in the heat of passion, are in most cases by men who are temporarily insane. In many cases the individual is under the influence of alcohol. Intoxication is nothing else than temporary insanity. There are other drugs, as opium, cannabis indica, and cocaine which produce temporary insanity. The very word, assassin, is derived from the Indian name of cannabis indica. It is a corruption of Hashish. Men took this drug to "nerve" them to the bloody deed. The assassins of history can be shown to be in nearly every case more or less physically and mentally degenerate. While it is true that assassination in many countries is largely a political measure, and approved by a large percentage of the population, and therefore not exactly a capital crime, but rather one of political necessity, yet the man selected in nearly every case is a degenerate. The assassins of our own country have mostly been men of weak minds, who succumbed to a love of notoriety, but this is a species of insanity. Such men were the assassins of Lincoln, Garfield, McKinley and Carter Harrison.

There is no subject upon which medical men are so universally agreed as upon the subject of the hereditary nature of insanity. The Jukes family has often been cited as an illustration of the hereditary nature of crime, insanity and degeneracy in general. Two sons of an early Dutch settler in New York State married two sisters. They had 1200 descendants, and of these 709 were either paupers, insane, diseased or criminals, and few, if any, achieved even

mediocrity. Prof. Pelham, of Bonn University, Germany, traced the descendants of Frau Ida Juke, born in 1740, who was a drunkard, a thief and a tramp for forty years. She had 834 descendants, of which 106 were illegitimate, 144 beggars, 62 lived on the charity of others, 76 were convicted of crime, seven of which were sentenced for murder, and 181 of the females were disreputable. On the other hand the Edwards family, of New England, is taken as an illustration of the transmission of genius and other good qualities. Here were ministers, lawyers, physicians and statesmen, and few, if any, defectives and criminals. The Adames, the Abbotts, the Beechers, the Harrisons, and many others attest the hereditary nature of talent and genius. Ralph Waldo Emerson, the Sage of Concord, and himself a minister, was the ninth in a succession of preachers. There can be no doubt that alcoholism is hereditary. Observers estimate the cases in which inebriety is transmitted variously from 25 to 80 per cent. If alcoholism is temporary insanity and multitudes of crimes are committed while the perpetrators are in a state of intoxication, then anything which the physicians can do to promote the cause of temperance, will to that degree lessen crime.

The punishment for crime, and the protection of the people from the insane and the criminal, have hitherto been almost entirely in the hands of the lawyers. The time has come when the doctor should come in for a share of the work and of the responsibility.

Time was when the leading idea in punishment was revenge, under the pompous name of justice. An eye for an eye, a tooth for a tooth, a life for a life, was the Mosaic idea of justice and the protection of society. The great Teacher and Physician who appeared among the hills of Nazareth nineteen hundred years ago, taught us a new doctrine, but we have been a long time coming to a recognition of its value. The idea yet largely prevails that we should protect society by making crime impossible on the part of the criminal, or at least so costly that few will dare to indulge. The idea of making punishment a means of reforming the criminal is a recent one.

In the future we will devote our attention to the prevention of crime and the protection of society by some method which will

prevent the production of criminals. But even the methods we have of preventing crime are not well carried out. President Taft, in a recent speech, said: "I believe, and I regret to say it, that throughout this country the administration of the criminal law and the prosecution of criminals is a disgrace to our civilization". Here we have the opinion of a lawyer, a judge and a statesman, to the effect that the matter of dealing with crime is not above criticism.

The plan which prevails in all nations of sentencing a criminal for a term of years, or for life, is totally wrong. This is not the first time attention has been called to it. A man should be sentenced for an indefinite period, and during this period an effort should be made to reform him. If it is found impossible to make any improvement after a fair degree of effort, then keep him under restraint long enough to pay the penalty of his crime, or if his crime is one of first degree murder and no evidence of insanity is found, let him be executed or turned over to the medical profession for scientific experimentation, that we may be possibly able to learn something which will be the means of saving life. If improvement is observed, shorten the period of his confinement in proportion to the degree of his improvement and the degree of his crime. Before any male criminal is discharged, let him be rendered incapable of reproducing his kind by a humane method, hereafter to be mentioned. All males discharged from insane asylums and institutions for epileptics and feeble-minded should be sterilized in the same manner.

Let it be understood that I am not advocating a method of lessening crime by lessening the punishment, or by avoiding punishment. The subject of the responsibility of the insane has been much discussed. I believe that there are as many among the insane who are responsible for their actions as there are among those who are generally supposed to be sane. Few men are perfectly balanced, either mentally or physically, and all are susceptible to influences which produce temporary insanity. There is such a thing as temporary insanity just as there are temporary conditions as to temperature, pulse rate, respiration, etc. I do not believe in acquitting an individual accused of murder on the ground of insanity. He should be judged guilty of the crime, if so proven,

and sentenced to an indefinite period of restraint, during which time he should be in the hands of the physician, as well as in the hands of the law.

If there is any way to stop the manufacture of criminals and insane, without injuring the individual, it would certainly be a philanthropic act to put the plan into execution, no matter what the cost may be. Various methods have been considered. A few States have laws forbidding the marriage of first cousins, but this has little effect even where the laws are enforced. Five States have laws forbidding the marriage of feeble-minded, epileptic and insane women under forty-five years of age. But marriage is not essential to the production of offspring, as everybody knows. Most of the children born out of wedlock belong to the defective and criminal classes. Castration is objectionable for several reasons. The removal of the testicles and ovaries has other effects than the production of sterility. Unsexing men and women will never meet with the approval of the people, except possibly in the case of would-be rapists. Colonization, or the confinement of the defectives where access to the opposite sex would be impossible has been proposed. This would be expensive and otherwise unfeasible.

The only plan which offers a solution to this problem is the one already in force in one of our States. In March, 1907, the Indiana legislature passed a law authorizing the sterilization of confined criminals, idiots and imbeciles in the State institutions by vasectomy. Within two years of the passage of this act over 800 convicts have been sterilized, some 200 of them at their own request. Last February the State of Oregon passed a similar act, but it, I believe, was vetoed by the governor. Illinois has a similar bill under consideration.

Dr. F. E. Daniel, in an address before the State Medical Association of Texas, says:

"I agree with Dr. Belfield, who says: 'This method of arresting the production of criminals is, I am bound to believe, one of the coming blessings to humanity', and I earnestly advise that the committee on legislation bring the subject to the attention of our lawmakers and ask for the passage of a bill to make it effective in Texas".

There yet remains the discussion of the objections which may be raised to this pro-

posed method of preventing crime. One will say, if vasectomy becomes known to the people, will not thousands of young men seek this method of avoiding the responsibilities involved in promiscuous intercourses? Possibly so, but if the surgeon is an upright man, and I think most of them are, he will point out to the would-be patient, the consequences of the operation. He will show the young man that while he will not be deprived of the sexual desire, he can never become a parent, and that this alone will render the married state certainly one of misery instead of one of possible happiness. He should be told to postpone the operation until he has married and has become the parent of at least one child. Then, again, the dangers of contracting venereal disease from promiscuous intercourse and all the dangers connected therewith should be shown.

The young man needs medical advice on this point, even if he expects to remain single through life. But nearly all sane men have a normal desire to become parents. This natural instinct will alone perpetuate the human race.

There is another objection which is easily met. Will not thousands of married men, the fathers of, perhaps, half a dozen children or less, desire this operation as a means of limiting offspring, thus tending to race suicide. Possibly, but what of it? Better have half a dozen healthy, happy children, well started in life, than a dozen, part imbeciles, perhaps, and probably left to care for themselves. Better fewer and better people in the world. Thomas Carlyle said: "There are 3,000,000 people in England, mostly fools", and he didn't miss the mark very far, in my opinion. I do not believe in race suicide, neither do I believe in race degeneration.

But what is vasectomy? I presume that the majority if not all of my hearers know what the operation is, but I will nevertheless refresh your minds with a brief description of the operation and its results. Vasectomy consists in tying the vas deferens through which the spermatozoa of the male must pass to reach the bulk of the seminal fluid. It is done in a few minutes under cocaine anaesthesia, and, of course, proper asepsis, through a skin cut half an inch long. There need be no infection, no confinement to bed. It is not more serious

than the extraction of a tooth. It does not impair sexual power or pleasure and has no effect on the system in general, while effectually preventing the procreation of offspring. Thousands have been unwittingly sterilized through venereal disease, by a somewhat similar blocking of the vas. Dr. Daniel thinks that vasectomy ought not to apply to rapists or would-be rapists, that in such cases there should be a complete removal of the testicles.

THE INFLUENCE OF PHYSICAL DEFECTS ON PERSONALITIES, MORAL OBLIQUITIES AND CRIME.

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(Read at Annual Meeting of State Medical Association, Elkins, Oct., 1909.)

Personality represents the status or the expression of the status of the psychosomatic totality of an individual, and while there are as many distinct personalities as there are individuals in the universe, there are two grand divisions into which this subject can conveniently be separated, and individuals may be considered under the classification of normal and abnormal personality. With the normal we have little to do in this paper, but will deal entirely with the different degrees of the abnormal personalities, endeavoring to point out some causes either or both physiologically or psychologically productive of abnormal states which, resulting in altered personalities, subjects the unfortunate victim to much personal inconvenience, ridicule, misunderstanding of self and often a serious misjudgment of others.

The object of this paper is to stimulate more careful observation, consideration and study of the pervert, believing that a better understanding of the possible, probable, or actual conditions which may cause or influence a physical or psychical process, either or both independently or reactively, so as to result in an expression of diversion or perversion from the normal, will tend to place us in a position to be more considerate for and helpful to those unfortunates who outnumber by far the normal individuals who seek or need our assistance as physicians.

I intend to make no expression in this paper signifying my opinion or belief in rela-

tion to the actual degrees of responsibility concomitant in any case mentioned or condition expressed. Whether the abnormal individual shall be considered totally responsible, semi-responsible or entirely irresponsible is a matter of careful estimation of the actual psychic conditions present and recognizable in every given case; nevertheless, reduced responsibility is a condition prevalent in all cases of abnormal personality, and this condition may be either temporary or permanent. Abnormal personalities is an expression of abnormal psycho-neuro entities which are pathological, and while the pathology of all these diverse conditions are not readily demonstrated, yet sufficient facts have accumulated to assure one of the validity of this statement.

Every practitioner of medicine can readily recall cases of moral lapses or other obsessions, due to functional or organic disturbances, resulting in either temporary or more or less permanent disturbance of the psychic integrity, the more common of which are the toxic psychoses, viz., mania accompanying typhoid fever and kindred conditions; induced psychosis as pathological intoxication from indulgence in alcohol, etc.

These examples express the cause and the result in certain cases, and may readily recall to your minds the difference of degree of disturbed mentality in several different cases observed, but give no clue to the process through which these results obtain, but this we say is individually a matter of personal resistance; and we recognize in normal individuals degrees of higher resistance and in abnormal or defective individuals correspondingly lowered degrees of resistance. Resistance therefore represents the potential integrity of the central nervous system, either functionally or organically, through its ability to control or modify neuro-psychological processes through exhilaration or inhibition of physical functioning, indicated in both independent and combined expressions of stimulation acting purely psychically in one instance and purely somatically in another or psychosomatically in a third.

The central nervous system is composed of an aggregation of physical elements constituting a somatic entity, and while functioning is both physical and psychic, that is to say, that the physical organic function-

ing of the central nervous system gives origin to physical changes resulting in psychic manifestations, its further or dissimilar functioning also refers only to physical or somatic conditions without involving any of the higher psychic recognitions; therefore we have a central nervous system devoted to the control of purely somatic conditions, which is also capable of purely psychic functioning, and may also be concerned in a combination of psycho-somatic functionings; the affinity of the two processes in a normal individual being so approximate that we need not attempt to trace its intricacies here. Suffice it to turn our attention to the operations of the psychologic functions as expressed in the normal and later in the abnormal individual, and let us here not confound the somatic entity, the physical brain, with the psychic entity, the mind, though through the physical functioning of the former arises the possibility of the latter.

Preponderance of evidence has long since accumulated demonstrating the fact that the psychic acts upon and is also acted upon by the functioning somatic entities both in health and disease.

Psychology teaches us that the mind is the culmination of the physical functioning of the brain through the sense organs, and is composed of two distinct faculties, each embracing numerous sub-divisions, the higher or superior division beginning with simple recognition or perception and progressing all the way through the various steps to the highest degree of intelligence, aggregating in degrees of both knowledge and wisdom. The lower or subconscious mental strata are cognizant of physical functioning independent of thought; presiding over so-called reflex acts and directing physical processes intending to insure the comfort and well being of the individual independent of reflection, judgment or thought; processes which may or may not be recognized or influenced by the higher functioning mind. This subconscious mentality which has much to do with the personalities of individuals, especially in abnormal conditions, is best recognized and studied in dissociated states, hypnotic or hypnoidal states. What specific physical difference of functional process obtains in the production of the two different mental states is as yet unknown.

But in recognition of the two dissimilar results of cerebral functioning we are conscious of feeling resulting from the one function and of thought from the other, yet the sensation of feeling and the fact of thinking, while exerting much or little influence upon each other, are still two distinct entities. Under feeling we recognize states of satisfaction and discontent, pleasure and pain, desire and aversion, jealousy, hatred, grief, etc., which are purely the result of internal organization, which we do not determine, but which we feel without first having thought of them. These conditions exist for the preservation of both the man and the animal, without consciousness, reflection or any other active participation on the part of the individual intellect being necessary. These mental states having reached certain intensities simulate the impulse of an electric current applied to a vivisectioned animal and produce certain involuntary acts, such as movements, attitudes and gestures, entirely independent of consciousness, and always corresponding to the designs of nature for the needs and preservation of the individual. This constitutes the elemental basis of the moral personality.

Now, the superior mind, the psychic intellectual, is not concerned in the generation of feelings or impulses primarily, but is concerned in the stimulation or inhibition of the phenomena of feeling and propensities which create the desire for gratification; thus by irritating the soles of the feet in normal individuals may produce both muscular contractions (an impulse generated within the nervous system and subconscious mind tending toward self-preservation) and laughter (a complex act signifying the expulsion of nerve energy), all before the fact is recognized by the conscious mind; but immediately the normal conscious mind has the power to control the muscular contractions and suppress the laughter, while in abnormal conditions, dissociated states, as hysteria, crying and laughing may proceed alternately without any inhibition or control possible on the part of the superior mind, it being in dissociation. This is further expressed in conditions of somnambulism, hypnosis, amnesias, etc., all dissociated states in which the intellectual forces are dormant and incapable of functioning.

Therefore personality or individual character is concerned primarily with the sub-

conscious mind, which function is its fundamental basis. I am now referring, of course, to the moral individual personality which represents the integrity of the functioning of that part of the central nervous system concerned in the production of states of feeling, emotions, etc., plus the supervisory functions of stimulation and inhibition of the intellectual mind. Now, it readily follows that the moral attitude of an individual is an expression of the intensity of functioning of the subconscious mind, on the one hand producing emotions, or inversely lack of functioning, displaying negativisms, or perversion of functionings producing derangement of sense perceptions, which produce states of normal, subnormal or abnormal feelings respectively, the expression of which feelings or the gratification of which feelings constitutes personalities, supervised, of course, by whatever element or elements of the intellectual mind as shall be and are exerted to modify or control excessive impulses or stimulate indifferent desires.

In proof of the statement that the subconscious mind is the basis of the moral personality of man we need only to consider a variety of examples concomitant with daily experiences. The imbecile, for instance, is possessed of a moral personality, but possesses little or none of the higher mental faculties capable of modifying or controlling states of feeling, impulses or passions. Whatever degree of morality he possesses is the result of external forces exerted by others, on the one hand, and the absence of intensity of states of feeling, impulses or passions on the other.

A further demonstration is expressed in individuals of inverse conditions, examples of which we can all recall instantly, cases of so-called moral insanities, or individuals with insanities of conduct, emotional insanities or moral idiocy and certain systematized insanities or mono-maniacs, in which such qualities of the conscious mind as perception, memory and judgment remain unaffected. These cases present all degrees of moral obliquities, extending in some instances almost, if not quite, to total moral depravity combined with high intellectual faculties.

Now, having established the fact of the normal functioning subconscious mind as the basis of the normal moral personality,

involving also the normal functioning of the whole central nervous system in normal ratio, we can turn our attention to the influence of physical defects on personalities which may produce abnormal personalities, including moral obliquities and crime, which may be regarded as only possible end products of the same psycho-somatic process. It is not possible to go into all the detail and technic of condition and operation expressed and implied in a paper of this length explanatory of the elaboration of feelings, emotions and passions, which are qualities of the subconscious mind, nor of the influence of environment, education or habit which may be joint qualities of both divisions of the mind total in production of the individual total moral entity, which we all, I think, can fully realize.

Now, referring again to abnormal states from physical defects, I believe the subject begins with hereditary defects involving principally the nervous system. The neuropath, for instance, signifying greater or lesser degrees of inferior resistance, individuals who become semi or total invalids through their susceptibility to nervous diseases and their inability to withstand the tedious grind of daily existence in the struggle for a livelihood or supremacy. These neuropaths in infancy and childhood may or may not be capable of normal and equable development, and thus fall into the class of defectives, the perverts or the precocious early in life; or the defect may be originally of so slight a degree as to remain for a long time undetected; thus the intelligent, industrious, social business man in consequence of some decline in business suddenly becomes gloomy, taciturn, dejected or even utterly despondent, while another whose disposition was formerly hopeful, bright, gentle and equitable, becomes irritable, changeable, morose, and he may also become harsh and overbearing to his family or dangerously violent to his associates. These changes in personality are expressions of pathological conditions, which may or may not be specifically isolated for recognition and occur long before there is any evidence of deterioration of the higher intellectual faculties.

Having followed the course of physical defects thus far it only requires the advance of one step to enter the realm of moral obliquities, which are further expressions of

either abnormal functionings of the nervous elements involving the subconscious mind increasing the intensity of states of feeling, including emotions, passions, etc., creating desires with strong demands for gratification, in which repetition establishes habit, and from which the status of the conscious mind either takes no account or is unable to produce the degree of inhibition and adjustment to effect control.

It is, indeed, not readily evident just what may be the status of the conscious mind, the psychic intellectualis, at this point of moral degeneration, as we do not know the physical phenomena producing intelligence, other than that the intellectual qualities of reason, judgment, etc., are conditions arising from experiences, environment, education, etc., the immediate process of which we are ignorant. However, two possibilities are suggested to my mind as worthy of consideration: the intellectual phenomena arise undoubtedly from some physical process in the brain, whether it is instantaneous with or superimposed upon the physical process which produces mental phenomena in the subconscious mind, or as a further elaboration of the same process resulting in intellectual states and thereby in these cases of moral obliquity and crime which may arise from abnormal functioning through the subconscious nervous system be a continuation of the same morbid process, or whether the abnormal intensity of feeling generated in an abnormal nervous system assumes so overwhelming a degree of impulse as to place the intellectual functions in a relative position of paresis. This explanation is offered only as a suggestion of possibilities. We find all degrees of states of moral obliquities and states of mental intelligence in no systematized proportions whatever in different individuals who have had much the same educational advantages, environment and training.

Crime is simply moral obliquity carried into the third degree. I am personally convinced that the same process producing and influencing the one is the potential of the other.

So much for conditions following hereditary degenerations in general. Now, we have induced and accidental physical defects, as toxic states, traumatism, etc., both independent of and accompanying hereditary degenerations.

I have already referred to the effects on the nervous system from toxic states arising from alcohol and the infectious fevers, or their autotoxicosis and its result in producing mental and moral abrasions.

I will conclude, then, by reference to some extrinsic causes producing physical defects resulting in changes of personality, moral obliquities and crime.

I quote from Hollander, "Mental Functions of the Brain", in which he details in the chapter on the pathology of melancholia, the clinical histories of one hundred and fifty cases, and under the following heads: fifty cases of injury, one-half of which recovered after operation, tumors, inflammatory disease, hemorrhage, symmetrical atrophy, cranial abnormality and disease, etc. He further gives the clinical histories of three hundred and fifty cases of irascible insanity and mania furiosa with localized brain lesions. There is nothing new or peculiar in the histories of these cases collected by Hollander, but the point to which I wish to call your attention is, that I find, in reviewing these histories, that in cases with histories of demonstrated hereditary defects of the nervous system, and also in those in which one can reasonably infer such a condition, we find the slighter traumatism and other exciting causes producing the greater exaggerated degrees of effect.

In reviewing the physical defects influencing personalities, moral obliquities and crime we have, of first importance, I believe, hereditary defects involving the nervous system resulting in hypo or hyper-tonic conditions. Next following this is a condition very closely allied, if not hereditary, that of adenoid vegetations producing pharyngeal and nasal deformities and obstructions, and frequently involving the auditory functions; interfering with normal respiration sufficiently to produce suboxidation, and resulting in listlessness and inferiority of the individual, with inability to fix attention, and defective memory, reducing the possibility of the higher attainments of the faculties of the psychic intellectualis, and rendering possible a distinctly lowered moral tone. Then follows a long range of induced causes producing functional or organic defects, the foremost of which are the toxic conditions, intrinsic and extrinsic. Of the intrinsic, autotoxicosis of frequent or

more or less prolonged stages; of the extrinsic, autotoxic states from alcohol and other narcotic drugs, infectious diseases, fevers, etc., exposures resulting in reduced vitality, traumatism and accidental injuries.

ECLAMPSIA AND A SUMMARY OF ITS TREATMENT.

J. H. Steenbergen, M. D.,
Huntington, W. Va.

(Read before the Cabell County Medical Society.)

I must confess I feel a decided hesitancy in trying to present anything new about eclampsia to men who have been practicing for years, and who are all men of far more experience than myself. I will try, though, to give you briefly a resume of the pathology, diagnosis and treatment, as others have described it and as I have seen it.

The so-called toxemias of pregnancy and eclampsia are so closely allied and are so near the same that for clinical purposes they are the same and are treated along similar lines.

We may have toxemia with or without convulsions, as has been repeatedly shown by post-mortem findings and clinical reports.

Pathological—The typical picture of eclampsia is briefly as follows: Hemorrhage in and about the portal spaces, central necrosis, thrombi in the vessels of the liver and giant cell emboli in other organs, with various changes in the kidney, varying from cloudy swelling to the more serious nephritic conditions. The urine of all eclamptics shows the presence of albumen, red and white blood cells, and should always be examined microscopically as well as chemically.

In eclampsia, as in all other conditions, the earlier the diagnosis is made and proper treatment is instituted the more favorable the prognosis for both patients. I say both patients, for there are two, and we must try to save both if possible—always, though, the mother is the first consideration.

If the physician has had the case under observation for months, it is easy enough to recognize the convulsions of eclampsia. But our aim should be to recognize the danger long before that stage is reached, and

endeavor if possible to prevent such a condition.

The chief premonitory signs and symptoms of the prodromal or pre-eclamptic period are: *Oedema* of the lower limbs and feet and at times of the hands; *headache* of a severe frontal type; *epigastric pain* and various digestive disturbances; disturbances of vision; increase in the amount of urea in the urine with usually an associated albuminuria. Again, on the other hand, there may be no premonitory symptoms. An attack may come on while the patient is asleep, "like a bolt from a clear sky."

The attack may come on at any period of pregnancy, but seldom before the fifth month and usually after the seventh.

The attack with typical convulsions may be divided into three stages: (1) Invasion. (2) Tonic and Clonic Convulsions. (3) Coma.

The first symptom in the so-called stage of invasion is the convulsive twitching of the lids; the eyes fixed and staring and the pupils, which were at first contracted to a pin-point, are widely dilated. There is a total insensibility to light. Pulse is very rapid, high tension and wiry. The face is cyanotic, and there is rapid and convulsive jerking of the muscles about the alae of the nose and the mouth.

These symptoms are all followed in rapid sequence by rotation of the head and rolling of the eye balls. The movements which were at first limited to the head, soon extend to the trunk and limbs, and the patient presents the typical opisthotonic picture. In about twenty seconds the tonic convulsions become clonic, the breathing becomes stertorous, and many patients vomit large quantities of black stercoraeous fluid. In this stage so often the temptation is to restrain the patients, but they should not be held other than that which is necessary to keep them in bed; and usually, though the convulsion is violent, they will not move out of one spot. In all true eclamptic convulsions there is complete loss of sensation and consciousness. (Eclampsia in many clinical features closely resembles epilepsy.)

Following the clonic convulsion the patient passes into the stage of coma, the duration of which is usually twenty to thirty minutes, after which, if a favorable issue is to take place, the patient falls into a deep sleep, and later awakens to ask con-

fusedly what has happened, not even realizing that she has had a convulsion.

The clinical picture of eclampsia once seen is never forgotten. Words are not adequate to express the apparent hopelessness of the patient's condition, and yet in many ways it is one of the most satisfactory of all the abnormal conditions the obstetrician is called upon to face and to fight. To see the patient during a convulsion, then see her a few weeks later, apparently well, it seems as though there is after all some satisfaction in practicing obstetrics.

Treatment—We will divide the treatment into two heads: (1) Preventive and (2) Active or curative.

Under the head of preventive treatment, let me say that it is of course necessary for the physician to see and examine his patient as early during the pregnancy as possible. He should obtain a history of previous pregnancies and labors (if the patient is a multipara) and in every case should make a thorough physical and vaginal examination and pelvic measurements at the time he is employed for the case or as soon thereafter as possible. He should examine the urine carefully at least once a month up till the seventh month, and every two weeks from then on. This requires but little time, and gives him a fair idea as to whether or not the excretory organs are doing their proper amount of work. The patient should have a thorough movement of the bowels each day, be careful of what she eats, and take sufficient exercise.

The physician should instruct her to report to him any severe headache, disturbance of vision, digestive disturbances, etc., so that he can be upon his guard. It is a case of watch and wait.

The active or curative treatment may be divided into three groups, according to the time of the appearance of the premonitory signs and symptoms: (1) Ante-partum, (2) Intra-partum, (3) Post-partum. No one line of treatment can be used in every case. However, there are three indications to be met: 1st, control the convulsions; 2nd, eliminate the poison or poisons which we presume to be the cause of the convulsions; 3rd, empty the uterus if it has not already been done.

If the attack comes on before labor, of course the question arises as to the possi-

bility of relieving the attack and allowing the case to go to full term, and if possible save the life of the child, too. However, the first indication is to control the convulsions, and this may be easily done with *tr. veratrum viridi* (Veratrine P. D. & Co.) either alone or with small doses of morphia sulphate. The veratrine should be given hypodermically in doses of xv-xx at 15-minute intervals until the pulse rate is reduced to 60 or 65, and maintained at that rate by doses repeated as frequently as necessary. It will be seen that after the rate is reduced the amount and frequency of the dose is very markedly diminished, and the patient will not have a single convulsion if the pulse rate is kept below 65.

Also morph. sulph. gr. $\frac{1}{4}$ and scopalamine hydrobromate gr. $\frac{1}{100}$ may be used to control the convulsion, and no doubt in certain selected cases these give excellent results, but are not quite so free from danger as *veratrum viridi*.

To meet the second indication—the elimination of toxins—we must empty the bowels as quickly as possible and produce diaphoresis and diuresis. Magnesium sulph. oz. $\frac{1}{2}$ in concentrated solution per rectum, or croton oil m. 3 in olive oil and placed on back part of the tongue acts quickly and thoroughly.

Diaphoresis is best obtained by application of external heat, either the hot pack, patient wrapped in blankets wrung out of very hot water, or by tent over the patient and hot air. Pilocarpine should never be used because of the tendency it has to produce oedema of the lung. In the great majority of cases it is best to empty the uterus, either by the induction of labor and one of the slow methods of dilatation, or by Caesarian section. On the other hand, if the patient is already in labor there are several methods to choose from—rapid dilatation by Harris' method; abdominal or vaginal Caesarian section, and slow dilatation by means of Champetier de Ribes' hydrostatic dilatation, or Barnes' dilators. One of course has to make the best of circumstances and take into consideration the conveniences, etc., at hand, and act accordingly.

Perhaps it is best for the physician to use the method he is most familiar with, though no one operation is suitable for all cases. Usually, if the attack is ante-partum or

intra-partum, as soon as the uterus is emptied there is little danger of any more convulsions, but diaphoresis should be kept up for several hours and diuresis for several days, and the patient be carefully watched. Perhaps at this time a little stimulant may be necessary. If so, strychnine and whiskey may be used; one that acts more quickly is camphor gr. 1 in sterile olive oil drachm $\frac{1}{2}$, hypodermatically.

Should there be a post-partum convulsion you will almost invariably find the pulse rapid and wiry, and *veratrum viridi* is indicated. It is also well to bleed, drawing off from 300-500 c. c., and give from 200-500 c. c. normal salt solution subcutaneously, thus removing from one-fifth to one-fourth the total toxins and diluting those which remains.

An important point in the after-treatment is the diet, and milk fills the entire need; for several days the patient should have nothing but milk and water. Cream of tartar lemonade is an excellent diuretic and fairly palatable, and the patient should be encouraged to drink all of it she possibly can.

Now permit me to give a brief summary of the active treatment, and by remembering the following six words you will have a key to the treatment—Depletion, Diaphoresis, Catharsis, Diuresis, Deliver, and Diet.

1st. Depletion with *veratrum viridi* (bleed the patients into their own veins) or bleed them by venesection. This reduces the pulse rate and blood pressure, and controls convulsions.

2nd. Diaphoresis by hot packs.

3rd. Catharsis by *magnesiae sulph.* or croton oil.

4th. Deliver by one of the various methods named.

5th. Diet, milk.

6th. Diuresis—Cream of tartar lemonades.

I am indebted to Drs. Dobbin and Brach, Williams, Welch and Edgar for references and valuable information, though chiefly to Dr. Brach, for it was with him and Dr. Dobbin that I worked and obtained my clinical experience.

Case.—To illustrate the treatment here suggested, a case is presented that was observed by the writer in the service of the Maryland Lying-in Asylum.

Miss B., aged 22, was brought to the hospital in an ambulance at 10 a. m. Sunday. Unconscious

on admission. Very restless and vomiting large quantities of black, watery fluid. Had scarcely gotten her to bed when a convulsion occurred, the third she had had. She was catheterized and then put in a hot pack. Before starting for the hospital she had been given tincture veratrum m. xx, and morphia gr. $\frac{1}{4}$. On admission, the pulse being full and bounding, she got tr. veratrum m. 15, to be repeated every 15 minutes; later reduced to m. 10, which was to be repeated at same interval until pulse rate was 70, and then to be given as needed. Also got croton oil m. 3 before going into the pack. After the pack a high enema of salt water, which was very effectual.

Patient regained consciousness and asked for water after the pack. Took cream of tartar lemonade freely. Got packs repeated during the next 24 hours several times. Also large doses of magnesium sulphate, and veratrum as the pulse became full and rapid. Patient did well until Wednesday p. m., when she became restless, complaining of a bad headache. At about 7 p. m. she had her fourth convulsion, before which there was a slight aura. At the occurrence veratrum was given, but without effect. After this it was determined to deliver.

A small Barnes dilator was inserted in the cervix at 7:15, and the patient taken to the operating room for delivery at 8:30. Under anesthesia manual dilatation was done, and the child delivered by internal podalic version and forceps to the after-coming head. Slight cervical laceration. Patient was put to bed in good condition, and did well for 48 hours, when she had two more convulsions. The eliminative treatment was kept up, and the patient put on a rigid diet of milk, veratrum also being given. The patient made a good recovery, and was discharged from the hospital at the end of three weeks.

The child was safely delivered, but died in 48 hours in convulsion. Autopsy showed kidney and liver lesions and marked congestion of the brain.

SOME INTERESTING CASES.

C. B. Williams, M.D., Philippi, W. Va.

(Read at meeting of Barbour-Randolph-Tucker Society.)

I ask your kind indulgence while I report four interesting cases of children's disease that have occurred in my practice during the past two years. My notes are meagre so I have to rely on memory partly, but the cases were so striking and unusual to me that I remember them fairly distinctly:

The first is that of Baby W., white, American, aged 7 months. Parents healthy. Child was healthy and breast-fed up to 6 months of age. It then became necessary to wean him and substitute the bottle. Cow's milk tried in every way would not agree, so he was fed on several of the prepared infants' foods, Imperial Granum among the number. I was not asked to prescribe for the child until about Sept. 15, 1906, when his

father came to the office and said: "There is something wrong with the boy's water," and that he was feverish, fretful and his urine was very scanty. I was called to the house and found the baby on examination to present the following symptoms, viz.: Temp. 102, pulse 120, hard and full. Fretful and pale, skin oedematous about the face, especially around eyes, and over the hands and feet. Urine scanty and food could not be retained in the stomach for any length of time. I questioned the mother very carefully about any previous illness or if anything like turpentine had been used about him, but could get no history of anything to account for this illness.

The oedema became more marked for a few days and general, and the urine more scanty, but gradually the oedema lessened some, and the urine became more plentiful in the late stages of the disease. The child became weaker, paler, more emaciated all the time. During the last week he became very quiet and indifferent to his surroundings.

The urine contained albumen and casts every time I examined it. Fever persisted throughout the attack.

Treatment was as follows: Hot packs and baths, flannel clothing and blankets around the child. Citrate potash, peptonate of iron, nitre laxatives and colonic irrigations.

Diet—Whey and barley water, albumen water.

My diagnosis was primary nephritis.

Prognosis was bad from start. Holt, in his series of 10 cases, lost 9, I think.

The child died in convulsions on Oct. 11, 1906, after a sharp attack of colitis had set in.

Remarks.—Rarity. Fatality. Obscure cause.

Second case is that of Baby S., white, male, age 2 $\frac{1}{2}$ years, American born. Family very neurotic. Father and paternal grandmother asthmatic. Maternal grandmother insane. Child was healthy looking, well nourished, large for his age. Had escaped the usual childhood diseases but was asthmatic at times. His grandmother fed him plenty of sugar and sweet things as I was informed. About the first of February, 1907, his parents noticed that he passed an unusually large amount of urine for a child, and that it took so much water and milk to check his thirst. They thought nothing about it until about the middle of June, 1907, when he began to lose flesh very rapidly, and his other symptoms increased. We were never able to measure the exact daily output of urine, but it averaged from two to four quarts daily. On securing a sample of urine I found the sp. gr. high, 10.30 and loaded with sugar, and at no time during the period that he was under my care did the sugar diminish in amount. The child gradually grew thinner and weaker and about last August passed from my care.

Still retaining an interest in the outcome of the case, I learned that he just went from bad to worse and died in diabetic coma Nov. 1st, 1907.

Diagnosis.—Diabetes mellitus. Prognosis in children always bad.

Treatment was salicylate of soda, co-deine, laxatives, and dietetic, but I feel sure

my directions along this line were not carried out, as the child had always been indulged in every way the parents' means would permit.

The next case is one of unusual interest to me, for I had never before heard of or seen one like it, and I am still puzzled to know the cause and pathology of the condition. Dr. Thos. D. Parks of Birmingham, Ala., reported a series of 18 similar cases in a paper which he read before the A. M. A. in the section on children's diseases at Atlantic City last June. The symptom-complex of his cases in the main tallied with this case I am going to report, but I could gather very little information as to cause, etc., from his paper or from the discussion. The general opinion was that the condition might be due to some toxin developed in the intestinal tract, for the bowel function was disturbed one way or another in every case. Twelve cases were fatal out of 18 he reported.

Baby E., aged 16 months, female, white, American. Parents very healthy people. Breast fed. No sickness of any kind up to about five weeks before this fatal illness, when she developed a mild attack of typhoid fever. This ran its course in less than three weeks, and the day before she was taken sick she was apparently in the best of health, and playing around the room. Dec. 10, 1906, child had morning temp. of 105. Pulse 140. Resp. quick but nothing out of ordinary, bowels distended some and a slight diarrhoea. Tongue was furred, child fretful, anorexia, lungs clear. Dec. 11. After calomel and castor oil purge temp. came down to 102; bowels still disturbed, pulse and resp. still quickened. Lungs clear.

Dec. 12. Temp. normal. Resp. 40 to 60, labored, abdominal in type accompanied by expiratory moan or grunt, bowels distended and constipated. Child restless, declined food and water; lungs clear.

Dec. 13. Temp. subnormal. Resp. 60 to 80, very labored and still accompanied by expiratory moan. Pulse failing. Child semi-comatose. Bowels distended, no peristaltic sounds; a little flatus after an enema. Lungs on repeated examination still remained clear. Liver not enlarged to any marked degree so far as could be detected. Child died at 1 a. m. Dec. 14.

Remarks.—1. Rarity. 2. Short course. 3. Rapid invasion. 4. Peculiar symptom-complex. 5. Fatality. 6. Obscure cause. 7. Attacks healthy infants, as a rule. 8. Unavailing treatment. Symptomatic. Southworth, Bertam, gives some credit to bicarb. of soda.

Last case is that of W. D. G., Jr., aged 10 months, male, white, American. Parents healthy. Was a hard baby to feed, couldn't digest his mother's milk. Thrived best on churned sour

milk with sugar and flour added. About Sept. 8, 1907, developed a mild attack of entero-colitis that was easily controlled with castor oil and bismuth and careful dieting for two or three days. Improved for two or three days. When, on Sept. 13, parents noticed that he strained in urinating, was very fretful, feverish again, and passed a little blood in the urine once. He seemed a little better up to Sept. 15, when he had a decided chill followed by a sweat. Saw him shortly after chill and he had a temp. of nearly 101, but was bright and playful at the time of my visit.

Sept. 16th another chill and this time he passed a small amount of mucus with the urine. For about six weeks from this time he would be fretful for a day or so and then would discharge a little pus with the urine, then would come an interval of several days with comfort till another fretful spell would set in. The urine remained acid. In the meantime his digestion improved, and he took during this period diluted cow's milk to which I added a few grains of citrate of soda. He seemed to be well by the last of October and has been doing very well since.

My microscope was away being repaired and I only got it home in time to make one microscopical examination of urine, but found pus corpuscles and a micro-organism in abundance that I took to be colon bacillus.

Treatment.—Citrate of potash, urotropin, hyoscyamus.

Remarks.—A chill in an infant is almost pathognomonic of pyelitis. This disease is said to be much more common in the female than the male. Dr. Kerley states that all of his cases were in girls. The prognosis is good in the cases due to the colon bacillus.

Selections

WHAT THE COUNTY SECRETARY CAN DO TO MAKE THE STATE JOURNAL A FORCEFUL ELEMENT IN MEDICAL ORGANIZATION.

(Read by J. E. Goodwin, M.D., St. Louis, before
the Missouri Society of Medical Secretaries,
May, 1909.)

Upon the secretary, more than upon any other member of the county society, rests the burden of keeping the work of the society up to its highest pitch of usefulness, and the members instinctively expect the secretary to exhibit an active, keen and lively interest in everything they themselves attempt to do. If the secretary fails to do this, the interest in the work of the society immediately drops, just as the engine slows down when the steam is shut off; for the

secretary is usually the motive power of the society machinery, and if he fails to perform his functions faithfully, cheerfully and conscientiously, the other members fall into a state of indifference that spells ruin for the society. They do this sometimes in spite of the most energetic and faithful work on the part of the secretary; but in that case he has the satisfaction of knowing that he did his best to prevent such a fate. When a society stops working, the association's influence in that community is practically dead; and it would not take many societies of that kind to cripple the work of the general body very seriously. Fortunately, however, we have a good body of earnest, hard-working secretaries, and therefore we have a number of good societies. But we have not as many of the good sort as we should have, and not all of them are doing all they should do, and are capable of doing, to make their societies more effective and more influential bodies in benefiting the members, as well as effecting a greater and larger benefit for the profession throughout the State and for the general public. Every society in the state, no matter how small it may be numerically, which holds meetings and keeps up a live interest in medical organization, contributes a powerful influence towards the fulfillment of the aims and object of our organization. That this is not mere idle talk, was demonstrated during the meeting of the legislature this year by the passage in that body of medical bills that will raise the practice of medicine to a much higher plane in this state than it has ever occupied before. Previous to the reorganization of the State Association, and the creation of the county medical society, the ordinary legislator paid scant heed to measures which the medical profession introduced; but now the voice of the profession commands the attention and respect which the power and influence of such an intelligent and devoted body of men could properly receive. Every secretary here is entitled to feel that he has contributed largely to this long-desired and much-sought-for consummation; and, feeling so, he should be strongly encouraged in his work for the future.

The duties of the secretary are so manifold and his attention to these duties so very important in maintaining the interest of the members in society work, that he

should take advantage of every means which will tend to make his work more effective and lasting; and the Journal, I believe, is his most important ally in accomplishing this end. The great value of the *Journal* as a means of giving permanence to the labors of the secretary and to the influence of the society, has not been fully appreciated by all county secretaries, for many of them do not give prominence to the work of their societies through the pages of the *Journal*. I think those societies which have sent reports of their proceedings to the *Journal* for publication will testify that attention to this simple matter has been very effective in maintaining the interest of the members in society work. Every organized body should have a medium of communication through which the members can keep in close touch with the events that occur from time to time in the different districts of the State, as these events have something in them which in some measure is interesting and useful to the entire membership. For instance, in St. Louis, recently, the notorious Larsen, who advertised to cure all digestive diseases by his "teleconi" system, was fined \$500 for practicing medicine without a license. A very important ruling by Judge Williams, the trial judge, defines the practice of medicine as "holding one's self out and representing and professing to be able to heal disease, no matter by what process". Larsen was arrested by the health department of St. Louis about twenty-one times, but used every possible means of evading the law, without success. He was permitted to pay \$150 in fines and leave the State. The judicial decision defining the practice of medicine will be of great service in exterminating the advertising medical fakir from all counties. Now here is an item of very considerable interest to every physician in the State, particularly to every member of our organization; and yet only a comparatively small number would ever hear of such an event through the newspapers, whereas all may learn of it through the *Journal*. Optometry would be flourishing in our State in a short time had we not had a good organization to fight the measure introduced to legalize this practice and a *Journal* in which to publish the truth in regard to the dangers of such a fallacious doctrine.

These successes are a source of encour-

agement to every member, but only through the *Journal* can we bring such matters to the attention of the members. The doctor who lives in a district remote from the points where such events occur, feels that he is closer to the members throughout the State because he can read of what they are doing; his interest in society work therefore is kept alive, and he is more ready to assist in promoting the effectiveness of his own county society than he would be were he not informed of the work that other societies and other members are doing. Every occurrence, therefore, that can be construed into having an interest for the members in general, should be reported in the *Journal*; and, of course, it is the duty of the secretary to transmit the information to the editor.

One of the important functions of the *Journal* is the publication of papers read at the county society meetings; therefore the secretary should make it a point to select the good papers and send them to the *Journal*. When a member has devoted much time to the preparation of a paper and reads it before the society, it is a graceful acknowledgment of appreciation by the other members of his society if it is sent to the *Journal* for publication; for usually whatever has interested the members of your own society will hold the attention of other members in various parts of the State and bring out the fact that your society is doing good work. I believe, therefore, that it would be a good plan for the secretary to see that the *Journal* has a paper from some member of his society every three or four months. The knowledge that the paper will be published in the *Journal* will be a healthy stimulus to careful preparation of the paper, and cannot fail to stimulate and sustain greater interest in the general work of the society. The fear that few papers would be good enough to appear in the *Journal* should not deter you from adopting this plan, for you easily distinguish between the papers which have some merit and show careful work on the part of the authors and the ones that would not reflect much credit either upon the author or the society; and the authors themselves, as a rule, will be the ones who will object to the publication. And every paper thus prepared and read means increased interest in county society work, not only from one who reads the paper, but also from those whose interest is

enlisted as a result of the work of the author of the paper.

Another way in which the *Journal* can be made to do greater service for the society is for the secretary to send copies to eligible non-members. There are still quite a number of good men outside the county society who, if constantly and periodically urged, would be induced to join. About every three months the secretary should make up a list of non-members in his county and have the *Journal* sent to them. At the same time the secretary should write a letter informing them that a sample copy of the *Journal* will be mailed, inviting their attention to the *Journal*, and emphasizing the reasons why it should be to their interest to join the county society. Coincident with this the secretary of the State Association can mail a letter of invitation to join the county society, and the editor at the same time write a similar letter. In this way the influence of the society is extended and sooner or later you will get most of the desirable physicians, if not all of them, to join the county society. If the copy of the *Journal* that is sent contains a number of papers read in the different societies, and particularly if it contains a paper by some member of your own society, together with a good report of the last meeting, the effect upon the non-member would be very beneficial in its influence for good.

Finally, whenever you hear of a member who complains that he does not receive his *Journal* regularly, you should make it your duty to notify the editor. Of course, it is easier to say "write to the *Journal* about it," but to do so is to miss an opportunity of showing the member that you, as secretary of the society, are watchful of his privileges and benefits of membership; however, if you yourself would take the trouble to write a postal to the editor, simply stating that Doctor So-and-So complains about non-receipt of the *Journal*, you would show the member that you consider the *Journal* an important feature of membership, and you would gain his friendship and co-operation, and compel his interest in society work.—*Missouri State Association Journal*.

Small kindnesses, small courtesies, small considerations habitually practiced in our social intercourse, give a greater charm to the character than the display of great talents and accomplishments.—*M. A. Kelly*.

THE FUNCTIONS OF THE COUNTY MEDICAL SOCIETY.

(We give this extract from the reports of the County Societies' work, made to the Kentucky State Association, to show how very useful a county society may become. We suggest that we may emulate the example here set, and increase our usefulness and our popularity as well.—Editor.)

W. E. Senour: Campbell-Kenton Society being convinced of the urgent demand for a Bureau of Publicity, and in keeping with the recommendations of our President, last year at Winchester, our chairman appointed a Committee on Publicity, and unfortunately I was made the chairman. Recognizing that the index of any community's health is the welfare of the school children, and being convinced that the physician is best qualified to interpret that, we put on a course of lectures, five in number, the first two of which pertained to the medical inspection of schools and school children. The first lecture was given on November 28th, 1908, under the auspices of the Bellevue Educational Society. The subject was "The Medical Inspection and Examination of Schools and School Children." This lecture was delivered by your humble servant. The next lecture in the course was delivered by Dr. Wm. Thompson, of Newport. His subject was, "Are Our Schools Manufacturing Physical Defects for Its Pupils?" The next two lectures were given by Dr. J. O. Jenkins. Subject, "Tuberculosis." He covered the history, the pathology, and the prophylaxis of tuberculosis. He dwelt largely upon the importance of correct sanitation and hygiene, and the prevention of the disease. Following this lecture, Dr. W. W. Anderson gave a lecture also under the auspices of the Bellevue Educational Society, at which time he discussed popular errors and superstitions in medicine, covering such subjects as teething, growing pains, worms and questions of that character. This completes the course of lectures for the present year given by the Committee on Publicity.

Being also chairman of the scientific work and the post-graduate work in our county, I want to make the following report. We adopted the program of the second year as mapped out by the American Medical Association, thinking it was better than any we might prepare. In addition, I want to say

the post-graduate work was well done. Great enthusiasm prevailed, and resulted in both interest and profit to all concerned. The first six months the attendance was very good up to vacation time. Since that time we have had a few laggards. In addition to the regular post-graduate work done by our society during the year, we prepared and arranged for two joint meetings, one with the druggists of Campbell-Kenton County, which was held on April 30th. At this meeting the following subjects were discussed: "The Pharmacopea," by Mr. Francis Houser, druggist, in Covington. The next subject discussed was the prescribing of proprietary articles, and the sale of patent medicines. This paper was presented by Mr. T. J. Woodrick, of Newport. The next subject was discussed by Druggist Wilhelme, of Newport.

The consensus of opinion at the termination of this meeting was that we would adopt and use no preparations except those appearing in the Pharmacopea and the National Formulary until the Council on Pharmacy and Chemistry appointed by the American Medical Association had passed upon these preparations.

In addition to these meetings, we have prepared for a meeting with the school teachers of Campbell-Kenton County, which will take place on Oct. 29 of the present month. At that time there will be two papers, one by Dr. W. W. Anderson, upon the nervousness of pupil and teacher; the other by Dr. Morgan, of Covington, upon the methods employed in the inspection of schools and school children in that city. A further report will be made from our society by Dr. W. W. Anderson.

W. W. Anderson: Our society, not wishing to burden one delegate with all the work, has divided the work up. The society asked me to report particularly upon one or two matters, which I will do briefly: The subject of school inspection should be referred to a little more fully than has been done, and the subject of referee work, which does not come particularly in line of state association work, yet is intimately related to the welfare of practice in our county.

As to school inspection, it has been established both in Newport and Covington, first in Newport, in this wise: The secretary of our county society, who is also a member and president of the County and City Board

of Health of Newport; working in conjunction with a committee appointed from our society, and with the City Board of Health, approached the Board of Education and proposed the inspection of schools and school children, laying the matter before them. After due deliberation the Board of Education of the City of Newport agreed to establish the practice of inspection of schools and school children on a modest basis, and asked the County Medical Society to nominate for its election two inspectors of schools and one nurse. This was a compliment to the county society, which we highly appreciated, as the Board of Education showed such confidence in our society as to indicate that we were the better able to choose who would make the better inspectors. Curiously, it happens that the Board of Education and Board of Health are both Republican in politics. The county society has nothing to do with politics, being interested simply in making good nominations, and afterwards discovered that the two gentlemen named as inspectors happened to be Democrats.

These inspectors started in on the work about the first of May, last year, and began in a very careful and diplomatic way by inspecting first the sanitary conditions of the school buildings and premises. Nobody would object to that. Then they proceeded to inspect the children for vermin, and found in one school as high as 30 per cent. of *pediculus capitis*. In the City of Newport in one district there is a large Russian and Hebrew population. Nobody objected to inspection along this line. Then they inspected for scabies, and nobody objected, except possibly here and there an objection was raised on the part of those who were forced to clean up. Then they inspected the pupils with reference to the various forms of skin maladies, and other diseases which might come up in a notable way. Then they continued the inspection of schools with reference to vaccination. So far, the work has gone on smoothly and easily. People have become accustomed to this work, and do not object to inspection. The members of the county society are lending their services in the direction of inspection for vaccination purposes. We have vaccination pretty well enforced in the schools and the inspectors are continuing to enforce it this year.

They are prepared now to take up the subject of backward children, and of eye, ear, nose and throat troubles, and will proceed to the full line of work, and have arranged a card index record of every child in the public schools in the City of Newport. So far, there has been no important opposition to the work. It has met with very generous approval. The City of Covington later in the summer adopted the same plan of inspection, providing one inspector, and, I believe, no nurse. He has found no pediculi, but I would suggest that he look again. The inspection in Covington began with the school year, and has not progressed very much thus far, but it will be carried on successfully.

The subject of abortion has been a troublesome one and will always be so in every city. We had a midwife who was doing a large amount of abortion work. It was hard to convict her with a mass of sworn testimony. According to the law of Kentucky, abortion, short of viability of the child, is not considered any worse or as bad as disorderly conduct. We need a new law on abortions. We got the names and numbers and approximately the dates the abortions were induced in three cases, and then we asked the secretary of the State Board of Health to write to this particular midwife to this effect: Dear Madam: We are investigating the subject of abortion in your community, and want some information regarding the abortions committed on Mrs. So-and-So, and Mrs. So-and-So, on such dates. Can you give us any information regarding these cases, or offer any suggestions? This letter scared the woman. She pulled her sign off, and promised she would not do anything of the kind again, and she has kept her promise.

Our members have brought before the State Board of Health, two affidavits recently taken of two abortions recently committed by an alleged physician in the jurisdiction of our county society, and we hope to have his case handled in a way to make him and others sit up and take notice.

We had two unlicensed physicians in the county who were induced to move on. Another insisted on practicing after having failed twice before the State Board and was persuaded to discontinue. I hear he has started again, but when I get home I will find out whether he is licensed or not. We

have had still another fakir, who, after having left the U. S. A. hospital corps, put out his card as a physician and claimed to be a captain and army surgeon. He faked quite sharply for a time, but was indicted by the last grand jury and has left the state on a long leave of absence, we hope.

OPTIMISM IN TUBERCULOSIS.

Too great optimism in regard to tuberculosis is neither warranted nor wise. Noteworthy as the progress in diagnosis and treatment has been, a study of actual statistics shows that the disease still goes on collecting its deadly toll of mankind. In New York State in 1907, of the total deaths, 147,442, tuberculosis of the lungs was responsible for 14,406. This was 379 more than in 1906 and 802 more than the average for the previous five years! In November, 1908, there were 1,101 deaths from tuberculosis, 31 more than for the same month in 1907 and six more than the five years average! These statistics are not conclusive, for they do not supply details of collateral significance, but they do show beyond all doubt that tuberculosis is as great a problem today as ever. Statements that the disease has been conquered or that it will totally disappear in fifteen years are little short of criminal. Indeed, the optimistic attitude has been sadly overworked and an infinite amount of harm in the further struggle with the disease will surely be done unless the truth of the situation is straightway broadly disseminated. Already the people are losing their fear of tuberculosis because of the questionable teaching that it is a curable disease. Curable is not the proper word. The disease may be controlled or arrested, but few clinicians of experience would be willing to declare any patient cured beyond possible recognition of the disease under certain conditions. A continuation therefore, of unwarranted statements as to the absolute curability of tuberculosis will surely lead to a decrease of precautionary measures on the part of the people. Thus will be weakened the fundamental detail of any effective scheme of prophylaxis, a dire calamity, since it is universally conceded that in prevention rest our principal hopes of ultimately overcoming this fearful scourge. Every therapeutic measure, every detail of diet and open air living, and every other

possible aid in arresting tuberculosis in individuals afflicted should be utilized. The results that have thus far been obtained warrant reasonable confidence in our ability to save and return to useful lives a considerable proportion of those who formerly were inevitably doomed. But we should neither delude ourselves nor our patients with the belief that tuberculosis is any less serious or dangerous today than it ever has been. The "regiment" that New York State contributes every month of the year to the army of tuberculosis martyrs proves the fallacy of such a belief.

The extermination of tuberculosis lies in promoting the principles of physiological protection. The widespread dissemination of the tubercle bacillus and its congeners, makes the hope of doing any more than to limit the extent of these infective agents, chimerical in the extreme. But the growth of information concerning the relation of bodily resistance to infectious processes shows that here beyond all question is the one great opportunity. Better air and more of it, better and more rational methods of living, and an earlier recognition and correction of predisposing causes, will build up the only real defence against tuberculosis. Some day science may discover an effective means of securing an artificial bodily immunity. But until then, we must depend on the best measures at our command, which after all are the natural forces of the body. It takes no very great intelligence to see that tuberculosis would never have reached the proportions it has but for mankind's fatuous disregard of Nature's teaching. The price that the people have paid for dwelling in cities, for indoor living, for foolish comforts and for over-indulgence in general, is appalling. But it is not too much to pay if it only will serve to make the world think, and thinking, act. The emancipation of mankind from tuberculosis has not come yet, nor will it until the medical profession as well as the people more thoroughly realize the practical pertinence of the old and time-worn saying that "an ounce of prevention is worth a pound of cure."—Editorial in *American Medicine*.

To have what we want is riches, but to be able to do without is power.—George MacDonald.

Correspondence

LETTER FROM INDIA.

By L. D. Wilson, M.D., Wheeling, W. Va.

CALCUTTA, INDIA, Nov. 25, 1909.

Dear Dr. Jepson:

On the afternoon of the 15th we started northward for our ever-to-be remembered trip through India, the objective point being Delhi. The run from Bombay to Delhi is about a thousand miles. The first part is through a flat, low-lying plain covered with tropical growth. After three or four hours we enter a broken, hilly country which reminds one of our own semi-mountainous regions near home. For some hours tunnels and bridges and heavy grades characterize the route. Finally we reach the great central plateau of India which we are not to lose until we reach Calcutta. This great level stretch reminds one of the great Dakota plains of the west. It is very productive when the seasons are favorable. Irrigation is very largely used. About 9 p. m. of the 16th we reached Delhi, the ancient capital of the Mogul conquerors who ruled India for so long, and whose splendid monuments are the wonder of the world today. Delhi is historic from the earliest known times. No less than six great cities have risen, flourished and gone to destruction on this great plain, and the seventh is now risen in the midst of the ruins of its predecessors. For ten square miles of plain to the southward the country is covered with the ruins of former cities, their history and fate lost for the most part in the mystery of by-gone ages. The present city reached the height of its splendor during the reign of the Moguls. It seems not to be exempt even in these later times from the perils and disasters that overwhelmed its predecessors. In the terrible times of 1857 which are called in history the Indian mutiny, this city was the key to the whole situation; and the heroic story of its siege and final capture by "the Lion of the Punjab," the glorious Nicholson, cannot but thrill the most stolid nature. Our hotel was outside the walls, and we enter by the historic Kashmir gate. The first visit was made to the great red sandstone fort built by Akbar, the great-

est of the Mogul emperors. He it was who created and established that great empire which at last, under the feeble rule of its latest successor, fell to pieces before the advances of that latest and most enlightened of empire builders, Great Britain. This fortress is a vast structure whose walls are forty or fifty feet high and twenty or thirty feet thick, enclosing about three hundred acres. Within this enclosure are some of the most exquisite works that human hands have ever done or the human mind contrived. To describe them is impossible, yet I cannot pass them by without some notice. Akbar's immediate successor, Jehangir, seems to have been a feeble ruler and did not reign long. It was left for his son and successor, Shah Jehan, to carry out to completion the work of the mighty grandfather. Akbar built in red sandstone. All the structures he erected, mostly of a defensive character, are built of this material; but Shah Jehan built in marble. The palace of Jehan; the exquisite Pearl Mosque; and within the palace the place of the Throne of Justice; the public audience hall; the private audience chamber, in which once stood the wonderful peacock throne, estimated to have cost \$30,000,000; the king's bath; the baths of the ladies of the harem, over the door of which is this inscription: "If there be a paradise on earth, it is this, it is this, it is this"; all these are built of purest white marble exquisitely carved. The interiors—but to attempt to describe these marvelous creations is to attempt to describe with the pen the miracles of the brush. Nothing that words can convey can give any adequate conception of the marvels, the beauties, the almost celestial loveliness of these heathen-built symphonies in marble. They simply stupefy one with their indescribable richness and beauty. These interiors are all inlaid with precious stones in wonderful profusion of scheme and coloring. Walls, ceilings, columns, floors, everywhere decorated with the most exquisite inlaid work. Jade, malachite, lapis lazuli, precious stones of every kind and color written into the pure white marble in traceries that might well confound the daintiest work that magic could contrive. The great mosque and a beautiful Jain temple are also structures of admirable design and finish that we visited in the city itself. The cunning hands of

Delhi's artisans are shown in the bazaars, where exquisite ivory carving, jewelry, ebony and sandal-wood work, gold and silver embroideries of women's fabrics, shawls, ivory-painting, etc., etc., may be seen in endless variety.

On the 18th we reach Agra; and in the afternoon we drive out to that miracle of architecture, the Taj Mahal. This exquisite building, considered by common consent to be the most beautiful ever erected by man, is the tomb of Shah Jehan's favorite wife, who died when comparatively young. Jehan never to the end of his life ceased to mourn for her, and as evidence of his devotion decreed that she should have a tomb the like of which no mortal had ever beheld. He made his word good. This white marble building, its dome rising to the height of 245 feet, stands on the banks of the Jumna, a tributary of the Ganges. Its outlines are familiar to most in prints and illustrations, but no print or illustration or description can depict the almost supernatural reality. A beautiful garden and entrance gate through which one first views the building add their mite to make up the loveliest vision that human eye has ever rested on. In naked words, this building is carved within and without, and decorated with inlaid work and precious stones. There are no open windows, the light being admitted through wonderful lace-work marble screens whose carving seems almost the work of supernatural intelligence. But nobody can describe the Taj Mahal.

The next day we visited the fort, built by Akbar. It contains in the enclosure about 600 acres, being a square, each side of which is about a mile in length; walls like that of Delhi, with a line of fine carving around the base, and ornamental cornice at the top. Imagine four miles of this! A wide, deep moat surrounds the wall, and at the time of its construction it was absolutely impregnable. Within this fortress, as at Delhi, are palace and mosque in the same marble and precious stones. The Pearl Mosque, Jehangir palace, the Jasmine Tower, Noti Masjid, Khas Mahal, Jumna Masjid of Jehangir Mahal are all simply indescribable. The last is a wonderful specimen of pure Hindu architecture. But we shall say no more of Agra, although there is much more to tell. Of Shah Jahan,

the creator of so much beauty, we might add, that in his later years he was dethroned by his own son, and imprisoned in the fort at Agra. He died in the Jasmine Tower, and now lies by the side of his wife under the white dome of the Taj.

Our next point was Cawnpore, with its tragic memories of Nana's bloody treachery during the mutiny, and the wild barbaric vengeance of the English soldiery after its recapture. Here, too, we first saw the Ganges. Lucknow came next. Here memories of the siege rise on every hand. The ruins of the Residency stand as they came out of the siege. Here also are many wonderful tombs of the Kings of Oudh, marvels of architecture; a wonderful mosque, a beautiful Jain temple, and many other interesting structures. On the afternoon of the 21st we reached Benares, the sacred city of the Hindus. Here are the Monkey Temple, the Cow Temple, the Golden dome, all characteristically named. In the first a hundred or more monkeys cavort around, climbing over gods and sacred things generally, they themselves being the most sacred of all. In the Cow Temple several sacred cows stand around in dignified composure, their worshippers crowding in and out in throngs. The Golden Temple has a large dome and separate spire, each covered with pure beaten gold. We the next morning quite early (6:30) visited the ghats, or landing steps, along the Ganges. We took a boat and went up and down the river past the bathing ghats, the burning ghats, where the bodies of the dead are burned, and the mile or so of Hindu temples along the banks. Hundreds and hundreds of worshippers were bathing in the sacred river; bodies were burning on the pyres, priests were sitting under their canopies, and the entire atmosphere seemed surcharged with religious devotion. It recalled the remark of Steevens in his book on India: "Compared with these, we western people simply don't know what religion is." It is true, we do not.

Leaving Benares, we arrive in Calcutta on the 22nd. On the way we travel still over a vast plain, but becoming more and more fertile. Great tracts of rice are seen everywhere, and evidence of a more prosperous agriculture. Calcutta is simply a great city. Except for the site of the

"black hole." in which in 1753 a hundred and forty-six English prisoners were confined one hot June night, in a room 14 by 18 feet, with but one small window near the top, and but 23 were alive when the door was opened in the morning, there is here little of interest historically. A Hindu temple or two are interesting; and the Hoogly river, as wide as the Mississippi, is a wonderful sight with its shipping. From Calcutta we went northward about 400 miles to Darjeeling, in the Himalayas. This city is reached by a most wonderful railroad. It has only about a two-foot gauge; the cars are about five feet wide and are only six inches above the rails. This tiny railway winds its course up the mountain, the crookedest way possible, four complete loops and four switchbacks being necessary on the ascent. It runs up the mountain for fifty miles, rising in that distance 7,000 feet. Arrived at the top, we found it quite cool, a heavy frost covering everything in the morning. Our view of the mountains was superb, but Mt. Everest, the highest peak in the world, obstinately refused to come out of his veil of cloud. Consequently *he missed seeing us*. Our return was made the next day, and I am now on our steamer ready for our southward sail to Burma and Java.

DIAGNOSING THE DEAD BEAT.

Would it not be delightful, asks E. S. McKee, in the *American Medical Compend*, if we had tests to tell this evil as we have for blood, sputum, urine, feces and so forth? Dead beat is an Americanism, and like a great many of them is very expressive. A dead beat is one who never pays, though often quite able to do so. He lives by evasions and is an utterly dishonest fellow. Dead here intensifies the meaning of the word beat. One who is badly beat is spoken of as beat all to sticks. Beats who are very expert are described as, world beat Caesar himself. Shakespeare tells us "Beat not the bones of the dead". A dead beat in saloon parlance is said to mean a compound of ginger, soda and whiskey, while in newspaper lingo it has quite a different meaning. The world is the dead beat's country and the inhabitants thereof his meat. Shakespeare seems to have had some advanced ideas on asepsis, for he says, "I'll beat thee but I should infect my hands". A daisy beat is the euphonious name applied to a swindler of the first water. The medical profession is the peculiar prey of this gentry. Speaking generally, colored people, prostitutes and gamblers are good pay only when they pay cash, though I have seen marked exceptions in each of these classes. Peo-

ple who hold unimproved Seattle real estate, undeveloped mining stock, great expectation of inheriting from an old relative, should be looked upon with suspicion. Inhabitants of Continental Europe will probably pay a small bill promptly when they first come over, but in time will learn the trick of their dead beat neighbors. The second generation will dress better and pay worse. The physiognomy of the dead beat is somewhat characteristic though not pathognomic. He has a bold hail fellow well met indifferent air of effrontery. First lead him on to a recital of his former medical attendants, their mistakes and failures, then when you get home call them up and find how much they are out. I have often saved myself more chagrin by following this method.

A patient who shows an utter lack of consideration for the doctor and other patients should be regarded with suspicion. One who carefully counts and when possible saves the doctor's visits, intends to pay for the same, though he may want them at a reduced rate. Morphine and cocaine fiends usually lose all honor and of course with the rest a willingness or desire to pay the doctor. They can be put down generally, as sure to beat you if you trust them. The man who owes you and is able to pay you but will not is seldom your friend, but usually your enemy. He will try to ease his conscience, if any, by making himself and his acquaintances believe that you have done him harm instead of good, and that you do not deserve your money. Doctors ought to post each other as to dead beats. If a doctor has been badly swindled by one of these wretches he should by all means let his neighbors know so that they might protect themselves. Things are not always what they seem, and one may be mistaken in his diagnosis of the dead beat ante-mortem as easily as that of any other disease. We sometimes get a respectable fee where we least expected it, and likewise lose one where we least expected. The diagnosis of the dead beat is a scientific and necessary part of medicine. Let the doctor learn to diagnose the dead beat and avoid him. Put his time and money to better use; watch the business side of medicine more carefully; accumulate a little surplus so that, along in the fifties or sixties, as he thinks best, he may be able to take life more easily, and in a different sense, than he did in his early practice.

A vine-clad home on a quiet street,
An easy chair and slippers feet,
With wife of youth, and plenty to eat,
And never a thought for the darned dead beat.

No one is ever beaten unless he is discouraged. To think a thing is impossible is to make it so. You may not be so fortunately situated as some other men are, but play the game. No tyranny of circumstances can permanently imprison a determined will. The man with backbone plays the game with the cards he has; he does not ask for a new deal, but plays the game.—*Backbone*.

The West Virginia Medical Journal.

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All communications to this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notices of deaths, removals from the State, changes of location, etc., are requested.

Our readers are requested to send us marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

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Should be made by check, draft, money or express order or registered letter to Dr. S. L. Jepson, Ch'n of Pub. Com., 81 Twelfth Street, Wheeling, W. Va.

Editorial

If the JOURNAL does not reach you by the 10th, drop us a card.

TYPHOID FEVER PREVENTION.

In *Public Health Reports* for Feb. 4th—issued by the U. S. Public Health and M. H. Service—is a valuable paper by Dr. Lumsden, passed assistant surgeon, on the Health Officer's work in the prevention of typhoid fever. We all recognize that this is one of our most common diseases. It is our personal experience in the examination of applicants for life insurance, that the great majority of men over forty years of age have had this disease. Dr. Lumsden shows that in the census report for 1900 the typhoid fever death rate in this country reached 46.5 per 100,000 inhabitants, which indicated the existence of about 500 cases in this population; and during 1909 there were about 500,000 cases in the United States. In the year 1900 this disease

reached the fourth place in the mortality list, causing 35,379 deaths. This is the highest rate reached by any one of eight countries from which the writer had statistics.

We have been so long taught that this is a water-borne disease, that the profession has shut its eyes to all other possible causes. We are glad to see that Dr. Lumsden finds other causes operating in the production of this disease, a position we have long held. He says, that careful epidemiologic studies of the subject "have taught that in some communities there may be a high typhoid death rate due largely, or even entirely, to factors other than water in the spread of the infection; and sanitarians now regard the rate of prevalence of typhoid fever in a given community as a fair measure of the sanitary intelligence exercised by that community, not only in regard to the water supply, but in regard to all other factors concerned in the transmission of typhoid infection." The author of the paper regards imperfect sewerage systems and outdoor vaults as contributing in no small degree to the prevalence of typhoid. We quite agree with him. The imperfect, or entire neglect of, disinfection of typhoid excreta at the bedside is another very active cause of the spread of the disease.

In order to apply preventive measures intelligently, the different modes of transmission of the disease must be clearly recognized. Dr. Lumsden makes the statement that the disease, besides being "infectious" or indirectly transmissible, is, as "there appears no longer any room for reasonable doubt. * * "contagious or directly transmissible from the sick to the healthy!" We are inclined to the opinion that the latter position may still be regarded as not proven. Doubtless cases do arise from contact with patients in the sick-room; but are not these rather from the ingestion of infectious material than from emanations from the body of the patient? How very rare, at least in the private and hospital experience of the present writer, do multiple cases occur! We have passed through a hospital experience when almost every bed was occupied by a typhoid patient, without a single doctor, nurse, or other patient contracting the disease; and in forty years of practice have seen duplicate cases in the same house at or near the same time but once. Indirect in-

fection through the excreta poisoning food and drink, the influence of flies as poison-carriers, and the influence of human carriers, are the commonly recognized methods of propagation of this disease. The flies are most difficult of control, although the good house-wife might diminish their number very materially by cleanliness and the screening of windows. The human carrier, as has recently been demonstrated, is equally hard to manage, and only expert examination can tell when he is free from being a menace to the public health. That the parasite may remain in the gall bladder or intestine and urine of the convalescent for an unlimited time is no longer to be doubted, although such cases are doubtless exceptional, occurring in but 2½ per cent of 307 cases investigated in Washington. In view of the facts here cited, we have never had any sympathy with the oft-repeated charge that the existence of typhoid fever is a public crime or disgrace. The difficulties in the suppression of the disease are so very many and great that we never hope to see it entirely suppressed. But it certainly can be considerably controlled, and we have no doubt that the most potent factor in its control is the prompt and efficient disinfection of the excreta at the bedside of the patient. In the majority of cases, we venture to assert, no effort whatever at disinfection is made. In many others it is not commenced soon enough, because we are so often unable to diagnose the cases early. In others still it is done inefficiently. Dr. Lumsden says that of 2,000 cases investigated in Washington, in but one-third was the disinfection found to be efficient. He suggests that for the Health Officer "the two principal plans of action to prevent typhoid fever in his community should be as follows:

"(1). The prevention of the spread of the infection from persons in the community who harbor the infectious organism (typhoid fever patients and typhoid bacillus carriers).

"(2). The prevention of the introduction of infection into the community from without through various channels, such as the water supply, the milk supply, and the general food supply."

He further suggests that the Health Officer should, (1) become informed as to the best methods of prevention; (2) secure the

prompt report of recognized cases and of suspected cases, so that preventive measures may be begun early; (3) advise and have carried out at the patient's bedside efficient methods of prevention; (4) have preventive measures continued as long as the dejecta are infective; (5) discover bacillus-carriers, and safeguard against the spread of infection from them; (6) secure proper disposal of sewage; (7) prevent the introduction of infection from without through the water, milk, and general food supply; (8) secure the co-operation of practicing physicians; (9) let the subject be discussed in the local medical society, so that the members may become informed in the principles of prevention; (10) make the health office educative.

In order to carry out the above most excellent program, the Health Officer must be not only well qualified for his position, fearless in the discharge of his duties, but also most tactful in his dealing with the people, and especially with his professional brethren.—S. L. J.

MEDICAL REVIEW OF REVIEWS.

Beginning with the January 1910 issue the old established *Medical Review of Reviews* will be edited by Dr. William I. Robinson, editor and founder of the famous *Critic and Guide*, *Therapeutic Medicine*, and *The American Journal of Urology*.

The editorial offices of the *Medical Review of Reviews* have been removed to 12 Mt. Morris Park W., New York City. The scope of the journal will be enlarged and every department will be strengthened. The subscription price remains the same, namely, \$2.00 per annum.

THE NEW SUTURE.

A Question of Priority.

WHEELING, W. VA., 18th Feb., 1910.

To the Editor of *The West Virginia Medical Journal*:

Dear Sir: I desire to reply through the columns of the JOURNAL to the letter of December 16th last, that appeared in the January issue from Wm. Tod Helmuth, 26 62d street, New York. This reply would have been made sooner but that my attention was not drawn to his letter in time for the February issue. His letter raises a question between himself and me, of priority in devising the suture described with cuts in my article in the September issue. He says: "This suture was devised by myself, and has been used by me for the past ten years, and I have had the honor paid me by having it called after my name," and then asks the editor of the JOURNAL for correction. Since having read his letter I am informed that he is a homeopathic surgeon of repute. If Dr. Wm. Tod Helmuth devised this

suture himself, and has used it for the past ten years, and has had the honor of having it called by his name, it should have been an easy matter for him to produce the requisite evidence of his claim, instead of contenting himself, as he did, with mere allegation. That is an easy and cheap way of achieving notoriety suddenly, and has been tried with some show of success even out here in West Virginia, but the trouble with it is that it does not last, and will not stand inspection. But New York is more populous.

My article stated that I had "devised a suture that practically overcomes" certain difficulties, and gives illustrations. This suture was devised by myself, unaided by Dr. Wm. Tod Helmuth and all his works, or any of them, or of or by anyone else. Indeed I did it without so much as knowing of him. According to the custom, time-honored and prevalent, among regular practitioners, my device was freely and without price, but modestly withheld, given to the profession and the public, as mentioned in my article. Yet for six months previously, it had been put to the test by a number of surgeons, and had justified all that was claimed for it in my article. In addition to this, it was presented to and met with the hearty approval and commendation of professors in standard medical schools east and west. I may be indulged a reference to the kind words of one in particular who, besides being a professor in the medical department of one of the great universities of the country, is also the author of a work on gynecology, declared to be altogether one of the best in the English language, and he says: "It is so simple that I marvel at the fact that no one has thought of it before." One at his point of vantage ought to know if anyone had ever thought of it, or in any event published aught of it, before. I am quite sure that I had never thought of it before, nor read of anyone who had, and if anyone else, of what school of medicine soever, ever did, without paying due regard to the customs above mentioned, no question of priority could very well be determined in his favor.

In the honorable and high-toned practice of the medical profession, all things that make for the advancement of the profession, and for the alleviation of human suffering and deformity, are not hid in a corner, but are voluntarily and in the first instance subjected to the scrutiny of the light that there may be more light; and if and when hid in a corner they only come forth to raise questions of priority, there shall no priority be given them, and certainly there is nothing to correct.

If to the public and to professional world of medicine and surgery, Dr. Wm. Tod Helmuth has given of the best that is in him, as it is the teaching and practice of the regular school to do, and he can properly show that he devised this suture himself and has used it for ten years in his practice, and has had the honor paid him of having it called after his name, he will find no one more ready and willing than myself, to accord him his full meed of praise and credit.

If he can do this, he should so respond as fully to relieve his claim of doubt.

Very truly,

R. M. McMILLEN, M.D.

A NATIONAL TUBERCULOSIS SUNDAY ON APRIL 24th.

Announcement of a national tuberculosis Sunday to be held on April 24th in 215,000 churches of the United States was made today by the National Association for the Study and Prevention of Tuberculosis.

Following campaigns against consumption that have been carried on in the churches of hundreds of cities, and sermons on tuberculosis that have been preached before thousands of congregations during the past year, a movement has been started to establish a permanent tuberculosis Sunday, on which it is hoped that every one of the 33,000,000 churchgoers in the United States will hear the gospel of health. It is planned to enlist the active co-operation of anti-tuberculosis organizations, labor unions, fraternal organizations, and other bodies together with the churches in the movement. The aid of leading churchmen in many of the principal denominations has already been offered. All of the large interdenominational bodies, such as the Young Men's Christian Association, the Young Women's Christian Association, the King's Daughters and Sons, and the various young people's societies are also in sympathy with the anti-tuberculosis campaign.

It is planned that on April 24th tuberculosis sermons shall be preached in all the churches of the country. Literature will be distributed to members of the congregations, and in every way an effort will be made to teach that tuberculosis is a dangerous disease and that it can be prevented and cured.

Clergymen who desire to obtain additional information in regard to tuberculosis will be able to secure literature from state and local anti-tuberculosis associations and boards of health, as well as from the National Association.

RELIEF FOR NEEDY PHYSICIANS.

To the Secretary of Each State and County Medical Society, and Other Interested Members:

At the last meeting of the American Medical Association at Atlantic City the following report of Committee on Miscellaneous Business was adopted: "The Committee recommends that the President of this Association appoint a committee of five members to inquire into the desirability and practicability of the establishing under the auspices of the American Medical Association of a fund for the assistance of physicians disabled by sickness, and for a sanatorium for the treatment of such members of the Association, as may be afflicted with tuberculosis or similar diseases; such committee to report to the House of Delegates at the next annual meeting of the Association."

As a basis for wise action the Committee urges that the officers of State and County Medical Societies, and others interested in the subject, should at the earliest possible dates forward to the Secretary of the Committee, Dr. A. C. Magruder, Colorado Springs, Colorado, answers to the following queries, with some account of any special cases that seem to illustrate the need for provision for disabled members of our profession.

1. Is there any provision by your State Medical Society, or local society, for the care of destitute and disabled physicians and those dependent upon them? If so, how is such care provided for?

2. What number of instances of special need for such assistance (or sanatorium treatment) have arisen in your locality within the last five years and what number of your members need such assistance now?

3. About how many of your County Medical Society are at present afflicted with tuberculosis or similar diseases; or have, within the last five years died, or withdrawn from professional work on account of such diseases?

It is earnestly requested that this matter be brought before each County and State Society at its next regular meeting, and that the desired information be furnished our Committee at the earliest possible date.

Fraternally yours,

- EDWARD JACKSON,
Denver, Colorado.
- JEFFERSON R. KEAN,
Washington, D. C.
- A. T. BRISTOW,
Brooklyn, N. Y.
- H. B. ELLIS,
Los Angeles, Cal.
- A. C. MAGRUDER,
Sec'y, 305 N. Tejon St.,
Colorado Springs, Colo.

State News

Just as we go to press the sad news reaches us, through the daily papers, that ex-President Barber of Charleston is dead. For about two years he has been suffering with pernicious anemia, and a fatal result has of course been expected, but the news is no less sad. Barber's was one of those cheerful and sunny souls that permitted no gloom in his presence. A few years ago, when he crossed the ocean, the captain of the vessel, in a speech to the passengers, pronounced the voyage the most delightful he had ever made, adding that "this was largely due to the cheerful presence of our genial friend, Dr. Barber." We are quite sure our departed friend, were he permitted to speak, would echo the words of Tennyson, and say:

"And may there be no sadness of farewell
When I embark."

We feel certain that heaven is made more bright by Barber's presence.

Parkersburg has adopted a new milk ordinance framed along the lines of milk inspection, license, etc.

We are glad to report that Dr. T. A. Harris, long seriously ill with a large carbuncle, is still increasing in strength.

Dr. C. J. Scott of Parkersburg started on a tour around the world early in February. The trip will occupy over four months. Dr. Shaw of Cincinnati is looking after his practice.

Dr. Solomon Roberts has moved from Rockport, Wood county, to Parkersburg.

Dr. L. D. Wilson, whose interesting letters from the Orient are now appearing in the JOURNAL, arrived home the middle of February. We extend to him a hearty welcome! He was unfortunate enough to have an attack of grippe while on the Pacific, but soon recovered and is again in his usual health, and doing his accustomed work. He reports that there were over a dozen medical men on the voyage, and one, an invalid on leaving home, died from malignant disease while crossing the Pacific on the homeward journey.

A daughter of Dr. J. McKee Sites of Martinsburg, who has been quite ill from a pin scratch infection, is reported as somewhat improved.

Dr. S. L. Jepson of Wheeling, on invitation of the Principal of the Academy of Washington and Jefferson College, Pa., delivered to the students an address on Feb. 8th on the "Claims of the Medical Profession." This was one of a course to be delivered on the claims of the various vocations, and intended to guide the students in the choice of a career in life.

On the evening of the same day, the doctor addressed a full house of men in Town Hall on "The Social Evil and the Venereal Peril." He also gave this address early last month to about 200 men in the town of Hundred, Wetzel Co. The men in the oil fields know something about the venereal peril, but will they avoid it?

During a recent visit to Washington, Pa., the seat of his literary alma mater, the editor had the great pleasure of attending a meeting of the County Medical Society. About forty members were present. Three lectures were delivered on chest and heart wounds, and empyema. All were interesting, and the meeting was a success. Not all good lecturers are attached to the Medical Colleges.

Society Proceedings

AMERICAN PROCTOLOGIC SOCIETY.

Abstract of Proceedings of 11th Annual Session.

(Continued from February issue.)

"SIR CHARLES BALL'S OPERATION FOR INTERNAL HEMORRHOIDS",

Was the title of a paper read by G. W. Combs, M.D., Indianapolis, Ind., in which he briefly described the operation advised by Mr. Ball for the removal of internal hemorrhoids which consists: (1) of making a curved incision opposite the pile being treated, terminating in the mucous membrane on either side of the pile, the greatest convexity not including more than one-third of the revolved anal ring; (2) of bluntly dissecting

the pile from the external sphincter, the dissection being carried upward until healthy mucous membrane is reached; (3) of crushing the pedicle in a powerful clamp; (4) of passing a heavy silk ligature subcutaneously in the remaining two-thirds of the revolved anal ring and through the crushed mucous membrane pedicle, one part of which is constricted in a first tying and the whole of it in a second; (5) of tying the ligature very tightly, thus bringing the remaining two-thirds of the revolved anal ring up into position, maintaining it there until union takes place and constricting the pedicle so that sloughing will occur.

The results obtained by the writer have not been so favorable as those that should follow the procedure as indicated by the author.

The following are the writer's conclusions:

1. The post-operative pain is greater than after the usual ligature or clamp and cautery method.
2. The duration of the healing period is not shortened because of the sloughing of the ligature from either the skin or pedicle before union takes place, leaving the wounds to heal by granulation.
3. There is a necessity for unusual watchfulness that all ligatures may be removed as they slough.
4. Failing to secure primary union, skin-tabs frequently remain for subsequent removal.
5. No time is saved by this modification of the ligature operation.
6. There is danger of secondary hemorrhage from an early tearing off of the pedicle by traction.

"THE TECHNIC OF THE INJECTION TREATMENT FOR HEMORRHOIDS",

Was the title of a paper by Dr. Edwin A. Hamilton, of Columbus, Ohio, who stated that the injection treatment does not have a wide application; as its indiscriminate use is followed by embolus, abscess and other complications; and relapses are prone to occur except in cases especially adapted to this method. The instruments needed are a cone-shaped anal speculum with one broad fenestrum and a special copper-tipped long needle of large caliber with an outside barrel which may be screwed to the needle proper to regulate the depth to which it may be inserted. The solution is 10% carbolic acid, 90% oil of sweet almonds. Neither water nor glycerine is used in the solution as they cause pain. When the sphincter is normal or hypertrophied, the hemorrhoids are never strained outside of the rectum and treated there, but are allowed to protrude through the fenestrum of the speculum and attended to in their normal location. In cases where the sphincter is dilated and the hemorrhoids are easily replaced, they may be treated outside, but under no other conditions. From four to eight drops are injected in a hemorrhoid, only one injection being made at one treatment. The patient rests in the recumbent posture for several minutes. No application or dressing is applied. The bowels are moved after the second day. Subsequent treatments may be administered at intervals of five days.

"THE TEST DIET; NITROGEN AND SULPHATE PARTITIONS. AS AN AID TO DIAGNOSIS IN INTESTINAL DISTURBANCES".

By JEROME M. LYNCH, M.D., New York City, N. Y.

Who stated that the subject of test-diet, as suggested by Professor Schmidt, is one well worthy of study. If, after a proctoscopic examination of the rectum and sigmoid, and an examination of the stomach contents, a case is still obscure, the test-diet should be given, and an examination of the feces and a thorough examination of the urine, with nitrogen and sulphate partitions, be made. Otherwise, one cannot conscientiously say he has exhausted all the resources at his command.

These tests, he admitted, are not always conclusive, but in most cases they are of great help; often, a positive solution of doubtful problems.

Of twenty-five cases under observation during the last six months, he found three of especial interest. Case I was referred for treatment on account of moderate diarrhea, with prolapsing and bleeding internal hemorrhoids. The stomach had been previously examined with negative results. Proctoscopic examination, except for hemorrhoidal condition was negative. Put on test-diet. The specimen of feces examined had a somewhat pasty consistency, a light yellow color, normal odor and showed no macroscopic admixture. Microscopic examination showed the usual amount of striped muscle fiber, carbohydrate food remnants and granular detritus, with an excess of free fat and fatty acids. The starch was properly digested; bacterial flora, not excessive; reaction, neutral. Sublimate test, negative. Fermentation test, negative. The specimen showed evidence of deficient bile admixture.

The analysis of a twenty-four hour specimen of urine showed the specimen to contain no albumen and no renal elements, with a normal daily amount of urine, a normal specific gravity and a normal daily excretion of urea. The sulphate ratio as well as the ratio of the urea and uric acid was somewhat depressed, with the presence of a marked excess of indican.

Analysis of this report disclosed at once the cause of the diarrhea, namely: deficiency of bile with excess of fatty fluids and depressing of sulphate ratio, causing auto-intoxication.

The two other cases were equally interesting.

Relative to the determination of the clinical significance of faulty sulphate and nitrogen partition, the writer stated that the relative increase in ethereal sulphate may be due to one of several causes, among which were mentioned—stasis in the bowel, ingestion of decomposing nitrogenous food, improper digestion of food in the stomach and upper intestine, by diminution or absence of hydrochloric acid and bile, the result of excessive or faulty bacterial fermentation in the lower portion of the small intestine and the upper portion of the large intestine. This process may exist without an actual toxemia, and an actual toxemia may exist without this particular putrefactive process; but they are usually associated.

Excess of ethereal sulphate is usually associated with an excess of endoxyl sulphate, though

not always. Without means of estimating the amount of the actual products of toxemia, the relative excess of ethereal sulphates is used as a guide, although subject to errors, as are other guides.

Fault in the nitrogen partition would seem to justify the inference that the hepatic function is disturbed. The decrease in the relative amount of urea nitrogen probably indicated the degree of the fault. With this decrease, there is a relative increase in the amount of one or more of the other forms of nitrogen in the urine. In the severe toxemias of pregnancy, pneumonia, etc., this is chiefly in ammonia nitrogen and creatinin nitrogen; in digestive disturbances the increase in the so-called extractive nitrogen, and in lithemic cases and in those of cyclic vomiting, headache, or albuminuria, in the purin nitrogen as well, particularly during the acute attack. In cases of enteritis or colitis, owing to the destruction of cells, the purin nitrogen is often increased.

Faulty nitrogen partition may exist without a toxemia but a hepatotoxemia without a faulty nitrogen partition is practically unknown. Acidosis frequently accompanies a faulty nitrogen partition; but it would seem an evidence of the toxemia rather than of the fault in hepatic function, though this is disputed by some.

"MULTIPLE ADENOMATA OF THE RECTUM."

By JAMES P. TUTTLE, M.D., New York City.

Who stated that this distinction between multiple adenomata and polypi is more marked clinically, than histologically. Pedunculated adenomata or polypi may exist in varying numbers without constituting a true multiple adenomata. Age and its relation to the two types; distinction between the two types in proportion to the number of growths; the relative frequency of the growths in different portions of the bowel; growths found largely in the sulci and not in the mucous folds of the bowel. What is the probability of malignant metamorphosis when not interfered with? The tendency to recurrence, in malignant form, after surgical measures? Results of internal and local medication; results of functional rest to the parts. Does radical operation furnish the best hope for the patient, in view of clinical experience?

"SURGICAL TREATMENT OF DIARRHEA AND A DESCRIPTION OF A NEW CECOSTOMY WHICH PERMITS FREE IRRIGATION OF BOTH THE SMALL AND LARGE INTESTINE".

By SAMUEL GOODWIN GANT, M.D., LL.D., New York City, N. Y.

In this article attention was first called to the frequency of occurrence of chronic diarrhea and the simplest and most reliable methods were briefly outlined of diagnosing ulcerative lesions of the colon inducing diarrhea and also the relative frequency was mentioned between gastric and hepatic diarrhea and those caused by local disease of the large intestine. The author then proceeded to make the following points:

FIRST: That acute attacks of diarrhea could sometimes be controlled by diet, rest and internal medication and, further, that the frequency of the evacuations could occasionally be diminished by these therapeutic measures in chronic diarrhea but that a cure of the latter could be accomplished only in rare instances in this way.

SECOND. That the treatment of chronic ulcerative colitis by internal medication should be abandoned because it is harmful in many ways and utterly unreliable in so far as a cure of the diarrhea is concerned.

THIRD. That *direct bowel treatment* by lavage or medicated irrigation introduced through the anus or from above through the appendix or cecum, is the only rational treatment for diarrhea due to ulcerative lesions of the colon.

FOURTH. That operative procedures are contraindicated except in cases where, for any reason, the colon tube cannot be introduced sufficiently high, to insure thorough washing out of the entire large bowel and when operative procedures are declined.

FIFTH. That the surgical treatment of chronic diarrhea gives universal satisfaction and that he recommended appendicostomy and cecostomy for the relief of this ailment with the same confidence that he did appendectomy for appendicitis.

SIXTH. The relative values of *resection, intestinal exclusion, colostomy, appendicostomy, simple cecostomy, and cecostomy* with an arrangement for irrigating the small intestine, (Gant's operation), in the treatment of chronic diarrhea, were fully discussed. The results of his experience show that appendicostomy and cecostomy could be performed most quickly, where the least dangerous, give the best results and were less often followed by unpleasant sequelae than the other procedures.

SEVENTH: He stated that formerly he was prejudiced in favor of appendicostomy, but that a more recent and larger experience caused him to look with greater favor upon cecostomy, especially when combined with irrigation of the small intestine. He maintained that his cecostomy was suitable in all cases of chronic diarrhea because it could be employed when the frequent stools were due to both an enteritis and an ulcerative colitis and when the lesions were confined to the colon alone, and, further, that his operation should supercede appendicostomy, in many instances, because the appendix was frequently unfit for irrigating purposes because it was too short, too narrow, strictured or bound down by adhesions and often had a tendency to become necrotic, slip back into the abdomen, become closed when not kept open by the introduction of a catheter and that appendicostomy was not suitable when the small bowel was diseased.

EIGHTH. He then briefly described the technic of his cecostomy with provision for small intestine irrigation, the main idea of which consisted in making an opening in the cecum and inserting two tubes, one into the cecum and the other into the small intestine through the ileo-cecal valve by the aid of a catheter-carrier. He claimed that the advantage of this procedure over other operations, was that either the small or large bowel could be irrigated at will and that there was no fecal leakage about the catheters.

NINTH. In concluding his remarks, he summarized the results obtained by him in the surgical treatment of chronic diarrhea by the through and through method and reported 38 cases treated by appendicostomy, and 14 by cecostomy, 8 of the latter being operated upon by the Gibson, and the remainder by his new procedure and said that the universally successful results obtained by surgery in this class of cases is far better than those obtained by the use of the time-worn way, where they depend upon dieting, rest and medication, as practiced by many physicians to-day.

THE CABELL COUNTY SOCIETY.

HUNTINGTON, W. VA., Feb. 12th, 1910.

This society met in the Hotel Frederick Feb. 10th with President Rader in the chair. Dr. Moore reported a case of respiratory embarrassment in a child, resulting fatally, of particular interest because the doctor could discover no cause for the trouble. Secretary reported a case diagnosed as pellagra and exhibited a specimen of carcinoma of stomach with metastasis in liver.

Committee on Incorporation of the Society reported, and after much discussion it was decided to continue the committee with instructions to give a further report at the next meeting. It seems to be the consensus of opinion among our members that the State Association should be incorporated, as the local societies are only component parts of the State Association.

The resignation of membership of Dr. B. L. Hume of Barboursville was accepted.

Report of Committee on Program for the year was accepted. (Parenthetically, I will add, that as soon as the programs are prepared I shall send copies to all the county secretaries.) A committee was appointed to act with the President in arranging for one or more public meetings during the year. This committee consists of Drs. McGuire, Fitch and Pritchard.

Fraternally yours,

JAS. R. BLOSS, Sec'y.

BARBOUR-RANDOLPH-TUCKER SOCIETY.

The Barbour-Randolph-Tucker Medical Society, through its president and secretary, has arranged with County Superintendent W. J. Long to conduct a campaign against tuberculosis.

Various schools in the different districts will be visited and addresses will be made by able speakers on the subject.

Patrons are earnestly requested to be present at these meetings and to help make them a success.

The teachers of the schools are expected to make special effort for a large attendance.

No better work can be done against tuberculosis than in the public schools. It has been shown that 50 per cent of school children are afflicted with the disease.

Meetings will be held either day or night at the time and places given.

Superintendent Long will be present on all these dates and will be accompanied by physicians and in most cases by a prominent teacher or minister.

Dr. McBee, secretary of the society, will make arrangements with the physicians and others to

supply the appointments on the different dates, definite announcements to follow.

Randolph is the first county to begin this work in the State and let her be known as a leader

GRANT-HAMPSHIRE-HARDY-MINERAL MEDICAL SOCIETY.

KEYSER, W. VA., Jan. 29, 1910.

Editor West Virginia Medical Journal:

The Grant-Hampshire-Hardy-Mineral Medical Society held its regular quarterly meeting in Romney on Jan. 27. Dr. E. K. Wilson of Romney and Dr. K. Taylor of Slanesville were elected members of the Society.

Dr. J. W. Shull, the incoming President, delivered an excellent address, and urged every member to use his influence to build up the Society by bringing in new members.

Good papers were read by Dr. W. M. Babb of Keyser and Dr. A. H. Hawkins of Cumberland, Md.

The Keyser Academy of Medicine, of which all the doctors of Keyser are members, was organized in November of last year with Dr. C. S. Hoffman, President, Dr. W. M. Babb, Treasurer, and Dr. Geo. W. Kenney, Sec'y. Meetings are held every two weeks.

W. HOLMES YEAKLEY.

HARRISON COUNTY SOCIETY.

At the annual election of officers of the Harrison County Medical Society, held Dec. 30, the following members were elected to serve for 1910: President, Dr. C. W. Halterman, Clarksburg; Vice President, Dr. R. B. Nutter, Enterprise; Secretary, Dr. C. C. Jarvis, Clarksburg; Treasurer, Dr. J. B. Winfield, Clarksburg; Member of the Board of Censors, to fill the expired term of Dr. H. V. Varner, Dr. Fleming Howell, Clarksburg. Delegates to the meeting of the W. Va. State Medical Association: Dr. John Folk, Bridgeport; Dr. C. C. Jarvis, Clarksburg; Dr. B. F. Shuttleworth, Clarksburg.

An amendment to the By-Laws, raising the annual dues from three to four dollars, was voted on and adopted.

TAYLOR COUNTY MEDICAL SOCIETY.

CRAFTON, W. VA., January 29, 1910.

Editor State Journal,

Wheeling, W. Va.

Dear Doctor: Please send my STATE JOURNAL to Mercy Hospital, Baltimore, Md., till further notice. I am leaving to take up special work, and will be away for several months.

Not much doing in medical circles in Taylor county.

Officers for 1910: President, J. S. Whitescarver, Grafton; Vice President, W. C. Curry, Flemington; Secretary, I. H. Doyle, Grafton; Treasurer, C. A. Sinsel, Grafton.

Yours truly,

JOHN H. DOYLE, Sec'y.

Reviews

THE PREVENTION AND TREATMENT OF ABORTION.—BY FREDERICK J. TAUSSIG, *Lecturer in Gynecology, Medical Department of Washington University, St. Louis.* 59 illustrations. Published by C. V. Mosby Company, St. Louis Mo.

It was the inestimable privilege of the reviewer to hear the six lectures on abortion by that "prince among medical men," Prof. T. Gaillard Thomas, at the College of P. & S., in New York City, during the season of 1889-'90. Those lectures were considered classics at the time of their publication by Appleton in 1890, and, as Dr. Taussig observes, "there has not appeared since in the English language any monograph dealing in a comprehensive way with this important subject." Text books very naturally take up this question, usually in one brief chapter, but as the author remarks in his introduction, "not at all proportionate to the importance of the subject." Certainly, no apology need be made for giving to the profession so interesting a work as the one before us; when we stop to reflect that out of five pregnancies there is one premature expulsion of the ovum, and with a mortality higher than after confinements.

Complications involving operative measures occur with far greater frequency, and every practitioner knows what a large proportion of his patients date the onset of their trouble to a mismanaged abortion. It is a far more serious condition than we formerly considered it, and demands our most careful consideration and analysis."

This book, very naturally, differs widely from the lectures of Professor Thomas, in that it represents a critical review of all European and American obstetricians, the author refusing, as he says, to inject his own personal views to an undue degree. Thomas, on the other hand, distinctly says in his first pages that: "In these lectures I am not going to give you the opinions of the latest authorities in Vienna, London or Paris, but that I will in part to you all that thirty-five years of practice has taught me about abortion."

The reviewer doubts the wisdom of the author suggesting to the general practitioners, to whom, he distinctly says in his preface, the book is primarily addressed, the omission of the sterile rubber gloves in the digital removal of the retained placenta. He writes: "It is not easy to loosen the placenta from its attachment with one finger through a cervix that barely admits of its entrance, and gloves make the work more difficult."

Taussig will not find many gynecologists agreeing with him in his advising that "greater adoption of Ecouvillonnage should be furthered" in this country. This step, liberating the uterus of adherent placental fragments with a brush bearing a twisted wire handle, and usually a protruding lit of wire at its summit—such a brush is used for cleaning a test tube—should only be mentioned in any book for practitioners, to be condemned.

The author is certainly to be congratulated on the timely advice given with regard to the sharp

curette in the technique of curettage. He suggests the blunt spoon, where curettage is necessary, as the "practical and safe instrument for this work." That literature contains many instances of perforation due to the sharp curette, and that this accident occurs much oftener than has been reported, we all know. Many a woman has been hurried to her grave from the use of the sharp and too vigorous scraping of the uterine cavity.

The illustrations, fifty-nine in number, are new and very helpful throughout.

Part one contains eight chapters taking up the subjects of frequency, anatomy of early pregnancy, pathology, etiology, symptoms, clinical course and diagnosis.

Part two deals with the prevention of the preventable expulsion of the human ovum, and includes chapters teeming with interest, handling the subject of criminal abortion, education and legislation in a logical and forceful manner.

Part three takes up the subject of treatment, and is rich in material which should be on the table of "live books" of every wide-awake practitioner.—F. LEM. H.

EXAMINATION OF THE URINE: A MANUAL FOR STUDENTS AND PRACTITIONERS.—BY G. A. DESANTOS Saxe, M.D., *Instructor in Genito-Urinary Surgery, New York Post-Graduate Medical School and Hospital.* Second edition, enlarged and reset. 12 mo. of 448 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1909. Cloth \$1.75 net.

This book presents in a concise and practical manner, yet not too briefly, the subject of urinalysis.

It will appeal to the student as well as the busy practitioner who wishes to avail himself of the more recent laboratory methods of making and confirming his diagnosis.

It treats of the composition of urine in health, selection of specimen, chemical and microscopical findings. Urinary diagnosis is fully considered. A separate description of the diseases of the urinary tract is given, with the characters of the urine fully described under each one, special stress being given to the clinical significance of abnormal constituents or excessive amounts of the normal.

It contains a working description of the important new tests: i. e., Cammidge's reaction, urotoxic coefficient, and devotes a chapter to The Relation of Urea, Ammonia and Undetermined Nitrogen in the Toxemias of Pregnancy.

In the appendix is given a routine method of urine examination sufficient for every-day purposes, that shortens the time and labor required, yet is accurate enough to meet insurance examination requirements. This is an invaluable work, and should be at hand for ready reference in every medical laboratory and library.—GILLESPIE.

A PRACTICAL STUDY OF MALARIA.—BY WILLIAM H. DEADERICK, M.D., *Member American Society of Tropical Medicine; Fellow London Society of Tropical Medicine and Hygiene.* Octavo of 402 pages, illustrated. Philadelphia

and London: W. B. Saunders Company. 1909. Cloth, \$4.50 net; Half-Morocco, \$6.00 net.

This work takes up malaria from the beginning of its history and brings it down to the present day.

In the Introduction mention is made of the many authors who have done work in the investigation of this disease, and special mention of the few who have distinguished themselves.

Under Etiology it goes into the supposed causes before the discovery of the part played by the mosquito, and later classifies the mosquitoes of North America, and describes particularly those connected with malaria.

The chapters on Pathologic Anatomy, Clinical History, Diagnosis, Prognosis, Prophylaxis and Treatment are very full. Under Diagnosis a very accurate and exhaustive account is given of the examination of the blood. Under Prophylaxis the best measures for the destruction of the mosquito are given.

The book abounds in tables of statistics, and has many excellent illustrations.

Hemoglobinuric Fever is described fully under a separate head in each of the chapters.

It is a very complete book, and will be very valuable as a book of reference, especially so as the investigations of the authors referred to are mentioned, and information given in the back of the book as to where these articles may be found.—J. W. M.

A TEXT-BOOK OF THE PRACTICE OF MEDICINE.—By JAMES M. ANDERS, M.D., PH.D., LL.D., *Professor of the Theory and Practice of Medicine and of Clinical Medicine, Medico-Chirurgical College, Philadelphia.* Ninth Revised Edition. Octavo of 1326 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company, 1909. Cloth, \$5.50 net; Half-Morocco, \$7.00 net.

No work on Practice ever sprang more quickly into pronounced popularity. At the time of the appearance of the first edition (1898) the author was not very widely known, but this book soon made him famous. Each edition has brought marked improvements which have made the work extremely popular. The present edition shows many alterations and additions, a number of new conditions and some new diseases being fully discussed, and the latest new things in therapeutics presented in the author's clear yet comprehensive manner. Here we can learn of the serum treatment of cerebrospinal meningitis, the magnesium sulphate treatment of erysipelas, the tuberculin tests for tuberculosis, Grocco's sign in serofibrinous pleurisy, and many other new and valuable things.

We have reviewed this book twice in recent years, and hence need only to add that of all the works on Practice in our library, we find ourselves turning to this of Anders the most frequently, and always with satisfaction.

INTERNATIONAL CLINICS—A Quarterly of Illustrated Lectures and Original Articles. Edited by W. T. HONCOPE, M.D., Phila. Assisted

by OSLER, MUSSER, BILLINGS, MAYO, and others. Vol. IV. 19th Series. J. B. Lippincott. \$2.00.

This series is so familiar to the profession that no lengthy notice is necessary. That it has been so long before the reading public is evidence of its high character. This volume contains a greater variety of papers than usual, dealing with medicine, surgery, Roentgenology, gynecology, obstetrics, pediatrics, parasitology, laryngology and pathology. Flexner on Antimenigitis Serum, Wainwright on Hypnotism and Psychotherapy, Biering on Pernicious Anaemia, Rectenwald on the Gravity Method of Removing Adherent Placenta, Deaver on the Indications for the Removal of the Prostate, are a few of the very valuable papers contained in this most excellent volume. A number of the articles are well illustrated.

VITAL ECONOMY, OR HOW TO CONSERVE YOUR HEALTH.—By JOHN H. CLARK, M.D. Published by A. Wessels, New York. 50 cents.

A small volume of 119 pages, dealing in a very practical way with the care of one's health. It treats of bathing, exercise, fresh air, etc. The author thinks a weekly bath is all sufficient, thinks fresh air may be overdone, and on a number of points indicates that he does his own thinking. When the reader takes up this little book he will probably finish it before he lays it down, so interesting is it.

TREASURES OF TRUTH.—GEO. F. BUTLER, M.D. Chicago: DeWitt Clough, Pub'r. 75 cents.

A neatly printed and bound little book, by a medical author well known as a very graceful writer. The chapters deal with How to Live, Some Thoughts on Work, The Successful Life, Worry and Trouble and How to Overcome Them. It is a book to pick up when one has a minute or two to spare. It contains much wisdom, is very quotable, and altogether interesting.

ANNALS OF SURGERY.—Jubilee Number. December, 1909.

This is perhaps the most notable single issue of a Medical Journal the world has seen. It contains 400 oct. pages, and the writers are almost all men of international fame in medicine. Sir Wm. Macewen, Harvey Cushing, Chas. Mayo, W. Arbuthnot Lane, C. L. Scudder, Hugh M. Young, B. G. A. Moynihan, Daniel N. Eisen-drath, and John B. Deaver are a few of the writers. No modern surgeon can afford to miss this strong collection of papers. The book is well illustrated. J. B. Lippincott Co., Phila.

SAUNDERS' BOOKS—A descriptive catalogue of Medical and Surgical Works.

W. B. Saunders Company, Philadelphia, have just issued this edition—the thirteenth—of their handsome illustrated catalogue. It contains some twenty new books and new editions, and besides numerous black-and-white illustrations, there are two-color cuts of special value. Every physician may obtain a copy for the asking.

PAMPHLETS RECEIVED.

HYGIENIC LABORATORY.—

Bulletin No. 58—Digest of Comments on the Pharmacopoeia of the U. S. and the National Formulary. MOTTER & WILBERT.

Bulletin No. 59—The Oxidases and other oxygen-catalysis concerned in biological oxidations. J. H. KASTLE.

Bulletin No. 61—Relative Physiological Activity of Some Commercial Solutions of Epinephrin. W. H. SCHULTZ.

Influence of the General Condition of the Patient on the Result of a Surgical Operation. Surgical Shock. Some Accepted Facts and Mooted Points in the Management of Appendicitis. Ununited Fractures. Extraperitoneal Implantation of the Ureters into the Rectum in a case of Extrophy of the Bladder. The Necessity of Secondary Removal of the Appendix after simple incision and drainage. All by STUART MCGUIRE.

Review in Surgery—Clinical Surgery, Joint Affections. ALEXUS McCLANNAN.

Stuttering in School Children. E. B. MCCREADY.

Protein Diet for the Sick and the Convalescent. E. E. SMITH.

The Symptomatology of Prostatitis. WM. C. BRYANT.

The Rational Treatment of Splanchnoptosis—Management of Exhaustion States in Men. J. MADISON TAYLOR.

Medical Outlook

RABIES DEVELOPING NINE MONTHS AFTER INFECTION.—G. H. F. House, M.D., Indianapolis, reports a case in Indianapolis *Med. Journal*, which is of interest. Nine months after being bitten on the wrist by a little dog, Mrs. C. developed a typical case of rabies, from which she died two days after the first symptoms. The wounds were slight. They were cauterized with nitrate of silver and lysol and healed at once.

G. D. L.

ALCOHOL IN PNEUMONIA.—Fock, of Hamburg, sent a question blank to a large number of medical men in Germany, Austria, Switzerland, Denmark, Sweden, and England, especially the professors of internal medicine and other internists, asking their experience in regard to the use of alcohol in pneumonia. The questions asked were: whether or not alcohol was given in every case of pneumonia or only under special circumstances, the form in which it was given, whether or not it was given to hard drinkers, what effects were expected from it and what effects were realized, and if the same effects could not be obtained by other means. The general conclusions from the large number of replies received are that there did not seem to be any difference in the final outcome whether patients had been treated with or without alcohol. About equal numbers recover with and without it. Some physicians had the subjective impression that convalescence was shorter when alcohol had not been given. Fock urges hospitals to collect statistics on a large scale by treating patients alternately with and without alcohol.—*Medical Bulletin*.

PELLAGRA.—The *Journal* of the S. C. State Med. Assoc. for Nov., 1909, is a Pellagra number, there being nine original articles on this subject. H. H. Griffin, M.D., of Columbia, has an article entitled, Is Pellagra Communicable or Hereditary, from which we abstract the following: Medical opinion in Italy seems unanimously against the theory that pellagra is contagious or infectious. The health authorities of certain States of the Union, however, are trying to have the cases isolated. There seems to be a hereditary predisposition to the disease. The offspring of parents afflicted with pellagra are generally of poor development, mental and physical. Children of generations of pellagrins fall easy victims to the disease. There is also a predisposition to physical and mental degeneration and insanity. This may account for the apparent increase of insanity in our Southern States. G. D. L.

THE DECHLORINATION TREATMENT OF DROPSY.—In the *Scottish Medical Journal* for February, Dr. F. D. Boyd has called attention to the value of the dechlorination treatment of dropsy—a method which we owe to the French and which has had little vogue in England. Widal pointed out that in renal disease, when sodium chloride accumulates in the body, oedema results and albuminuria increases. On the other hand, when sodium chloride is withheld from diet the albuminuria diminishes and the oedema may disappear. Dr. Boyd relates the following striking example of the value of this treatment. A man, aged 57 years, was admitted to the hospital with swelling of the legs, abdomen and hand. For twenty-five years he had suffered from attacks of bronchitis every winter. Ten years before admission he first noticed swelling of the ankles. In the last four years he had suffered from frequent attacks of dyspnoea and had seldom been free from oedema of the legs. For three months he had been confined to bed. On admission there were bronchitis, general anasarca, ascites, considerable effusion into both pleural cavities and dilated heart. The radial artery was thickened and the blood pressure was low. The urine was scanty and contained albumin, but no formed elements were found. A light diet and one and one-half pints of fluid were given in the twenty-four hours. During the next six days the oedema slightly increased and the arterial pressure rose. Then a salt-free diet, consisting of bread made without salt, meat, fish, and fowl, cooked without salt, and potatoes cooked without salt and eaten with fresh butter, was prescribed. The amount of the fluid taken was kept at one and a half pints in the twenty-four hours. On the second day improvement began; the arterial pressure fell, and the quantity of urine more than doubled. Diuresis was maintained until all oedema had disappeared. The intake of chlorides on this diet was about two grains in twenty-four hours. There was an enormous excretion of chlorides which followed closely the excretion of water. The weight of the patient fell from 190 to 132 pounds, and in seventeen days he became free from the oedema which had lasted for years. Frequently, even in dropsy resulting from grave cardiac and renal disease, Dr. Boyd has seen oedema disappear on withdrawing salt from the diet when all other means failed.—*N. Y. State Jour. of Med.*

GELATIN AND SALT-WATER INJECTIONS FOR INTESTINAL HEMORRHAGE IN TYPHOID.—Whitthauer (*Munchcher medicische Wochenschrift*, Jahrg. 55, Nr. 18) calls attention to the fact that the usual treatment of intestinal hemorrhage during typhoid fever by means of opium, ice-bag, ergotin, adrenalin, and similar measures very frequently fails to bring good results. He has recently used subcutaneous injections of gelatin and saline solution in four severe cases of hemorrhage in typhoid, with good results in three of the cases. He has used gelatin in 10 per cent. solution in the quantity of 50 cc. to the dose, repeated every day or every other day, and given two to six times while the bleeding lasted. If the patient is conscious gelatin may be given by the mouth. Combined with the gelatin injections are given subcutaneous injections of normal salt, continued until two days after bleeding has stopped. This treatment does not interfere with other supportive measures. The author believes that gelatin and normal salt solution injections are of unusual value in such hemorrhages.—*Therapeutic Gazette*.

TREATMENT OF INTERNAL HEMORRHAGES.—The means applicable to stopping inaccessible hemorrhage are limited. Many things supposed of benefit have been wrongly credited because spontaneous stoppage occurred coincident with their use. Dixon (*Lancet*) shows that tannic acid is absorbed but slightly in the stomach while adrenalin is decomposed. They have no effect, therefore, on distant parts when used internally. Adrenalin intravenously; ergot, digitalis, strophanthus, barium, and lead, internally or subcutaneously increase blood pressure most in the splanchnic area, least in the lungs, brain, and coronary arteries, and are, therefore, useless, probably harmful in hemoptysis and cerebral hemorrhage. Morphine to quiet and calcium chlorid, by mouth or subcutaneously, to increase coagulability are our main reliance.

In hemoptysis inhalation of amyl nitrite to reduce general blood pressure (as recommended by Hare) is very useful. In gastric hemorrhage *tr. opii* deod. *gtt.* x to xv and calcium chlorid *gr.* xx, every half hour or hour are efficient. The first dose may be returned, the succeeding usually stay. Three or four doses generally stop the trouble. Then the medicine may be continued as needed a few times daily. In the foregoing ice to the precordial region and epigastrium are always of use.—*Ohio State Med. Journal*.

CARCINOMA—UNEXPECTED RECOVERIES.—In several instances recovery has followed palliative operation performed for the temporary relief of inoperable cancers, and Weindler, (*Centralblatt für Gynäkologie*, No. 22, 1907) reports three such cases which have occurred in his own practice. All were tumors of the cervix and uterus.

In the first case a vaginal total extirpation was contemplated, but abandoned on account of the extensive infiltration found at operation. Instead, the womb was deeply curetted, and the cavity burnt with the actual cautery. At long intervals the wound was cauterized with pure carbolic acid. The wound healed promptly, and there has been no return of the growth for five years. The

other patients exhibited similar lesions, but the firm adhesions of the uterus showed an operation to be hopeless. Both were treated by removing as much of the tumor as possible with the sharp curette, and burning the wound deeply with the actual cautery. This was followed by the carbolic acid treatment. These cases have remained free from recurrence for four years. Czerny has cured a case by a similar procedure, using tampons soaked in 30 per cent. zinc chloride solution instead of the carbolic acid. The recovery of these cases is not yet satisfactorily accounted for. Various explanations are offered by different pathologists, but the effect of the cauterization on the blood supply seems to be the most important factor.—*Therapeutic Gazette*.

LARGE STRYCHNINE DOSAGE.—There is a widespread belief among clinicians that strychnine is of inestimable service in the treatment of acute conditions of cardiac collapse, and although certain recent studies on shock have seemed to point to the desirability of modifying our beliefs relative to this remedy, yet such studies have been, up to the present time, too fragmentary and inconclusive. The clinical world at large has faith in its efficacy. Among those who for some years have stoutly maintained that strychnine is the best remedy we possess for acute cardiac collapse is Professor Troisfontaines, of the University of Liege. In a recent contribution to the subject (*Revue de Medicine*, No. 5, 1907) he points out that one of the most potent causes for lack of faith in the value of strychnine is due to its being given in entirely too small doses. The reason for this parsimony in the matter of dosage is because of fear of poisoning on the part of the non-intrepid prescriber. To do away with some of this fear and to show that the remedy is potent for good and is comparatively innocuous for evil, even in the doses usually held to be toxic, is the thesis that he maintains in this interesting article. He holds that strychnine is not as dangerously poisonous as pharmacologists have led us to suppose. In twenty years' constant practice he maintains that he has yet to come across a single instance of idiosyncrasy; that such individuals do exist is probable, but he has not seen them. To evade, rather than invite, danger, then, it is wiser to begin all strychnine medication with fractional doses. As a routine procedure in giving strychnine for its effects in the nervous system he begins with doses of 1-20 grn., and administers as much as 1 or more grains a day. In cases of vital importance, where urgent strychnine medication is indicated, he does not hesitate to give as much as 1-10 to 1-6 grn. of the sulphate or nitrate of strychnine, subcutaneously, and to repeat this injection several times in the twenty-four hours. In patients requiring prolonged medication he has used these large doses for months and has been unable to observe any cumulative effects. Special caution should be taken to obtain only the purest of salts.

Whether the average American physician will dare to use such massive doses or not we cannot say. Hammond uses enormous doses in treating locomotor ataxia.

It would seem that our strychnine therapy has been half-hearted and thus largely ineffectual.—*Merk's Archives*.

GONORRHEA—WHEN IS IT CURED?—Dr. A. L. Wohlbarst, in *N. Y. Med. Journal*, thus concludes a paper touching this subject:

Of the fifty-five cases studied fifteen patients are still under treatment and observation because of the occasional positive finding of gonococci in the expressed secretion. Forty have, therefore, been declared cured. Of these forty patients the duration of treatment before the disappearance of the gonococci from the morning urine, passed by the patient, varied from ten days to eleven weeks; from the massaged prostatic secretion in the same patients from nine weeks to ten months. While exact figures cannot be given, these cases show that the longer the duration of the infection, the longer it takes to get the gonococci out of the prostate and adnexa.

Conclusions.—1. The so-called "incurable" and "recurrent" cases of gonorrhoea are those in which the gonococci remain latent in the prostate and adnexa.

2. Every case of chronic gonorrhoea in the male should be thoroughly examined for gonococci in the prostate and adnexa.

3. The morning urine passed by the patient may or may not contain gonococci; the massaged urine passed immediately after, or, better still, if it can be obtained, the expressed secretion of the prostate, will most always give a positive finding.

4. The urine passed by the patient may be clear and sparkling; yet the massaged urine may be full of pus, and epithelia, which are loaded with gonococci.

5. There is no direct relationship between the urine clearing up and the disappearance of gonococci from the prostate.

6. Five examinations of the massaged urine may give a negative result. The sixth may give a reverse verdict. Here persistence is a cardinal virtue.

7. Before a patient can be declared "cured" and marriage sanctioned, he should be put on the customary tests, and in addition, the massaged prostatic secretion should be examined at weekly intervals until at least six consecutive negative findings result. Thereafter for at least a year, a monthly examination of the same kind should be made, so as to make assurance doubly sure.

105 East Nineteenth street.

TREATMENT OF RECENT SPRAINS AND CONTUSIONS.—Schauffler claims that early massage to diminish the exudate and improve the circulation is strongly indicated. This should be toward the body and from the proximal side of the swelling progressively across it. Unload the blood vessels at a distance up the limb, then rub down the upper edge of the swelling, then advance to the center, etc. Support may be afforded by a flannel bandage or, better, by some form of elastic bandage. This may be replaced, often early and nearly always later, by appropriately applied strips of rubber adhesive plaster. Over the contusion in the soft parts and where applied to prevent swelling, the strap should be at "fascial tension," i. e., about the tightness of the fascia over a large muscle. Only when it is desired to relieve a torn ligament by outside strapping should the plaster be tightly drawn, and in that case it should, of course, never completely encircle the limb. Hot compresses may be used

early, or to still greater advantage, dry heat in an appropriate bake oven, if the affected part be a limb. The temperature can be pushed up to 300 F. if proper precautions are taken to absorb all the moisture. The advantage of baking in old joint lesions is well known. When the apparatus is at hand it may be advantageously employed in most recent cases.

Passive motion should be substituted at once by the surgeon. It should be light, but of good range, and persisted in, in spite of moderate pain. Schauffler says that the whole treatment of a sprained ankle by the "army strapping method" fails unless the patient is made to walk from the first; carefully, to be sure, and in short installments, with the foot elevated between times; but walk he must, or the circulation becomes sluggish and the treatment fails. A large joint effusion is the only contra-indication to early active motion, except fracture, and some kinds of fracture do well under the ambulatory treatment after a few days of rest. Massage may be continued through the strapping, or an elastic bandage may be used and removed for rubbing, baking, and so on. A belladonna-ichthyol ointment may be applied under the bandage. In the latter stages electricity is of distinct value. It is Schauffler's custom to treat all fractures of the forearm between flat padded board splints and to remove these every few days for bathing of the skin and light massage. Passive motion is instituted in ordinary cases within a week and always after two weeks. He has never had the bone slip out of place under such manipulation if it had been properly reduced at first. In fracture of the neck of the femur in old people he applies no traction or splints. The limb is kept quiet with sand bags for 48 hours, then the patient is made to sit up in a reclining chair and is early allowed to walk with crutches. The weight of the limb is supported by slings of plaster or by a hip splint.—*Dr. Schauffler, Abstract in Jour. A. M. A.*

Miscellany

BE BUSINESS-LIKE.

One evening at the Medico-Legal Society we fell to discussing the practice of medicine as a money-making proposition. Canvassing the names mentioned, we concluded that one, Dr. J—, had made more money than any other practitioner in that part of the city, and we finally appointed a committee to interview him on the subject.

Dr. J— received us kindly and told his story. He had come into possession of a tract of wild, worthless land, overflowed by the tides. This he had held for years.

A friend confided to me that he got rich by running in debt. He was in receipt of a very fair income but spent it all. Each month saw him waiting anxiously, with empty pockets, for his salary. By the advice of a friend he bought a piece of real estate, obligating himself to pay for it a certain sum every month. He did so. Many a cigar went unsmoked, many a theatre ticket was unpurchased, and little luxuries disappeared from his table. He divided his expenses between those absolutely unavoidable, those that were excusable, and those entirely useless and

unnecessary. It scared him to see how big a slice of his income went into this third category. But he saved the money for his payments and found himself none the worse for the self-denial.

Let me whisper in your ear: the practice of self-denial increases one's will-power and we all like to feel that we are "strong" men.

Try it. Next payment you must make, don't draw your funds out of bank, or sell your good, salable, dividend-paying stocks, or mortgage your house; just hustle. Go at your delinquent debtors with a will, a nerve, a determination that will win; and you will surprise some of them into letting you have some dollars that would otherwise go into the barkeeper's hands or buy madam a new bonnet she could do without. You can well afford the time, and you need the experience, the discipline, that comes from wrenching your mind away from hormones and opsonins, radiography and Bier's hyperemia, and to come down to earth and your fellow-men, who also must hustle to keep even.

Nothing gives the public that delusion about doctors being "all wealthy" like their wretched business methods. Men know *they* have to get what they earn, and if "Doc" doesn't seem to mind being swindled he must be above the need of money. A doctor who collects sharply from his patients, without being greedy or unmerciful is a benefactor to the whole profession.—*Am. Jour. Clinical Medicine.*

TUBERCULOSIS AND POETRY.

"Let's talk of graves and worms and epitaphs".

Does anything remain uncelebrated of the poets? Who would suppose that tuberculosis had ever inspired the divine afflatus? Yet 'tis a fact that it has been exploited in verse. Thus Henry Kirke White, a poet of great promise who died of tuberculosis at the age of twenty-one, after completing his first year at Cambridge University and taking first honors at the great college examination, wrote a Sonnet to Consumption which we here reproduce:

"Gently, most gently, on thy victim's head,
Consumption, lay thine hand!—let me decay
Like the expiring lamp, unseen, away.
And softly to slumber with the dead.
And if 'tis true what holy men have said,
That strains angelic oft foretell the day
Of death to those good men who fall thy prey,
O let the aerial music round my bed,
Dissolving sad in dying symphony,
Whisper the solemn warning in mine ear;
That I may bid my weeping friends good-by
Ere I depart upon my journey drear;
And, smiling faintly on the painful past,
Compose my decent head, and breathe my last."

GALLSTONES IN THE URINARY BLADDER.

F. Michel, Koblenz, *Zentralblatt fur Gynakologie*, January 2, 1909.

The author reports a very rare case. The patient, a 27-year-old woman, three years previously had severe gallstone colics followed by the signs of peritonitis. Later a large exudate developed in the right iliac fossa, which was supposedly due to an appendicular inflammation.

Repeated attacks of anuria and dysuria were noted. About six months ago severe cystitis, very resistant to treatment, appeared, and a calculus was suspected. Michel was called in to operate upon the patient, and through a vesico-vaginal incision removed four large stones, which fitted together on their faceted surfaces, forming a sausage-shaped mass. The bladder wound healed. The stones contained cholesterin and bile salts. Since the operation the urine continues to show bile and is oily, proving that communication with the bile passage still persists. Cystoscopy was refused.—*Am. Jour. of Surgery.*

THREE ECTOPICS AND THREE OPERATIONS IN THE SAME PATIENT IN FOUR YEARS.

By DR. J. HUTCHINGS WHITE, Muskogee, Okla.

In a series of ectopic cases reported in the January, 1909, number of the *Kansas City Index-Lancet*, I gave a history of the second ectopic in the following case. Since that time the third tubal pregnancy has taken place:

Mrs. H., age 33 years, married 16 years, a fleshy woman, suffered from one attack of pneumonia since childhood. During childhood suffered from whooping cough and measles. Periods began about fourteen years of age, suffered no pain, flow normal, periods lasting five days. Has given birth to three children; one now living, five years old; one miscarriage. No complications arose at time or births or after miscarriage.

Two weeks prior to her first operation, on November 27, 1905, she was seized with pain in lower abdomen and bloody discharge from vagina. She did not skip a period, however. On the above date the cul-de sac was opened and a quantity of blood evacuated. Recovery uneventful.

Two and one-half years later she failed to menstruate in April, and on May 25th was suddenly taken with severe cramps in lower abdomen, temperature 101° F. Pain and tenderness in pelvis on examination. The following day patient suffered from considerable shock and abdomen became rigid. She rallied from this and improved up to the 29th, four days after onset, when she again suffered much pain. I saw her first in consultation with Doctors Joblin and Adams, May 1st, and operated same day, removing left tube and ovary. The abdomen was filled with a large quantity of blood. Recovery uneventful. On examination of the tube we found a scar the seat of rupture of first ectopic.

In May of this year patient again skipped her period, and in June was seized with a sudden sharp pain in lower abdomen. Nauseated and suffered shock. Abdomen became swollen and very tender. Her condition was too grave to move to hospital at once. She rallied from the shock and gained enough strength to be carried to a hospital two days later, where abdominal section was performed, and the right tube and an ovary removed. Recovery uneventful.

I would like to call attention to the fact that the second and third operations were performed five days and four days respectively after primary rupture.—*Journal Oklahoma Med. Asso.*

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Original Articles

THE EARLY RECOGNITION OF TUBERCULOSIS.

Edward Cummings, M.D.,
The Hinton Hospital, Hinton, W. Va.

(Read before the Summers County Medical
Society, December, 1909.)

I shall review in simple and elementary terms the actual means of detecting pulmonary tuberculosis at a curable stage. In doing so I shall deal with the subject in a purely practical way, outlining the method of work I have found best adapted. No attempt at a classical exposition of the subject will be made; I shall present merely some notes of my own ideas and describe my routine of examination.

I. DOCTOR AND PATIENT.

I think you will agree that most physicians give their patients too many prescriptions and too little study. Nothing can be truer than the ancient teaching that a *physician is primarily a watchman, and a therapist only when necessary*. When we are called to see a case of acute illness, it happens very often that there is little or no occasion for using drugs. Naturally, one prescribes some medicine, of one kind or another, for the patient and patient's family can not see any use in the doctor coming again and again unless he gives the patient medicine. He would be an extraordinary doctor indeed, and possessed of wonderful gifts of persuasion and com-

mand, if he could wait upon a case of acute illness of any kind, and advise only hygienic and dietetic measures and let his patient get well without drugs.

No! The patient expects his magical bottle of physic and the potent box of capsules, and I ave them he will, even if he has to get another doctor.

But when the doctor has prescribed his medicines, and paid due attention to the patient's emunctories, and interfered, wisely or foolishly, luckily or unluckily, with the mysterious economy of organs whose functions the ablest physiologists do not even half understand—has he done all that a physician should do? Has he discharged his duty to his patient?

By no means. His duty is to inquire into the case, to study it thoroughly, to discover if this group of symptoms is but the passing distemper of an otherwise healthy person, or if it be the expression or acute manifestation of some grave local or constitutional disease. If it should be the latter, even though the patient rallies and recovers from the acute attack, the doctor has not done his duty unless he establishes the actual diagnosis and puts the patient on his guard.

Has the patient violent headaches? It may be a neurosis; on the other hand, it may signify some ocular trouble requiring correction. Has he abdominal colic? It may be intestinal indigestion due to "something he ate"; on the other hand, it may be chronic appendicitis. Does he have constant severe pains in the chest? It may be mere pleurodynia. On the other hand,

it may be chronic pleurisy. Is he jaundiced? It may be biliary catarrh. On the other hand, it may be gall-stones or carcinoma. Has he a chronic pain in the back? It may be lumbago. On the other hand, it may be Pott's Disease. Has he chills, aching all over, cough, and a weakness out of proportion to his degree of fever? It may be the grippe. On the other hand, it may be a typical "reaction" of chronic pulmonary tuberculosis.

This last illustration brings me to the point I wish to make. Fully one-half of the patients I have seen with consumption during the last three years give a history of being treated for repeated attacks of the grippe, which was not grippe at all. A great many of them were left to find out the nature of their trouble themselves, or were apprised of it only when the symptoms pointed so plainly that their neighbors could make the easy diagnosis among themselves.

I insist that a physician is a watchman; he must study his cases; he must be on the lookout for chronic diseases which should not be allowed to run their fatal course. In particular I plead that he should be eternally suspicious of that Captain of the Men of Death, tuberculosis. The patient himself is not often suspicious; he prefers to call it a cold, the grippe, and bronchial trouble, and frequently hands the doctor his own diagnosis, ready-made.

A thorough examination should be made of every suggestive case; every known means of making a diagnosis should be exhausted. If the objection is made that the physician cannot afford to devote half a day's work to every passing client who summons him to prescribe for a cold, I reply that this is the fault of the pernicious system of charging for work by the visit or office call or prescription, and not according to the value of the services rendered. If he is at all in doubt about the case he should say to the patient: "My friend, you look well, and do not appear to be in a bad way, and I think you are likely to get over this attack. But in the brief examination I have given you, there are some things I do not like the look of. You should have a searching examination; you should have your expectation and your urine tested; I must give your chest a most careful examination; I

must study your temperature and pulse at different times, and, if need be, employ the tuberculin test. All this will require extra trouble and work on my part and some extra expense on yours. Pulmonary tuberculosis, or consumption is a very common disease, as you know; one person in every seven dies of it, and many people have it and get well of it, without knowing it. Within recent years it has been proved to be curable, but only when taken in time. If a person has it, he can not find it out too quickly for his own good. There is a definite way to set about curing it, when it is discovered in time; when it is far-gone it can often be helped and life be prolonged, but it can not then be cured. Understand me well—I do not say you have it. I can not express my opinion until I have thoroughly examined and tested you, and examined your sputum. If I find that you are free from it, so much the better, and there is no harm done. If I find you have it, you are still to be congratulated, for having discovered it in a curable stage. My advice to you now is to have this examination made, for I regard your case as suspicious."

If this talk is made earnestly and persuasively, the patient is generally willing to go to considerable trouble, and give you all the opportunity you desire for studying his case. But you should speak to him plainly, with authority and conviction; it will not do to say casually, "Drop into my office some day and let me run over your case." Put it up to him fairly; tell him it is to his interest to know about his case, and that you can not speak until you know, and that you can not know until you have examined. Give him a definite idea of what you need to do, and how and when, and, if need be, an idea of the probable cost. People are rarely unwilling to spend money on themselves for their health when the reason and the need of it are made clear to them.

I speak of this financial matter because I am convinced that it often stands in the way. The patient usually expects to pay the doctor for his visit, and no more, and the doctor knows he expects to pay no more, and is apt to trim his services accordingly. Let us teach our patients to regard the doctor, not as a man to be called upon for a prescription for a dollar, but as a

guardian of health, a teacher of preventive medicine, an adviser and a guide, and to pay what those services are worth, irrespective of any arbitrary custom.

I have spoken of this matter because it is a vitally important point of practice in connection with the detection of all diseases requiring a careful clinical diagnosis. Put it to your patient squarely, and if he does not heed your advice, you at least have done your best and discharged your duty.

I can not insist too strongly that the greatest part of a doctor's labor should be expended upon the clinical study of his cases, and in the effort to bring to light the curable hidden lesion or constitutional dyscrasia that may underlie so many clinical manifestations and acute illnesses. It is in this way that he can be of most service to mankind.

II. THE ROUTINE OF EXAMINATION.

I shall review the routine of examination of a person who is well-nourished, works well, but has a suspicious history. In the first place the patient is told beforehand to bring a specimen of morning sputum, and urine. He is told to collect the sputum in a clean vaseline bottle, as this is an article to be found in almost every house.

The finding of the tubercle bacilli, of course, establishes the diagnosis at once. But if you do not find them, it means, I think, nothing at all. If you consider how small is the particle of sputum you spread upon the cover-glass, and what a still smaller portion of this can be covered by the tiny lens of your microscope, you must realize what an immense number of bacilli are requisite to thoroughly saturate the mass of pulmonary secretion, much of which is from the bronchi. Moreover, it should be the aim of the examiner to diagnosticate tuberculosis before the tubercles have so broken down as to show bacilli in the sputum.

The urine should be examined for albumen and casts, and indications of passive congestion of the kidneys.

The history of the case is gone into *thoroughly*. The patient is pinned down to positive answers, for there is nearly always a tendency to make out a good case for himself, and to wander from the subject, and to give inaccurate and haphazard replies. The following is a specimen of

dialogue that I have had, in substance, repeatedly:

"Have you a cough?"

"Well, no, I can hardly say I have a cough—in fact, I haven't, unless I take cold."

"Do you cough often?"

"Hardly ever, as I say, unless I take cold."

"Are you subject to cold?"

"Yes, indeed."

"Do you always cough when you have a cold?"

"Yes."

"How often do you have a cold?"

"Oh, one after another; in fact, all the time."

Thus the fact is finally elicited that the patient has a cough, and has it all the time.

Another will say that he has absolutely no cough at all, and it is finally ascertained that he did not consider his morning bout of hawking and expectoration as a real cough. Another will say that he feels strong and well and able to work, when the fact will develop that he has not been able to work for months. As a rule, also, patients answer categorical questions with difficulty and will wander and evade, and the question must be repeated patiently again and again, for a positive yes or no.

A definite series of questions should be made, and a careful case record be left. Especial inquiry should be made into the patient's family history, personal history, cough, decline in vigor and weight, spitting blood, shortness of breath, gastric disturbances, hoarseness, appetite, ability to follow usual occupation, and environment. Menstrual disturbances, child-births and miscarriages should be carefully looked into, for tuberculous women often date their decline from parturition.

Now, the main clinical symptoms we look for in early tuberculosis are slight cough, some decline in strength and weight, poor appetite and a pulse somewhat accelerated and of low tension, and occasional attacks, slight or severe, of acute illness, with malaise, muscular pains, and anorexia.

The occurrence of haemoptysis or a frank haemorrhage must be looked upon as almost pathognomonic; it often comes early, and is really a fortunate symptom, for it attracts attention to the lungs when few other symptoms are present. I may safely

say that spitting blood or haemorrhage should always be taken to mean tuberculosis, until the contrary is proved.

The careful study of the morning and afternoon temperature is a matter of the very first importance. In this connection I wish to call attention to the fact that physicians and nurses, by the usual way of taking the temperature, do not always get an accurate registry. Thermometers are marked "half minute," "one minute," and "two minutes." As a matter of fact, they seldom register fully in the specified time. Indeed, a half-minute thermometer can not be depended upon to register in three minutes. From two to three minutes are usually given, and I wish to say that if you really desire to know the patient's temperature, you should leave the thermometer in the mouth *at least ten minutes*, and in examining a suspected case, *twelve to fifteen minutes*. I have proved this fact to my own satisfaction, and that of my associates, so many times, that I am warranted in taking up some time in discussing it. The thermometer is an instrument of precision of immense value. It is a pity that its usefulness should be lost so often through imperfect technique. Ordinarily any thermometer will register practically true in five to seven minutes, and this is enough for ordinary clinical usage; when studying the temperature in suspected tuberculosis, a few tenths of a degree have a momentous significance.

You may lay it down as a safe rule that no thermometer can be *depended upon* to register fully in less than twelve minutes. I do not ask you to take my unsupported word for this. Test your thermometer at two or three minutes, the usual time of exposure, and again at twelve or fifteen minutes. A half-dozen different tests will probably convince you.

Now in a suspected case of tuberculosis it may be necessary to take the afternoon temperature not once but often. The patient can be instructed to take it himself, at certain hours—three and eight p. m.—and keep a record. A low fever, if persistent,—99.2 to 99.8—is very suspicious. All other disorders that may cause a low continued fever must, of course, be carefully excluded. Among these is the wasted condition resulting from the psychoneuroses—in particular, profound chronic neurasthenia. But

do not, in a neurotic patient, overlook the fact that tuberculosis may be present as an underlying cause. Study the temperature for weeks at intervals, if need be. Taken in connection with slight cough, or attacks of grippe, loss of weight and strength, and impaired appetite, a persistently low afternoon fever means clinical tuberculosis eight times out of ten.

The pulse is also significant in early tuberculosis. The characteristic tuberculous pulse is accelerated, usually of a weak tension, and more or less compressible. It has a tendency to become quite rapid upon the least exertion, and is often unduly rapid at the examination owing to the patient's excitement. In the morning, on waking, when the patient has made no exertion, it may be 60 or 70, while in the afternoon, after slight exercise, it may be 90 to 120. It must not be forgotten that the pulse in early tuberculosis *may* be perfectly normal and of strong tension.

I will not speak of the gross symptoms, such as great loss of weight, anaemia, night sweats, hectic fever and great bodily weakness, for none of these appear in early tuberculosis, though they appear in quick consumption a short while after the onset.

The term early (or incipient) has no relation to the length of time the patient has had the disease, but to the degree of invasion and destructive activity. As usually accepted it means favorable or curable tuberculosis.

Tuberculosis nearly always begins as a lymphatic process. It may confine itself to the lymph nodes, for a long life time, and is not necessarily incompatible with fair, or even robust health. Lymphatic tuberculosis is very common. But when lymphatic tuberculosis begins to produce symptoms, we must look carefully for signs of its extension from the lymph-nodes to the chosen seat of its toxic processes.

In examining the lungs we should employ all the methods of examination, and in particular auscultation and percussion. The two sides of the chest should be carefully compared, point by point, percussing over the costal interspaces. Infiltration of a lobe or part of a lobe will generally give impaired percussion resonance, or a short note. On auscultation you may get characteristic dry rales, or none at all, save bronchial; also, the breath sounds are harsher, or you get a

clear broncho-vesicular breathing. Thickening or effusion in the pleura, of course, may interfere with the auscultation. Often you get a slight pleuritic friction rub toward the end of expiration. If there is no pleurisy you may get a slight increase in tactile fremitus. In noting tactile fremitus you must always remember, of course, that normally the right side is the stronger. Slight bronchophony may be elicited over the affected area, especially if the infiltration is rather dense and sharply localized. But the signs of disease indeed may all be very slight, or even wholly wanting. The lung is a large organ, and a bunch of tubercular nodules a small thing. It is often particularly difficult to detect them in a well-nourished or muscular person with thick chest walls.

Even moderately advanced and far advanced tuberculosis may show few physical signs. The reason for this is that in some cases most of the nodules have broken down and been thrown out, with a general disappearance of congestion. The respiratory note, instead of being harsher than normal, is feebler than normal. Tactile fremitus and vocal fremitus may become normal, and about the only sign of the disease is the tympanic nature of the percussion note in the affected lung. These cases puzzle the practitioner, but tubercle bacilli are usually present in the sputum at this stage, making the diagnosis easy.

The surest and readiest way to find a lesion in the lungs is to patiently compare the two sides of the chest, step by step, rib by rib, auscultating and percussing. The most frequent seat of beginning tuberculosis is the apex. If you find an abnormal difference in the apices, keep after it till you know what it means.

As to the tuberculin tests, I will say that a negative result does not necessarily mean the absence of tuberculosis. I have had a failure to react in two cases of tuberculosis where the bacilli were found in the sputum. According to many authorities this means a bad prognosis. The tests have a decided value, however, and will have a greater value still when more is known about tuberculin. Even now, I consider a positive tuberculin reaction a valuable confirmation with a suspicious history and suggestive variations from the normal physical signs.

In conclusion:

1. The doctor should always be on the lookout for tuberculosis, because the patient, as a rule, is not; and the doctor who attends a patient during an exacerbation and gets him out and about his business has not discharged his full duty unless he makes a diagnosis.

2. A healthy appearance should not determine a negative diagnosis.

3. A careful and searching examination should be made of every suspicious case, for the patient does not easily forgive the doctor who permits him to drift into advanced consumption.

4. All cases of recurrent grippe should be investigated and closely looked into, for the symptoms of a typical "reaction" or exacerbation of tuberculosis are almost identical with those of the grippe.

5. Frequent tests of the temperature should be made, over long periods, if necessary, and the thermometer should be left in the mouth at least ten and preferably twelve to fifteen minutes.

6. When a diagnosis is arrived at, the patient should be plainly and bluntly told, for he has a right to know.

APPENDICITIS AND THE GENERAL PRACTITIONER.

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(Read at Annual Meeting of State Medical Association, Elkins, Oct., 1909.)

Appendicitis as it principally concerns the general practitioner would probably be a more correct title for the remarks which follow. Books on appendicitis are usually so voluminous that the important clinical points are obscured, and brief descriptions of this disease as given in text-books on general surgery fail to single out for special emphasis the facts that the practitioner is in greatest need of at the bedside. The special treatises are written for the surgeon, at least, it is the surgeon only, as a rule, who studies them carefully. The text-book articles are intended for the medical student, giving a sort of bird's-eye view of the disease and its complications, treating of most of the facts in general and of none in

particular. Although my early training was along surgical lines, it has been my good fortune to have been an active general practitioner for many years, and while in recent years my work has again become largely surgical, I am enjoying the privilege of seeing much general practice, thanks to the courtesies of a large number of medical friends. It is because of this that I believe that I know the needs of the general practitioner in a disease like appendicitis, which, although essentially surgical, will continue to constitute no small part of the practice and responsibilities of the general practitioner. It was this consideration that led me some time ago to read and publish my paper on "Appendicitis—Its Clinical Aspect"; and I beg that you accept the same as an apology for returning to a subject about which apparently so little new can be said. It is my object here to emphasize certain facts and ideas which are apt to be forgotten by those who see a case of appendicitis only every now and then.

DIAGNOSIS AND COURSE.

There was a time when the mere making of a correct diagnosis, even in ordinary, typical cases of appendicitis, required uncommon knowledge and was considered a matter of considerable credit. That time is now past, since the cardinal symptoms of the disease have become common knowledge among the physicians. In fact they have become part of the general intelligence of the community, and of late the layman does not often miss making a correct diagnosis. To-day the duty of the physician lies mainly in the following two directions: First, to avoid mistaking another disease for appendicitis, and second, to be able to keep close track of the course which the disease is taking.

As to the first: It is now very rare indeed that appendicitis is overlooked, but it is not at all uncommon for other diseases to be labeled appendicitis. Those are quite numerous, but I will mention such of them only as I have observed: Indigestion, intestinal parasites, gall-bladder disease, floating kidney with and without torsion of the ureter, pyonephrosis, renal colic, typhoid fever, intestinal obstruction, mesenteric cysts, salpingitis, and cancer of the caecum. Treves properly calls attention to the fact that certain symptoms are common to all acute dis-

orders within the abdomen at their onset. In connection with this phase of the subject nothing is more helpful than the observation made by Murphy. He insists that in 98 per cent of all cases there is a definite order to the development of the principal symptoms of the disease, and that unless they do appear in this order the diagnosis of appendicitis should not be made. The order is as follows: Pain is the first symptom. Nausea and vomiting two or three hours later. Then tenderness, and only after a lapse of several hours does fever appear. He also insists that there is no appendicitis without fever appearing some time within the first twenty-four hours. Where trusty observations show an absence of fever, he would exclude the diagnosis of appendicitis.

In children, mistakes are particularly common both ways, and it is well not to overlook the fact that in them abdominal pain may be a symptom of pneumonia. In women the differential diagnosis is at times difficult. Morris claims that in pelvic diseases there is to be found a tender point an inch and a half on each side of the umbilicus on a line towards the spine of the ileum, but the presence of it on the right side only points to appendicitis.

To my mind the diagnosis of appendicitis should never be made in the absence of tenderness on pressure after the disease has been under way a few hours. To be sure, that tenderness may not be at McBurney's point, and a rectal examination should never be overlooked in the search for its true cause.

With your permission I will stop here for a moment and exhibit two specimens of cancer of the caecum, one of which was mistaken for appendicitis. I had also hoped to have for exhibition a little boy who was operated on for appendicitis, but instead it was found to be a case of mesenteric cysts. There was a history of an illness of several days' duration, with symptoms of pain, vomiting, fever and constipation. A marked tumor was present in the appendiceal region, formed by a large cyst in connection with the caecum. I regret that his parents refused to bring him.

As to the second duty of the physician: The making of the diagnosis of appendicitis is small consolation, if later the catastrophes of perforation and peritonitis are overlooked. The signs and symptoms of these

complications are fairly pathognomonic, and if properly observed should leave no room for guessing the pathological events. Yet it is a fact that oversights are quite common, resulting seriously.

As already stated, the symptoms of simple inflammation of the appendix are widely known. The knowledge of the symptoms of perforation and gangrene is not as common as it should be. Sudden cessation of pain and rigidity, with usually a drop in the temperature, indicates perforation or gangrene; for with their occurrence the rapid absorption of toxins from within the tightly distended appendix has suddenly ceased. Of course, the same might occur in cases where drainage suddenly takes place into the caecum. But such cases are very rare. To be sure, after some hours the resulting peritonitis will awaken the physician to a realization that a serious complication has taken place. But at this time the serious condition of the patient would become obvious even to a layman. Elsewhere I have suggested that it would be a safe rule for the practitioner to assume that perforation or gangrene has taken place whenever pain and rigidity disappear, until by a close study of the other symptoms he can satisfy himself that this is not the case.

The symptoms of the less serious forms of peritonitis are familiar, of course, to all physicians, and the older practitioner is more especially impressed with the local symptoms of severe pain and great rigidity. It is singular, however, how comparatively few physicians are alive to the fact that in the severer forms of diffuse peritonitis there may be neither pain nor rigidity. Hence, the great importance of learning the details of the history of the entire illness.

The old practitioner particularly must get rid of the belief that chill and fever must always be present in connection with an acute abscess; for both are frequently absent in appendiceal abscess.

The number of complications which may occur in this disease is rather large and their early recognition is important. Among the more common ones, however, perforation, gangrene and peritonitis are certainly the most serious, so much so that were I to attempt a full description of this disease, I would make a special effort to impress them upon the memory of the reader above

all else. Here is one way in which I might do it: Instead of describing the symptoms of appendicitis as THE disease and then follow with a discussion of perforation, gangrene and peritonitis as complications, which is the rule in our books, I would take the liberty, for purely clinical reasons, of describing them collectively as connected events of one disease, preferring perhaps to designate it by the old name of perityphlitis, or perhaps coining for it the compound word of appendico-peritonitis, a name which, if accepted, would probably sound as well as the term broncho-pneumonia. My description of its symptoms then would read briefly as follows: It is a disease clinically consisting of four stages. First, the initial stage, characterized by the symptoms of pain followed by nausea, vomiting, tenderness, fever, etc. Second, the stage of intermission, characterized by an abrupt cessation of the pain and rigidity, and an abrupt drop in the temperature; the patient is comfortable and his general condition is good. Third, the stage of relapse, characterized by a return of pain, rigidity, tenderness, nausea, vomiting, etc. Fourth, the stage of toxic exhaustion, characterized by the disappearance for a second time of pain and rigidity and marked tenderness. The patient is uncomfortable and his general condition bad. As you can readily see, the first stage corresponds to appendicitis proper; the second stage to the complications of perforation or gangrene; the third stage to the development of peritonitis; the fourth stage to the advanced state of the severe form of this complication. Mention would have to be made of the fact that occasionally the second stage is wanting, and the difference between the symptoms of the first and second stages can be recognized by the difference in the character of some of the symptoms. Thus, pain in the first stage is of a colicky nature, while in the third it is steady. Vomiting in the first stage is projectile in character and the attacks few in number, while in the third stage it is regurgitative and lasting.

If we wish, we could make this form of the disease, as described, the typical one, describing all the other forms as irregular ones. Thus, what is commonly known as simple appendicitis we could describe as the abortive form of peri-typhlitis or appendico-peritonitis, consisting of its first stage fol-

lowed by a gradual and complete disappearance of the symptoms. This method of description may or may not be scientific, but I venture the assertion that many a practitioner will find it helpful in actual bedside work.

TREATMENT.

We all remember the time when the discussion of the treatment of this disease was always begun with the question as to whether the proper treatment was to be surgical or medical. Later, the question was changed somewhat by asking what forms and stages of the disease were to be treated surgically and what medically. All this is a matter of the past, and to-day not only physicians but the laity are willing to admit that the treatment of appendicitis is surgical as soon as the diagnosis is made. The medical side of the treatment concerns the practitioner only in cases where operation is impossible on account of circumstances of one kind or another, or where it has to be delayed.

The principal point in the medical treatment of appendicitis is rest, which, as you know, is a very old principle in the treatment of all inflammations. In applying it to appendicitis, however, there are some little details worth knowing. Instead of using opium for the purpose of avoiding peristalsis, thus encouraging localization, we have learned from Ochsner that by withholding food and drink from the stomach we accomplish the same result without the disadvantages of the opium, and by removing what food there may happen to be in the stomach through the stomach tube, this end is insured with greater certainty. The patient, of course, must be kept quiet and should not be allowed to turn upon his left side. The best position is to have the body on an incline of about forty-five degrees and turned a little to the right side. Placing in the rectum from six to eight ounces of salt solution with or without the addition of some nutriment or stimulant at intervals of two hours, will sustain the patient and will remove to some extent the objections of the family to the withholding of food and drink from the stomach. Cathartics should never be used, but a small enema once a day is permissible. The value of any topical applica-

tions is certainly doubtful, to say the least. Hot compresses, however, are agreeable to the patient, can do no harm, and have a good moral effect on the patient's confidence in his physician. The icebag is still used by many, and I fear that its effect is rather harmful on account of its stimulating peristalsis.

ANATOMY AND PATHOLOGY.

The exact anatomical details are, of course, indispensable to the surgeon, but they are not without considerable interest to the physician also. The usual location of the appendix is remembered by all, but that its tip, which is occasionally the exclusive seat of the inflammation, may be attached at a considerable distance away and in almost any direction, is sometimes forgotten. Bearing in mind its small and unyielding lumen, we have a ready explanation of the great pain which is caused locally and reflexly when it is overfilled with pus, and also why such overfilling often results speedily in perforation or gangrene. A study of the peculiarity of its vascular supply gives much light on the causes of the frequency of this disease. Its large amount of lymphoid tissue gives a hint as to the reason for the marked constitutional disturbances. The variations in the length of its mesentery in some individuals helps us to understand why the disease is apt to be common in some families. A knowledge of some of the gross pathological changes should be of much help to the physician, and for this purpose he should never omit an opportunity to follow his patient to the operating table and to note carefully the findings at the operation. He may thus learn why his patient's tenderness was away from McBurney's point, why he had frequency of micturition, why his symptoms abruptly disappeared for a time, the nature of the tumor, if there was any, etc. At this point I am tempted to correct a false idea among physicians, who, on witnessing operations in pus cases, think these cases to be exceptionally bad if there is a pronounced offensive odor to the pus. Such pus is due to infection with the colon bacillus, which does not produce the worst form of the disease.

INSTITUTIONAL SPECIALISM.

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W. Va.

(Read by title at the Annual Meeting of State
Medical Association, October, 1909.)

[NOTE.—The following paper was written by the author when at Bournemouth, England, in search of health. He had been long ill with pernicious anemia, and died at his home in Charleston in February last.]

I feel that a word of explanation should precede the preparation of any paper upon the afore-named subject, and I beg the privilege.

When asked by our Secretary in the early part of the year—soon after a winter's sojourn in Florida—to present a paper for the 1909 meeting of the West Virginia State Medical Association, I responded with an acceptance, and named my subject, "Institutional Specialism."

On account of the application of remedial agencies in an established institution for the past six years, and being much absorbed with the study and development of this branch of medical practice, I contemplated a systematic and rather full investigation of the development of institutional methods of practice. To carry out this purpose, I needed access to the proper books and the leisure. But the re-appearance of a constitutional ailment, and the peremptory order of medical friends, made an early sea trip a necessary interruption to my contemplated preparation of this paper. My hope of a sufficiently early return home to enable me to carry out my original intentions has been balked by the customary congestion of home-going vessels, and at this near approach to the date of meeting, I presume there has been publication of the program for the meeting. So that, rather than have it appear that I have sent in a subject and failed to provide the paper, I desire to submit some thoughts on the subject, which will serve to show my good intentions and I will hope for the indulgence of the Association in thus performing a promised duty.

To simply announce the subject which I am asking you to consider with me, naturally brings it into conspicuous contrast with the customary methods of treatment of ailments of human kind—namely, that in

the home. The home is supposed to exist everywhere, and in it must transpire all the incidents and accidents of life, among which are the sicknesses that must sooner or later come to all. It is but natural that here, too, must be summoned the medical and scientific talent that must grapple with these departures from health, and the remedial agents indicated must here be used. Is it not marvelous that down through the ages has come such marked success in these uneven contests, and that medical science as we have it has been evolved? In this wonderful age of progress in all things scientific, the rehearsal of which is always interesting, but not relevant to the purpose of this paper, I can think of few adjuncts that have come in to the aid of the physician in his investigations and conclusions that are any more effectual than the trained nurse. On her semi-professional training and her constant presence to observe and record the progress of disease and the effects of remedies, the conclusions of the physician must be based. It is thus possible to secure at the bedside, anywhere, the data that must be had for the complete and effectual study of the factors that must enter into the scientific investigation of disease and its remedies. We have but to contrast with present conditions what must have been the handicap to the scrutinizing physician before the advent of our present efficient graduate nurse. The further consideration of this most interesting advance toward the goal of the physician's mastery of the obstacles to his victory must also be left for your ready supplementation.

What has greatly impressed me in the consideration of my theme is that, whether in quest of cause or cure of the ailments of man or beast, or to know the physiological action of the myriad proffered remedies and preventives, the capable physician of to-day must consider, the *institution* has almost become the *sine qua non* to reliable results. Many pioneer discoveries have been made by the lone investigator at the unaided bedside, whose accuracy has subsequently been verified at the *institution* in the testimony of many witnesses.

One of the first thoughts that would naturally spring up in the mind of one who would try to grasp this subject *in toto*, must be as to when institutional practices began. This in itself would be a fascinat-

ing subject for investigation and would lead into the consideration of much literature not altogether professional. In my present nomadic life in a strange land I am deprived of the opportunity as well as of the time needed that would afford me data for an historic consideration of this subject. But even the unaided memory must sweep back through the ages and light upon a number of allusions to the practice of resorting to localities noted for the amelioration of human suffering and disease. The "Pool of Bethesda"; the "Bitter and Sweet Waters", are doubtless but casual allusions to many resorts of people in the time of sacred writ. Waters with healing virtues from medicinal ingredients have no doubt been administered and applied in the remote ages, and their localities were the *then institutions* for the special treatment of certain afflictions. Since then, the world over, mankind has sought out Hot Springs, Warm Springs, Cold Springs, Mud Springs, Sulphur Springs, Gas Springs, and so on without number, and doubtless many have real virtue, while not a few have purely imaginary healing qualities. Atmospheric conditions have also been the determining factors in the magnetic effect that has drawn suffering humanity together to some of the world's now famous health resorts. These few allusions must serve to recall many others where natural provision and phenomena have been the determining factors in the location of many of the world's famous health resorts.

The undoubted success of nature's provided remedies has thus become a great stimulus to the establishment of prophylactic and curative institutions without number, carrying out the varying tastes and ideas of the man of science, charity and business, till now the world of humanity, with its never ending category of complaints, is either resorting to some of these, or the wise medical advisor is glad to suggest to them an institution especially effective in the malady complained of.

Thus Institutional Specialism has become an established fact, and establishments have sprung up in all parts of the habitable world, and very often without any reference to nature's indications. Hospitals, sanitariums and homes for the afflicted of a general and special kind now exist with-

out number, and are mostly located in or near populous centers for the convenience of the public and their patrons. These afford a chance for the care and study of separate maladies and the segregation of those whose nature and contagiousness demand separate housing. This is or should be much to the advantage of all concerned—to the physician and all that act with him in the exclusively scrutinizing investigations these special institutions are permitted to make, and to the patient whose condition and care must receive the special attention thus provided for. Institutions, open for the reception of all kinds and characters of disease, can but give limited attention to the minute study and care of many of the diseases whose proper care depends upon the differential diagnosis and specific treatments indicated. Thus it will occur to the thoughtful and observing to call to mind the almost innumerable institutions based on the equally variable indications and reasons for the same. The rehearsal of these would cover most of the physical, mental and moral departures from perfect health and carry this paper beyond its purpose.

But as to my own personal application of the scheme of Institutional Specialism, I wish to add a few words. After a good many years of general practice of medicine and surgery, I have learned the lessons of most medical men who have prescribed for and ministered unto suffering humanity, namely, that very few remedies are necessary to the conduct of most cases, and that correction of life's mistakes and reforms in diet and hygiene will restore nature's equilibrium where organic changes have not taken place. As nature is its own restorer, and all departures from normal conditions tend to correct themselves, I have sought to inculcate these reasonable facts into the minds of those who have consulted me professionally and have eliminated as much drug taking as possible. It is doubtless the observation and experience of every medical practitioner, that when he has succeeded in restoring normal physiological processes, his patients are well. Then it would seem a natural proceeding to institute the physiological conditions in all cases where we observe that this can be done, and where long-continued departures from the normal have made it difficult for

nature to act for itself. So the establishment of *institutions* for the application of the well-known physiological remedies surely seems within the province of professional endeavor; and, while most of these remedies could be applied at the homes if any one or two would prove adequate, still the aggregation of all or most of them in one place where force and effectiveness can be assured by larger installments of them, is far more satisfactory. Most of such appliances and apparatus can not be made effectual when portable. Every centre of population should, if possible, have some place to which cases can be referred by the profession, and the proper modality be applied. Where possible, the attending physician should prescribe the kind of treatment desired, but in most cases much discretion should be left to the administrator of the remedial processes. Having thus equipped an institution for the application of *heat, cold, lights of varying colors, water of varying degrees of heat and cold and force of impact*, incorporating also *chemical and gaseous features* to the baths when indicated; *massage* in its varying forms, *manual and mechanical; rest treatments of body and mind; gymnastics* for developmental and corrective purposes; *electricity* with its varying modalities; the *X-ray* for alterative and radiographic purposes, and with whatever adjuncts are the devised aids to their application, I feel that I have brought into one place what can but prove an efficient factor in combating maladies by physiological methods.

With all of them under one roof and in the hands of competent operators, I feel that few institutions can offer a more complete armamentarium than mine. Its records for the first six years are eminently satisfactory.

ABORTIFACIENT DRUGS SIMULATING FREQUENTLY OBSERVED DISEASES.

Gilman R. Davis, M.D., Price Hill, W.Va.

(Read at Annual Meeting of State Medical Association, Elkins, Oct., 1909.)

There are many times in the practice of medicine where the physician, however experienced, talented or conscientious in the

discharge of his duty, is placed in a position of great disadvantage.

One of these occasions is where he is called to see a woman, living at home with her husband and children, and she is vomiting and purging and in great pain and anguish. She will declare, if forced to it by close questioning, "it is due to something she has eaten or drunk."

Or, she may have headache, rapid breathing and marked dyspnoea simulating an attack of asthma. You will then learn she has pain in the region of the kidneys with frequent and painful urination, with tenderness and swelling of abdomen. Or, she has aches, pains and bruised feelings from head to foot, with alternate flashes of heat and rigors, as in the grippe.

Let your suspicions be what they will, that she is in the early stages of pregnancy and has miscarried, or is about to, and that probably not from legitimate causes. If she is smart or "smooth" enough not to make evasive or contradictory answers, thus making a loop-hole through which you can enter and force a confession from her, she will too often fool you.

Question her as you will and her every answer is a falsehood. Suggest or attempt a digital examination of the uterus, and you are promptly met with a peremptory and positive "No! it is not necessary, do you doubt my word?" I think I am safe in saying the physician is placed in a position of great disadvantage.

This paper is not on the general subject of abortion, but the action of drugs, principally turpentine and infusion of May apple (podophyllin) taken with criminal intent, simulating frequently observed diseases. As symptoms only will be considered, nothing will be said of the treatment.

Abortifacient drugs act by directly or indirectly exciting uterine contractions.

The *Materia Medica* gives fifty-seven drugs, gases, etc., which are "reputed" to cause abortion. Their very number is necessarily the weakest argument as to the claims upon them and makes them not guilty even after indictment for the offense.

There are certain drugs known as *ecbolics*, which cause contraction of the muscular fibres of the uterus, but I sincerely doubt if any drug, whatever its power to act on unstriped muscular tissue,

can, per se, cause the impregnated uterus to evacuate its contents. If they do, it is because the ovum has a very insecure attachment or there is a predisposition to miscarry.

I do not refer to abortion from acute infectious diseases of mother, or where she is guilty of "arsenic eating," poisoning by phosphorus, lead, illuminating or other poisonous gases. In most of these cases the fetus is dead, and being a foreign body, nature throws it off. I refer only to strong, healthy women with a live fetus.

Abortion must be caused by mechanical means. If from drugs, their action, as in the case of infusion of May apple, causing such vomiting and profuse diarrhoea with constant violent and long-continued tenesmus; or from turpentine, causing violent strangury and other conditions, the resulting pressure from these bearing-down pains causes rupture of the sac and expulsion of the uterine contents.

The cause in such cases is mechanical, but always accompanied with very serious, if not fatal inflammation of part or all of the organs of the abdominal and pelvic cavities. I believe sawdust or any other non-medical irritant causing sufficient gastro-intestinal inflammation to produce violent tenesmus, would have the same effect as drugs. It is not the medicinal but the mechanical action resulting from the drug or other irritant that produces the result.

Whether you kill the fetus by puncturing the sac with a uterine sound or similar instrument, the reflex contractions caused by sponge tents inserted in the os, or rupture the sac by tenesmic pressure, the result is the same. "Things equal to the same thing are always equal to each other." Let me give you a drug proving of turpentine:

Mind—Stupefaction, comatose.

Head—Vertigo, act as if intoxicated.

Nose—Sometimes violent nose bleed.

Face—Pale, with clammy perspiration.

Stomach—Appetite gone, burning sensation and vomiting of mucus.

Abdomen—Excessively distended and sensitive to touch.

Stool—Mucus and water. Intestinal catarrh.

Urinary Organs—Heaviness and pain in the region of the kidneys. Frequent urina-

tion with strangury. Urethritis. Urine scanty and bloody, sometimes suppressed.

Examination of Urine—Sp. Gr. 1.020 to 1.026. Heat and nitric acid show albumen.

Lungs—Marked dyspnea. The general condition is one of great prostration, sometimes with subsultus.

If you were called to a case presenting, more or less, the above symptoms, especially with a temperature of 100 to 103° and the patient positively denies having taken turpentine, cantharides, arsenic or any drug, would you not see a pretty good picture of acute Bright's disease? Would you be blamed if you so treated it?

Take a drug proving of May apple, the well known podophyllin. It grows in abundance on the mountains. Women gather the apple, make a strong tea of it, and drink it in doses either fatal or bordering upon it.

Head—Severe headache with blurring of vision. Dizziness with nausea and vomiting.

Tongue—Coated white, with viscid mucus and foul taste.

Throat—Dry, with great thirst for large quantities of water.

Stomach—No appetite. Constant nausea and vomiting; mucus, dark green and sometimes bloody.

Abdomen—Severe pains and cramps. Pain in the right hypochondrium with retraction of abdominal muscles.

Stools—Watery, yellow, green, undigested feces, mucus, streaked with blood, accompanied with griping and intense tenesmus.

Genito Urinary—Enuresis, sometimes suppression. Severe pain and tenderness in uterus and both ovaries.

Should you be called to a case with the above symptoms, more or less, and could find no cause for them, would you not be justified in considering it a case of the gastro-intestinal trouble so commonly observed in the hot summer months, due to indiscretion in eating and drinking?

I had eight positively known cases in eighteen months of turpentine and podophyllin poisoning, taken with intent to produce abortion. How many more I did not positively identify, I do not know. The above drugs are the favorites in the coal region for abortifacients. As to the quan-

tity taken, it is difficult to give the exact amount. In two cases the patients took two tumblers full of infusion of May apple.

Of turpentine, one took "eight and ten drop doses, frequently repeated."

Another, "teaspoonful doses every two hours." I could not find out the number of doses in either case. It would not be very difficult in many cases to differentiate a poisoned from an innocent diseased condition, if you were called at the start. The intensity of the symptoms, odor of the turpentine, etc., would be noted.

But as a rule you are not called for several days, and this regardless of the severe suffering endured and often alarming symptoms presenting. The husband or some friend will come for you in spite of the patient's positive declaration, "I do not need a doctor, I will soon be all right."

It cannot be the physician's fee that deters them, for according to the universal rule through the coal region, all these women were "list cases" and there is no charge for visits. This circumstance alone, other things being equal, gives me a clue to the real or probable condition of affairs.

These women know their guilt and they will conceal it by every deception and denial in their power. Of the known eight cases, four were of such a nature that I had no hope of saving them. Two recovered at home and two I sent to the hospital, one of whom died.

This fatal case was an aggravated and typical example of persistent lying and deception (asking pardon of the dead for speaking ill of her.) The patient was a large, strong and heavy-set woman, white, aged 30 years, and the mother of three children. She had been very sick for two days before sending for me, vomiting and purging incessantly, tympanites marked, entire abdominal and pelvic region so sensitive that any attempt at palpation or making digital examination of the uterus would cause her to scream and peremptorily order me to desist. (Part of this was no doubt feigned.) In the third day she had every appearance and symptom of acute general peritonitis, temp. 106, pulse 160. She repeatedly made positive denial of pregnancy or taking any drugs whatever.

I was positive she was deceiving me. As the result of some quiet detective work I

found out, firstly, that she was undoubtedly pregnant, and, secondly, that she had drunk a quantity of "May apple tea."

I at once called Dr. Thos. E. McGuire of Mt. Hope in consultation. He not only fully concurred in the etiology and diagnosis, but decided that on account of her very serious condition and extremely unfavorable surroundings at home to send her to Sheltering Arms Hospital. By judicious use of cold water and indicated remedies she was in shape the next morning to be moved.

I sent her to the hospital together with a letter fully explanatory of the case. The physicians and nurses made every effort to extort a confession from her, but to no avail.

She was admitted Dec. 10, 1907, returned home Dec. 17, but did not let me know when she returned; was uncommunicative and so shunned me that I let her alone. She returned to the hospital Jan. 7, 1908, and was delivered at once of a six-months fetus. She died Jan. 13—six days later.

I would like to report a very interesting and complicated, and I know instructive case of turpentine poisoning (pregnant six weeks and aborted), but time forbids.

The fact that from ten to twenty per cent of all pregnancies result in miscarriage from innocent causes is bad enough, but this criminal and cowardly expedient of purposely producing them is a horrible blot on both the morality and civilization of our time.

No wonder our enterprising "Teddy" has taken advantage of the fertile field presented him, and has exploited his very commendable doctrine of "conservation of natural resources" and "race suicide."

Desire to do things with a desire that sets every fiber in being aflame. Love everything that is being done with a love that is the living power of the soul itself; and give yourself, your largest self, your whole self, to your life and your work. And what you give, that will be your fate.—*Larson*.

Small kindnesses, small courtesies, small considerations habitually practiced in our social intercourse, give a greater charm to the character than the display of great talents and accomplishments.—*M. A. Kelly*.

THE SIGNIFICANCE OF LEUCORRHOEA.*

By Augustin H. Goelet, M.D., New York.

(AUTHOR'S ABSTRACT.)

The neglect of leucorrhoea is a grave and unfortunately a common error, that is unpardonable because it involves the health, happiness and often the life of the patient. The character and source of a vaginal discharge should always be investigated by the physician who encounters it and the patient should never be dismissed with a prescription for a vaginal wash to be used unintelligently and indifferently because the true significance of the discharge is not appreciated.

Education of patients to an appreciation of the possible significance of leucorrhoea in *Childhood before Puberty; in Young Women before marriage; in Married Women; and in Women past the Menopause* is particularly insisted upon.

The danger to the woman in after life of disregarding or neglecting a vulvo-vaginitis of childhood that may be derived from infection of a serious character is forcibly emphasized, as is also the necessity of investigating the leucorrhoea of young girls after puberty and before marriage. These latter are the cases most often neglected because of false modesty on the part of both the mother and daughter, shared only too often by the physician. It too often happens that the unsuspecting mother and physician permit neglect of a vulvo-vaginitis of gonorrhoeal origin because a proper examination is not insisted upon.

The leucorrhoea of recently married women, as is pointed out, is often the result of infection from the husband who has a gleet or chronic prostatitis at the time of marriage, and if it is neglected may lead to serious consequences. It is unfortunate that leucorrhoea of married women is so often regarded only as a necessary inconvenience. Its possible character and the probable outcome if disregarded should be impressed upon every woman.

*From a paper presented by invitation at the Richmond meeting of the Tri-State Medical Association of the Carolinas, Feb. 15 to 17, 1910.

The danger to the young wife is so great that special examination of the prospective husband who has once had gonorrhoea should always be insisted upon before marriage is consented to.

Vaginal discharge in women past the menopause is often disregarded because of the popular belief that women at this period of life are exempt from disease of the generative apparatus.

The most frequent causes of vaginal discharge at this period are senile endometritis and cancer of the uterus. Both of these conditions are important; senile endometritis because it leads to constant ill health or chronic invalidism and premature aging; and cancer because it endangers the life of the patient. *Hence at no period of a woman's life is investigation of a vaginal discharge more important than after the menopause.*

It is unfortunate that the term leucorrhoea is so indiscriminately used to designate any and all forms of discharge from the female genitalia. It is so frequently given as a symptom by the patient who consults the physician that it has come to be regarded as natural, and its actual character is seldom noted.

Correspondence

LETTER FROM JAVA.

By Dr. L. D. Wilson, Wheeling, W. Va.

BATAVIA, JAVA, Dec. 13, 1909.

Dear Doctor Jepson:

I fear you will repent of your request that I would occasionally drop you a line while on my circumnavigating tour. The writing habit is a dangerous one to cultivate unless one fully realizes his limitations, and understands how easily he can perpetrate the stale and uninteresting. We are here about 500 miles south of the equator, with the sun only a few degrees further south of us, so you may just as well know, right now, that it is hot here, and hot the year round, too; about like our hot harvest weather in July, and from now on, until next Fall, getting hotter and hotter. No wonder tropical vegetation grows luxuriantly here, for with the heat and the rain in an all the year round performance, it sim-

ply couldn't help it. My last letter was from Calcutta. Since then we have visited Rangoon, Burma; Singapore, the Straits Settlements; and this Java city. Rangoon is a fine large city, controlled by Great Britain. It is now the greatest rice market in the world. Burma rubies and jade are also among its commercial articles. The climate is tropical and all tropical products flourish. In sharp contrast with India at this time of the year, the country is one unbroken stretch of verdure. Rain falls here with sufficient frequency to keep vegetation growing.

The great feature of Rangoon for the traveler is the great Shwe Dagon pagoda. This is the greatest Hindu temple, or rather assemblage of temples, in the world. The pagoda itself is the most sacred in their estimation, and in construction one of the most wonderful structures in the world. It stands in the center of a great raised platform 900 feet long by 680 feet wide which is 170 feet above the surrounding plain. The base is about 450 feet in diameter, and it rises, a huge tapering spire, without window or opening, to the height of over 300 feet, the tip of the spire standing almost 500 feet above the plain. This shaft tapers quite rapidly for the first third of its height, then more slowly and gracefully to the top, where it terminates in a slender spire which supports a jewelled crown of gold and precious stones valued at \$400,000. From bottom to top, this huge shaft is one unbroken expanse of gold leaf. There must be acres of it. And the glitter in the bright sunshine can be seen for miles and miles in every direction. Surrounding the base is a circle of chapels, perhaps a hundred or more in number, varying in width from ten to twenty feet and twenty to fifty feet high, each containing an image, twice or three times life size, of Buddha. These images are richly decorated with gilding and brilliants. The chapels on the exterior are one maze of elaborate carving rising in tall steep spires, and either heavily gilded or decorated with mosaic work in many colored glass designs. Some of these are simply one mass of gilding. Around the outer edge of the great platform, allowing a paved passage way of 20 or 30 feet between them and these chapels, the whole space is taken up with a succession of the most wonderful temples, 50 to 100 feet in height, with columns and spires,

gilded and most wonderfully carved, the interiors glittering with gold and brilliants, and the images, which each one contains, a mass of gorgeous coloring and decoration. Standing in the midst of all this, the effect of the whole is as if one were in a dense forest of golden spires and columns. It is simply bewildering. The pagoda dates back 580 years before the Christian era, and as pilgrimages from the entire Hindu world are constantly coming and going, leaving their votive offerings, the riches of this shrine are incalculable. Religion is religion with these people. At the middle of each of the four sides of the great platform a covered flight of steps reaches its top. These are enclosed and covered, and the same wonderful carving and gilding lavishly used in their decoration. All the way up on either side are stalls for the sale of flowers and candles used in worship, and curios and such like objects. Scattered about the city are many other pagodas, whose golden spires rise in glittering gorgeousness skywards, and were it not for the Shwe Dagon they would be deemed wonderful structures. The whole effect is weird and strange, as if magic had been here on one of her extravagant frolics. One of the sights of Rangoon is the elephants at work in the great teak lumber yards, handling and piling the great logs. The Burmese seem to be of rather a better type than the average of upper India. The incubus of caste does not fetter them. Their women are not secluded, are comely and often quite pretty and vivacious. They dress in bright colors, gracefully draped, and wear much showy jewelry. They are a welcome element in the general aspect of the streets and bazaars. December 10th in the morning we arrived in Singapore, the great port of the Straits Settlements, also under British control. The city is fine, streets wide and beautifully paved and shaded, a splendid park with a labyrinth of lake. We took a train for a run of 17 miles through a country just revelling in all the splendors of tropical vegetation, to Johore, the capital of the little principality ruled over by the Sultan of Johore. An interesting visit to his palace filled in the whole morning. As Singapore is but 80 miles from the equator, the seasons are very much alike. In fact, there is only one season, Summer. The mean range of tem-

perature the year round I was told is only about 5° ; the diurnal range, from 75° to 95° . Owing to a very heavy rain the night before, the day of our visit was the coolest in twenty-five years. We were duly thankful. Leaving there the evening of the 10th we crossed the equator sometime in the night, but not before Neptune had sent a messenger on board to announce that the Sea God himself would come aboard the next day and receive the homage of his subjects, the passengers, officers and crew. This is a most interesting ceremony and was duly carried out on the afternoon of the 11th. Neptune and his court and retainers come aboard, hold a reception, distribute favors and decorations, order baths, shaves, &c., as his Royal Highness pleases to award them. A large tank of water about ten feet square and about four feet deep is conveniently placed in front of his throne, and numerous are the victims whom his guards, by his behest, immerse therein. There is no waiting to allow a change of clothing; just what one happens to have on will do. One little preacher, who was hilariously enjoying the ceremonies, without a thought of trouble "across his peaceful breast," suddenly found himself sailing over the brink into the middle of the pool. At the last the ship's hose was ruthlessly turned on everybody in reach, and such a drenching most of them never had before. Neptune then distributed certificates, or rather permits, to each passenger, certifying to his having crossed the God's equator, and granting certain privileges for the future, and then with court and retainers departed to his realm.

On the 12th we arrived at the Dutch city of Batavia. This is a fine city, clean, well shaded, beautiful drives, &c., but nothing especially noteworthy. We were splendidly entertained at lunch and at dinner in the fine botanical garden, and during the afternoon native music, dances, sports, &c., were provided. In writing of the visit to Johore, I should have mentioned that we there had our first experience with the "rickshaw," which is simply a two-wheeled cart or sulky, with a coolie for traction purposes instead of a horse or pony. These fellows, with their magnificently developed legs, trot along at a brisk jog almost as rapidly as we drive, ordinarily, in our buggies. We leave here today for Labuan, Borneo, and then to Manila.

ECLAMPSIA AND MORPHIA.

Editor W. Va. Medical Journal:

Dr. Steenberg, in his article on Eclampsia and a summary of its treatment in your March number, treats of a subject of such vital importance to every practicing physician, that I will ask to supplement one point in his treatment.

He speaks of the use of morphine and scopolamine in certain selected cases, but he does not tell us what these cases are, and this is an exceedingly important point. There are two varieties of puerperal eclampsia, one strictly due to toxemia, which may occur in any pregnancy. For this the remedy is depletion, by the use of enemas and veratrine.

The other is the form frequently met in primiparas, where toxemia is not very marked, at least is not present in sufficient degree to cause convulsions alone, but we have on the other hand a very marked nervous disequilibrium due to the natural apprehension felt by the woman on facing for the first time this, to her, frightful ordeal. Owing to the highly nervous condition in which she is, comparatively small causes will give rise to convulsions. This is one of the nervous forms which has won for morphine its repute in these cases, for in the truly toxemic forms it can only be a disastrous medication. But whenever morphine is indicated, the H-M-C combination will accomplish the object better and with less peril; hence in these cases and in these alone the H-M-C is well fitted to give relief. No opiate or other remedy which tends to lock up toxins in the body should be permitted in the true toxemic cases. The watchword is Elimination and again Elimination. In both cases the earliest possible delivery and the control of the convulsions themselves by chloroform are indicated.

DOCTOR.

Knicker—"There are plenty of books telling how to save life while waiting for the doctor."

Bocker—"Yes. What we need is one telling the young doctor how to save life while waiting for the patient."—*Harper's Bazar*.

Selections

THE DIAGNOSIS OF HYSTERIA.

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A few remarks about the symptoms in general may be in order before taking up the chief symptoms. The symptoms are characterized by a loss of normal control; it may be the emotional sphere, from excessive laughter to an emotional convulsion; or of the higher psychic centers, from a foolish fear to a trance; or of the vasomotor system, from a blush to a dermatographia; or of sensation, from paresthesia to anesthesia; or of motion, from nervous movements to spasmodic contractions; or, from slight inhibition of movement to paralysis; or, of general disturbance of mentality, from peculiarity to insanity; or, of sympathetic visceral disturbance, from disordered function to suspended function; and likewise, one may say of the special senses, they may vary from hyperacuteness to inactivity.

Bearing these facts in mind, we are aided in separating some of the various types of hysteria and in classifying some of the chief and subsidiary symptoms, although no sharp line can be drawn between them. The recognition of the stigmata is important, for, when present, they only appear typically in hysteria, while the other symptoms are not characteristic.

STIGMATA: HYSTEROGENIC SPOTS, limited areas, pressure over which will cause a hysterical attack. The inframammary and inguinal regions are the most important.

HYSTEROPHRENIC SPOTS, pressure on which arrests an attack. The left inguinal region is the best known. Neither of these must be confused with other tender points which are among the general symptoms.

ANESTHESIA. The most typical are hemianesthesia of the whole of one side of the body and the glove or stocking shaped anesthesia of the extremities. Other peculiarities of the anesthetics are that the hemianesthesia is usually on the left side, except

in left-handed people. The patient is rarely cognizant of the existence of the anesthesia until brought out by the examination of the physician. This is because, as Dercum suggests, the part is elided from consciousness and not simply due to change in the peripheral nerve terminals. I do not agree with Babinski that it is due to suggestion on the part of the physician. Its area of selection would seem to disprove this theory. Hysterical anesthesia never picks out the area of distribution of an individual nerve. When the extremities are affected, sensation usually returns from the proximal line toward the periphery, often clearing up in segments, while in organic anesthetics the whole area fades as recovery takes place. Anesthetics of the special senses, taste, hearing, smell and vision, are generally unilateral and on the same side as the cutaneous anesthesia. This combination of unilateral affection of special senses and of cutaneous sensation is pathognomonic of hysteria and does not occur in organic diseases.

A curious fact has recently been brought out, viz., in dissociated (hysterical) anesthesia, tactile stimulation, though not consciously felt, may give rise to the same galvanic reaction as when consciously perceived.

Interesting also are the facts obtained by testing sensation in a hysterical patient recovering from anesthesia which consist mainly of an abnormal persistence of sensation to cutaneous stimulation, delayed time reaction before the stimulation is consciously appreciated, non-perception when a more normal sensation is at the same time present, a tendency to immediate motor response to a stimulus, the disagreeable quality of a sensation, expressed as a "queer feeling," unnaturalness, etc., and the impairment of the sense of personal ownership expressed as "hardly belonging to me," "strange," etc. These are grouped by Ernest Jones under the head of phrictopathic sensations.

ANALGESIA. This may be so marked that pins may be stuck in patients at will. Analgesia may exist without cutaneous anesthesia. It is most often unilateral and all evidence of organic disease must be eliminated before it is pronounced hysterical.

HYPERESTHESIA. Irregular areas of hyperesthesia not corresponding to root-areas

nor peripheral nerve distribution may be considered hysterical.

SPECIAL SENSE DISTURBANCE. Loss, diminution or hyperacuteness of special senses when organic disease is excluded may be evidences of hysteria.

CONTRACTIONS OF VISION AND COLOR FIELDS. The vision fields are contracted concentrically and not in the manner of a hemianopia. In the color field blue is the first affected and red last, while in organic atrophy, the red field is first diminished.

CONTRACTIONS OF THE TRUNK AND LIMBS. These do not occur in the same positions as organic contractions, and unless fibrous changes have taken place, they may be easily corrected under anesthesia, or at times, by distracting the patient's attention. The contractions are probably due to the patient getting into a position and by auto-suggestion thinking it can not be corrected. Beevor calls attention to the non-relaxation, or action contrary to intention of antagonistic muscles in hysterical palsies, which is a valuable point in differentiating between functional and organic cases.

To simply enumerate the multitude of symptoms which may be seen in hysteria would serve no purpose and be confusing to the diagnosis. We must look for the personality, the stigmata, the general type of the manifestations, and last, but not least, we must exclude every possible organic disease, however, at the same time, bearing in mind the fact that true hysteria may be superimposed upon a genuine organic condition.

Most of the symptoms of hysteria may be divided into:

Sensory, as anesthesia, hyperesthesia, paresthesia, and analgesia.

Motor, as paralysis, contractions, paroxysms, spasms and some tics.

Physical, as trance, phobia, amblyopia, aphonia, etc. Hysterical pain is considered by some as a hallucination, real and agonizing to the patient, but without pathological basis.

Sympathetic. Visceral and vaso-motor, as vomiting, globus hystericus, dermatographia and phantom tumor.

Subsidiary, as hysterical cough, quivering eyelids, dilated pupils, rise of temperature without evidence of inflammation, and tender spots along the spine, on the head, or

elsewhere, which cannot be otherwise accounted for.

DISTINCTIVE DIAGNOSIS. It must be emphasized that no one or two of these symptoms is sufficient for a diagnosis of hysteria. The type or variety of a hysterical explosion is chiefly of importance in relation to what other condition it may simulate. The grand hysterical convulsions of Charcot, consisting of a succession of distortions and poses are rare, and their existence has been doubted. I have had the opportunity, however, of studying several such cases. Paroxysms resembling epilepsy are much more common, while cataleptic and trance states are at times observed. The most frequent manifestations are those simulating paralysis and those arising out of a neurotic environment grossly resembling neurasthenia, melancholia and hypochondriasis.

It has frequently been stated that the great emotional storms which have swept over the face of nations and made the history of massacres, revolutions, crusades and religious reformations so readable and often so horrible, are manifestations of epidemic or pandemic hysteria. With this belief I entirely disagree, for I believe they are widespread psychic emotional reactions of excitement and are not hysterical. Hysterical people are more or less cowards, too selfish to make sacrifices, their sphere of action restricted, and their emotions too unstable for prolonged strain. I venture to say that many more hysterics during these strenuous times would be found at home paralyzed with fright or having convulsions at horrible sights, or, reversing the biblical order, and weeping with those who laugh and laughing with those who weep.

Neither are the leaders hysterics. Nero may have been a maniac, Henry VIII. a pervert, Caesar and Napoleon epileptics, but I have never heard of a well known leader in history who was a hysteric.

In considering the differential diagnosis of hysteria, only a few of the diseases which it may simulate have we space to discuss.

In the distinctive diagnosis between hysterical and organic palsies, we must remember that hysterical palsies are often of the spastic type, but there is never present the Babinski phenomenon. The deep reflexes are never absent as they may be in organic diseases. Hysterical palyases never attack

single muscles nor the muscles supplied by a single nerve. Reaction of degeneration never occurs in hysteria.

The atrophy of hysteria is never accompanied by fibrillary tremor. Hysterical contractions, unless of long standing, cease under anesthesia. In hysteria, loss of the pupillary light reflexes does not occur. Incontinence of feces and urine is extremely rare, although I have seen it in at least one truly hysterical case. In hysterical hemiplegia or paraplegia the inner border of the foot is usually dragged, while in organic cases, it is the outer border. The ankle clonus of hysteria is easily exhausted, and at the beginning voluntary conditions of the muscles can usually be felt and the rhythm of hysterical clonus is irregular.

The positions of the limbs in hysterical paralysis may grossly resemble that of organic disease, but there is never an exact similarity. Hysterical paralyzes may be overcome by an electrical shock, fright, manipulation, or suggestion. We have all heard of hysterically paralyzed patients making an agile escape from a burning house.

Certain tests are useful in partially paralyzed patients in making the diagnosis of functional or organic paralysis. If when the patient, with the arms folded, on arising from a lying to a sitting posture, flexes the hip, and the heel of the partially paralyzed side is raised, the case is organic.

In incomplete organic hemiplegia, the patient lying on the back can lift either lower limb separately but cannot lift both together.

If, in an incomplete organic hemiplegia, the patient lying on his back lifts the affected limb, and we lift the other, the partially paralyzed limb drops, but if the patient lifts the good limb and we lift the affected one, then the unaffected limb does not drop.

Babinski has discovered that in organic hemiplegia there may be paralysis of the platysma, while in functional hemiplegia this is not so.

According to Hoover, a normal person lying on his back on a couch, in lifting one foot lets the heel of the other dig into the couch; this can be felt by feeling the tendo Achilles. In organic paralysis of one leg the same thing happens in the sound limb if the patient attempts to lift the paralyzed leg. If the sound leg is lifted, the para-

lyzed one attempts to press down in proportion to its paralysis. In hysterical paralysis of one leg, an attempt to lift it does not press down the other one. If, however, the unaffected leg is lifted, the hysterically paralyzed one digs down.

In paraplegia if we lift one limb and find that because of rigidity the other limb is raised also, then the case is organic. With these points in view and bearing in mind the other stigmata of hysteria, one is usually able to reach a correct conclusion.

I have recently seen a case of hysterical hemiplegia in which the voice was also affected. This attack came in a woman one year after her husband died of an organic hemiplegia, which it simulated almost exactly. The above tests and contracted vision fields enabled a proper diagnosis to be made, and the patient was induced with a faradic shock and suggestion to quickly walk and talk.

Early multiple sclerosis is often mistaken for hysteria, but the scanning speech of multiple sclerosis and nystagmus must be looked for and the stigmata of hysteria excluded.

The diagnosis of hysteria from other functional diseases and certain mental troubles is at times difficult. If we study hysteria we will not confuse it with simple nervousness.

Neurasthenia, according to Mitchell, is essentially a chronic fatigue, due in part to malnutrition, in part to functional over-exertion, occurring in persons with a predisposition, hereditary or acquired. He further says that from hysteria, except when the two are actually mingled, diagnosis should be possible by the absence in neurasthenia of crises, paroxysms, emotional storms, paralysis, contracted vision fields and anesthetics.

Hypochondriasis may be mistaken for hysteria. The hypochondriac pays undue attention to trifling symptoms. Various complaints soon become senseless and an abrasion on the skin may be considered syphilitic, or they may believe their brains shrunken up or their stomach melted away, etc. These are often accompanied with hallucinations of sight and sound, and delusions of persecution may develop. Their emotional crises may lead to such impulsive acts as suicide. Hysteria lacks these profound mental attributes and is characterized

by its own peculiar personality and stigmata.

From *melancholia*, hysteria may be told by the absence in melancholia of a desire for audience, by the presence of genuine distress. The melancholiac in the agitative period wrings the hands and walks the floor in mental anguish even when alone, and in the depressed state sits with bowed head and fixed expression. This distress may be traced to delusions and hallucinations; they are unworthy and have committed the unpardonable sin, etc.

Mania is usually marked by periods of depression and exhilaration. The stigmata of hysteria are not present, but there is marked motor agitation and acceleration of the flow of ideas with hallucinations and delusions in the excited period which is the one chiefly to be distinguished from hysteria.

Epileptic Convulsions have been confused with hysterical seizures. In a hysterical seizure the patient falls, if she falls at all, without injury. She frequently talks or screams in the attack, the pupils react to light, the movements of the extremities are wide and purposeful. She may fight or bite at surrounding objects or people, her position takes the character of a pose and there is usually no after stage of stupor. The tonic, then clonic, stage of convulsion, biting of the tongue, foaming at the mouth, and other symptoms of epilepsy are absent.

Psychasthenia pure has been described but I have never been satisfied that such a separate condition exists, for most of the cases reported under this head appear to me to rather belong either to neurasthenia with superadded hysteria, or to hypochondriasis, or to hysteria.

Hysteria may have an insanity imposed upon it, and if so, it carries us into a field of discussion not yet settled and hence will not be considered here. Hysteria is sometimes diagnosed upon individual symptoms, as cough, phantom tumor, vomiting, anuria, hiccough or ovaralgia, etc., but a patient presenting one of these symptoms alone without other hysterical manifestations or stigmata cannot be said to be suffering from hysteria. In every case most careful examinations must be made to exclude every possible organic cause. Even a functional disorder of some organ should not be diagnosed as hysterical unless there is additional

ground upon which to base our diagnosis. It never occurs, in the writer's opinion, that hysteria affects the function of single organ alone.

In conclusion it may be said that carelessness and prejudice are the two main factors in an erroneous diagnosis of hysteria, and it is needless to state that these errors often work an injury not only to the patient and the physician, but also to the friends and family of the patient and to the medical profession.—*Old Dominion Jour. of Med. and Surg.*

MEDICAL INSPECTION IN SCHOOLS.

The London School Board presents the following summary of their work and their recommendations:

Our findings with regard to teeth, vision, ringworm, favus, suppurating ears and adenoids, debility and tuberculosis are as follows:

(a) TEETH.

That, in the opinion of this Sub-Committee, there is a prevalence of dental caries among children attending public elementary schools, and that the existing accommodation in hospitals and dispensaries for even simple dental examination and treatment is wholly inadequate.

That, in the opinion of this Sub-Committee, it is desirable that provision should be made for simple dental treatment of school children.

That it is desirable that the daily use of toothbrush by children in their homes be encouraged.

That it is desirable that instruction in the hygiene of the teeth should be given to school children and to their parents and guardians.

That it is desirable that from time to time children be examined as to the cleaning of their teeth.

(b) VISION.

That a large number of children are suffering from defective vision.

That both their ability to profit by school instruction and, in many cases, their physical health, are prejudicially affected.

That neglect or delay in treatment may be attended by chronic or permanent disability.

That, owing to the large number of cases,

the existing provisions for their examination and treatment are inadequate; and further, that the delay and loss of time suffered by parents seeking, often from a distance, hospital treatment for the children affected frequently result in the children not being treated at all.

That the existing accommodation in the hospitals and dispensaries for such treatment is inadequate.

That all cases treated should be re-examined every other year.

That additional provision is desirable for the treatment in the vicinity of the school of all children suffering from errors of refraction.

(c) RINGWORM.

That, owing to this obnoxious and contagious disease, many children, estimated at 2,950 annually in regular attendance, are prevented from attending school, and expose others to infection at home.

That the cure of the disease by lotions and ointments is a process occupying many months, or in some cases even several years, the patient being meanwhile prevented from attending an ordinary school, and remaining a source of infection.

That the disease is now capable of being cured rapidly by x-ray treatment, the child ceasing at once to be a source of infection and able to resume school on the re-growth of its hair.

That, owing to the fact that x-ray treatment is provided only at a few hospitals, where its use is greatly in demand for a variety of adult and other diseases, the treatment is available only to a very limited extent for ringworm cases.

That the delay and loss of time suffered by parents seeking, often from a distance, treatment for the children affected frequently results in unwillingness to submit the child for treatment, the child meantime remaining a source of infection.

That by means of the x-ray treatment, the disease can be practically stamped out, thus rendering unnecessary the present schools specially maintained for children suffering from it.

That provision is desirable for the treatment of the disease by x-rays at a fixed center or centers.

That power shall be given to compel the attendance of children for treatment immediately on discovery of the disease.

(d) FAVUS.

That the present special treatment of cases of favus disease should be continued.

(c) SUPPURATING EARS; ADENOIDS.

That cases of suppurating or discharging ears are greatly prevalent amongst children, about 1 per cent or 7,500 children being thus afflicted, more especially those in insanitary surroundings.

That neglect of the complaint frequently results in deafness or defective hearing, and sometimes in consequences dangerous to health, or even life; in most cases the child being more or less disqualified from profiting by the school instruction.

That the cure of such cases involves skilled syringing of the ears daily, as well as dressings.

That such treatment cannot in most cases be given at the child's home, and cannot be undertaken by the hospitals, even if the parents were able and willing to take the child there for treatment.

That provision is desirable for the proper treatment of suppurating ears in the immediate vicinity of the school.

That any cases requiring operation or treatment other than as above described, and all cases of enlarged tonsils or adenoids calling for operation, should be referred to hospital or private treatment.

(f) DEBILITATED CHILDREN. . .

That a considerable number of children living in insanitary conditions are so debilitated as to be unable fully to profit by instruction in school, or attend without further deterioration.

That such children especially succumb to tubercular infection as well as other diseases.

That it is desirable further provision be made of schools on the lines of the existing open-air day schools at which debilitated children could be admitted by the local education authority for short periods.

(g) TUBERCULOSIS.

That tubercular disease with its consequences disqualifies children, if able to attend school, from taking due advantage of school instruction.

That many cases discharged after treatment from hospital, and other cases not treated in hospital or convalescent home, require rest and sanitary surroundings for their effective and permanent cure.

That the disease could in a large number of cases be arrested or cured if such means were provided for its treatment in the earliest stages, and that it is of the first importance that it should be so treated.

That children in whom tubercular disease of the bones or joint is detected should be sent to their private practitioner or to hospitals for treatment.

OSTEOPATHY.

Osteopathy is the art of pulling a man's leg by rubbing his back. You have a pain in your side, perhaps. As a matter of fact you know that when you eat too much the pain increases, and when you are careful not to overeat your side doesn't hurt. But you are like most other human beings, you would rather pay some one else to doctor you than doctor yourself free of charge. A friend of yours, who has been relieved of a headache by osteopathy, gives you no peace until he has led you to a door with "Dr. Thums, D. O." on the glass, and there you are, ready for a delightful experience.

The osteopath is a pleasant fellow, and very sympathetic. Many of the old-fashioned doctors are cold and gruff, but the D. O. is friendly and interested at once as you tell him about the pain in your side. He lays you on his table, face down, and plays up and down on your spine with his agile fingers as if you were a musical instrument of some sort. After a bit he pauses and lingers over one particular vertebra as if he found the music of that key discordant.

"Dear, dear!" he says. "I wonder your stomach works at all. Do you notice how much this vertebra juts out beyond the line of the others?"

Sure enough, it does jut out, as he says, and you are astonished that you have not discovered the jog in your spinal column before. The D. O. looks grave. He tells you that this vertebra misplacement presses on nerves that supply the stomach, impairing their conductivity. He thinks he can work the bone back into place in a few treatments, and you beg him to go ahead. You thank your stars that you came to him in time to save your stomach from being completely cut off from central.

In the next few weeks you learn many

interesting things from Dr. Thums. One is that the man who spends four years in college and four more in medical school and hospital, preparing himself to doctor sick folks, has wasted five or six of those years; for much of the M. D.'s laboriously acquired knowledge is tommyrot. You feel a good deal incensed over these disclosures, you are sore at the "old school" doctors for trying to keep the world in darkness and for acting so ungraciously toward the bright young osteopaths, who have learned more in two or three years at Kirkville than can be learned at Columbia in eight. You recall with indignation the action of the family physician who turned away your patronage by telling you to get outdoors more and drink more water and stop complaining. What an ignorant old faker he was, not to have examined your spine for vertebra out of line.

Dr. Thums does you a great deal of good, you feel. He is a good talker, a good jollier and a good rubber. It is very soothing to lie on a comfortable table in a pleasantly appointed room and have your back rubbed and your mind cheerily occupied. It costs a lot, perhaps, but it is worth the price. This is a cold world, and sympathy and kindly interest and the touch of a friendly hand are never too dearly bought. Therein lies the virtue of osteopathy. It is friendly.

It is physical and material; something that an ordinary man can grasp. It does not require so much of the imagination as Christian science or mental culture. It is not such a strain on the digestion as patent medicine. It is more dignified than massage. The Emanuel movement is much less convincing than a gentle kneading movement in the small of the back.

The D. O. may get so confidential that he will tell you how much business he is doing. He may be taking in \$300 a month; it is almost certain to be more than the ordinary doctor makes. You will observe that every minute of his time is busy, that other people are leaving as you go in, and going in as you depart; and you can do a little figuring on your own hook and make sure that Dr. Thums is getting ahead rapidly enough to satisfy almost any man. You see clearly that if the disgruntled M. D.'s would add back-rubbing to their repertoire they would have no further cause to oppose

the spread of this new and wonderful cult that cures all ills so handily.

But let some sudden and violent sickness swoop down upon you, and oh! how loudly you cry for old Dr. Pills. When it comes to a show down, we are slaves to custom, the centuries have left their mark on us, and in dire peril we would no more call on the D. O. than on the d—l. Still the D.O. ought not to complain if, at critical moments, we prefer the allopathic services; he is considerably ahead of the game anyway.

Old Dr. Pills comes in, obedient to the call of duty, although you may not have spoken kindly to him for a year; poor old Dr. Pills, faithfully doing the hard, disagreeable work of his profession while other people get the top cream. His coat is a little seedy, and his hair is a little long, he might look more prosperous if there were not in his practice scores of poor people whom he has to supply with medicinae, scores who can't frighten the stork away from their chimneys with all their poverty. He has to keep a horse too, and a horse in this part of the country is about as expensive as an actress. His days, and many of his nights, are spent in fighting dirt and ignorance and stupidity and cruelty; he is constantly in contact with the unnecessary sufferings of this world, sharing it with the sufferers as a part of his work. There is no light ahead between him and the boundaries of life, he must die in the harness, working and suffering to the end. He toiled for years to fit himself for his calling, he has given the best of himself without adequate return, and will continue to give it while he has the strength.

Old Dr. Pills comes in with his discredited calomel and saves your life.—*Nebraska State Journal*.

AMENDMENTS SUGGESTED TO THE REGULATIONS OF THE A. M. A.

The following resolutions were adopted by the Council of the Chicago Medical Society, January 11, 1910:

WHEREAS, The Chicago Medical Society is an integral part of a constituent society of the American Medical Association, and therefore vitally interested in the welfare of that great organization; and,

WHEREAS, Certain conditions exist which menace the best interests of the members of the

American Medical Association, and of the profession at large; therefore, be it

Resolved, That the Chicago Medical Society in council assembled recommends the following changes in the policies and management of the American Medical Association, viz:

1. The laws should be so amended that no one person will be permitted to hold, at the same time, more than one executive or honorary office in the Association.

2. The office of General Secretary and the positions of Editor and Manager should be separated, and no person should be permitted to fill more than one of these places at one time.

3. The offices of Editor and Secretary should be filled only by men educated in regular scientific medicine and of unimpeachable records.

4. The number of Trustees should be increased.

5. All officers and employes whose duties involve financial responsibility should be bonded.

6. The laws governing admission to membership in the American Medical Association should be so amended as to make it mandatory upon the Secretary to enroll applicants who have complied with the provisions of the by-laws governing the same.

7. Space should be set apart in the *Journal* for free and courteous discussion of the policies and methods of the Association, or for any other matters which may appeal to the membership at large as bearing upon the interests of the Association.

8. Provision should be made for the initiative and referendum.

9. No member should be expelled from the Association without a fair trial and full hearing.

10. No person who is a general officer or member of the House of Delegates or Board of Trustees or employe of the American Medical Association shall be eligible to serve as a general officer or member of the House of Delegates, or Council, of any constituent Association.

11. *Be it further resolved*, That the Secretary of the Chicago Medical Society be instructed to publish these resolutions in full in the *Bulletin* of the Society, and to transmit a copy of the same to the *Journal of the American Medical Association* and to the editors of the various State journals.

(The Secretary of the Chicago Medical Society writes that the above resolutions "were presented at a full meeting of the Council (of the Society) and the same were carried by a large majority." We suggest that our delegates to the American Medical Association—and the alternates—study these resolutions carefully, and with a view to the best interests of that organization decide as to the wisdom of the proposed changes, upon which they will probably be called upon to vote. These resolutions were rescinded at a later meeting of the same body that adopted them, indicating, as we remark in an editorial, a body differing in sentiment perhaps by a not large number.—Editor.)

The West Virginia Medical Journal

S. L. JEPSON, A.M., Sc.D., M.D., *Editor.*

ASSISTANT EDITORS

L. D. WILSON, A.M., M.D., G. E. LIND, M.D., Ph.D.,
C. A. WINGERTER, A.M., M.D., LL.D.

WHEELING, W. VA., APRIL, 1910.

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All communications to this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notices of deaths, removals from the State, changes of location, etc., are requested.

Our readers are requested to send us marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

CONTRIBUTIONS TYPEWRITTEN.

It will be satisfactory to all concerned if authors will have their contributions typewritten before submitting them for publication. The expense is small to the author—the satisfaction is great to the editor and printer.

ADVERTISEMENTS.

Advertising forms will go to press not later than the 20th of each month.

Advertisements of proprietary medicines must be accompanied with formulae. Rate cards sent on application.

REMITTANCES

Should be made by check, draft, money or express order or registered letter to Dr. S. L. Jenson, Ch'n of Pub. Com., 81 Twelfth Street, Wheeling, W. Va.

Editorial

If the JOURNAL does not reach you by the 10th, drop us a card.

The next annual meeting of our State Medical Association will be held in Parkersburg on October 5th, 6th and 7th.

THE AMERICAN MEDICAL ASSOCIATION MANAGEMENT.

For several years past the management of our national association has met with very considerable criticism, Dr. Lydston of Chicago leading the critics, if indeed he be not the originator of all the opposition that has thus far appeared. No doubt many of our readers have received Lydston's periodical pamphlets, which do not impress the judicial mind with the idea that their author is a man sincerely in love with the association whose management he criticises, and earnestly desirous of effecting changes

that he believes are necessary to its continued prosperity. After considerable hesitation, and not until we had received the counsel of several of our colleagues, we printed in our December issue one of Lydston's articles, the calmest—or rather the least stormy—which he has written, pre-facing it with some of our own views on the situation. Some of his suggestions seemed to be worthy of calm consideration, others called for changes that seemed altogether needless, and others still contained criticisms based on a want of knowledge of the rules and general management of our association and its *Journal*.

The Council of the Chicago Medical Society some weeks ago passed a series of resolutions in line with Lydston's suggestions. These we print in another column of this issue. Our readers will note that they were rescinded at a subsequent meeting of the body that adopted them, indicating a nearly equal division of sentiment among the members. We are glad to see that the editor of the *Association Journal* has been at last moved to reply to these repeated strictures in a series of editorials commencing in the March 5th issue. We trust that our members will give these editorials careful and judicious perusal, for those that have thus far appeared indicate quite clearly that we all need to cultivate a more intimate acquaintance with the rules and regulations of the association whose continued prosperity all should strive to promote. We are too prone to accept criticism at more than its full value, and often without proper consideration of a hearing of the other side. We are now getting the other side in the *Journal's* editorials, and if these are carefully studied the readers will learn how unfounded have been some of the criticisms that have been so freely circulated, and how needless are some of the so-called "reforms" called for, since the very laws so urgently demanded are now in existence and operation. For example, the Chicago resolutions call for the bonding of officers already under bond; and for a law that already exists governing the admission of new members.

The general plan of organization of the A. M. A., sometimes criticised, cannot, in our judgment, in its essential features be improved upon; and we take pride in the

fact that a West Virginian, the late Dr. M. H. Houston of Wheeling, conceived and presented to the Ohio County Medical Society, as long ago as 1847, essentially the same plan, in the following language: "Let each local society not only have the power but be required to send delegates according to their number to a state convention to meet annually, and each state convention be required to send delegates to a national medical union which shall constitute the great judicial and representative head of the profession in the United States." No House of Delegates was suggested by Dr. Houston, for no one could at that early time foresee an organization with an annual attendance of 3,000 to 6,000 members, and therefore the absolute need for a small business body which could truly deliberate. It is charged that this small body is in some way "managed" by the select few, and a referendum is demanded. Well, we already have provision for the referendum in the constitution, and it may be secured by the vote of either the House of Delegates or the General Session, at any time when things seem to be going wrong. The personnel of the body changes annually, and the delegates are composed of the leading men from the state associations, men not easily led into error or attracted by secret or improper schemes of designing men. So we fail to see how the House is to override the will of the great body of physicians in the General Session, to whom the meetings are at all times open.

But the A. M. A. is not perfect, nor are its constitution, its by-laws, nor its officers. If any suggested alterations seem to give promise of improvement in any direction, let them be presented by wise, cool-headed men to the House of Delegates, and we are quite sure they will receive proper consideration.

In this connection we present an editorial from the *California State Journal*, whose editor was a few years ago a vigorous fighter for certain reforms in the management of the *Journal A. M. A.*, and who did not cease his warfare until the battle was won. His views are worthy of consideration:

MEDICAL MACHINES.

"One hears, from time to time, more or less talk about 'machines' that run medical societies,

and the comment is always derogatory—or worse. What does it all mean? It simply means that those who have not the energy, the ability, the time or the inclination to do a certain amount of work, object when they see others doing it. Everything in the world is run by some sort of a machine. A few always do the work for the many. Lydston, and some other men with chronic ingrowing grouches, have expended a lot of energy (and no small sum of money, by whom contributed has not yet been explained) in attacking the American Medical Association, the cry being continually raised that it is run by a 'machine.' Well, for the sake of argument, let us suppose it is so run; do you not think it is a pretty good machine? It has built up the Association in the last ten years until now we own the largest and best medical journal published; we have nearly 40,000 members and we own over a half million dollars' worth of property. Is that something to be complained of? In running the A. M. A., modern business principles have been employed; authority and responsibility have been concentrated in one individual; it is up to the manager of any business to 'make good'; if he does not, out he goes. That is exactly the case with the A. M. A.; the Secretary and General Manager is responsible and he has made good. Why should the Trustees take a step backward and appoint a number of managers, thus dividing responsibility, when common sense dictates that the better policy, and the more successful one, is to concentrate responsibility and authority? It is absurd. Furthermore, it is a singular thing that, while the complexion of the House of Delegates changes from year to year, the policy of the Trustees is nevertheless endorsed each year; because it has been shown to be a good policy, and it is self-evident that the Association is being successfully managed; what more does anyone want? What more could anyone ask? If you were the owner of big business or a manufacturing plant, would you ask more than to have your business grow, develop, improve, increase with each passing year? It is absurd."

While we may not fully agree to everything said in the above from Brother Jones, it seems on the whole rather sound, and we believe the great majority of our readers will agree with us in this view. Several of our members have indicated to us their displeasure with the early career of editor Simmons. Well, it might have been better from the standpoint of the regular physician, and that it was displeasing even to Dr. Simmons is shown by the fact that he long ago turned his back on his past, "regulated" himself, and became as straight professionally as the best of us. Let us remember the old hymn and not forget that it is never too late for the return of "the vilest sinner". Are any of us just as good as we might be? "With malice toward none and charity for all" is a good doctrine to cling to so long as we are merely mortal—S. L. J.

A NEW JOURNAL.

Those of our readers who are interested in the various forms of Physiologic Therapeutics (including Hydrotherapy, Electrotherapy, Massage, Hyperemia, etc.) will be glad to know that it is proposed to shortly inaugurate a new journal devoted solely to the delineation of the progress made in these lines of therapeutic endeavor.

The American Journal of Physiologic Therapeutics will be published bi-monthly and the subscription price will be \$1.00 a year. The names and addresses of all interested physicians should be sent in, and those desirous of subscribing at once may enclose their remittance when writing. It is to be hoped that a wide-spread interest may be aroused in this matter. Write now, while this is fresh in your mind, to *The American Journal of Physiologic Therapeutics*, 72 Madison Street, Chicago.

C. S. Neiswanger, J. Madison Taylor, S. Baruch, N. M. Eberhart and a number of others are already in the editorial staff. This journal is going to be a success and it will fill an actual need. It will not be superfluous.

TUBERCULOSIS SUNDAY.

Approval of the movement for a national tuberculosis Sunday on April 24, recently inaugurated by the National Association for the Study of Prevention of Tuberculosis, is given in a statement by The Right Reverend Richard H. Nelson, Bishop Coadjutor of Albany, N. Y., for the Protestant Episcopal Church, issued to-day.

Bishop Nelson says: "I think well of the proposal that all the churches should unite on April twenty-fourth in presenting the truth concerning tuberculosis and stimulating public interest in the campaign for its prevention and cure.

"The campaign has entered upon its second stage. Having labored with some success to point out the danger, we are now concerned with the cure, and this depends upon improvement in conditions of personal and social life. Whatever the churches may be able to do along this line, will be a double contribution to physical and spiritual betterment, and I should think that all would wish to have a share in such an enterprise."

Reports from all parts of the United States indicate that the Sunday set apart will be generally observed, by the preaching of sermons on tuberculosis and by the distribution of special literature.

The National Association for the Study and Prevention of Tuberculosis declares that the campaign against tuberculosis is a warfare against ignorance, and that as soon as the people of the United States know that tuberculosis can be prevented and cured, they will demand that the needless waste of 200,000 lives annually be stopped.

In order to show that spitting on the sidewalks is dangerous to health, an investigation has been made by Dr. John Robertson, Medical Health Officer of Birmingham, England, which shows that seven per cent. of the "spits" collected in public places contained consumption germs. On the other hand, the dust collected from the floors

of the cottages of the Adirondack Cottage Sanitarium has been found to be free of tuberculosis germs, showing that a careful consumptive is not dangerous.

A JUDICIAL DECISION.

The Denver Chemical Mfg. Co. has won its suit against the Colorado Chemical Co. This was a suit entered by the manufacturers of anti-phlogistine against a company that put forth a competing article. The court decided, after a full hearing of the case, that the complainant is entitled to have a decree in accordance with the prayer of the complaint, and it is hereby ordered, adjudged and decreed that the defendant * * is restrained and enjoined from selling, offering for sale or advertising * * any preparation under the name of "Denver Mud." All labels, packages and wrappers were ordered to be destroyed; and it was further "decreed that the complainant recover from the defendant the profits made by the said defendant from the sale of the plastic dressing mentioned in the complaint under the name of 'Denver Mud' and that the complainant recover from the defendant its damages to be assessed as the court may direct and that the defendant pay the complainant the costs of this suit to be taxed."

THE AMERICAN SOCIETY FOR THE STUDY OF ALCOHOL AND OTHER NARCOTICS

Will hold a semi-annual meeting in the parlor of the Hotel Rittenhouse, Philadelphia, Pa., April 6th and 7th, 1910. Sessions will be held at 2 and 8 o'clock p. m. each day.

This society, organized in 1870, was the first medical association in the world to study the subject of alcohol and the diseases following its use from a scientific point of view. Dr. G. H. Benton of Chester, W. Va., is the secretary, and Dr. S. L. Jepson of Wheeling is one of the "Honorary Vice-Presidents."

PROGRAM OF PAPERS.

This embraces essays on every phase of the alcohol question. We regret that space is not available for the whole list, but papers will be presented by L. D. Mason of Brooklyn, Albert Gordon of Philadelphia, Tom A. Williams of Washington, J. Madison Taylor of Philadelphia, Henry J. Berkeley of Baltimore, Henry O. Marcy of Boston, Heinrich Stern of New York, C. H. Hughes of St. Louis, T. D. Crothers of Hartford, and many other widely-known men, including our own Dr. Benton of Chester. The meeting promises to be one of the most interesting held in recent years.

A NATIONAL HEALTH DEPARTMENT.

Senator Owen of Oklahoma recently introduced into the U. S. Senate a bill for the establishment of a National Department of Health, with a Secretary in the Cabinet. This is the ideal for which the organized profession has for several years past been laboring, but the probable result will be a Bureau of Health under one of the existing Departments.

Senator Owen presented a strong argument in favor of the Department, however. He endorsed

the reasons set forth by Dr. Reed of Cincinnati, as follows:

First. The time has arrived when, under the law of precedent, the health interests of the country ought to pass from their present bureau stage of development to that of a department. This course of evolution was exemplified first, I believe, in the development of the Department of the Interior, then that of Agriculture, and, finally, that of Commerce and Labor. In each of these instances the antecedent bureaus had existed for periods varying from a few years to a decade or two. The health interests of the country, more fundamental than all, have been left in the form of, successively, a "service," then of a "bureau," for more than a century.

Second. The creation of a Department of Health is furthermore demanded; first, because sanitary science has demonstrated its ability to conserve the efficiency and prolong the life of the people; and, second, because nothing less than the establishment of a department can have that maximum of moral force and educational influence, that maximum of prestige and effectiveness combined with business-like economy of administration that will enable it to deal with the disgraceful, not to say monstrous, conditions now prevailing in this country.

Third. That a Department of Health, with the fulness of power and influence that can inhere only in a department and nothing less than a department, is demanded by the conditions to which I have alluded is conclusively established by the fact that, first, about 600,000 people die in this country every year from preventable causes; second, that something more than 3,000,000 more are made ill and idle for variable periods every year from the same causes; and, third, that the annual economic loss from this source alone amounts to more than a billion and a half dollars every year.

Fourth. That nothing less than a Department of Health acting in co-operation with the States and in full recognition of their rights and powers, is practicable for the assembling and coordinating of the existing health agencies of the government and for their effective, economic, and business-like administration.

Fifth. That nothing less than the creation of a Department of Health can comprise a fulfillment of the pledge to the people contained in the platform of every political party that appealed to the popular suffrage in the last national campaign.

He cited the long fight against the plague in California, when commercial interests deceived a bureau of the government, and permitted this dread disease to get a firm hold all along the Pacific coast. He said:

The point I wish to emphasize is that the bureau dealing with public health was easily suppressed by commercialism and its supposed interests, putting in jeopardy the national health, the national honor, and the national wealth and Treasury, and was required to withhold and suppress the truth in violation of section 4 of the quarantine laws of the United States.

In 1908 we expended for the suppression of plague, \$228,337.22; in 1909 we expended for the suppression of plague, \$337,403.13; for 1910 we

appropriated \$750,000 and \$187,771 unexpended balance—in all, \$937,771—for the prevention of epidemics of cholera, typhus and yellow fever, smallpox, and bubonic plague (called also Chinese plague or black death). All of this appropriation was really needed for bubonic plague, which was the only epidemic seriously threatening the United States. Fortunately, we have \$724,000 of this on hand. So, from no danger, Mr. President, in 1901, 1902, and 1903, the danger grew to the request for an appropriation of over \$900,000 in 1910. There has been over a million dollars appropriated and the plague has not been suppressed. The bureau was prevented giving publicity to the truth, and Mazatlan, Mexico, was infected in consequence of no sufficient precaution.

OUR INTERNATIONAL OBLIGATIONS.

A Department of Public Health is absolutely essential in order to deal with this matter, and with similar questions, with the full power and dignity of this government and in order to faithfully and honorably comply with the state and international sanitary obligations of the United States.*

* * * * *

Yet our Marine-Hospital Bureau was prevented from making the truth known, and even in its publications made its notice as obscure as possible for several years. The bureau understood the importance of publishing the truth; the bureau desired to tell the truth, but it was suppressed. I refer to this painful history not to criticize the unhappy, miserable, and weak bureau, but to point out the fatal weakness of a subordinated bureau as compared with the dignity and power of a department.

Mr. President, a miserable bureau will not do! It has been tried in the balance and found wanting.

The importance of the subject-matter, the dignity and honor of the United States, its international agreements, and the health and welfare of the world demand a department and a secretary of public health.

The Senator showed that the government is expending money for health purposes through nine different channels, the amount appropriated for the present fiscal year reaching a total of nearly \$15,000,000, not including the amount to be expended in Cuba, among the Indians, and in our foreign possessions.

"A Department of Public Health" has been indorsed by the National Grange (Des Moines, 1909); by the American Federation of Labor, with about 2,000,000 members; by the American Medical Association, with about 80,000 physicians and surgeons affiliated; by the National Child-Labor Committee; by the Conference of Governors; and in one form or another by every political platform.

* * * * *

The co-operation of the authorities of the several States of the Union and of the municipalities of the several States, each one operated along the lines of constitutional propriety, can be established by a Department of Public Health with much greater efficiency than through a subordinate bureau.

Indeed, under a subordinate bureau such co-

operation is impracticable. The bureau has not sufficient dignity or power in an emergency. It has no national standing. It can not take the initiative, but must always stand subject to the orders of a secretary too greatly influenced by mere apparent commercial and fiscal interest. A bureau of public health so controlled is pitiful, if not despicable, as an agency of an enlightened nation.

The Senator then showed that the centralization of the different bureaus of the government touching health matters has been favored by both national conventions and both Presidential candidates of the two great political parties, as well as by President Roosevelt. His presentation of the subject was forcibly made, and the Senator deserves the thanks of the entire medical profession, ever alive to the interests of the people in all matters pertaining to health.

REPORTS OF COUNCIL ON PHARMACY.

The following fake remedies have been weighed in the balance and found wanting by the Council on Pharmacy and Chemistry of the American Medical Association:

BRUSH'S REMEDY FOR SEASICKNESS.

W. A. Puckner and W. S. Hilpert, Chicago (*Journal A. M. A.*, May 15), reporting from the Chemical Laboratory of the American Medical Association, in reply to numerous inquiries that have lately come to *The Journal* as to the composition of Brush's Remedy for Seasickness, say: "The 'remedy' is a light yellow liquid, without odor, but with a decidedly acid taste. Qualitative tests demonstrated the presence of citric acid and sodium bromid, but the presence of other acids, metallic radicles or any alkaloids, could not be demonstrated. Quantitative determinations showed the presence of 14.94 gm. sodium bromid and 2.71 gm. citric acid per 100 c.c. of the preparation. A small quantity of an organic coloring matter was also found." In the pamphlet accompanying the "remedy" when sold, the usual extravagant statements are made and some of these are quoted in the report. It is essentially only a solution of sodium bromid and citric acid, and hence has the value only of these ingredients.

MARMOLA.

In reply to a correspondent enquiring as to the composition of marmola, the *Journal A. M. A.* October 16, says in its pharmaceutical department that this preparation is one of a class of nostrums that have become very common since the passage of the national food and drugs act, and which may be descriptively called "prescription fakes." That is, the patent medicine is advertised, not as such but as an apparently innocent ingredient in a "prescription," which the reader is urged to have filled at the nearest drug store. This method has been used both in this country and in Great Britain, and recently the company has modified its method by advertising Marmola also in tablet form. The composition of it was discussed in an article on "Commercial Thyroid Preparations" by Drs. Hunt and Seidell in the *Journal A. M. A.* Oct. 24, 1908. It was there shown that the nostrum depended for its action on thyroid extract. It has also been analyzed by the *British Medical*

Journal with the same results. The danger of the indiscriminate use of such drugs by the laity is evident, yet we read, "A safer way of reducing fat can not be imagined than by the use of pure Marmola prescription."

"HYDROCYANATE OF IRON."

This preparation, which is advertised as being "unexcelled as a remedy for epilepsy, hysteria," etc., was subjected to analysis, and the results appear in *The Journal A. M. A.*, June 19. The term "hydrocyanate of iron" is an unfamiliar one and was not to be found in any available reference work on chemistry. Thinking that the term might have been loosely applied to ferrocyanid of iron, or Prussian blue (a compound once suggested for epilepsy, but long ago considered useless), the manufacturers were asked if such were the case. They replied that their preparation was "not Prussian blue in any sense of the word," and added that "Prussian blue has no curative properties as applied to all forms of epilepsy." The inference drawn from the company's literature was that "hydrocyanate of iron" is a definite chemical compound. The preparation was then analyzed and "from the analysis it is concluded that 'hydrocyanate of iron' (Tilden), is essentially a mixture of approximately equal parts of talc and Prussian blue, containing traces of organic matter having the general properties of alkaloids."

HABITINA.

The *Journal A. M. A.*, in its pharmacologic department, March 12, exposes "Habitina," one of the vicious and dangerous nostrums advertised to "cure" the morphin habit. It is advertised by the Delta Chemical Company of St. Louis, for the "positive cure" of the "morphin and other drug habits." The Delta Chemical Company is, according to reports, practically owned by one Ryland C. Bruce, who was previously in the insurance business; the "chemical company" is said to have its preparation put up by other houses according to demand. The advertisements call attention to the fact that a "free sample" of this "cure" may be had on application. Those writing for it receive a half-ounce bottle containing eight grains of morphin sulphate and four grains of heroin hydrochlorid. This means that, under the present lax state of affairs, any man, woman or child who cares to go to the trouble can, at a total expenditure of two cents, get enough morphin to kill seven or eight people. No reputable drug store in the United States would dare to sell this quantity to a layman on no other authority than his simple request. The expose refers to another article in the same issue reporting a case of blindness resulting from the use of this nostrum. Before taking "Habitina" the patient was taking six grains of morphin daily—after taking the "cure" she required daily sixteen grains of morphin and eight of heroin.

HOWELL'S MERCOL.

This preparation is again discussed in *The Journal A. M. A.*, May 15. Mercol is advertised as a 1 per cent. solution of mercuric iodid in a non-irritating menstruum, and is recommended for hypodermic use in the treatment of syphilis.

In a previous issue of *The Journal* it was shown to contain no appreciable amount of the mercury salt. After the appearance of the first article, a physician wrote stating he had seen mercol manufactured, following the process in detail and had himself weighed out a sufficient quantity of mercuric iodid to produce a 1 per cent. solution. He protested that the firm "had no desire to foist on the medical profession or the public a fraud." With his letter he sent a sample of the particular batch of Mercol which he had seen manufactured. This sample was analyzed with the same care and thoroughness that the previous sample had been, and the practical absence of mercuric iodid was again demonstrated. While *The Journal* does not question the honesty and good faith of either the manufacturer or the physician, it maintains that claims for remedial agent should be based on the finished product rather than on the component parts used in its manufacture. Without attempting to explain what has become of the mercuric iodid, it insists that the important fact, and the one that vitally concerns both patient and physician, is that the finished product fails to contain it. If the manufacturer has made an honest mistake in supposing he could produce a 1 per cent. solution of mercuric iodid in liquid petrolatum, he will doubtless see that the mistake is corrected. If, on the other hand, he is governed by commercial considerations only, the misrepresentation will probably be perpetuated.

WATERBURY'S METABOLIZED COD-LIVER OIL COMPOUND.

W. A. Frockner and L. F. Warren, in the *Journal A. M. A.*, October 9th, give the results of their examinations, made in the laboratory of the American Medical Association, of Waterbury's Metabolized Cod-Liver Oil Compound. Previous examinations had disclosed only the merest traces of cod-liver oil in the product, a fact that has been previously mentioned in the *Journal*. As the company took exception to the statements previously published and because of the claims made by it that the product "represents cod-liver oil in its entirety" and in view of the fact, also, that present advertisements emphatically declare that cod-liver oil is present in the preparation, as now sold, it was thought best to examine some of the preparation with especial reference to the quantities of fatty acids from cod-liver oil. The results of the examination, the details of which are given in the article, are briefly as follows: The total quantity of acids isolated amounted to about 0.3 per cent., and of this amount about two-thirds was salicylic acid. Thus it appears from the examination that the preparation contains at most but one part in a thousand of fatty acids from cod-liver oil—a totally insignificant quantity. From the results of their analyses, the authors are of the opinion that the statements previously published in the *Journal* are essentially substantiated and that the product does not deserve to be designated as a cod-liver oil preparation. They also add that "to obtain a medicinal dose of cod-liver oil the patient would be compelled to swallow the contents of a bottle of this mixture, and as the product contains 11 per cent. alcohol the patient who did so would probably experience a degree of exhilaration not referable to cod-liver oil."

State News

IN MEMORIAM.

Doctor William Everette Dempsey was born in Fayette County, West Virginia, August 5, 1873. He was the eldest son of J. E. and H. F. Dempsey. His early life was spent on his father's farm and in clerical work. His preliminary education was obtained in the public and private schools of this state. He received his medical degree from the University of Louisville in 1897, and since that time was actively engaged in the practice of medicine in his native county until a short time before his death. In 1904 he was married to Miss Kate Morris of Belva, W. Va., a most estimable and accomplished lady, who survives him. During the summer of 1908 Dr. Dempsey left his native state for Oklahoma, with a view to locating there, but contracting malaria, he returned to West Virginia and located in West Charleston. But his health continued to decline, and in the late fall of the past year it was definitely settled that he had contracted pulmonary tuberculosis, of which malady he died, near Jacksonville, Fla., March 2, 1910, where he had gone in hopes of regaining his health. His remains were brought back to his native state and county, and interred at Belva, W. Va., near his wife's old home, on March 8, 1910, under the auspices of the Masonic Fraternity, of which body he was a prominent member. For several years prior to 1908 Dr. Dempsey practiced medicine at and near Oak Hill, W. Va., where he is well and favorably known. He had qualified himself by study and post-graduate work at different times, so as to be well fitted for his professional work. He was a member of the American Medical Association, the West Virginia Medical Association, a member and former secretary of the Fayette County Medical Society. He was a man ever true to his friends and ever ready to do what he could for the upbuilding of the profession, and will be missed as a good worker from our midst. While he gave up his life in its early morning to the Great White Plague, being only 37, he shall ever be remembered as an upright Christian gentleman and a good physician. M.

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DR. EDGELL DEAD.

Dr. K. C. Edgell, for eighteen years a practicing physician of Oceana, and one of the best known and most popular citizens of Wyoming county, died suddenly, Thursday night of last week (January 27, 1910). His death was due to paralysis of the heart and his illness was only of a brief duration.

* * *

Dr. J. A. Lilly, one of the oldest practitioners of Summers county, died at his home at Jumping Branch, recently. He was about 70 years of age and he had been engaged in the practice of medicine in Summers county since the Civil War. He was one of the best known and liked citizens of Summers county and was an uncle of D. G. Lilly, of the auditor's office.

MARRIED: At the Olympia Hotel, Cumberland, Md., on March 8, 1910, William John Judy, M.D., of Kerens, W. Va., to Miss Jessie Harper Wamsley of Mill Creek, W. Va.

* * *

Dr. Charles Gooch is located at Lester, W. Va., which is on the line of the Virginia Railway.

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Dr. I. P. Champe of Charleston has returned from a two months' stay in New York, where he has been doing post-graduate work.

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Dr. J. W. Hopkins of Fayetteville has returned from a month's trip in the northwest.

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Dr. S. G. Moore, formerly of Coalton, has located in Charleston.

DIED in Wheeling, at the home of her son-in-law, Dr. F. L. Hupp, on March 27th, Mrs. E. H. Jelffe, of New York City.

Nicholas county is about closing up its campaign against small-pox, of which about 100 cases occurred, with no death since November last. Dr. Lind has been most active in the fight.

Society Proceedings

EASTERN PANHANDLE MEDICAL SOCIETY.

The Eastern Panhandle Medical Society held its last meeting in Martinsburg in the Y. M. C. A. gymnasium, Dr. B. B. Ranson of Harpers Ferry presiding. The meeting was unusually well attended. The society was called to order at 12 o'clock and at 2 p. m. adjourned for dinner at Hotel Berkeley, the visiting physicians being the guests of the local members of the society.

Doctor Ranson is president and Dr. J. H. Hodges of Harpers Ferry is secretary of the society.

Papers were read by Dr. Guy L. Hunner of Baltimore, Dr. R. E. Venning of Charles Town, Dr. Wm. Perry of Halltown, and a report of a case by Dr. C. C. Lucas of Kearneysville.

Those present at the meeting besides the doctors heretofore mentioned were Drs. Frank Burden of Paw Paw; F. M. Phillips, Charles Town; W. W. Brown, Shenandoah Junction; Howard Osborn, Rippon; A. J. Lemaster, Bedington; Lewis M. Allen, Baltimore; G. M. Swimley, Bunker Hill; Nathaniel Burrell, Shepherdstown; E. B. Lefevre, Inwood, and the following Martinsburg physicians: J. McKee Sites, A. Bruce Eagle, T. K. Oates, Clifford Sperow, R. W. Miller, James Duff, H. G. Tonkin, C. E. Clay, H. G. Castleman, W. T. Henshaw, E. H. Bitner, Virginia McCune and Florence Evers. Next meeting in Charles Town.

HARRISON COUNTY POST-GRADUATE SCHOOL.

It was deemed advisable by members of the Harrison County Medical Society and others in post-graduate work that to successfully pursue the course outlined by Dr. Blackburn, it would be necessary to organize a post-graduate school,

this school to consist of physicians who appreciate the value of the work and who are willing to attend regularly and take part.

The Harrison County Post-Graduate School was then organized, February 10, 1910, with a president, vice-president, secretary and treasurer. A constitution and set of by-laws were adopted.

All members who are in good standing in the county society of this or adjoining counties, or whose application is pending, are eligible to membership. The school meets every Thursday night at 8:30 in its room, No. 320 Empire Building, with the exception of the last Thursday of each month, which is reserved for the session of the Harrison County Medical Society. A membership fee of \$5.00 per annum is charged, and at the present writing twenty-two physicians have joined the new organization. Considerable enthusiasm has been shown in the work and the meetings have been well attended. At the last meeting Dr. C. W. Halterman kindly loaned a manikin to the school. A movement is now on foot to buy some charts on skin diseases, an articulated skeleton and other useful paraphernalia.

The officers for the year 1910 are: President, Dr. B. F. Shuttleworth; Vice-President, Dr. John Folk; Secretary-Treasurer, Dr. C. N. Slater

MEETING FEBRUARY 17, 1910.

This being the first meeting after organization all were anxious to see the new school begin its work. The program was complete and carried out in full. Those having the honor of being assigned a place on the first program were Dr. T. M. Hood, Dr. C. W. Halterman and Dr. G. L. Howell. Dr. Hood had for his subject, Membranes of the Brain, Ventricles and Gray Matter. The doctor very entertainingly pointed out to his hearers the anatomy of these structures, reminding the school of college days when in the lecture room we listened to discourses on these structures. This lecture was well received and proved entertaining and instructive to all present.

Dr. C. W. Halterman followed with a talk on Structure of the Brain, Cerebellum, Cerebrum and Blood Vessels. This subject was presented more from a clinical standpoint, the aim being to point out those structures most frequently the seat of brain lesions. Mention was made of the internal capsule, with a description of its various fiber contents, of the motor and sensory areas, "silent" area, the large ganglia at the base, and other structures commonly the seat of various lesions.

Dr. G. L. Howell lectured on the Physiology of the Brain. The subject is large but apparently none too large for the "Worthington Sage." Fortified with charts and drawings in colors, the work of no little time and labor, he approached his subject with the confidence and bearing of a man "who knows," who had taken time to consider before coming to the lecture room. (We should all spend more time in the preparation of our papers and lectures.) The doctor in a clear and forcible manner presented this intricate subject to the benefit of all present. Discussions on the various subjects were interesting and instructive.

At the meeting on March 3rd Dr. Mason had

the subject, Cerebral Hemorrhage. The doctor thought that cerebral hemorrhage was due primarily to a diseased condition of the inner and middle coats of the blood vessels. He described minutely the formation of miliary aneurism of the cerebral vessels, and showed how the intima and media coats of these vessels were first affected. Dr. John Folk read a paper on Cerebral Embolism and Thrombosis. He especially emphasized the importance of infective diseases, and particularly rheumatism, in causing the infective form of endocarditis which not infrequently results in cerebral embolism. He mentioned localization relative to the symptoms that follow these destructive processes. In the discussion Dr. R. B. Nutter reported a case of typhoid fever that developed phlebitis of the left femoral vein. In the third week of the disease the patient suddenly became unable to talk, soon lost consciousness and died. Dr. Fleming Howell cited the following case: Mr. R., age 60, a native of this county, whom he had treated on several occasions for alcoholism, never showed the influence of drink in any way except in his conversation. He invariably talked with a thick tongue. The doctor on being called one evening noticed the usual "thick" articulation and the smell of alcohol on the patient's breath. After observing his patient for some minutes he decided that his suffering was from the same old cause—imbibing too freely of alcohol. The next day, however, much to his surprise he found his patient paralyzed and two days later his patient was dead. The doctor emphasized the point that we can readily be deceived in our diagnosis of these particular cases. Dr. Shuttleworth thought that a larger proportion of doctors died from cerebral hemorrhage than was commonly supposed. He had noticed that from every medical journal giving a list of deaths of physicians, cerebral hemorrhage was not infrequently the cause assigned. Dr. Halterman made a strong plea for the simple life. He thinks we are living too far from nature, doctors as well as the laity. The doctor thought eating, alcohol and syphilis were responsible for a large majority of these cases. Dr. Mason mentioned a case: Mr. B., age 65, after eating a good supper was sitting in the reception room. He suddenly lost consciousness without having a convulsion, and fell from the chair to the floor. His pupils were not affected. Next morning the patient regained consciousness and for a few days he was able to walk around the yard. Examination of urine showed albumen and hyaline casts. He then began complaining of his left toe, and for a week he could walk only by dragging the toes of his left foot. The paralysis gradually enveloped the left side (left hemiplegia) and three weeks later he was dead.

A second case: Mr. O., aged 42, total abstainer. He had always been a hard worker. He had frequently complained of headaches and had taken treatment to relieve them. Two weeks before his stroke he complained of pain around his heart and in the intercostal muscles of the left side. When paralyzed he was riding on a street car, and suddenly noticed his inability to use his right hand. He was taken to a hospital and complained of severe headache. Evidence of arterio-

sclerosis was shown on examination of his blood vessels. The entire right side became paralyzed and he remained in a semi-conscious condition for several weeks. After a four months' treatment in the hospital his condition improved and he was able to oversee his business, though his right side remained partially paralyzed with contractures. The patient led a rather active life for four years, and suddenly died with a second stroke in less than an hour.

The meeting of March 10th was well attended, the subjects for the evening being Diseases of Cerebral Veins and Sinuses and Cerebral Palsies of Children. In the absence of Dr. E. N. Flowers on the first subject, the entire evening was spent in listening to a very able paper on the Cerebral Palsies of Children by Dr. W. M. Davis and the discussion that followed. Dr. Davis pointed out the many important features of this subject in a clear and instructive manner, detailing the things of practical value and worth in our management of these cases. The discussion brought out many things of interest. The stimulus giving the school by Dr. Davis's able presentation of the subject led all present to join the general discussion much to the pleasure and benefit of this good meeting.

On March 17th the meeting was called to order promptly at 8:30 p. m., Dr. Shuttleworth in the chair. Dr. C. W. Halterman discussed the subject, Varieties of Aphasia and Significance of Each. Points touching the development of speech and language and their relation to civilization were dwelt upon. The location and development of the various centers, motor, auditory, visual, were shown by drawings. The symptoms following lesions of these centers were mentioned as well as the nature of the various destructive processes that involve these parts. Dr. Shuttleworth lectured in an able and entertaining manner on the important subject, The Localization of the Lesion in Intra-Cerebral Hemorrhage. This lecture was illustrated by a drawing in colors, and all the various points of interest were made clear. The localization of the more common lesions was pointed out with their accompanying symptoms, crossed paralyzes, as of the 3rd, 7th and 5th nerves were mentioned, and the point of lesion producing these located with an exactness that admitted of no questioning. Hemorrhage affecting the optic nerve tracts and radiations were mentioned as producing symptoms of complex nature. These were all detailed and made clear by drawings.

Dr. C. N. Slater followed with an entertaining and instructive lecture on Early Diagnosis and Treatment of Cerebral Palsies of Children. The school was anxious to know what the doctor would have to say on this important subject, and listened throughout his talk, highly entertained and pleased with his manner of dealing with this class of cases. He mentioned various points of interest relative to diagnosis, then took up the treatment of these conditions and dwelt at length upon the various methods of positive and probable value in the treatment of these unfortunate little ones. This meeting was well attended, and the discussion following the various topics presented was animated, instructive and interesting.

Cases of importance were cited touching various phases of the subjects under discussion.

Very respectfully,

C. W. HALTERMAN,
E. N. FLOWERS,
C. N. SLATER,

Committee.

LITTLE KANAWHA AND OHIO VALLEY SOCIETY.

PARKERSBURG, W. VA., March 7, 1910.

Editor *W. Va. Medical Journal*:

Two months have elapsed since you heard from us.

At the February meeting 13 were present. The report of Committee on Medical Defense submitted to the various societies was read and action on same postponed until meeting in September.

Drs. M. Stone of Parkersburg, L. J. Jones of Pennsboro and C. Connelly of Richardson, Calhoun county, were elected members of the society. The essay of the evening on Tetanus, by Dr. M. McNeilen, was read, an able and interesting paper, detailing the cause, bacteriology, etiology, symptoms and treatment, with a report of a fatal case occurring here after the Christmas celebration, from wound by cartridge from toy pistol. Dr. Rose gave an interesting resume of bacteriology of the disease. Drs. Barker, Shaw and Sharp reported cases seen by them. One of Dr. Sharp's fatal cases followed a curettement after abortion caused by use of a lead pencil to bring on the abortion. Then another he saw in 1865 which recovered. Treatment in latter case was morphine and chloroform to control convulsions. Dr. Gaston cited a paper where reporter used gelseminum in six cases successfully;—used massive doses of tr. gelseminum, frequently repeated until recovery. Dr. Campbell cited use of solution of sulphate of magnesia both subcutaneously and intravenously. See original paper in a recent number of *American Journal of Medical Sciences*.

Dr. O. Tolles, D.D.S., is to read at the next meeting a paper on the relations of the dental and medical professions to each other. The society authorized the secretary to invite the members of the dental profession to be present.

March 3rd.—14 present; also a number of visiting dentists and doctors. Dr. Jeffers presented an interesting case of a girl, age 10, with greatly enlarged spleen and liver, with much ascites; child much emaciated.

Dr. Tolles, D.D.S., then read the essay of the evening on Relation of the Dental and Medical Professions, telling of the ways they could aid each other in their work; of the points where dental diseases affected the general system, and how a knowledge of each other's profession was mutually beneficial. The paper was discussed by Dr. Bartlett, D.D.S., Drs. Sharp, Shaw, Campbell and others. Dr. Tolles was requested to give the paper to the secretary and that the STATE MEDICAL JOURNAL be requested to publish the same.

The president was requested to appoint a committee of arrangements for meeting of the state society.

Dr. J. C. W. Fling of Burnt House, Ritchie county, was elected to membership.

Society adopted appropriate resolutions on the death of Dr. W. C. D. Bond of this society, which occurred about the 25th of February at his son's residence in Wheeling.

I wish to note that two members of the society came from points out of the city from 20 to 50 miles, while some of our members cannot come one city square.

Fraternally,

W. H. SHARP, Sec'y.

MERCER COUNTY SOCIETY.

The Mercer County Medical Society met January 21st, 1910, in Bluefield and elected the following officers for the ensuing year:

President, Dr. Thomas E. Peery; Vice-President, Dr. O. S. Hare; Secretary, Dr. B. F. Cornett. Dr. E. Herbert Thompson was re-elected treasurer and Dr. Wade H. St. Clair was elected to fill vacancy on board of censors.

The program for next meeting includes papers by Drs. Easley, Ridley and Wood. A "smoker" will be given after the business session.

Our society is doing very good work and practically all our members are very progressive and take interest in the society. We are planning to make our meetings so interesting that all our members will pay their fees promptly and feel proud of our society.

The next meeting will be on April 9th. After reports of clinical cases the following papers are expected: "Diseases of Frontal Sinus," Dr. A. D. Wood; "Erysipelas in Children," Dr. E. M. Easley; "Scarlatina," Dr. F. T. Ridley. A Dutch lunch will be given by Bluefield members.

Yours fraternally,

B. F. CORNETT, M.D.

Reviews

PREPARATORY AND AFTER TREATMENT IN OPERATIVE CASES.—By HERMAN A. HAUBOLD, Clinical Professor in Surgery and Demonstrator of Operative Surgery, New York University and Bellevue Hospital Medical College. The price of this work in cloth is \$6.00. D. Appleton & Company, Publishers, New York and London.

While a number of works have been written on this subject, this one is by far the most encyclopedic in character that has been called to our notice. It is a work that will be particularly helpful to the general practitioner in helping him co-operate with the surgeon in the treatment of his cases. It contains the knowledge of the subject in its title well boiled down and carefully brought up to date.

It is interesting in reviewing this work to note the general tendencies, the trend of the times. Among many other things the author says: "Drainage is not now so frequently used as formerly." We all realize that it is an admission of imperfect or incomplete technique; however, often the same incompleteness is the most expedient thing for the patient. Among other signs of the times is the careful description of the use

of iodine in the preparation of the operation site.

It is pleasing to see how many of the stock myths of medicine and surgery are conspicuous by their absence. For instance, strychnia is admitted to be of little or no value in shock, and Crile's methods of treatment for this condition are advised.

The work is with few exceptions most complete, and covers practically every detail all the way from skin grafting to the wearing of artificial limbs. The work is a conservative one and is inclined to follow the dictum of Pope,

"Be not the first by whom the new is tried,
Nor yet the last to lay the old aside."

There are a few typographical errors. Nearly all of the cuts are original. The use of plain, small diameter catgut for the fascia and chromicized catgut for the muscle suture will seem an innovation to many. The use of the figure-of-eight or common loop stitch of silk worm gut to hold the edges of the fascia in apposition has not been mentioned.

The employment of purgatives early after operation is advocated more freely than many surgeons deem advisable.

The author has no patience with those who advocate early getting out of bed after laparotomy. He would keep the clean appendix case, who has had an inch and a quarter McBurney gridiron incision, in bed for ten days. This seems, in view of extended experience to the contrary, to be a trifle severe.

The cautions about the exercise of care to prevent the too firm packing of gauze or the too tight tying of sutures are most commendable.—J. E. C.

A TEXT-BOOK ON THE PRACTICE OF GYNECOLOGY—For Practitioners and Students.—By W. EASTERLY ASHTON, M.D., LL.D., Professor of Gynecology in the Medico-Chirurgical College of Philadelphia. Fourth Edition, Thoroughly Revised. Octavo of 1099 pages, with 1058 original line drawings. Philadelphia and London: W. B. Saunders Company, 1909. Cloth, \$6.50 net; Half Morocco, \$8.00 net.

The fact that a fourth edition of this work is so soon called for, is to my mind one of the very best evidences of its popularity with the profession.

The author is widely and favorably known, and the position occupied by him is a sufficient guarantee as to his qualification for the preparation of a satisfactory book on the subject presented. Dr. Jepson of Wheeling noticed a previous edition of this book, and I fully agree with him in regarding it as a rarely fine work, especially for the general practitioner.

By the opening chapters, on microscopic and bacteriologic examination, the general practitioner is brought in close touch with the laboratory. The chapters on the Blood in Relation to Surgery, the x-rays in Gynecology, Hydrotherapy, Constipation, Diet, Indoor Exercises and Saline Injections have been, as Doctor Ashton well says, "written with the object of giving definite information, which can be used at the bedside and at the same time serve as a working basis for the purely Gynecologic subjects which follow." The plan of arranging the work on an anatomic basis, enabling the practitioner and student to

study the various methods of examination, step by step, is an admirable one.

The author has considered fully both the medical and surgical aspects of the subject. The text is supplemented by a profusion of splendid illustrations, elucidating each step of the operation corresponding with each step in the text. All the instruments, needles, and suture materials used in every important operation are shown by a separate drawing, placed before the operative technic; in this way the surgeon can readily select what is required in any given operation.

On the whole this is a most excellent work, and the author must be congratulated on having produced a book so admirably suited to the busy practitioner.—J. E. R.

NUTRITION AND DIETETICS: A Manual for Students of Medicine, for Trained Nurses, and for Dietitians in Hospitals and Other Institutions.—By WINIFRED S. HALL, Ph.D., M.D. New York and London: D. Appleton & Co., 1910.

Part 1 discusses foods as to: (1) the needs of the body, (2) natural foods, (3) foods defined and classified, (4) the preparation of foods.

Part 2 treats of the use of foods in the body, including: (1) the digestion of food, (2) the absorption of food, (3) the assimilation and use of food, (4) getting rid of waste material.

Part 3 is devoted to diet in health, including: (1) fuel value of foods, (2) the menu, (3) food for healthy people, (4) food for normal infants.

Part 4 discusses diet in disease and includes: (1) infant feeding in abnormal conditions, (2) principles of sick-room dietetics, (3) dietetics in fevers and infectious diseases, (4) dietetics in diseases of digestive system, (5) dietetics in disorders of nutrition, (6) diseases of the organs of excretion, circulation, respiration and of the skin.

An appendix gives classification of diet, recipes and experimental chemistry of foodstuffs, foods and digestion. A well arranged and very complete index adds value to the work.

The work is accurate, scientific, and full of valuable information. The general practitioner is not as well posted in this subject as he should be. The science of dietetics, and it is a science, is not studied enough. In this respect it is like the weather—everybody has his own notions and superstition rules where science should come in. If all the different kinds of advice about eating and choice of food that have been given in print and taught by doctors and others were collected it would be the worst literary hodge-podge that could be dreamed of.

This book is pre-eminently up to date and as free from erroneous teaching as it is possible to make in the present condition of our knowledge. We can unhesitatingly advise every practitioner to secure the work. It will be more useful to him than the major part of the books in his library.

G. D. L.

SPONDOLO THERAPY.—By ALBERT ABRAMS, A.M., M.D. Cloth. 420 pages, 100 illustrations. Price, \$3.50. The Philopolis Press, San Francisco.

Dr. Abrams' work should and will attract attention. It is a pioneer, its sterling worth is that of

the pioneer, and what defects it has are the defects of the pioneer. Osteopathy has been of service to the regular profession by calling our better attention to the value of spinal therapy; Dr. Abrams has, by very patient and painstaking research, brought out a great deal of most important scientific knowledge on the subject, especially concerning the visceral reflexes. This new knowledge he gives us in this book, in which he has also collated in proper order and system the older facts noted and studied by others on the various spinal reflexes. The work is "meaty"; it is very rich diet; it is a true text-book, in the sense of text taken by the preacher: a condensation of truth for study and development. There are fifty pages scattered throughout the volume, any one of which could be torn out and be used as a starting point and an inspiration for most valuable research work. The possessor of this book has a rich mine of startlingly suggestive knowledge, but the lazy practitioner and the superficial reader had better leave it alone, for it will be a constant reproach to both; but to the man of study who strives to reach ever better and more fruitful methods of investigation and cure of disease this book will be most welcome. C. A. W.

ANNUAL REPORT OF THE SURGEON-GENERAL OF THE PUBLIC HEALTH AND MARINE-HOSPITAL SERVICE FOR 1909.

This government report gives in detail the work of this bureau for the past fiscal year. This includes the antiplague operations on the Pacific coast, which were very successful in spite of the early and persistent obstacles placed in the way by local selfish interests. Much scientific research work is also here recorded. Also studies of pellagra, rabies, amoebiasis, tuberculosis, the hook-worm disease, etc., etc.

The report is a valuable one, and indicates that this Service, under the direction of General Wyman, is doing a large amount of work in the interest of the public health.

NEW AND NON-OFFICIAL REMEDIES, 1910.—Published by *Jour. Am. Med. Ass'n.* Paper, 25 cts.; Cloth, 50 cts.

This is a book of 250 pages, containing all of the non-official remedies that have been approved by the Committee on Pharmacy and Chemistry. Nowhere else than in this book can the physician obtain as full information as to name, composition, and therapeutic use of the new and approved proprietaries. Doubtless many of these will soon drop out of sight, others will become official, and a few doubtless of permanent use. Much valuable information is here given as to serums and vaccines, the latest forms of treatment.

THE PROPAGANDA FOR REFORM IN PROPRIETARY MEDICINES. Sixth edition. Press of Am. Med. Ass'n. Paper, 10 c's.; Cloth, 35 cts.

This book contains the various exposes of nostrums and quackery that have appeared in the *J. A. M. A.* Many of the quack and widely advertised remedies have been carefully analyzed

and shown to be grossly fraudulent. The book is of permanent value, since the physician may here learn the exact character of preparations which he may have used, and can put himself and his patrons right as to the merits and demerits of the many advertised remedies. We advise our readers to send for a copy.

HANDBOOK OF THERAPY.—Press of Am. Med. Ass'n. Cloth, \$1.50.

This is a duodecimo of 420 pages, made up of the very valuable articles that have appeared in the *J. A. M. A.* in the Therapeutic Department. It does not pretend to treat of every disease, but many of the more common medical and surgical affections are treated in a very lucid and up-to-date manner. We are pleased to note, under the head of *Cardiospasm*, a very complete digest of Dr. Wingerter's paper on that subject. The book is well worth having. We have had occasion to refer to it several times, and have not been disappointed.

Besides the articles on therapy, the book contains a list of the articles accepted by the Council on Pharmacy and Chemistry for inclusion in New and Non-official Remedies, as well as tables and compilations of miscellaneous data.

The book is of convenient size for the pocket or the satchel.

Medical Outlook

BROMALBIN IN EPILEPSY.—The defects of the inorganic bromides in the treatment of epilepsy and other convulsive disorders have long been recognized by medical practitioners. While the bromides have been extensively prescribed—because nothing better had been devised to take their place—their proneness to derange the stomach and to produce systemic disturbance has militated against their usefulness.

The "something better" appears now to be at hand. Reference is made to Bromalbin, an organic compound in which bromine is chemically combined with albumen. Bromalbin contains approximately 15 per cent. of bromine. It is in the form of a light-yellow powder and is odorless and practically tasteless. It is insoluble in water, alcohol, acids and the ordinary solvents, but is slowly soluble in alkaline solutions.

Bromalbin was evolved in the chemical laboratories of Parke, Davis & Co. Before being offered to the medical profession at large it was subjected to thorough clinical test by leading practitioners throughout the country in a large number of cases in which bromine medication was indicated. Reports of its use in the treatment of epilepsy were highly encouraging, and the belief is expressed that it will prove equally efficacious in hysteria, neurasthenia, reflex headache, insomnia, migraine, and other nervous affections.

The chief advantage of Bromalbin over the inorganic bromides appears to be in its adaptation to long-continued treatment. It passes through the stomach practically unchanged, consequently does not produce the gastric irritation common to the alkaline bromides. Slowly dissolving in the

intestinal secretions, it is then absorbed, producing a gentle, prolonged systemic effect. Other advantages are: its more complete absorption, its comparative tastelessness, and the small likelihood that it will produce acne, dizziness, or other symptoms of bromism. It is marketed in powder form (ounce vials) and may be given in water, coffee, chocolate, syrups, wines or any beverage not alkaline in character. It is also supplied in 5-grain capsules (bottles of 100), in which form, perhaps, it is likely to be most commonly used. There is wide need of a sedative such as Bromalbin promises to be, and fuller reports on the new agent will be awaited with interest by the profession.

H-M-C A SURE FOUNDATION.—In closing an able editorial on "Anesthesia" John King Scudder's *Eclectic Medical Journal*, November issue, says:

"I believe we have in the H-M-C tablets one of the best aids that can be given a patient about to submit to a severe surgical procedure. This remedy should be given at least one-half hour before operation, and the dose should be the least amount to give appreciable help. I would say that this remedy, when properly administered, is a great saving in the amount of chloroform or ether that would be required. It is also a great saving of the loss of blood during the operation, as it produces the slower action of the heart; the patient sleeps through the operation and beyond, and gradually awakens with less nausea and less force of the rushing of blood to the part operated upon. This last claim is a great adjunct in the restoration of the patient toward recovery."

THE MANAGEMENT OF UREMIA.—E. F. Wells, Chicago (*Journal A. M. A.*, November 27), says that in making a diagnosis of chronic interstitial nephritis the physician should give his attention to the prophylaxis of uremia. He should inform the patient of the nature of the disease, give a tactful prognosis and directions as to proper diet and general regimen. The diet should be individualized and arranged so as to maintain nutritive equilibrium as fully as possible with the smallest amount of proteid and carbohydrate foods. The liquids should be adjusted from time to time so as to help the elimination of waste materials and the regimen should consider residence, clothing, occupation, exercise, etc. Extraordinary care should be taken to avoid infectious disease. The physician should keep closely in touch with his patient, using modern methods of examination, and the patient should consult his physician promptly on the advent of any significant symptom, a list of which should be given to him. Wells does not believe in the probability of uremia occurring without such premonitions as can be detected by an alert observer. As is well known, the blood pressure is abnormally high in these cases. It can be reduced by various medicines, but ordinarily the high tension is conservative and should not be interfered with. In some cases, however, the rise is so rapid as to threaten danger to the weakened vessels, and in this case Wells advises artificial reduction by free blood-letting in urgent cases. In less urgent ones

the slower methods may be used. The circulatory balance is seldom fully restored when once lost. Not infrequently circulatory insufficiency follows an acute infection or other depressing influences, without the patient experiencing the extreme tension above referred to. The part played by edema in the production of uremia is important and Wells thinks special consideration should be accorded to its management in every case of nephritis. He recommends the following treatment from his experience, which, however, may be varied to suit individual needs: During the first day the diet should consist of thin gruels, cream and water, vegetable soups, tea, coffee, cocoa, water and carbonated waters. From these there should be omitted the gruels on the second and soups on the third day; during the fourth and fifth days very little should be taken; on the sixth day the soups should be replaced and on the seventh day the gruels; later the ordinary careful dietary of the nephritic should be gradually restored. Every night of the first three days the patient takes ten grains of mercurial mass, in two recently made pills of five grains each, followed by an efficient sodium or magnesium saline purge in the morning. Beginning on the fourth morning, after free action of the saline, there is given 1-30 grain pure elaterin hourly for three doses; 1-24 grain every two hours for three doses; finally 1-18 grain every three hours until ten or twelve copious watery bowel movements have been induced. During the last series of doses the intervals may well be p. r. n., or as specially directed. Subsequent to the discontinuance of the medicine there will be several more of the liquid evacuations. The elaterin must be pure, and it is preferably given in powder, with sugar of milk and finely powdered ammoniated glycyrrhizin. During the time the elaterin is being given the patient should remain in bed, using the pan. He should be informed of the abdominal distress, nausea and vomiting which the drug sometimes induces. Without giving reasons for the opinion Wells is sure that, if satisfactory results are to be secured, it will be well to follow closely the spirit of the suggestions in regard to diet, medicine and general regimen as detailed. He thinks that this treatment will usually drain a large amount of serum through the bowels, and during the period of alvine drain, renal activity is much reduced but later becomes greatly increased both in quantity and urea content. In some unsatisfactory cases this fails and the edema continues. The other symptoms also subside to the great relief of the patient, but the full benefit is not experienced until about six weeks, and may continue for a long time. Careful medical management will augment the good effects of this treatment and properly directed exercise to keep up cellular activity will be advisable.

A psoas abscess may point over the anterior spines of the ilium, simulating osteomyelitis of that bone.—*American Journal of Surgery.*

A sort drainage tube, and its' early post-operative removal, are perhaps the best safeguards against the formation of an empyema sinus.—*American Journal of Surgery.*

Miscellany

THE INTERNATIONAL AMERICAN CONGRESS OF MEDICINE AND HYGIENE, BUENOS AIRES, ARGENTINE REPUBLIC, MAY 25th, 1910.

The international American Congress of Medicine and Hygiene of 1910 in commemoration of the first centenary of the May revolution of 1810, under the patronage of His Excellency, the President of the Argentine Republic, will be held May 25th, in Buenos Aires, Argentine Republic.

In order to facilitate the contribution of papers and exhibits from the United States, there has been appointed by the President of the Congress, Dr. Eliseo Canton, and the Minister of the Argentine Republic at Washington, a committee of propaganda of which Dr. Charles H. Frazier (Philadelphia, Pa.) is chairman and Dr. Alfred Reginald Allen (Philadelphia, Pa.) is secretary.

The Congress has been divided into nine sections, each section being represented in the United States by its chairman in this Committee of Propaganda as follows:

Section 1—Biological and Fundamental Matters, Dr. W. H. Howell, chairman, Baltimore, Md.

Section 2—Medicine and Its Clinics, Dr. George Dock, chairman, New Orleans, La.

Section 3—Surgery and Its Clinics, Dr. John M. T. Finney, chairman, Baltimore, Md.

Section 4—Public Hygiene, Dr. Alexander C. Abbott, chairman, Philadelphia, Pa.

Section 5—Pharmacy and Chemistry, Dr. David L. Edsall, chairman, Philadelphia, Pa.

Section 6—Sanitary Technology, Dr. W. P. Mason, chairman, Troy, New York.

Section 7—Veterinary Police, Dr. Samuel H. Gilliland, chairman, Marietta, Pa.

Section 8—Dental Pathology, Dr. George V. I. Brown, chairman, Milwaukee, Wis.

Section 9—Exhibition of Hygiene, Dr. Alexander C. Abbott, chairman, Philadelphia, Pa.

Papers may be sent direct to the chairman of the particular section for which they are intended, or to Dr. Alfred Reginald Allen, Secretary, 111 South 21st Street, Philadelphia, Pa.

ADVICE TO NURSES AND MOTHERS FOR THE PREVENTION OF BLINDNESS.

Issued by the Ohio Commission for the Blind with the advice and approval of Advisory Committee of the State Medical Association.

INFLAMMATION OF THE EYES OF THE NEW-BORN.

Whenever within the course of a few days after the birth of a child there present themselves any signs of inflammation about the eyes, it is highly important that the presence of this should be called to the attention of the attendant physician, or in his absence to some other physician, without delay. Ophthalmia of new-born infants is among the most destructive of diseases of the eye, and through neglect to receive proper attention is among the most frequent causes of blindness. Its full development is usually due to neglect to institute proper treatment immediately,

and after the disease is fully developed the most skillful treatment may fail to prevent destruction of sight.

The laws of the state of Ohio recognize the importance of this, and require the nurse, midwife, or person in attendance upon the infant, to report to a licensed physician within six hours after it has been noticed, the fact that this inflammation exists, and failure to do so is punishable by fine or imprisonment, or both. Neglect of early treatment may result in blindness within a fortnight.

Caution—The discharge from these eyes is contagious, and if introduced in the eyes of other persons will give rise to a similarly destructive inflammation. Care should be taken to immediately burn all cloths and cotton used in the treatment (cleansing) of the eyes, and the hands should be washed, and the towel used for drying the hands afterward should be used for no other purposes.

This form of ophthalmia is due to the infection of the baby's eyes with irritating material during or very shortly after birth. About the third day after birth—in some cases a little earlier, in others a few days later—the baby's eyelids become swollen, and a yellowish secretion is found forming and discharging from the eyes. This is the sign of danger, and these symptoms are caused by no other than this disease. Skilled medical advice should be obtained without delay. In the meantime the baby's eyes should be cleansed in the following way:

Place the baby on its back with a cloth under its head; separate the eyelids gently with the thumb and finger, and with a bit of fresh absorbent cotton or a soft clean bit of cloth drip warm water freely into the eyes, moving the lids gently over the eyes, so as to wash away as thoroughly as possible every bit of the secretion that has formed. This should be repeated hourly, or in cases of much secretion, half hourly, until the services of a competent physician have been secured.

FROM THE REVISED STATUTES OF THE STATE OF OHIO ON OPHTHALMIA.

(3140-3) Sec. 1. (Report of inflammation, swelling in eyes of infant, etc.; unnatural discharges therefrom). Should one or both eyes of an infant become inflamed or swollen, or show any unnatural discharge at any time within ten (10) days after its birth, it shall be the duty of the midwife, nurse or relative having charge of such infant to report in writing within six (6) hours to the physician in attendance upon the family, or, in the absence of an attending physician, to the health officer of the city, village or township in which the infant is living at that time, or, in case there is no such officer, to some practitioner of medicine legally qualified to practice in the state of Ohio, the fact that such inflammation, swelling or unnatural discharge exists. (91 v. 75.)

(3140-4) Sec. 2. (Penalty.) Any failure to comply with the provisions of this act shall be punished by a fine of not less than five dollars (\$5) nor more than one hundred dollars (\$100), or imprisonment for not less than thirty (30) days nor more than six (6) months, or both fine and imprisonment. (91 v. 75.)

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Original Articles

"CHRONIC RHEUMATISM."

Thomas McCrae, M.D., F.R.C.P. (Lond.)
Associate Professor of Medicine, The
Johns Hopkins University, Baltimore.

(Read before the Kanawha Medical Society,
March 1, 1910.)

It may seem at first glance that the subject chosen is rather a common-place one about which there is little to be said. However, it is often the ordinary every-day things which are most in need of being turned over occasionally to see if we can get some new light on them. As regards the "disease" which my title represents—and of this more will be said later—it stands high in the list of complaints made by patients. Go back over the patients you have seen in the past month and if you are in general practice you have heard this as the complaint in not a few cases. The patients often come to you with this diagnosis but whether you are justified in sending them away with it we shall discuss at some length. The diagnosis of "chronic rheumatism" is one which is satisfactory to the patient as a rule. Why should it be, and share this distinction with "too much uric acid" and "torpid liver?" Send a man away with one of these diagnoses and as a rule he is satisfied. However, such a diagnosis is about the same as that said to have been given by Sir William Gull to the insistent wife of a patient who demanded a

diagnosis: "Madam, your husband has a cachexia."

It would be interesting to put the question to one hundred physicians as to what they understand by the term "chronic rheumatism," and it is altogether likely that we would be surprised by the variety of answers. That there would be any agreement I am sure no one would expect. It would perhaps be more interesting to have a list of the conditions which are termed "chronic rheumatism." By some the term would be applied to chronic conditions—such as endocarditis or pericarditis—which may be left after an attack of rheumatic fever; by others what is commonly known as arthritis deformans would be meant; gout would comprise others; some would describe by it the degenerative arthritic changes often found in those of advanced years; others would again apply it to painful conditions of the muscles and fascia which are often described as myositis; while in some cases—and perhaps most frequently—the term would be applied to any ill defined condition which caused pain without any reference as to whether it was due to changes in the nerves, muscles, fasciæ or joints. To know how many diseases have been given the diagnosis of "chronic rheumatism" would be a sad commentary on our powers of diagnosis. It is certainly a sort of arthritic scrap basket into which many guesses are thrown. As a term which can be used with any definite meaning, "chronic rheumatism" certainly cannot be described.

That such a state of affairs is unsatisfactory requires no argument. To have an accurate knowledge of any subject requires a

definite determined terminology. Language is our main method of communication, and if six men are using the same term to mean six different things there can be no satisfactory discussion of such a subject until all are agreed on what is meant. This is true of the profession, but much more so of the laity as far as medical terms are concerned. To digress a moment let us take another example, the meaning to be attached to the term Bright's disease. Take a medical audience and by some any form of albuminuria would be so termed; a febrile albuminuria is "acute Bright's." Others would restrict the term very greatly and perhaps apply it only to marked cases of chronic nephritis. Take the often asked question, "Doctor, have I Bright's disease?" and answer it by "yes" and nothing more. What idea has your patient of his condition? You cannot tell unless you go very carefully into the question as to what he understands by the term. To the majority of the laity it means a condition which is rapidly fatal and the diagnosis of its presence is regarded as the warning signal for Charon's boat.

Then again give a condition a name and you have to a considerable extent settled it as regards your mental attitude, especially concerning any probability of further inquiry. A patient comes with some obscure condition—arthritic or otherwise—and you say that he has "chronic rheumatism." By doing that the condition is so to speak pigeonholed and that once done it is only a very unusual mind which pulls the contents out and goes over them again. Let a man say that he does not know what the disease is and there is the good hope that he will endeavor to go farther and try to discover what really is wrong. By doing so he will be less likely to designate such a condition as carcinoma of the spine or an occupation neuritis as "chronic rheumatism." As Gowers has said in reference to the loose use of the designation hysteria, "a conception which conceals whatever it covers. We must rescue it from whatever we wish to study. It can be put back again afterward if desired." How much this making of "chronic rheumatism" a convenient diagnosis name for all kinds of things means both for the patient and physician requires little thought to prove. It means much to the former especially in regard to prognosis

and treatment. It means much to the latter both in reference to accurate thinking and reputation.

It is interesting to endeavor to find why this word "rheumatism" has become a designation for many conditions. The use of the term rheumatism or "rheumes," as it was in early times, goes back to a respectable antiquity. It was used to designate humors, fluxes and catarrhs and perhaps we have inherited and come honestly by a tendency to apply the word to many conditions. For a long time various forms of arthritis were jumbled together and it was long before any attempt was made to separate them. To Ballonius or Ballion (1642) is given the credit of first employing the term rheumatism in something of its modern usage. From his day to the present the attempt to differentiate the various forms of arthritis has gone on but, it must be confessed, with only partial success. In this the writer believes that the use of the term "chronic rheumatism" has added much to the difficulty. The earlier medical writers grouped many different forms of arthritis under gout; we have done no better but have merely substituted another term.

If we turn to a study of the use of the word rheumatism we at once appreciate how confusing this has been. A comparative example would be the use of the word fever to designate an elevation of temperature and also to specify a particular disease characterized by this. One cannot apply the same term to arthritis as a whole and to one special form of arthritis and preserve any clearness of meaning. Yet this is what is constantly done. The term rheumatism is employed in synonymous with arthritis—witness gonorrhoeal "rheumatism," scarlatinal "rheumatism," tuberculous "rheumatism," etc.—and also to designate one disease which has arthritis as one of its principal features, namely rheumatic fever. Choice must be made of one or the other if we are to have a satisfactory terminology. Use it as equivalent to arthritis generally if you will, but then do not use it for rheumatic fever; the difficulties connected with this are evident. In the writer's opinion it would be better to drop the use of the word "rheumatism" and employ arthritis as a general designation. For the disease known as acute inflammatory rheumatism or acute rheumatic fever,

the designation rheumatic fever might be employed. The adjective acute seems to be unnecessary. The designation acute articular rheumatism is not a good one. As well speak of it as acute endocardial rheumatism; in many ways it might be better if we did. Certainly the endocarditis is of much more importance than the arthritis and in children occurs much more frequently.

The objection may be raised that it is not easy to teach an old dog new tricks; that when one has spoken of "gonorrhoeal rheumatism" for many years it is not easy to speak of gonorrhoeal arthritis. This objection is a natural one but if the change is worth adopting of course there will be some difficulty. I know it took some watching on my part to give up the use of the expression "gonorrhoeal rheumatism," which had been learned as a student. But if we could start our students with a proper terminology it would not be long before the profession would have it as a matter of course.

Whether or not we consider it well to retain the term "rheumatism," there seems much less reason to retain the designation "chronic rheumatism." In connection with this let us turn to the consideration of the various conditions to which the name "chronic rheumatism" is applied. The number of these is proof of the entire absence of any agreement as to what the designation means and suggests how many diseased conditions are covered by its mantle.

1. Have we a condition which follows rheumatic fever, in which there are permanent changes in the joints? If this does occur it would seem proper that to it the term "chronic rheumatism" might be applied. However, if there is any evidence that an attack of rheumatic fever leaves permanent changes in its train, the writer does not know of it. On the contrary, one of the most characteristic features of the arthritis of rheumatic fever is that the joints are left undamaged. We are all familiar with the striking way in which a joint in rheumatic fever may show signs of a very acute arthritis one day and very soon after be perfectly clear, and it is a good rule to follow that if there are permanent changes left in a joint after an attack which has been regarded as rheumatic fever, we

had better go back and revise the diagnosis. The writer knows that this view is opposed by some who consider that rheumatic fever may leave permanent arthritic changes. However, the writer has never seen such a case, although on the watch for it for many years. There are cases of rheumatic fever in which cardiac complications may persist for months although the arthritis has subsided. To these the term "chronic rheumatism" might be applied with propriety, but it is practically never used in this sense.

2. The various changes which follow infection with certain organisms such as the gonococcus, tubercle bacillus, etc., are often termed "chronic rheumatism," or are qualified by the casual factor, e. g., "gonorrhoeal rheumatism." This may be regarded as showing rather the careless use of the word than an essential mistake in diagnosis, for the man who speaks of "tuberculous rheumatism" probably has an arthritis due to the tubercle bacillus in mind and not a combination of tuberculosis and rheumatic fever. However, the use of the word "rheumatism" is likely to suggest an association of some mysterious kind with a "rheumatic" process. One particularly unfortunate use is to speak of the arthritis which occurs in scarlet fever as "scarlatinal rheumatism." It suggests that we have a particular variety of rheumatism which has occurred in a patient with scarlet fever.

3. The various forms of arthritis which occur secondarily to various infection without any evidence of the presence of organisms in the joints. These are comparatively common and are important to recognize. Take for instance the arthritis which may occur with or follow an attack of tonsillitis. Here the original local infection is usually due to streptococci but these are not to be found in the joints and the most probable explanation is that the arthritis is due to the toxins. This might be termed a "toxic or toxæmic arthritis," which seems a much preferable term to the commonly used designation of "infectious arthritis."

It is not easy to separate this group by any sharp boundaries. Such attacks of arthritis may subside and leave no damage behind, or on the contrary some changes may be left which subsequent attacks may increase. In this latter event the cases apparently approach very closely to those

which are discussed later under the heading of arthritis deformans.

4. Gout. My personal opinion is that this disease is frequently not recognized and is then usually called "chronic rheumatism." There is an impression that gout is a very rare disease in this country, but this seems to be erroneous and the incidence is probably not much below that in England. It is well to rid the mind of the idea that gout follows only upon a course of high living in the individual or his ancestors. This is quite incorrect, for while of course it may be inherited, yet in this country beer drinking seems to be the most important single etiological factor. In the recognition of gout it has to be kept in mind that the classical picture is not invariably present and that polyarthritis occurs frequently.

5. In any discussion on chronic arthritis, the form which in this country usually goes under the name of arthritis deformans deserves attention. It is much commoner than is usually supposed, carries the probability of crippling the patient more or less, and too often dooms him to years of suffering. The chance of aiding these patients is lessened by the idea that such conditions are "chronic rheumatism" or are "rheumatic" in character and so require treatment adapted for a "rheumatic state," which is usually the worst that could be chosen. As an example of this we often find that meat is cut out of the diet and the patients are dosed with salicylates for weeks and months. There is no evidence that arthritis deformans has any association with or relation to rheumatic fever.

To go fully into all the diagnostic questions would require more time than is available, but there are a few points which might be kept in mind. One is that arthritis deformans is often characterized by an acute polyarthritis with fever, for too often it is thought that it is always a chronic process and that acuteness rules it out. One helpful point is that the process having attacked a joint does not subside rapidly, as does rheumatic fever which does not leave permanent changes in a joint. In all doubtful cases it is important to watch particularly the knee joints and the joints of the hands. It is in these that slight thickening is often shown first; if it is found, revise the diagnosis of rheumatic fever. The persistence of the arthritis and the presence of

permanent changes in or about the joints are the most characteristic changes of arthritis deformans. The X-ray plates give much assistance in its recognition. The finding of any changes in the joints is evidence against any true rheumatic condition.

In connection with this reference may be made to the term "rheumatic gout," which is sometimes applied to arthritis deformans. This should no longer be used as the disease has no relationship to rheumatic fever or gout. The same may be said of the term "rheumatoid arthritis," which is used by many to designate one of the forms of arthritis deformans. As all our teaching is devoted to showing that it is *unlike* rheumatic fever, the use of a term suggesting its likeness to that disease seems unfortunate. We have to plead to a similar usage in the term typhoid fever, but here it has become so general and the use of the term typhosus to describe the casual bacillus renders any change undesirable. Besides there are few places where typhoid and typhus fevers can be mistaken for each other; there is no place where rheumatic fever and arthritis deformans may not be the cause of difficulty in diagnosis.

That there are difficulties in regard to many points associated with arthritis deformans we all know. It is therefore the more important to lessen them as much as possible and so let us do away with the confusion caused by applying the term "chronic rheumatism" to it. "Cover a thing with a name and you conceal it," we need all the light we can get on arthritis deformans.

6. There are certain conditions of the spine—some of which belong to arthritis deformans—and sacro-iliac joint which are too apt to be dismissed with the diagnosis of "chronic rheumatism." How many patients with spondylitis or sacro-iliac joint disease have been given this diagnosis it is hard to say. The impossibility of any clear idea of what is the cause of the symptoms and as a consequence the inability to give relief are very evident if we are content to label the symptoms of such lesions as "chronic rheumatism." In the group of spondylitis cases it is always well to remember that the symptoms—especially pain—may be referred to regions removed from the primary lesion, e. g., pain which suggests sciatica is very common in spondylitis of the lumbar vertebræ.

7. Changes in the joints in advanced life. We are all familiar with the changes seen not infrequently in the joints of aged persons, especially those who have done hard manual work. In many cases these are due to arthritis deformans, but in other instances the changes seem to be due more to the "wear and tear" of life, and more of the nature of a degeneration than an inflammatory character. It would be about as reasonable to term a Charcot joint "tabetic rheumatism" as to apply the word to these conditions.

8. There are many patients who suffer from obscure pains in the muscles and about the joints in whom evidence of any arthritis is entirely lacking. To these the term "muscular" or "chronic rheumatism" is frequently applied. As regards the former term there is no evidence—so far as known to the writer—which suggests that there is a specific involvement of the muscular tissues in connection with rheumatic fever or any chronic muscular condition which follows it. Of course there is wasting, but that is not what concerns us at present. The condition would be better described by the term myositis or as has been suggested fibrositis, which is probably a more accurate designation in most cases. The process is usually in the fibrous tissues and repeated acute attacks may be followed by permanent change. It is evident that so long as we give it a name which suggests a rheumatic condition, so long will we have incorrect views as to the essential nature of the process. Our therapy must then be directed to a name rather than to a disease and this is also an important reason for trying to discard anything which gives a false conception of what we have to treat. It is always too easy to form the habit of treating the name of a disease and not the patient.

9. Of conditions which have nothing to do with arthritis it may be thought unnecessary to speak did not experience show that they too frequently are disposed of by the name (chronic rheumatism) given to them. These are so various that there is no end to them but some may be noted.

(a) Occupation neuroses. These are very common and may be seen in motor-men, those who run machines which involve special positions or demand special work of one leg or arm, those who sit in constrained

positions—sometimes seen in locomotive engineers—and those in many trades. It is easy for the physician to call them "chronic rheumatism," but hard for the patient to be helped if he does.

(b) Flat foot. This may give symptoms which are not recognized as due to the local condition. Flat foot is comparatively common and unless a careful examination be made, is often overlooked. The absurdity of treating such a condition by remedies which are given for rheumatism is very evident.

(c) Neuralgia and neuritis. Minor grades of both these conditions are easily dismissed by calling them "rheumatism." We know how difficult it often is to be sure of such conditions without a very thorough examination. Give them a name and it is easy to be satisfied with that.

(d) The pains due to varicose veins are sometimes regarded as being due to "chronic rheumatism." The pains of tabes dorsalis have also received the same diagnosis. Not infrequently the pains due to syphilis have been regarded as rheumatic (quite apart from syphilitic arthritis). Sarcoma has had the same term given to it. In tuberculosis, too, valuable time has been lost and serious harm done by regarding the pains as due to "rheumatism." Patients with hip-joint disease have gone under this designation until the progress demanded another diagnosis.

(e) A great variety of examples might be cited, but I must be content with mentioning two which emphasize the same point. One was in a patient who had carcinoma of the spine, the pains of which were regarded for sometime as due to "chronic rheumatism." In this case no harm was done as regards the outlook for the patient. The second instance was in a man seen very recently, who complained of pains in the leg and limped a little in walking. He volunteered the diagnosis of "chronic rheumatism," which he said had been made by several physicians, none of whom, however, had helped him. The reason was very evident, after one glance at his leg—it required some persuasion to get him to undress: "No other doctor bothered about having my clothes off"—he had a *popliteal aneurism*.

Examples might be given at great length if there was any need, but it is evident that the conditions grouped together under the designation "chronic rheumatism" are most

diverse in their essential nature and are for the most part characterized by pain. This is surely indefinite enough if the term is used only for conditions associated with some form of arthritis, but it is unfortunately given as a diagnosis for painful conditions which have nothing whatever to do with the joints. One word may be said about the so-called therapeutic test. In the minds of many the opinion is held that a pain which is relieved by any of the salicylate preparations is necessarily "rheumatic." On the contrary we know that pain from many other causes is relieved by these drugs. The influence of the weather is also given prominence by many. Because certain pains are worse in wet weather is no reason why they are "rheumatic." Pains associated with many conditions, such as old injuries, occupation neuroses, neurasthenia, etc., are often rendered worse in bad weather. We do not necessarily therefore consider them "rheumatic."

A necessary association of this carelessness in diagnosis is carelessness in proper examination. If one has the habit of using the designation chronic rheumatism as a diagnostic hold-all, it becomes too easy to use it and be content with such a loose term. Give a thing a name and you have to some extent disposed of it. Had the physicians who saw—I was about to say examined, but that would be incorrect—the patient with the popliteal aneurism, not had a term like "chronic rheumatism" to give in explanation of the cause of the pain, it is reasonable to suppose that they might have taken the trouble to examine the patient. If we were content with the diagnosis of "fever" in every patient who had an elevation of temperature—and this is somewhat in the line of a diagnosis of "chronic rheumatism" from the complaint of certain indefinite pains—think what a chaotic state of affairs we would have as regards any conception of what particular fever we were dealing with.

It may be thought that the possibilities of error are discussed at undue length, but it is well to recognize how many of these there are and how many various diseased conditions may be put under one name. So long as one is content to use a diagnostic term which means nothing, so long is progress impossible. As long as men were content to designate malarial, typhoid, typhus and relapsing fever under the heading of con-

tinued fever, so long was any differentiation difficult. Exactly the same applies to the forms of arthritis. The use of proper terms is essential to clear ideas about what the terms stand for. To have different men using the same term to designate various conditions is worse than if each spoke a different language and knew only his own. Then each certainly could not know what the others said but would be fully aware of his own ignorance. But if two men use the same word with different meanings, each thinks he understands what the other means and is doubly deceived. Language does more than conceal the thought. The writer remembers well a discussion he had with a physician in Paris who had written extensively on arthritis. In some of his articles it had been impossible to know exactly what was meant by certain terms. But verbal explanations gave little help, for it was necessary at every use of the word rheumatism to stop and inquire what was meant. At one moment it meant any form of arthritis, at another some special form, e. g., tuberculous arthritis and again rheumatism *fer*.

Thus far it is evident that there has been little but destructive criticism and such has been the intention, for it is well to demolish thoroughly before starting to build. We may turn now to the question of construction and discuss any suggestions as to the impossibility of improvement.

1. When we are using a term which is employed in various ways and has no definite generally recognized meaning, we must either drop it altogether or accurately define its meaning and adhere to that. Which is the easier here? In the writer's opinion the first is the better and we should gain by giving up entirely the use of the terms "rheumatism" and "chronic rheumatism." It may be objected that we employ these terms a great deal, but it is evident that the more we employ them, the greater the confusion. If the designation carries no accurate meaning is its retention any advantage? On the contrary is it not a distinct disadvantage in every way? It has been said (with which you may or may not agree, for it is open to argument) that "confusion is better than error," but here we have both error and confusion. Certainly there is no gain in any way from the continuance of the use of these terms. To restrict them to one disease might be possi-

ble, but would be difficult. If the word "rheumatism" be retained it would seem that it should be employed as synonymous with rheumatic fever, but this is no special advantage.

It will not require long for anyone by taking heed to drop the term "chronic rheumatism" from his vocabulary, with a gain both in accurate thinking and especially in accurate diagnosis. Let everyone who has been in the habit of making the diagnosis of "chronic rheumatism" stop the next time he is tempted to do so and consider what he means by it and whether the designation fits the condition present in the patient. Most of us who do this conscientiously will be surprised to find in what a slipshod way the term has been used. It may be objected that the public understand and use the term and it will be hard to re-educate them. The profession gave them the term in the first place and if the profession leads in a reform they will soon follow. Then again if people were told they did not have "chronic rheumatism" we would limit a most common cause of non-professional treatment. There are probably more home-made cures for this "disease" going about than for any other. We all know instances of injury done by well meant but harmful advice in regard to "cures for rheumatism" given by the laity. It might also help to lessen some of the foolishness about "uric acid." "Chronic rheumatism" and "uric acid" seem to be two "idea centres" in too many cerebrums which must be connected by a specially developed set of communicating nerve fibres. The harm which often results as a consequence of cutting down the protein diet in certain forms of arthritis, e. g., arthritis deformans, is a striking example of this.

2. The attempt to carry some definite ideas as to the various kinds of arthritis, so that one can classify cases on some system. In the discussion of the diseases often termed rheumatism some idea of this has been given. With the systematic effort to properly classify our cases, it will be found that more and more are put in their proper pigeon holes and not thrown into the scrap basket of "rheumatism."

3. More care in diagnosis so that conditions which have no arthritic manifestations are put where they belong. This is perhaps the most important of all, as so many maladies called rheumatism have not

even the excuse of any arthritis as part of their manifestations. The full discussion of this would take us into many subjects, and cannot now be considered. Let us try to decide whether we have a form of arthritis—calling it such and not rheumatism—or neuritis, or neuralgia, or an occupation neurosis, or whatever it may be, and call it by a name which belongs to the disease.

Treatment—In an address of this kind there is always supposed to be a demand for some word of treatment, but it is evident that there can be no discussion of what does not exist. The whole argument has been that there is no entity which we can properly term "chronic rheumatism," and therefore there can be no treatment. The first essential is diagnosis and after that the treatment must depend on the conditions. Otherwise without proper diagnosis we merely treat a name and how unsatisfactory that is requires no emphasis. Those of us who teach Therapeutics are being constantly reproached that our students graduate with the tendency to treat the name of the disease and not the patient. In this paper I have tried to point out the reasons for doing away with one of the names which is so often treated. Frequently also even the name does not belong to the patient's malady; it exists only in the physician's mind. To treat a name in your own mind is not going to help the disease in your patient's body. The public often reproaches us for the inability of the profession to cure "chronic rheumatism." Is it any wonder, when in so many instances the actual condition is not properly diagnosed but is given a name which does not have any reference to it and to this the treatment is directed; witness the patient with popliteal aneurism, on whom much good medicine has been wasted. We can still echo the hundred year old sentiment of Haygarth that a number of conditions are grouped together as rheumatism which have no other feature in common than the occurrence of pain.

That you will agree with me entirely I do not expect, but I ask that you consider the matter and reconsider the diagnosis of "chronic rheumatism" when next it comes to your lips. My paper perhaps recalls to you a quotation from "Alice in Wonderland."

"Have some wine," the March Hare said in an encouraging tone.

Alice looked all around the table, but there was nothing on it but tea. "I don't see any wine," she remarked.

"There isn't any," said the March Hare.

"Then it wasn't very civil of you to offer it," said Alice angrily.

Perhaps you may consider it not very civil of me to read a paper on what in my opinion does not really exist. However that may be, I hope these remarks may suggest some consideration on the subject of the next diagnosis of "chronic rheumatism."

SERUM THERAPY.

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(Read before the W. Va. State Medical Assn., at Elkins, W. Va., in Oct., 1909.)

The first thing that occurred to my mind when I found that I had been assigned the subject of Serum Therapy upon which to write a paper to be read at a meeting of this society today, was my inability and unfitness to cope with a subject of such vast and vital importance to the medical profession and humanity as well as of the entire world; and also realizing that the treatment of disease by means of Serum Therapy is as yet in its infancy and that the question of its further development and perfection and its practical application to the treatment of disease rests almost solely with those great learned, silent investigators of the hidden mysteries of disease, our pathologists and bacteriologists, I felt almost in despair. But this being a subject in which I am deeply interested, and taking courage from the words of the great Great Physician who said, "Out of the mouth of babes cometh wisdom," I decided to go ahead and give you a short summary of the facts, figures, and theories that I have gleaned from modern text-books and recent medical literature, along with my own limited experience, along this line of latter day therapy, hoping that in so doing I will stimulate such a discussion of the subject from other members of this society, who are better informed than am I, that we may all be lifted from the common sod to a higher plane and have a broader view of this all-important question. Upon what is the treatment of certain diseased conditions of the human organism by Serum Therapy

based? Upon the theory, or I would better say, upon the well established fact that a vast number of the diseases to which the human body is heir are due to the secretion in the body of special poisons called toxins by certain specific organisms which have, under certain abnormal conditions, been enabled to penetrate and find lodgement in the tissues of the body.

We will now take up and consider for a brief period, toxins—the manner in which they are produced and how they cause disease. First: We have the invasion of the system by a certain specific disease-producing germ which, after a period of incubation, varying greatly in length, during which time, owing to its being subjected to favorable conditions for its development (body heat and moisture), it reaches the stage where it secretes a soluble chemical substance peculiar to itself known as toxin. Or in other words, a substance of unknown chemical structure which, under favorable conditions, is capable of producing in man, a morbid or diseased condition.

Toxins may be either of bacterial, vegetable or animal origin (bacteriotoxins, phytotoxins or zootoxins) as the case may be. They are sensitive to various influences, especially heat of high toxicity. Morgenroth and others have advanced the idea that toxins are in reality ferments, owing to the fact that certain ferments, when injected into suitable animals, produce anti-ferments.

Now, we have the toxin secreted by the germ in the system. Next, in what manner or under what circumstances or conditions is this toxin enabled to produce its toxic effect and set up a pathological condition in the human organism? That it circulates freely in the blood has been proven conclusively many times by such men as Brieger, Nissen and Wassermann, yet this alone does not give it the power of producing toxæmia, for it is also an established fact that the toxins of tetanus and diphtheria can circulate freely in the blood of certain people who are what we call immune (which subject we will take up later) without producing any untoward effect. There is yet something it must do: It must form a union with certain cells before it can become effective in producing a morbid condition.

There is another theory advanced which is believed by many, viz.: That many infect-

ious bacteria have pathologic substances called endotoxins attached firmly to the bacterial cells, which are liberated when the bacteria are destroyed and produce toxic effects; at any rate soluble poisons do not diffuse to any extent in the culture media in which this class of germs are cultivated. Yet without any actual infection, the injections into animals of the dead cultures of this class of bacteria produce toxic effects. Welch holds that the bacteria in this general class give rise in the affected body to toxic substances of the nature of amboceptors.

Now, scientific investigators having discovered that a vast number of the deadly diseases known to man are produced by certain toxins, secreted by micro-organisms, it behooved them next to endeavor to discover ways and means whereby the deleterious actions of these toxins could be overcome. So upon further investigation, it was found that bacteria and other toxins have the power, when introduced into the susceptible animal body, to induce the formation of specific anti-bodies. All substances having the power to do this are called antigens. Probably the best way to explain the action of antigens in producing anti-bodies, is by the way of Ehrlich's theory or the side chain receptor theory, and perhaps the best way to explain this theory is to take up the action of toxins, as they were the first antigens studied and this is the only one of the many which I shall take up in this paper.

Ehrlich, in his theory, assumes that in order for a toxin to become harmful, it must form a chemical union with constituents (side-chain or receptors) in the protein molecules of the cell of proper stereochemical configuration, or much in the same manner as food particles are taken up. So if the cell contains no receptors with which a given toxin can unite, that cell is naturally immune to that toxin. That toxins unite firmly with cells is shown by the firm fixation of tetanus-toxin by nerve tissue. Like certain complex chemical compounds of known composition, the toxin molecule is regarded as having two distinct anatomic groups, one whereby it unites with cell side-chains or receptors and called the haptophore or building group, and one by means of which it exercises its peculiar toxic effect, which is called the toxophore group. In the case of other antigens, such as pre-

cipitinogen, agglutongen, etc., the group corresponding to the toxophore group is commonly called the functional group. This connection explains the fact that when toxin and other antigens are subjected to chemical and other changes, they may weaken in their especial toxic and other properties, but may be still capable of producing other anti-bodies in suitable animals. Evidently the functional group is the more sensitive, whereas the haptophore group persists and unites with cell receptors. Toxins so changed are called oids. Now, when certain special cell receptors are occupied by the haptophore group of a certain antigen to such an extent that it interferes with their function of metabolism, then a regeneration of receptors begins which, according to Weigert's law of regenerative over compensation, gives rise to more receptors than the cell needs and these are thrown off from the cells into the circulation as free anti-bodies or antitoxins. Wassermann believes that the receptor formation, the functional group of the antigen stimulates the cells involved. Any cell that can bind antigens and produce receptors may produce antibodies also. This power is supposed to be widely distributed among the cells of the body.

Antibodies may form in loco or locally where antigens are deposited as shown by Romer, who found that if the conjunctiva of one eye was treated with abrin, antiabrin was formed in that eye only and nowhere else and, further, Wassermann and Citron found that anti-typhoid bodies may be produced on the part of the cells of the pleura, peritoneum and possibly of the subcutaneous tissues. It is now a well established fact that by careful stimulation of the mechanism, with gradually increasing quantities of an antigen, say toxin for instance, we have produced in the body large amounts of antibody or antitoxin. For a short time after the inoculation of the body, with various antigens or toxins, there occurs a depression of the mechanism of antibody formation (called the negative phase) which soon gives way to an active production of antibodies (called the positive phase). It has been further found that reinoculation during the negative phase serves only to prolong that phase and the greatest yield of antibodies is obtained by reinoculation during the positive phase.

Antitoxins are free cell receptors. They

are protective and even curative, because by uniting with the haptophore groups of the toxine molecule, they prevent these uniting with the cells or, as Behring has stated it, they are the substance in the body which, when situated in the cells, are essential to the production of a toxic process, but become curative agents when they enter the blood-stream.

As to the neutralization of toxin by antitoxin, the old theory or idea that antitoxin was a changed toxin has fallen and been proven to be untrue, because of the fact that the amount of antitoxin produced is out of all proportion to the amount of toxin injected, and because of the reproduction of antitoxin after bleeding immunized animals. At the present time it is regarded that this neutralization of toxin by antitoxin is brought about by a chemical union between the two, forming a harmless and fairly stable compound. It is upon these theories and well established facts, as I have related them, that the principle of preventing and curing diseases by means of Serum Therapy is based.

I will now take up some of the principal Serums and endeavor to show what results have been obtained by their use. First: We will take up diphtheria antitoxin, as it is one of the oldest and best known of antitoxins to the medical profession at the present time. This serum has been standardized and made official by both the United States and German pharmacopoeias. It was discovered by Prof. Behring in 1890, and is prepared from the blood of the horse by rendering the animal artificially immune by repeated injections of graduated doses of diphtheria toxin. Since the discovery and use of serum in the treatment of diphtheria, the mortality from this, one of the most dreaded and fatal diseases known to the human family, has been reduced from forty to one and one-half per cent. The potency of this serum is now so well recognized by the laity, as well as the profession, that it is considered mal-practice not to use it.

Personally, I began the use of diphtheria antitoxin in March, 1896, using it in eleven cases (including one of the laryngeal form) without a death. Since that time, I have used it in, I think I am safe in saying, between three and five hundred cases, with nothing but the best of results, and I have yet to see the first untoward symptom arise from its use, except a slight rash in one

case, and I have yet to see a case result fatally in which it was given during the first forty-eight hours of the disease and given freely. Remember it should be given freely, for too often we fail to get good results from its use because of the fact that we do not give large enough doses. Begin with three thousand units in a child and five thousand units in an adult and if good results are not forthcoming, do not hesitate to repeat it every eight hours until the desired result is obtained. When seen late in the disease, or where the case is unusually malignant, much larger quantities than those named above, should be used.

There is one very important thing in connection with the use of this serum that I must allude to before leaving it, and I want to impress the importance of this phase of the question upon every one present: That is, sudden deaths resulting from the use of this, one of the most important remedial agents at our command today. That we do have occasionally this deplorable result following its use is an established fact. Now, what causes this sometimes fatal result and how can we avoid it? It has been noticed that nearly all of these sudden deaths following the injection of this serum have occurred in persons who have or are subject to attacks of asthma or hay-fever. Now, the best explanation of this that I have yet seen was published in the *Journal of the American Medical Association* of March 13, 1909, in which it was explained by the sensitization theory, which is as follows: When an animal receives a single dose of almost any sort of soluble protein by subcutaneous, intravascular or intraperitoneal injection, it becomes after ten days or two weeks susceptible to a second injection of the same protein, so that this protein is now extremely toxic for this animal and may cause its death in a few minutes. Not all animals react the same in this respect, the guinea-pig being very easily sensitized, while some other domestic animals do not exhibit a characteristic reaction at all. Up to the present time, the exact nature of this reaction has been entirely unexplained. It seems to concern only protein substances and the amount necessary to sensitize an animal is extremely small, one twenty-millionth of a gram of egg albumen being sufficient. An animal is said to be sensitized when it has received a single dose of

protein a previously long enough time, say eight or ten days to react to a second or toxic dose. This condition of sensitization seems to last throughout the life of the sensitized animal and it is transmitted to the offspring of sensitized females. We do not know to just what extent we can apply the results of animal experimentation on this subject to the human being. But one thing we do know, that occasionally we have violent toxic symptoms develop and deaths follow the injection of antitoxic serum and the symptoms are identical with those observed in sensitized guinea-pigs, so we feel justified in believing that man can become sensitized to horse serum and other proteins, although the sensitization of man by therapeutic injections of antitoxic serum is somewhat confusing, as most of the fatalities following its introduction have been from the initial dose and not from a second dose administered some days after the first. So we would imply that man is not readily sensitized by foreign serum or that the serum being injected subcutaneously is absorbed too slowly to produce its toxic symptoms and that the poisonous effects are produced by injecting the serum hurriedly into the circulation of a sensitized person. So, knowing these things, and knowing that certain persons are in some unknown way (possibly inherited) so sensitized to protein substances, that the mere proximity of a horse will produce an attack of asthma or the mere preparation of eggs for food will cause nausea and fainting; I say knowing these things it behooves us to use the utmost caution in the use of antitoxin serum. Before its administration, we should invariably inquire if the patient has ever had asthma or hay fever or has an idiosyncrasy for eggs, or if any of its ancestors have had, and, if we find that such conditions exist, or have existed, and it becomes absolutely imperative to administer an antitoxic serum to preserve the patient's life, we should carefully carry out the following precautions: First: We should select a site for its injection as free from blood vessels and nerves as possible (preferably, I think, the interscapular space). Second: We should sterilize our hypodermic needle and insert it at the selected site and then withdraw the piston, if blood flows in the syringe, following the withdrawal of the piston, we should withdraw the needle and select another site, and

and another, if need be, until we find a site where no blood follows the withdrawal of the piston: then remove the hypodermic needle and insert the needle of your antitoxin syringe in the exact opening made by your hypodermic needle. Third: Then inject very slowly a few drops of serum and then wait three or four minutes, carefully watching its effect. If no toxic symptoms develop, then the remainder of the dose can be injected very slowly, taking from twenty to thirty minutes to complete the administration. And I wish to state here that in my opinion the interscapular space is the best site for the injection of antitoxic serum, and in all cases, idiosyncrasy or no idiosyncrasy, it should be administered slowly; and I further think that if we, one and all, will carry out the above given rules as to the administration of antitoxin, we will practically eliminate this, the only dangerous and objectionable feature in the application of this great modern therapeutic agent to the cure of that dread disease, diphtheria.

Of the other antitoxic serums on the market, I have had experience with but two, antistreptococcic serum, which I used in a very virulent case of puerperal septicaemia, giving sixteen injections of 10 cc. each every eight hours with recovery; and antidysenteric serum in a case of acute enterocolitis in a child one year old, with what seemed to be some improvement for awhile, but the patient finally died. Nevertheless, a great many physicians claim to have obtained good results from the use of antistreptococcic serum in scarlatina, erysipelas, mixed pneumonia and all streptococcic infections given in twenty to forty cc. every eight hours. The same may be said in regard to antidysenteric serum. Shiga and Flexner and his assistants claim to have discovered the specific bacillus which causes tropical dysentery and to have further discovered that it is closely allied to the bacillus causing the acute summer dysentery of the temperate zones, and they further claim that antidysenteric serum is a specific in this trouble.

There are many other valuable serums in practical use today, viz.: Antitetanic serum, Flexner's antimeningococcic serum, antipneumococcic serum, the antityphoid serum of Chantemesse and many others, as yet in a more or less imperfect state of de-

velopment, which I shall not mention in this paper.

Antitetanic serum has reached quite an advanced state of perfection and brilliant results are claimed from its use, but its greatest field of usefulness seems to be its use as an immunizing agent to prevent the development of tetanus or as a curative agent, if given at the onset of the disease.

Flexner's serum in the treatment of epidemic cerebro-spinal meningitis was proven to be highly satisfactory, reducing the mortality from an average of about eighty per cent to as low as fourteen per cent.

Antipneumococcic serum is not yet in general use, but great good is being claimed for it, and I have no doubt that ere long it will prove itself a valuable agent in the hand of the profession.

Chantemesse claims to have reduced the mortality of typhoid fever in the hospitals at Paris, from eighteen per cent to four per cent with his antityphoid serum. It is to be hoped this serum will soon be perfected and brought into general use that we may be able to curtail the ravages of this world-wide malady.

An antirabic serum is being rapidly perfected and no doubt in the very near future the present crude method, as enunciated and carried out by Pasteur and his associates, of preventing rather than curing this disease will be supplanted by the more modern method of preventing it and curing it by an antitoxin. I wish to state just here that the Public Health and Marine Hospital Service at Washington will, upon receipt of a telegram, furnish to any physician in the United States antirabic emulsion for the treatment of those bitten by rabid animals, the serum being furnished fresh every two or three days with instructions for its use, so that the local physician can treat these cases at home and receive the proper remuneration.

Although I have seen nothing regarding it, I think there is a great field for investigation along the line of producing an antitoxin for the prevention and cure of pertussis. This disease ranks among the first as to mortality among children up to three years of age. The specific germ has been discovered and by using the dog as a means by which to produce an antitoxin, I believe one can be secured that would be a specific in the treatment of this, one of the most fatal diseases of early childhood.

The next of these biological products to be taken up will be tuberculin. Tuberculin is obtained by the cultivation of the tubercle bacillus in an artificial medium, after which it is subjected to a high degree of heat and filtered. Of this agent so much has been said, and there remains so much to be said, and owing to its present uncertain status in the field of therapy, it would be futile for me to enter to any depth in its discussion. However, I will give you a few of the most salient facts concerning it. Koch, in 1890, announced that he had discovered a substance in the cultures of the tubercle bacillus which caused a specific reaction in those suffering from tuberculosis and when administered long enough would exert a curative action. This substance was later named by Bujwid, tuberculin, which name Koch also adopted. This discovery was hailed throughout the civilized world with great enthusiasm, and then followed a period during which it was extensively used, but unfortunately, notwithstanding the warnings of Koch, it was used promiscuously and without regard to dosage, which was followed by disastrous results and in consequence of this, this most important therapeutic agent fell into disuse for a time. But with our increased knowledge of tuberculin, the general practitioner can today use it for specific diagnosis and therapy without fear. Of the various diagnostic tests made with tuberculin, there are three which I shall mention, viz.: the ophthalmic, Moro's cutaneous and Detre's. The ophthalmic test consists in dropping a drop or two of diluted tuberculin in the eye, which will in tuberculous patients produce a marked congestion of the conjunctiva. The use of this test is being discarded because that from its use disastrous results have, in some cases, followed and eyes have been lost as a result.

Next, the Moro test (which has attracted considerable attention) is made by applying to the skin (preferably of the abdomen) an ointment made from equal parts of tuberculin and anhydrous lanolin. This ointment should be applied with considerable friction, for from one-half to one minute, over an area from one to two inches square. The reaction is noted by the eruption of a granular or papular efflorescence at the point of application. This test is fraught with little danger.

The last test which I shall mention, the

latest, and I think the most important one, is the test demonstrated before the meeting of the recent International Congress on Tuberculosis at Washington by Dr. Ladislaus Detre. Detre, it must be remembered, proved conclusively before the recent Tuberculosis Congress, that the human organism is susceptible to bovine tuberculosis (Koch to the contrary notwithstanding), although not so susceptible as to the human form, proving that there were two forms of tuberculosis, human and bovine, and that each animal is more susceptible to its own form than that of the other. This led to the inauguration and perfection of what is known as the Detre test, which consists in the application to the skin of three different substances at the same time: First: concentrated old tuberculin; second: bouillon filtrate of a culture of human bacilli; and, third: bouillon filtrate of bovine culture. Two very important things are determined by this test. First, it shows which of the two forms of tubercle bacilli, human or bovine, with which the patient is infected; second, it aids us in determining which of the sera to use as the proper therapeutic agent in a particular case, as it has been proven that it is impossible to immunize a patient with the dominant filtrate but they can be immunized with the concomitant filtrate. Thus to illustrate, if you get the greatest reaction from old tuberculin, the bouillon filtrate should be selected for treatment and vice versa; if you obtain the greatest reaction from bouillon filtrate, you should select old tuberculin for treatment. As to the therapeutic use of tuberculin, there is at present a great revival of interest and confidence in the use of this remedy as a curative agent. Koch claims its efficiency has been clearly proven if its use is confined to curable cases and those not complicated by the streptococci, staphylococci, pneumococci, or influenza bacillus. The following rules should be observed strictly in the administration of tuberculin for therapeutic purposes: First, always begin with minute doses, never give a larger dose in the beginning; second, do not raise the dose too rapidly or give at too short intervals; third, never repeat the dose until all the effects of the reaction (both local and constitutional) from the previous dose have passed away, fourth, don't increase the dose after a reaction has occurred; fifth, always remember that malaise, headache, loss of appetite,

an increased cough are evidences that the limit of the patient's tolerance has been reached and calls for a period of rest and a reduction of the dose.

Next and last of all, I will say a few words in regard to one of the latest curative and immunizing agents offered the profession—bacterins. A therapeutic use of these agents is based upon the opsonic theory of Wright, with which no doubt every physician is familiar. Wright showed by his demonstrations, that certain substances in the blood, and other fluids of the animal body, act upon the bacteria and modify them in such a way that they are taken up and digested by the phagocytes. These substances are called opsonins, and he further demonstrated that these opsonins may be greatly increased in amount by the injection of killed bacteria. Wright terms standardized and sterilized suspensions of bacteria, vaccines, but as this term applies more properly to virus obtained from bovines, the term bacterins has been proposed. Bacterins or bacterial vaccines consist of suspensions of killed pathogenic bacteria in normal saline solution. When a bacterin is injected into the tissues of a patient suffering from an infection of the corresponding live germ, the formation of special opsonins having the power of preparing that germ for phagocytosis is stimulated. The blood and lymph thus enriched, circulating through the focus of infection prepares the invading germ for destruction by the phagocytes, and therefore we have a subsidence of the symptoms and an improvement in the patients' condition.

Of the bacterins, I have had experience with but one, that being the gonococcal bacterin of Neisser, which I have used in thirty to forty cases. The cases varied from the acute to the chronic stage. Some of these cases were complicated by epididymitis and involvement of the inguinal glands, one by a gonorrhoeal cystitis and one by an anterior urethral abscess. In all these cases there was a marked improvement in the patients' condition, with an abatement of the symptoms, within forty-eight to seventy-two hours after the first injection of one hundred million killed bacteria.

Now, in conclusion, let me say that I consider this the most important subject by far in the field of medicine today, and I am sorry that I have not the time and ability to tell you more about it. Pardon me if I feel

over enthusiastic about it, but I feel that it is the only true, rational and scientific treatment of disease. Still unperfected and in its infancy, I will admit; but let us all awake, for things are doing along this line, and doing so rapidly that the literature of yesterday is old today. Let us keep pace with this rapid progress, for we are already in the dawn of a new day. The first gray streaks of light are now visible and soon from behind yonder mountain of ignorance will rise a glorious sun which will dispel all the darkness of empiricism and doubt and bring us into the light of a perfect day. And the name of that great light-giving orb is Serum Therapy.

RELATIONS OF THE DENTAL AND MEDICAL PROFESSIONS.

Orin Tolles, D.D. S., Parkersburg, W.Va.

(Read at meeting of L. K. and Ohio Valley Med. Society.)

I consider it an honor to be invited to speak before your society. I would apologize in advance for my paper, but your secretary promised me that very little was expected and that he would take all the responsibility.

I am strongly in favor of a closer alliance, professionally, between the dentist and physician. I am satisfied that it would greatly benefit both dentist and physician as well as our patients. I say professionally, because I think the relationship is quite close enough socially, judging from reports of a number of all night sessions I have heard of recently.

I am going to use this subject of closer relationship for my paper this evening, and if I can interest or benefit you by anything I may say, I will feel well paid for coming.

I think we both deserve severe criticism for the independent manner in which we practice our respective professions. I mean independent of each other. In order to get the results that we should in either medicine or dentistry we must work together. The dentist sees the first signs of many diseases long before the patient thinks of consulting a physician.

We see, for instance, a bad tongue, inflamed conditions of the throat, enlarged tonsils, polypi, ulcers of stomach origin, mucous patches, etc. We come in contact

with neuralgia caused by some systemic disorder. We observe pathological conditions of the heart and lungs. These, gentlemen, are only a very few manifestations of systemic disorder that we see in the mouth. Now we do not know just what all these conditions indicate, but we do know that they are pathological, and our duty to our patients would be to send them at once to their physician.

Do we do this? No, not often. We correct the dental trouble, whatever it may be, and dismiss the patient allowing some alarming condition to develop before a physician is called.

This is wrong, very wrong, and the sooner it is realized by the dental profession, the better, not only for the laity but for the profession as well.

I realize the dentist often makes a mistake and gives the physician cause for censure when he selects gold for filling in the tooth of a very delicate, nervous patient and thereby destroys the tone in that patient that it has taken the physician months to build up.

Now the physician looks into many mouths every day that require the services of the dentist, such as cases of stomatitis, simple gingivitis, caries, chronic abscess, interstitial gingivitis or pyorrhoea alveolaris, mal-occlusion, illy kept mouths, and other conditions that you are familiar with, and how many of these patients does he advise to consult a dentist? Not many, I am afraid.

I make the statement without fear of contradiction, that every disease that you are called upon to treat is influenced to a greater or less extent by the condition of the mouth. Oral sepsis is believed to be a factor in septic gastritis and toxic neuritis, as well as many other constitutional or remote diseases. Most of the diseases of the human animal are contracted by the germ entering the system by way of the mouth.

The physician treats stomach trouble for years, ignoring a mouth full of decayed and broken-down teeth. He treats intestinal indigestion and other pathological conditions of the bowels when the mouth is full of pus from pyorrhoea and chronic abscess. He overlooks many cases of contracted arch which interferes with respiration. You will find many anaemic children after having their mouth put into condition gaining weight and color.

Dr. D. D. Smith, of Philadelphia, says that, could all children receive systematic prophylaxis, diphtheria would be almost entirely unknown and tuberculosis would claim fewer victims, as the average mouth reeking with infection offers an ideal medium for the incubation period of these germs. How often does the surgeon examine the mouth conditions before an operation for appendicitis? The mouth is a part of the alimentary tract from which infectious matter is constantly passing to this open wound, especially if pyorrhoea or chronic abscess is present. The physician who wishes to cure a patient of the morphine habit should have the teeth carefully examined and put into proper condition before treatment is commenced. The use of morphine causes periostitis, caries, gingivitis expulsans and other troubles of dental nutrition. While the drug is being used the troubles are not noticed on account of the analgesic effect of the alkaloid, but when you take away the drug the troubles begin. The patient then feels the pain from these disorders and consequently rushes back to his friend morphia for relief.

The physician gives his best services to each patient he is called to see so far as any disease is concerned other than those affecting the teeth or gums. These he absolutely ignores in 75 per cent of all cases, unless the patient demands relief from him.

Now who is at fault?

Medicine, or in fact any treatment you may prescribe, surely cannot have the desired effect on the system while the patient is swallowing constantly germs and pus from pyorrhoea and abscess, or an otherwise filthy, germ-laden mouth, or when the teeth are in such condition that proper mastication is impossible.

The utter lack of regard the average person has for the condition of his teeth and the cleanliness of his mouth, providing no pain is present, is astonishing. I think the fault of this lies largely with the dentist and physician. I am obliged to blame the physician most because of the hundreds of cases he sees that never get to a dental office, and again for the reason that most people would have these conditions corrected if advised to do so by their family physician, when they would not listen to the dentist.

Dr. Tracy, of Philadelphia, mentions several cases of disturbances of digestion,

nervousness and irritation of the kidneys cured by no other treatment than the disinfection of the mouth. I have seen several cases of gastric catarrh associated with pyorrhoea cured by treatment of the mouth.

In an article in one of your journals not long ago, Sir Edward Treves makes the statement that if people were more careful of their teeth they would not need to be so careful of their diet. The remark was made by one of your profession that the great sanitary reform of the world is not the abolition of the closet, but it resides in the herculean task of revolutionizing the unsanitary condition of the human mouth. No truer or more beneficial remark to my mind could have been made.

It is a well known fact that dental treatment early in life prevents more diseases in after life than any other measure taken even by governments, not excepting vaccination.

In a recent article on prophylaxis of appendicitis, Wittauer says that bacterial influences must be combated by care of the teeth and mouth.

As you all know, in many of your more recent text-books on appendicitis, indiscretion in diet and gastric and intestinal catarrh are given a prominent place in the etiology of this disease. Even cases of tonsillitis have been followed by appendicitis, all of these conditions being caused or influenced by an unclean mouth.

Some of you gentlemen may think I am visionary, but if you will accept the opinion of your own medical authorities you will find I have not exaggerated in the least.

In conclusion I wish to say that any criticism I have made does not apply to any member of this society.

I would like to have every member say something on this subject. I thank you for your patience, and wish to express the hope that our two branches may in the near future be able to work more closely, feeling confident that our combined knowledge will better fit us to attack our common enemy—disease.

One should watch carefully for overdistention of the bladder in all cases of lesions of the spinal cord. In children the bladder has been known to distend sufficiently to hold 20-40 ounces.—*American Journal of Surgery.*

FRACTURES OF THE ELBOW, DIAGNOSIS AND TREATMENT.

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President Raleigh County Board
of Health.

There is nothing of greater importance to the surgeon than a correct diagnosis of the nature of a fracture of any of the bones of the body; and there is no class of fracture which comes into the hands of the surgeon more difficult to diagnose and treat than the fractures in and around the elbow joint.

While I am not going into detail, giving the differential diagnosis and treatment of every form of fracture at or near the elbow joint (for we have many excellent textbooks on fractures which you can consult), yet I want only to refer to diagnosis and treatment in a general way.

As country practitioners we do not have the many advantages for diagnosis that are afforded the city physician, who is in touch with competent skill for consultation when needed, and also has hospital advantages; but here we have to act on the spur of the moment, and it is all left to our own judgment, "hit or miss." There are many cases we do not see until several hours have gone by, and during this lapse of time considerable edema and swelling have resulted and we are many times unable to make a positive diagnosis; yet the laity do not realize this train of circumstances which is always hovering around, but have faith that by the simple grasp of the injured part by the physician, the diagnosis is made and the patient is on the road to recovery, thereby expecting, too, the same results that the best circumstances for diagnosis and treatment would permit.

When called to the patient the general surroundings, how and where the accident occurred, should be carefully considered. Approach your patients calmly, for they are generally nervous and excited. After you have gained the confidence of your patient, you should soon begin your examination, which should be done in a cautious and painstaking manner.

Remember the differential diagnosis between a dislocation of the elbow joint, and fractures in and around the joint, and when establishing the diagnosis of a fracture you should then begin to distinguish the form

or nature of the fracture with which you will have to deal. If you are so fortunate as to have an X-ray machine and have the patient at your office, so much the better, but as a rule we do not have these luxuries, so to speak, and we are called to go, instead of the patient coming.

I have been so fortunate, I may say, as to never have to use an anaesthetic in diagnosis or treatment, but the injured part may be so swollen and painful, and the patient so irritable in many cases that you will probably need an anaesthetic in making a positive diagnosis.

Having begun the examination with or without an anaesthetic as the case may be, you will usually, by manipulation, when the ear is close, hear crepitus or a grating-like sound of the broken bones rubbing together. You will also have impaired function of the injured part and abnormal mobility, and as a rule, you will have a deformity of the injured part. You will further have pain and swelling accompanying a fracture, but these are not in themselves positive signs.

You here will have the following fractures to consider in your diagnosis: Supra-condyloid, inter-condyloid, fractures of the internal and external epicondyle, fractures of the internal and external condyle, and separation of the epiphysis; also fractures of the olecranon or coronoid process and possibly fracture of the head of the radius, which is mainly in connection with fracture of the coronoid process of the ulna.

Many of these fractures with which you will have to deal may not be in every particular the same as the classification given, but may be a combination of two or more forms together, but you should be master of the situation and deal with it accordingly.

Having made your diagnosis (for upon this your treatment is built for good results to follow), you then begin your task.

You may find it necessary to use a general anaesthetic to reduce the fracture, and you are generally called upon to do this, for, as a rule, you will have no help save the assistance of some member of the family or a neighbor. Whether you find it necessary to use an anaesthetic or not, you are called upon to reduce the fracture, commonly called "setting," which is accomplished by manipulation and traction, with the elbow at right angles or fully extended.

When you have the broken bones in proper apposition, then with the aid of some member of the family or neighbor, you begin to apply a layer of cotton thick enough to keep the splints from being too tight when the swelling is fully established.

The manner in which the arm is put up depends solely on the nature of the fracture. It suffices to say, as a general rule, that all fractures we have mentioned at or near the elbow joint may be put up at a right angle, except fractures of the internal and external condyle of humerus, and olecranon process of ulna, which should be put up in full extension, and for treatment in full I refer you to some good text-book on the subject. Your splints may be made of pasteboard, molded plaster paris splints, tin, leather, etc.

In my practice I generally use pasteboard or plaster of paris splints, well bandaged. The splints should be bound to the parts with equal pressure and somewhat tight. If put up at a right or acute angle I again use some suitable bandage as the Velpeau or Desault's, to maintain the proper position and to keep the arm immovable. It is well to examine the fracture at the end of ten days or two weeks to correct any deformity that may exist, and then again rebandage.

I take the dressing off in from two to six weeks, depending upon the age of the patient and the nature of the fracture.

I then have the patient begin to use the arm, employing mild massage about the joint, and direct him to practice lifting or carrying weights with the hand of the injured side, thereby straightening the arm and getting a normal joint. When put up extended, gradual forced flexion is used with massage until the proper or normal angle is obtained.

In conclusion, I will say I cannot impress upon you too strongly the great importance of a correct diagnosis, if this is possible to be obtained in your cases, and nothing will be of greater importance in this than knowing the anatomy of the part to come under treatment. Then inaugurate proper treatment for each variety of fracture and as a rule good results may be expected to follow.

The following are a few cases that have come under my care for treatment, during the past three years:

Case 1—S. T., age 6 years. Fell from porch and received a supra-condyloid fracture of the humerus. After getting the fractured bones in proper apposition, arm was put up in acute

flexion for 16 days, then taken down. Passive motion, massage and lifting weights practiced, and arm in both appearance and use was normal in six weeks, from date of accident.

Case 2—J. F. S., age 22. Fell on frozen ground on elbow, sustaining a supra-condyloid fracture of humerus. Put up in acute flexion and taken down in 21 days with perfect union. The above after treatment was practiced and normal use of arm followed in two months.

Case 3—E. J. T., age 4. Fell from fence, sustaining an inter-condyloid fracture of humerus. Put up in acute flexion and taken down in 18 days with perfect union. After treatment same as above and normal use followed in seven weeks.

Case 4—B. S., age 10. Fell from fence on elbow and sustained an inter-condyloid fracture of humerus. Put up in acute flexion, taken down in 18 days. After treatment and results same as above.

Case 5—H. W. M., age 15. Fell on elbow from fence, receiving fracture of olecranon process of ulna. Bones put in proper position and put up in full extension for two weeks, with perfect union. After treatment was the same as the above cases, passive motion, massage, gradual forced flexion. Normal motion was obtained in five weeks.

Abstracts

DIET IN TYPHOID FEVER.

Dr. E. C. Register, Charlotte, N. C., in *The Charlotte Medical Journal*, says that a healthy person 30 years of age, and 150 pounds weight can be well nourished on five pints of milk or its equivalent per day. Some writers think the typhoid patient should take that amount, but Register thinks this amount is apt to do harm. The common teaching has been that such patient should take two-fifths as much as the healthy person. This is about correct, the amount being somewhat dependent on age and weight, after 45 the amount needed being less, and between fifty and sixty not more than a child of ten years. More can be taken during the first stage of the disease, with an ascending fever curve, the digestive power diminishing later when the fever has reached its height, and pathologic changes have progressed. Absence of saliva makes mastication difficult, and hydrochloric acid in the gastric juice is also much diminished, in grave cases being entirely absent. Much mischief is done in these cases by too free feeding, as is now sometimes advocated. "If the stomach is irritable, and its motor functions weak, with a

tendency to nausea, and possibly vomiting, or if there be diarrhea and tympanites, the quantity of food and also its quality should receive special consideration. When these symptoms are well marked, it is evidence in the majority of cases that the diet is defective, for it is infrequent that the pathologic changes in the bowels are sufficient to produce these symptoms.

"The feelings or inclinations of the patient should be carefully studied also. There are certain articles of diet that might theoretically be very proper for the patient, and yet for some reason not be suitable. There are patients who will suddenly become nauseated at mention of certain articles."

Continued high fever greatly cripples the power of digestion. The lower the range of temperature, the larger the amount of food that can be given. The higher the temperature the greater the tendency to bowel disturbances. Generally this is due to over feeding or improper feeding, rather than to pathologic changes in the bowel. Indeed the pathologic changes in the small bowel are not frequently responsible for the well marked diarrhea, or the well marked tympanites, or the very dry tongue, or the high temperature. These are frequently due to the plan of feeding.

The author advises free early elimination by purgation, a temporary low diet, and after some hours a gradually increasing diet. We have no ideal food for the typhoid patient. The individual must be considered. Milk in some form the author regards as the best. A very few exceptions exist, in which it does not seem to suit the patient. Milk is easily had and easily administered, a matter of importance. As is well known, a quart of milk contains a certain amount of albumen (35 grams), a certain amount of fat (35 grams), and a certain amount of sugar (45 grams). We can not be so certain as to the nourishing ingredients of any other food. Many patients have irritable stomachs. Nothing is so suitable for these as milk. "The main objection to sweet milk as a diet in typhoid fever, is that it constipates, and that it is likely to produce bacterial decomposition, and indirectly diarrhea; that it is deficient in iron, and that possibly it contains too much fat; that it is not relished by patients, and that it is likely to produce large curds, which act as a foreign body, possibly blocking the lumen of

the bowels. I take the position that the most favorable symptom in typhoid fever is constipation. If milk produces this state, which it unquestionably does in some cases, the circumstance is for the best. I heard a very eminent physician once say that he never saw a constipated case of typhoid fever die. Out of a thousand cases that have come under my observation, I have seen but a single exception to this rule. This experience does not differ from that of other observers. In fact, the man who observes accurately is not uneasy when his typhoid patient is constipated.

The author regards a half glass of milk every three hours, "given only when the patient is awake," as sufficient for the average patient. Do not give in connection with lemonade, as is sometimes done. Combined with some lithia water, curds are not likely to form.

Less than one-fourth of deaths in this disease are due to hemorrhage or perforation, more than twice this number die from severe infection, and many die from a mixed infection due to a decomposition of indigestible products in the stomach and bowels.

"At the London Fever Hospital, the largest of its kind in the world, milk is the principal diet in typhoid fever; and the death rate in that institution is quite low. Occasionally, on account of reasons already suggested, they have resorted to the various kinds of broths and soups; only infrequently do they employ commercial foods.

For the last few years, it has become a habit of mine, in many cases to substitute sour milk, or buttermilk for sweet milk. In the majority of cases I find that it is more palatable, and many of my typhoid patients prefer it. Buttermilk, as an article of food in typhoid is not a new thing; its value has been known almost since the beginning of medical history, but it is only recently that we have fully learned to appreciate it as a food for fever patients. There is hardly any substance that has as great a tendency to check putrefaction as has sour milk, and at the same time is so easy to digest, and gives us a food of considerable nutritive value. I have observed evidences of bacterial putrefaction in patients, to whom sweet milk was properly given, subside when the buttermilk diet was adopted. In cases where unfavorable symptoms arise as

the result of an excess of fat in the sweet milk the patient can usually digest sour milk. It is really in cases like this that it is especially applicable." S. L. J.

A SIDELIGHT ON THE SYPHILITIC ETIOLOGY OF TABES.

By J. J. Putnam, Boston.

(Abstract by Dr. T. A. Williams, Washington, D. C.)

The writer has never seen a case where syphilitic infection, or at least illicit sexual intercourse, could be ruled out, nor a tabetic woman in whom the absence could be proved. Not only is fatigue, as invoked by Edinger, inefficacious, but it does not even determine the localization of the tabetic process; a general fatigue, unattended by any obvious strain, even psychogenic in kind, may light up but cannot originate tabes of the lumbar roots; and there is no evidence to show that superior tabes is characteristic of the brain worker, or optic atrophy of those using their eyes excessively. Putnam compares the cord degenerations with those in pernicious anemia, as in both the sensory system is most affected, and both begin with paresthetic symptoms. In a hundred cases of this kind, the author has not seen a single established syphilitic. The lesions of this disease are truly due to physiological disorder of the nervous elements by failure of nutrition. The morphological contrast is equally striking, for in tabes the changes are confined to the neural elements. They are secondary degenerations, whereas the cord in pernicious anemia presents masses of changed tissue related arterially and not neuronically or functionally, and spreading laterally, not systemically. Indeed, actual cavities may occur in the disease when the process is rapid. Thus, as fatigue may be considered as playing a clear part in pernicious anemia, the lesions of that disease and of tabes should resemble each other were the latter contributed to by fatigue. Hence we can conclude that there is an essential difference in the pathology of the two disorders.

Your superiors will never envy nor hate you nor be jealous of you; but your inferiors will.

GENERAL PARALYSIS OF UNUSUALLY LONG DURATION—TWO CASES, ONE WITH NECROPSY.

By M. J. Karpas, New York, in Journal of Nervous and Mental Diseases, June.

(Abstract by Dr. Tom A. Williams, Washington, D. C.)

The first case remains in good physical health *twelve* years from onset. It began abruptly with a long period of excitement and persecutory hallucinosis. The dementia had features seen in dementia precox; but physical symptoms and lymphocytosis made the diagnosis of paresis.

The second case died of another malady *eighteen* years after the onset of paresis, in spite of a virulent infection, chronic alcoholism, and a strenuous life with emotional stresses. It was a cerebral type in which convulsions appeared early and progressed with remissions. The dementia was of long standing. The post mortem showed moderate haziness of the pia matter, including that of the cerebellum, slight atrophy of the brain (1120 grms.). Histologically diffuse glial hyperplasia in the first frontal, with irregularities of the cortex and loss of nerve elements, and of course the usual pesi-vascular plasma and lymph cells.

Four Cases of Long Duration Studied Histologically.

Case 1—Chas. B. A., A man committed suicide at 49, after eleven years of paresis. He had amnesia, irrational and persistent delusions, mental deterioration, one convulsive period. The lips trembled, speech was thick, writing unsteady, knee jerk exaggerated. *Post Mortem*.—Little gliosis and slight increase of vessels, with very little periarterial plasma cell exudate; moderate loss of parenchyma.

Case 2—Patient died from choking after eleven years of tabo-paralysis. Onset acute and very expansive; pupil and knee reflexes absent. After a seizure and four years of deterioration, there was little further change. *Post Mortem*.—Considerable atrophy of brain, with thickened pia, thinning of columns of Goll. Histological changes slight, as in last case.

Case 3—Aged 59 on admission. After two years improved and returned to work. After five years readmitted; confused, loquacious, and tremulous. Died at 74, after progressive deterioration. Toward the end a temporary right hemiplegia. Duration 15 years.

Post Mortem.—Slight atrophy; lymphoid and plasma cells in pia, but blood vessels only slightly infiltrated, except in medulla and in temporal lobes. Slight senile changes.

Case 4—This lasted 23 years. Began suddenly at thirty-seven with violent delirium which soon quieted, leaving iridoplegia, hemiptosis, tremor and dysarthria. Expansiveness alternated with depression, and dementia progressed to annihilation. Various passing cranial nerve palsies occurred. The report states that the patient died at seventy (a duration of 23 years. T. A. W.)

Post Mortem—Marked atrophy, opaque pia, granular ependyma, atheroma; diffuse, very slight, but characteristic histologic changes.

Selections

SPINAL ANALGESIA.

By John B. Huber, M.D., New York,

Professor Pulmonary Diseases, Fordham University Medical School; Medical Expert, New York State Department of Health; Visiting Physician to St. Joseph's Hospital for Consumptives, etc.

The recent visit of Dr. Thomas Jonnesco, Professor of Surgery in the University of Bucharest and the dean of its faculty, enlisted the cordial interest of his American colleagues, if not their complete concurrence in his views. He had planned to spend some two months in as many medical centres throughout our Union as possible, but had to return by reason of the grave illness of his father; he hopes to revisit us in order to finish the demonstrations which were the especial purpose of his coming. This was to show the anesthetic—or rather the analgesic—properties of a combination of 5 centigrammes of stovaine, with 1 milligramme of strychnine sulphate, to be injected into the arachnoid cavity, where it is absorbed in the spinal fluid. For inferior analgesia—from the abdomen down—the injection is made between the last dorsal and first lumbar vertebrae; and for superior analgesia—that is for operations on the neck, head, thorax and upper extremities—the space between the first and second dorsal vertebrae is penetrated. One c.c. of the solution is injected.

In several metropolitan hospitals operations were done under analgesia thus induced by Jonnesco himself. A boy under five years had incisions made behind the right ankle for the relief of contractures due to infantile paralysis; the tendo Achillis was shortened and adhesions were cut away. Of course such an operation as this

was impossible without analgesia, which it seems was perfect; for the boy—his face in a towel so that he could not see the operation—declared that throughout he felt no hurt whatever, though he had flinched when the needle was forced between the vertebrae. Again: A boy of eleven was injected, after which his club foot was corrected; yet this patient answered questions from time to time; the knife and the necessarily strenuous manipulations seemed to give him neither pain nor distress. In another boy of eleven a double hernia was done under like circumstances, and equally without distress to the patient. This analgesia again seemed adequate in a woman of thirty-eight, who was operated upon for an old fracture of the hip; although to begin with she felt some nausea, this passed away rapidly, and was not experienced during the operation itself. More remarkable were cases operated on in the upper parts of the body. A young man of twenty-one, a sufferer from frontal tumor and epileptic fits, was injected. Here the Jonnesco method was peculiarly appropriate, by reason that the patient's heart was weak, and it had been feared to give him either chloroform or ether. During this operation there were several epileptic convulsions—as might have occurred at any time—and his respirations were difficult; except for these phenomena the operation was successful, no pain was felt and the heart was not affected. In London, it is reported, Jonnesco, under his method, removed quite successfully a number of tuberculous glands from the neck of a sailor—certainly a most difficult and delicate procedure.

Such were the good results; some that were unfoward must on the other hand be recorded. In a patient operated on by Jonnesco himself for a hernia the analgesia was complete and satisfactory for twenty-five minutes; but during the latter half of the operation, which consumed forty-five minutes, feeling undoubtedly returned, as was evidenced by muscular rigidity and twitching. In such an event Jonnesco, who states the injection to be effective for only thirty-five minutes, advises a second injection. But this surely is objectionable, since it means the suspension of the operation for the time being; the raising of the patient—whose psychism is at best, in the circumstances, unduly taxed—to a sitting position:

and the risks of infection. In another case the mastoid was opened after two injections; though the skin was perfectly anæsthetic the patient became so much agitated that chloroform had to be resorted to; and the operation was completed under its influence. Again: a German suffering from epilepsy was operated on for a tumor of the forehead; within three minutes he lost all consciousness, quite as if he had been under ether or chloroform; collapse and failure of respiration became imminent: the most heroic measures were essential for his restoration; nor for twenty-four hours could he be considered to have passed the danger of death. Four other patients operated on after the Jonnesco analgesia are reported to have suffered, after returning to their wards from the operating room, fully as much discomfort and shock as obtains after general anesthesia; their nausea was not so marked, but their temperature went up as high as 102, their respirations were accelerated and they suffered pain in various parts of the body.

Of course spinal analgesia is not new; and Jonnesco makes no claim whatever of priority. At least a quarter-century ago J. Leonard Corning, of New York, discovered and acquainted the profession with this method (*N. Y. Medical Journal*, Oct. 31, 1885); he used cocaine, with which Koller had, at about that time, revolutionized eye surgery. And since then, as is well known, other substances—morphine, scopolamin, magnesium sulphate—have been used to induce spinal analgesia. For some two years past a New York surgeon, W. S. Bainbridge, has been injecting stovaine into the spinal canal, at the same time with strychnine under the skin; and this, as we understand it, some six months before Jonnesco published his method.* For several years past lumbar puncture has been used for diagnostic purposes; and in this way also various immunizing and curative substances have been injected into the spinal canal. Jonnesco by no means considers himself the first to have used stovaine; but he has experimented much upon animals during many years, until he has evolved a combination which he has felt justified in administering to human beings. And his formula,

here given, and which is freely at the service of any surgeon, seems to be original with him.

Obviously there are several and indeed vital objections to the routine use of Jonnesco's method; and the chief of these may here be summarized:

It is essential to successful surgery that the patient be absolutely quiet, in no condition to interfere in any possible way, with the operation procedures; his reflexes have for the time being, to be absolutely in abeyance; there must be no muscular rigidity or twitching, to disturb the normal relations of the parts.

Then there is the patient's psychism before the operation, especially when a wound has been the occasion of it. Of all patients the greatest to be dreaded is the stoic, the man not afraid, with plenty of grit, who likes to chat and smoke while you are cutting him up. Under the stovaine procedure the patient may walk away afterward, as if nothing had happened to him; this is "sport in surgery;" but such is not the spirit in which surgery should be done. It is reported that an assistant of Jonnesco in Bucharest operated upon himself before a class of students, explaining as he went along each step in the process. All such bravado is the veriest unwisdom; and oftentimes such a patient succumbs from the lowered vitality thus induced when he need not have died; that sort of thing takes out of a man the stuff he needs in such a crisis. The patient is best off, if possible, unconscious of what he is undergoing; he then experiences no fear—the emotion that occasions many fatal results in operative cases. Untoward psychic phenomena are mercifully spared the patient (and the surgeon) in general anesthesia; in spinal analgesia they are likely to be intensified, certainly they are not mitigated, especially for intellectual, nervous, and high-strung patients is this consideration valid; the shock following operation has ended in death for such people, and under spinal analgesia the percentage of these deaths must surely be increased.

In point of safety general anesthesia has the advantage. Available statistics show that in the last ten years 53,000 operations have been done under spinal analgesia, with 106 deaths attributed to the drug—one death for each 500 cases; 100,000 opera-

*At the Congress of the International Society of Surgery, Brussels, in September, 1898.

tions under chloroform have resulted in one death in 3,000 due to this anesthetic; 300,000 ether cases have averaged one death in 16,000 cases; thus spinal analgesia would appear to be six times as dangerous as chloroform, and thirty-two times as dangerous as ether.

Of course we must sympathize with the natural dread of "dying consciousness," no matter how brief the anesthesia or how skilled the hands in which the patient places himself; yet general anesthesia need today occasion almost no such terrors. Several preliminary whiffs—literally—of laughing gas obviate all reasonable objection to etherization; and at least one humane anesthetist arranges in his machine for a preliminary odor of cocktail to be inhaled by men, and of a delicious perfume for women patients; who need fear a brief nepenthe so agreeably induced!

Nor is the claim quite accurate that stovaine leaves no such after-effects as may obtain in general anesthesia. Again, puncture of the spinal canal—apart from the pain of the injection—is not a proceeding to be regarded lightly. The contents of the spinal canal are among the most delicate in the economy. The needle may easily invade the cord itself; thus may this procedure induce sepsis, abscess or otherwise permanent injury; sepsis is especially to be feared, since Jonnesco states that this preparation loses in efficiency when it is sterilized.

The conclusion is inevitable that general anesthesia must remain the procedure of choice in most cases; though spinal analgesia may judiciously be resorted to in selected cases in the lower part of the body, in operations on the face and throat, and where the heart, the lungs or the kidneys are so seriously diseased that a fatal issue may have to be feared from general anesthesia. Cocaine will still retain its place for minor operations, but as injection, not in the spinal canal, but immediately at the field of operation. We must add that after Dr. Jonnesco's demonstration in English and French hospitals, the consensus of opinion among the surgeons in those countries was unfavorable to his method. Such considerations as these should not, however, detract from the appreciation due him or the high personal esteem in which he should be held.—*Therapeutic Medicine.*

Correspondence

A LETTER FROM CHINA.

A VISIT TO MANILA.

By L. D. Wilson, M.D., Wheeling, W. Va.

CANTON, CHINA, Dec. 24, 1909.

Dear Dr. Jepson:

The merry Christmas season finds me in this far away land, and strangest city I have yet seen. As for Christmas weather, it does not exist in this part of the world, but I incline to the opinion that Fourth of July weather is very prevalent throughout at least three-fourths of the year. My last letter was from Batavia, which was our farthest point south, and which we left on Dec. 13. On the 16th we stopped at Labuan, on the Island of Borneo. This is not a place of much importance or extent. It is a coaling port and about the hottest place on the face of the earth. Here in December I found about the hottest weather I ever experienced. Hot enough for me. Outside of a few dances by the natives, and some performances by a band of Dyaks, or headhunters, that had been especially brought down from the interior for our entertainment, there was nothing to make note of except the heat, and we were glad to take up our cruise for Manila. The morning of the 19th found us sailing into Manila Bay, the scene of Dewey's exploit, and in about an hour we were at the dock. A genuine surprise awaited us. The American residents had decorated the long dock-shed with flags and at each post that supported the roof had placed the shield of one of the States, where the former residents of those States awaited our landing, each at the shield of his State. It was very cheering to be greeted thus, and we of West Virginia found four of our former residents waiting to bid us welcome, one, Miss Lewis, of our Third ward school, another, Mr. Chenoweth, of Moundsville, and Mr. and Mrs. Marshall. Mrs. Marshall was formerly a student at Buckhannon and Morgantown, and before her marriage was a Miss Marsh. But what a noisy, cordial welcome everybody got. Our friends took us to their homes, and feasted us, and took us about the city, and showered attentions on us in a way that made us feel that we were indeed brethren. The city of Manila is a most in-

teresting one. The old part of it is a walled city, the only one, I believe, that Uncle Sam possesses. The walls enclose all the old Spanish government buildings, churches, etc. The walls are twenty or thirty feet high, ten to twenty feet thick, with all the accompaniments of moat, bastion, curtain and gateways. The fortifications are situated in the angle formed by the junction of the Pasig river with the bay. The modern, as well as the old native city, is without the walls, and is the dwelling place of by far the greater portion of the population. The site of the city is flat and low. Most of the native houses are built of bamboo and palm, on posts four or five feet above the ground. Until recently there was no water service, and as a consequence drainage was impossible, and the general conditions made the place very unhealthful. A water service has been provided lately, and as soon as proper connections are made and the work of laying sewers and drains completed matters will be very different. They are very much improved as it is, for the government has done a great deal of work in a sanitary way. The streets are kept clean, the paid system for the removal of night soil established, hospitals provided and a general supervision of everything pertaining to the public health maintained by a most efficient and thoroughly organized health department. The government wisely recognizes that the healthfulness of the city is vital to its future growth and prosperity, and is bending every energy to bring about the best possible conditions to secure such a result. The city has a population estimated at 150,000, all but 6000 or 8000 natives. To educate and mould this vast body of primitive people into industrious, useful citizens is a stupendous job, only the merest beginnings having as yet been inaugurated. The country around the city is fairly well cultivated. Rice, hemp, tobacco and sugar are the principal products. We had a delightful boat excursion up the Pasig river eight or ten miles, through typical tropical growth of palms, bananas, etc. In the native town of Pasig, the huts or shacks are literally hidden in the dense growth of the banana, great groves of which spring up everywhere if allowed. The people as a rule are better clothed, or perhaps one ought to say, more clothed than any other of the native eastern people we have yet seen. They have but little religion, and only a trifle of that

little, ours. Their most absorbing amusement is cock-fighting. One can see roosters everywhere. In door yards, under houses, in the fields, tied to pegs driven into the ground, along the streets, under the arms of the passers by, everywhere. The sound of their crowing is almost continuous. They are so pugnacious, that the natives have actually built large amphitheatres, some of them holding three or four thousand people, simply to accommodate the uncontrollable disposition of these birds to scrap with each other. If one should wander into any of these buildings of an evening, I care not how sober or serious his train of reflection might be, it would surely be disturbed and his attention distracted by the ceaseless quarrels of pair after pair of these irrepressible scrappers. Some are even led to wonder which one of a pair will tire of the combat first, sometimes allowing their surmises to be backed up by a few pesos. Manila has great possibilities, and if our government ever outgrows its timid attitude towards a free and unrestricted commerce, it will become the imperial city of the East. I am sorry I cannot enter more into detail in reference to its trade and manufactures, but the time for writing has to be snatched from that allowed for sleep and meals when on such a tour as ours. After nearly three days spent in the city, on one afternoon of which we were formally received in a most hospitable and truly cordial manner by Gov. Gen'l. Forbes, we reluctantly, amid the hearty good-byes of a host of friends assembled at the wharf, bade adieu to the Philippines and sailed away for China.

Sir William Sinclair, Professor of Obstetrics in Victoria University, Manchester, England, in the *Lancet*, condemns the use of morphine and scopolamine in labor cases. It is too dangerous to both mother and child. Many cases, he says, have been reported from this combination, and many children have been born asphyxiated. The intervals between labor pains are prolonged, the uterine contractions weakened, and danger of hemorrhage increased. Sinclair thinks that $\frac{1}{4}$ grain of morphia alone may often be given hypodermatically with decided advantage about the time dilatation is complete.

The West Virginia Medical Journal

S. L. JEPSON, A.M., Sc.D., M.D., *Editor.*

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All communications to this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notices of deaths, removals from the State, changes of location, etc., are requested.

Our readers are requested to send us marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

CONTRIBUTIONS TYPEWRITTEN.

It will be satisfactory to all concerned if authors will have their contributions typewritten before submitting them for publication. The expense is small to the author—the satisfaction is great to the editor and printer.

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REMITTANCES

Should be made by check, draft, money or express order or registered letter to Dr. S. L. Jepson, Ch'n of Pub. Com., 81 Twelfth Street, Wheeling, W. Va.

Editorial

If the JOURNAL does not reach you by the 10th, drop us a card.

The next annual meeting of our State Medical Association will be held in Parkersburg on October 5th, 6th and 7th.

THE CURABILITY OF TRAUMATIC NEUROSES.

The traumatic neurosis was formerly the bug-bear of medical art; for its pathogenesis was at one time so vague that the indications for treatment were mere haphazard.

It is not yet generally realized that this is no longer so; but two cases recently reported in detail will show the careful reader how very amenable is this condition to the correct treatment which we now know. The first of these was reported in the *Medical Record*, Oct. 2, 1909, by Dr. Tom A. Williams, of Washington, D.C. The second

was reported by Dr. Julius Grinker, in the *North Western University Bulletin* of December last. As the first concerned a railroad accident, it is perhaps the more practically important of the two; and our readers will be glad of a few comments.

After bruising his back by a fall from a car, a railroad brakeman remained for six months very lame; and the sensibility of the lower limbs appeared to be lost. His tint had become sallow, and he was dyspeptic and emaciated; he was sleepless, sad, and cried much. The neurological examination reported with the case showed that there was no destruction of the nervous elements. This disability was shown by psychoanalysis to be a function of the false fixed-idea induced by the belief derived from his environment and some of his doctors that such symptoms as he showed could and should follow such injuries as he had received. One sitting sufficed to begin the correction of the false notion; and he himself completed the persuasion, and he was able to return to work in a month, as Dr. Williams had predicted.

It is shown that the loss of appetite, insomnia, emaciation, and unhealthy tint of the skin were secondary to the mental worry concerning the circumstances in which he was placed through his fixed idea, the false belief that he was irretrievably damaged in his spinal cord, and would be unable to earn a living for himself and family; and his whole *affective* tone thus became morbid secondarily to an idea derived by suggestion, as appeared.

Of course, shock perturbs the neurons, but does so temporarily. The physiological law of fatigue permits of no exception. A neuron system can only energize for a certain time. Even the spinal reflexes soon become exhausted; and the more complicated psychic reflexes much more quickly. The autonomic system has a slower rhythm than the cerebrospinal, yet even it soon tires. A blush lasts only a few minutes. The "goose-skin" soon passes, even though cold continues. The cold sweat of fear is no more permanent. Even "fright-palsy," which is largely conditioned by an idea, soon recovers as the circulation resumes its normal tone.

Hence the persistence of the incapacity induced by the shock of the accident is intellectual, and not *due to* the primitive emo-

tion. It is really a false belief which determines untrue acts—untrue in the sense of the bad adaptation to environment. The process by which the false belief arises may be termed suggestion, for it is an idea unmodified by other corrective or inhibitory ideas.

Inhibition has been invoked very differently by many writers on hysteria, who believe that a cortical centre is prevented from functioning by this negative cause. Babinski and his followers have made it clear, however, that the abeyance of function is not inhibitory but kinetic, and that a patient is positive, rather than negative, in his attitude towards his disability. An instance will make this plain.

Hysterical anorexia is not due to failure of the function of eating, but is due to the positive notion of not eating. A hysteria incapacitating locomotion is not due to the absence of the power to walk, but is due to the positive idea of not walking. This is not a mere quibble. A hysterical manifestation is not due to the absence of something needed for normal adaptation, but is due to the presence of something redundant, namely the false fixed-idea which determines the patient's autopsychic or allopsychic misconduct. The case illustrates these points most clearly.

The corollary of these principles is that a hysterical outbreak merely comotes a sufficiently powerful suggestion in a susceptible person. Now susceptibility to suggestion is as variable as that to tuberculosis or malaria. No one is quite immune. We can measure none of these, but we can test any of them, although it is not always advisable to do so. When necessary, however, as in a medico-legal case, this can always be done; for attention, perception, memory, association of ideas, fatigability, and even the emotional reactions can be sufficiently accurately estimated for clinical purposes.

Hence, the medical man need no longer rely upon vague impressions of nervoism or hystericalness; for it is his duty to estimate these as accurately as he counts blood corpuscles, or ascertains the reaction to tuberculosis. It is only by such experimental methods that our art can remove the reproach it has justly incurred regarding the cure of so-called traumatic neuroses.

SENATOR CULLOM'S BILL.

Senator Cullom, of Illinois, has recently introduced a bill "To Regulate the Traffic in Habit-Forming Drugs," a bill that has many features that are very commendable. It provides that

"Every person who imports, exports, produces or manufactures opium, morphia, cocoa leaves, cocaine, alpha and beta eucaine, chloral, cannabis, their salts, derivatives or preparations, and every person who further manufactures, compounds, deals in, or distributes the aforesaid drugs, or (section 3233, Revised Statutes) either of them shall, before engaging, or if he is already engaged in said business, register with the collector of internal revenue of the district his name or style, place of residence and place where such business is to be carried on, and at the time of such registry, and on or before the first day of July in each year, every (3237, Revised Statutes) importer, exporter, producer, manufacturer, wholesale manufacturing pharmacist, wholesale dealer or jobber, shall pay to said collector a special tax at the rate of \$10 per annum, and every retailer or distributor at retail shall pay to said collector a special tax at the rate of \$1 per annum."

Is the doctor who dispenses his own medicines to be classed as a "distributor" under this act? It does not appear to be very clear on this point. If the doctor is to be included, the act will work a hardship on the toiling physician, who already has a hard time in his practice, often not only making charity calls but giving medicines for which he cannot hope to receive any compensation. Section 4 of this proposed act is as follows:

"Sec. 4. That it shall be unlawful for any person to sell, or give away, in interstate commerce, any of the aforesaid drugs, or any of their salts, derivatives or preparations, to any person other than a person who has registered and paid the special tax as required by this act; but that nothing contained in this section shall apply to public hospitals or to scientific or public institutions."

From this it seems that no dispensing physician could purchase any of the drugs named in the bill until he had paid a special annual tax. Exception is made of hospitals and scientific institutions. Why not make an exception also of practicing physicians? Certainly the men who do so much for the public in charity work for the sick poor (and many also who are not so poor), and who are constantly putting forth efforts for the education of the public in preventive medicine, and for the enforcement of sanitation directly against their own pecuniary interests, should be excepted from the provision of this proposed law, which in its

maint features and in its purpose is so commendable. We sincerely hope that our congressmen in both houses will not permit this bill to become a law until the suggested change is made.

S. L. J.

The State Association secretary has already commenced the work of arranging a program for the annual meeting at Parkersburg, and requests any who contemplate the preparation of a paper to send him the title at once. He has recently returned from a long stay in Philadelphia, in doing post-graduate work, and is now ready for the society's business. Address Dr. A. P. Butt at Davis.

Have you paid your dues? If not, how do you think we are to know how many JOURNALS to have printed monthly? As a matter of fact, a number of new members are already deprived of some of the JOURNALS for which they have paid in dues, because they were late in paying, or we were late in getting information as to their election, and hence have not had enough copies of the JOURNAL printed. *Pay now* so that no future trouble may occur; and see that the money is *at once* sent to the State Association secretary, who will immediately notify us.

NATIONAL CONFEDERATION OF STATE MEDICAL EXAMINING AND LICENSING BOARDS.

The National Confederation of State Medical Examining and Licensing Boards will hold its twentieth annual meeting at St. Louis, Mo., on Monday, June 6, 1910, in the Southern Hotel.

The subjects to be taken up at this meeting will be a consideration of practical clinical instruction in medical colleges, a report on medical education in the United States by a representative of the Carnegie Foundation, and a report on a proposed materia medica list by a special committee. These topics are all practical and of vital interest to examining boards, medical schools and the profession. The contributors of papers to the symposium on clinical instruction are

men of the highest standing in the medical profession, many of them teachers in some of the foremost institutions in this country, and their productions will be worthy of the most careful consideration. The chief object of this symposium is to determine, as far as possible, whether clinical instruction in medical schools can be made sufficiently practical and thorough so as to warrant the medical boards in demanding practical examinations in the principal branches of the medical course.

An earnest and cordial invitation to this meeting is extended to all members of state boards, professors and teachers in medical schools, and all others interested in securing the best results in medical education.

The officers of the confederation are: President, A. Ravogli, M. D., 5 Garfield Place, Cincinnati, Ohio; secretary, Murray Galt Motter, M. D., 1841 Summit Place, N. W., Washington, D. C.

THE AMERICAN ACADEMY OF MEDICINE.

This organization, which specializes in Medical Sociology, will hold its thirty-fifth annual meeting in Hotel Jefferson, St. Louis, June 4 and 5. Among other subjects to be discussed are these: "The Health Assets of the Child," "The School System and the Child," "The Physician and the Social Organization," "The Physical and Social Havoc of the Social Plague." a symposium with papers by W. S. Hall, W. A. N. Dorland, H. O. Marcy, DeLancy Rochester and others.

At the request of President Wm. C. Gorgas, Dr. Charles A. L. Reed has for the present withdrawn his resignation of November 20th as member and chairman of the Committee on Medical Legislation.

HOMOEOPATHY AT THE UNIVERSITY OF MINNESOTA.

As the result of the small attendance of students in the homoeopathic department—some twenty-six professors and only two or three students, none in the freshman year—the department has been abolished, and simply the chairs of homoeopathic materia medica and therapeutics retained.

THE NEW SUTURE.

NEW YORK, April 11, 1910.

Editor of the West Virginia Medical Journal:

DEAR SIR:—It seems that Dr. R. M. McMillen is somewhat disappointed that the suture which he claims to have discovered, and which he described in your September issue, had been invented before, and in finding this out, rather regrets the fact, and suggests that I am seeking "cheap notoriety," by claiming priority.

It would certainly be small of any man to try to take away credit from any one, where credit is due, but apparently the doctor does not believe in this maxim, and insinuates that my statements are untrue, so that the "cheap notoriety" might be his own.

I do not in any way claim that Dr. McMillen ever read of my suture, or was helped by any suggestion from me, to devise such a stitch, but perhaps if he had come in contact with any Homoeopathic surgeons he might have known that such a suture existed. I am certainly pleased that the surgeons and professors who have used the stitch for the first time, through Dr. McMillen's efforts, speak of it so highly, as their approval agrees exactly with the Homoeopathic surgeons. I also quite agree with Dr. McMillen that "All things that make for the advance of the profession and for the alleviation of human suffering and deformity, should not be hid in a corner." So therefore for the good of humanity this suture has been demonstrated to every class of students that have graduated from the N. Y. Homoeopathic Medical College for the past ten years. It is unfortunate for the doctor that his efforts were a little late, and it serves to prove the old adage, that there is nothing new under the sun.

I take pleasure in sending to you the affidavits of a number of professors and instructors who have demonstrated the suture under discussion. While Dr. McMillen might claim that I would perjure myself for "cheap notoriety," I cannot believe he will say the same of men who have absolutely no interest in this controversy.

Yours very truly,

WM. TOD HELMUTH.

The editor has in his possession the affidavits referred to in the above letter. They are from Dr. E. Wells Kellog, Pathologist and Assistant Surgeon in the N. Y. Homoeopathic Medical College and Flower Hospital, Dr. E. Burt Sheldon, Lecturer on Minor Surgery, Dr. Ralph A. Stewart, Adjunct Professor and Demonstrator of Surgery, Dr. B. G. Carleton, Prof. of Genito-urinary Surgery, all in the above institution, and Dr. Wm. A. Stewart, Attending Surgeon and Gynecologist in the Homoeopathic Hospital of Pittsburg, and a member of the Board of Medical Examiners of Penna. The affidavits state that the writers have been acquainted with the so-called "new suture"—generally known as "the Helmuth stitch," and have used it and demonstrated its use as far back as 1895, '97, and 1903, '05 and '06.

Dr. Helmuth has certainly proven his priority, and is entitled to all the credit for the same. Dr. McMillen's invention was no doubt original with him, and we regret that Wheeling and West

Virginia must lose credit for the original invention of this suture. It is rather unfortunate that Dr. Helmuth failed to give to the profession, through the journals, a cut and description of his suture, as was done by Dr. McMillen.—Editor.

CONFERENCE OF THE COUNCIL ON
MEDICAL EDUCATION AND OF THE
COMMITTEE ON MEDICAL LEGIS-
LATION OF THE AMERICAN
MEDICAL ASSOCIATION.

Held in Chicago, Feb. 28-March 2, 1910.

This joint conference was called to order by Dr. Arthur Dean Bevan, Chicago, Chairman of the Council on Medical Education.

ADDRESS OF THE CHAIRMAN.

Dr. Arthur Dean Bevan, Chicago: We are called together for the purpose of improving the medical educational standards. Many of us here know the difference between the modern intelligent medical care and the ignorant charlatan care of the sick. 1. We have seen the woman dying of child-bed fever which might have been prevented by the intelligent aseptic conduct of her confinement. 2. We have seen the child dead from unrecognized and untreated diphtheria, when the death might have been prevented by early laboratory or intelligent clinical diagnosis and the proper use of antitoxins. 3. We have seen the pinched and dusky face of the man dying of peritonitis, which could have been prevented by early diagnosis and proper operative treatment. The public does not as yet realize the importance of public health measures and of measures aimed at securing properly trained medical practitioners.

From a study of the subject of medical education during the last eight years, I desire to present to you briefly some conclusions:

1. Medical education and medical educational standards are not in a satisfactory condition in this country, and, although great improvements have been made in the last ten years, conditions as a whole are unsatisfactory.

2. It costs more to conduct a modern medical school than the amount which can be obtained from students' fees. The 60 or 70 schools which should survive must receive either state aid or private endowment.

3. The medical school of the future must be developed as the medical department of a university.

4. The study of modern medicine demands: (1) a certain preliminary education; as a minimum this should be eight years in the primary school; (2) four years in the high school; (3) at least one year in special preparation in the pre-medical sciences of chemistry, physics and biology; (4) four years in the medical school, two years in the laboratories of anatomy and physiology, pathology and pharmacology; two years in clinical work in medicine, surgery, obstetrics and the specialties; and finally (5) at least one year of practical work as an interne in a hospital. And the time has about arrived when provision should be made for including this hospital year in the medical course.

5. The State licensing boards of the various

States should have the legal power to insist on a proper preliminary education and a proper medical course, and they should have the right to refuse recognition to work done in colleges not offering proper medical instruction and the examination for medical licensure should be of such a practical character and so thorough as to determine the ability of the applicant to practice medicine. This power is necessary in order to protect the people of the State against ignorance and quackery. No public health measure is of greater importance than that aimed at securing properly qualified medical practitioners.

6. In order to secure proper medical standards throughout the country we must have the united support of the State boards, the medical profession, the medical schools, the universities and, what is most important of all, public opinion.

7. In order to obtain this support we must carry on a campaign of education showing what the existing conditions are and what changes are needed in order to secure conditions which will best safeguard public health, secure proper medical attention for the sick and aid in the advancement of medical knowledge.

SECRETARY'S REPORT—INSPECTION OF MEDICAL COLLEGES.

Dr. N. P. Colwell, Chicago: All the work done by the Council on Medical Education since it was created in 1904 has been focused on the investigation of medical colleges preparatory to issuing a classification of medical schools. In making the investigation, the chief aim has been to point out reasonable standards of medical education and to assist the colleges in any way it could in the fight many of them have been making to keep pace with the advances, which through modern methods of research have been made in knowledge of the causation and treatment of disease.

Following the first tour of inspection, the Council was criticised in certain quarters for not publishing outright its classification of medical colleges. That classification was not published, however, because the Council desired to give a number of colleges which were contemplating improvements the opportunity to make good. The delay has been more than justified. Many colleges have made extensive improvements, numerous mergers have been brought about and, on the whole, the situation has been greatly improved. The general conditions as revealed by the first inspection, however, were given the widest possible publicity, so that at the present time any plea of ignorance of the demands of modern medicine is unworthy of consideration.

Including pseudo-medical colleges, there is an amazing variety of institutions professing to teach medicine in whole or in part which are annually turning out thousands of graduates who seek the privilege of practicing medicine. While some of these graduates may be thoroughly competent, there are doubtless many who are illiterate, untrained and decidedly incompetent. While they may differ greatly in their theories of disease and their methods of treatment, those who by whatever means secure the right to practice will be alike in this respect; they will all be re-

quired to differentiate between the normal and the abnormal; they must determine the nature of disease, injuries and deformities and in many of their cases what they do or fail to do will mean the life or the death of the patient.

The point to be borne in mind is that an osteopath is required to make a diagnosis just as a medical practitioner is, and, therefore, needs a similar training in the fundamental medical branches. Lower educational standards for osteopaths, therefore, are a serious menace to the public and are unfair discrimination against medical practitioners. Regarding osteopathic colleges also it should be stated that owing (a) to their lower preliminary requirements, (b) to their shorter course for the osteopathic degree, (c) the few instructors in their faculties who have had a scientific medical training and, more important still, (d) to the serious if not absolute lack of laboratory equipment and clinical facilities: not one of the osteopathic colleges in the United States can be compared even with those medical colleges which have been rated far below 50 per cent by the Council on Medical Education.

The only legal barrier which can protect the public from ignorant, untrained and incompetent practitioners is the State medical licensing board. It is of extreme importance, therefore, that in each State there should be a single licensing board, that its members should be selected because of their special fitness for the work involved, and that this board should be given full authority in the premises. Instead of that we now have in our 49 States and Territories 82 different boards of medical examiners including the sectarian boards. In some States the responsibility for defending the public against ignorance, incompetence and fraud, is divided among as many as four separate boards. The time has come, however, when the medical profession and the people of each State should see to it that a single board of competent medical examiners shall control the licensing of all practitioners of medicine, and that this board be given full authority. This one barrier between the sick and afflicted and the crowds of ill-trained and incompetent practitioners must be made effective.

REPORT OF THE SPECIAL COMMITTEE ON PRACTICAL TESTS AT STATE LICENSE EXAMINATIONS.

Dr. W. S. Fullerton, St. Paul: Your committee recommends that State examining boards shall require practical examination in the following subjects: diagnosis, pathology, histology, bacteriology, urinalysis, obstetrics and anatomy. While this may sound formidable the committee is convinced that it is feasible.

REPORT OF THE COMMITTEE ON ORGANIZATION OF A STATE BOARD OF MEDICAL EXAMINATION AND LICENSE.

Dr. W. H. Sawyer, Michigan, chairman, read the report of this committee, stating that there should be a board of medical examiners separate from the state board of health. Several states have tried the combined board of health and medical examination, but have, after experience, separated them, and those states in which the two boards are already combined are endeavoring to have the division made.

The examining board should be single.

The examining board should be non-sectarian. However, under existing circumstances it does not seem practicable or possible of accomplishment. In 19 states the law provides for a mixed or sectarian board. Of 17 states in which the law is silent as to sect, 14 reported through the secretary of the board, 7 advocating a mixed board, 3 a non-sectarian board, and from 4 there was no expression.

The examining board should be appointed by the governor on nomination of the state society. Any other attempted method at this time would more than neutralize the good effect of the medical board on the profession and people at large.

When possible the secretary should be a member of the board, but not necessarily so.

The examining board should be entirely distinct from all educational institutions.

REPORT OF THE COMMITTEE ON QUALIFICATIONS OF APPLICANTS.

Dr. S. D. Van Meter, Denver, chairman of the committee, presented this report:

It is unquestionably desirable that all applicants for license to practice medicine should be required to furnish proof of having received preliminary and collegiate education equal to that standard recommended by the Council on Medical Education. It is not advisable for the state to encourage sectarianism in medicine and it has no more right to recognize a school of medicine than one of theology. Examinations, in the opinion of the committee, should be oral, clinical and written. They should be practical and designed to furnish the examining board with adequate information on which to determine the educational and moral qualifications of those examined. The committee believes that examining boards should have the authority to determine the good standing of colleges. They should arrive at their conclusions by an unbiased review of all obtainable data, but owing to the cost and physical impossibility of making personal investigations of colleges at a distance, boards must of necessity at present rely chiefly on the reports of the Council on Medical Education and the Carnegie foundation for the Advancement of Teaching.

REPORT OF THE COMMITTEE ON THE DEFINITION OF THE PRACTICE OF MEDICINE.

Dr. L. M. Halsey, New Jersey, presented the following definition: A person practices medicine and surgery within the meaning of this act who holds himself or herself out as being able to diagnose, treat, operate or prescribe for any human disease, pain, injury, deformity, physical or abnormal mental conditions, and who shall either offer or undertake by any means or methods to diagnose, treat, operate, or prescribe for any human disease, pain, injury, deformity, abnormal, mental or physical conditions.

State News

STATE BOARD OF HEALTH.

This Board held its last meeting in Wheeling, April 12th, 13th and 14th. Twenty-two applications for certificates to practice were presented. Of the applicants, 17 passed the required examination, and 5 failed. We give below the names of the successful men:

- J. A. Moyers, P. and S., St. Louis, Oak Flat, W. Va.
- G. W. Smith, Univer. of Louisville, Canada, Ky.
- S. M. Prunty, Univer. of Louisville, Little Hocking, O.
- J. W. Travis, Univer. of South, Grafton, W. Va.
- E. B. Johnson, Woman's Medical Coll., Burner, W. Va.
- S. H. Phillips, Univer. of Va., Blakeley, W. Va.
- A. Lewin, Univer. of Pittsburg, Pittsburg, Pa.
- H. D. Jew, Univer. of Pittsburg, Pittsburg, Pa.
- J. M. Conway, Univer. of Pittsburg, Pittsburg, Pa.
- C. H. Cookson, Univer. of Buffalo, Richardsville, Pa.
- W. L. Burns, Univer. of Maryland, Cumberland, Md.
- J. F. Shannahan, Baltimore Medical Coll., Swissvale, Pa.
- G. W. Kenney, Baltimore Medical Coll., Keyser, W. Va.
- J. K. Biddle, Coll. of P. & S., Baltimore, Md., Burnwell, W. Va.
- W. G. C. Hill, Coll. of P. & S., Baltimore, Md., Middleport, O.
- A. Lewia, Louisville & Hosp. Med. Coll., Beckley, W. Va.

The successful candidates were one each from the following colleges: Eclectic Medical Institute, University of Pittsburg, Louisville & Hospital Medical College, Meharry Medical College, and University of Louisville.

We give the questions below. They number 120. The examination was both oral and written. Percentage required to pass, 80.

QUESTIONS.

Surgery.

1. Treatment for rattlesnake bite?
2. What is tetanus, cause and treatment?
3. What may an aneurism be mistaken for?
4. Prepare a quart of normal salt solution.
5. Give methods of controlling hemorrhage.
6. Treat fracture of the ribs.
7. How are wounds classified?
8. What are symptoms of shock? treatment?
9. Symptoms of appendicitis?
10. Give classification and treatment of burns.

DR. J. L. DICKEY,
Examiner.

Obstetrics and Gynecology.

1. Describe puerperal mania. Give cause and prognosis.
2. Treatment for excessive vomiting in pregnancy.
3. What would you carry in your obstetrical bag?
4. Would you rupture membranes? If so, give cause.

5. Give pathology, symptoms and etiology of septicemia.

6. Eclampsia: Treat.

7. What would you do in case of postpartum hemorrhage?

8. Treat case of endometritis.

9. Treat case of vaginismus.

10. Treat case of fibroma of the uterus.

DR. A. R. WARDEN,

Examiner.

Special Practice.

1. Name the important physical signs of incipient pulmonary tuberculosis.

2. Make a physical examination of heart and blood vessels.

3. Diagnose and treat hypertrophic rhinitis.

4. Describe mouth breathing. Give cause and treatment.

5. Diagnose and treat ulcer of the cornea.

6. What is "choked disk?" Most important cause and treatment.

7. Describe technic of laryngeal intubation.

8. Diagnose and treat foreign bodies in larynx.

9. Diagnose and treat paralysis of the seventh cranial nerve.

10. What symptoms follow a hemorrhage into the internal capsule?

DR. C. W. HALTERMAN,

Examiner.

Anatomy and Embryology.

1. Name the characteristics of mucous and serous membrane.

2. Describe Scarpa's triangle, giving contents and relations.

3. Locate thoracic duct, and indicate what portions of the body are drained by it?

4. Give arterial supply of the rectum, naming the branches from which they arise.

5. Give brief outline of arrangement and plan of distribution of the sympathetic system.

6. Give superficial and deep origin, course and distribution of facial nerve.

7. Name, describe and make diagram of the bony pelvis, mentioning the peculiarity of the female.

8. How is the true chorion formed?

9. What changes occur in the vascular system at birth?

10. Describe Poupart's ligament, and mention its surgical significance in the radical cure of inguinal hernia.

DR. R. E. VICKERS,

Examiner.

Chemistry and Medical Jurisprudence.

1. Define chemical incompatibility in medicine. Give example.

2. How is Hg. Cl. formed? What is the danger of giving acid with it?

3. How is quantitative analysis of diabetic urine made?

4. What is the quickest and most fatal poison, and is there an antidote?

5. In burning sulphur what is given off? How much should be used in a room 10x10 feet?

6. How would you determine organic matter in water?

7. What are ptomains?

8. Malpractice: Define it. What does plain-

tiff have to prove to recover damages?

9. Blood stains: How determine whether human or not?

10. What are the legal requirements in West Virginia to practice medicine?

DR. J. E. ROBINS,

Examiner.

Physiology and Histology.

1. What is the mode of production of heat in the body?

2. What do you understand by blood pressure?

3. Define the terms metabolism, anabolism and catabolism.

4. How the amount of urine be physiologically increased or diminished?

5. Describe physiology of hearing.

6. Describe the functions of the kidneys and name the products excreted.

7. Describe the normal heart sounds and explain cause of same.

8. How many different kinds of blood corpuscles in the human body, and what are their relative numbers in health?

9. How are cells produced?

10. Describe the structure of bone.

DR. H. M. RYMER,

Examiner.

Practice of Medicine and Pediatrics.

1. Give symptoms and treatment of chlorosis, simple anemia and pernicious anemia.

2. Give symptoms and treatment of syphilis. When would you begin the administration of drugs?

3. Give cause, symptoms and treatment of neurasthenia.

4. Give symptoms and treatment of neuritis.

5. Give cause, symptoms and treatment of pericarditis.

6. Differentiate, epilepsy from hysteria, and treat each.

7. Give symptoms and treatment of lobar pneumonia, differentiate from bronchial pneumonia.

8. Give your treatment of asthma.

9. State in detail how you would modify cow's milk.

10. Give cause symptoms and treatment of membranous laryngitis.

DR. M. V. GODBEY,

Examiner.

Bacteriology and Hygiene.

1. What do you understand by pathogenic germs?

2. Give two methods of making bacteriological diagnosis for diphtheria.

3. Define a toxin and an antitoxin.

4. What organisms may be found in a pleuritic effusion, and the significance of each.

5. Discuss water as a transmitter of disease-producing organisms, giving source of pollution.

6. What are some of the most approved methods for the purification of water for domestic use?

7. Suggest preventive measures during a typhoid epidemic.

8. What are the sources of danger from a sanitary view in the use of public buildings, and how may these dangers be lessened?

9. Give the prophylaxis of small-pox.

10. What can you say for and against the use of tobacco?

DR. L. S. BROCK,
Examiner.

Materia Medica and Therapeutics.

1. For what purposes are diuretics employed?
2. Describe the therapeutic uses of sparteine and state the dose of the sulphate for hypodermic uses.
3. Give the indications for the use of corrosive sublimate internally.
4. What remedies are employed to correct anemic conditions and how are they used?
5. State the precautions which should ordinarily be observed in administering medicines by the hypodermic method.
6. Describe asafoetida and outline the physiologic effects.
7. Outline the general treatment of acute articular rheumatism. Write a prescription containing at least two ingredients for an adult to relieve pain in acute articular rheumatism.
8. Why is atropine combined with morphine when the latter is administered. What is the dose of atropine when combined with morphine?
9. Write a prescription containing a sedative and an expectorant for a bronchial cough in a three year old child.
10. Define a mydriatic. Give three examples, with the dose for the local application in each case.

DR. A. N. FRAME,
Examiner.

TYPHOID FEVER PREVENTION.

The following communication has been recently sent out to a number of physicians in the lower end of the state. Although it was not sent us for publication, it may be well that the whole profession shall consider the subject, and no doubt the committee will appreciate any answers to the questions printed below. These may be sent to Dr. J. R. Hunter at Hansford. We shall be glad to know later what results have been reached.—Editor.

HANSFORD, W. VA.

Dear Doctor:

We write to ask your assistance in getting some data about typhoid fever. Its prevalence in this region is a matter of common knowledge. In one hospital alone more than a hundred cases of typhoid are treated annually, representing a loss in time and money estimated at \$40,000.00, even if the possible death of the patient is ignored.

That this disease is in a large percentage of cases due to preventable causes, notably an infected water supply and the deposit of germs on food by flies, will probably also be conceded, but up to the present time the importance and danger of these causes have not been appreciated by the people of the district.

In view of this situation the undersigned physicians have decided to send this letter to a number of doctors in the Kanawha and New River fields, whom they believe to be in a position to give valuable information and advice on this subject.

If the information obtained in answer seems to justify it, a definite concerted effort to eradicate the causes of the disease will be considered. An answer to the enclosed questions, as well as

any other pertinent information on the subject, will be greatly appreciated, and should be sent at your earliest convenience to Dr. J. R. Hunter, S.A.H., Hansford, W. Va.

QUESTIONS.

It is realized that doctors may interpret some of these questions slightly differently, and that accurate answers cannot always be given.

1. About what proportion of the medical cases that come to you are typhoid? 2. What per cent of the population of your district has had typhoid? 3. What do you estimate is the percentage of deaths? 4. What loss of working time does an average case entail? 5. What do you believe are the chief local causes of typhoid? 6. Who (or what) is primarily responsible for these causes? 7. What do you think could be accomplished by the employment of a young physician, with the necessary tact and patience, to spend a year in the district carrying on a carefully planned educational campaign among all classes? 8. What other or better plan would you suggest? 9. Additional information—

* * *

CAPTAIN CLARK STILL ALIVE.

MORGANTOWN, W. VA.

Editor West Virginia Medical Journal:

Nearly every doctor in West Virginia has heard of Captain John Clark, and a great many know him personally. He has recently found two brothers and a sister. Two he had not seen for forty-five years. He is now living with his sister on an island in the Caribbean sea. She has eight children and several grandchildren. He says in a letter: "I am surrounded by all these nieces and nephews, and am called "uncle" so much that I sometimes have to stop and study who I am, what it all means."

I would suggest that any of his doctor friends who would like to bring joy to one of the most tenacious persons in the world—one whose fortitude and physical endurance probably have never been surpassed—that they should write him in his island home. Any journals and papers would be appreciated by him. He is at Georgetown, Grand Caymen, B.W.I., via Kingston, Jamaica.

Write him. Send him papers.

Respectfully,

C. H. MAXWELL.

* * *

Dr. Frank LeMoyné Hupp was called to Washington, D. C., late in March by the Surgeon-General, to appear before the Army Examining Board for appointment to the Medical Reserve Corps of the Army of the United States. April 18th Dr. Hupp's commission was received, bearing the signature of President Taft and Secretary of War Dickinson, appointing him First Lieutenant. In event of war the office becomes active coincidental with all other reserve officers of the United States Army.

* * *

We regret to announce the death, in Parkersburg, of Dr. T. B. Camden, one of the old and honored men of the profession. For a long time associated with the Asylum at Weston, he became widely known and highly esteemed. We hope to have a fuller notice of the doctor's career in an early issue of the JOURNAL.

The following invitation has been received at the editorial office, and our congratulations and best wishes are extended to Dr. Cannaday, one of West Virginia's most progressive surgeons:

Gen. and Mrs. John Edwin Roller
request the honour of your presence
at the marriage of their daughter
Margaret Stewart

to
Dr. John Egerton Cannaday
on Wednesday the eleventh of May
nineteen hundred and ten
at twelve o'clock noon
Emmanuel Episcopal Church
Harrisonburg, Virginia.

Society Proceedings

AMERICAN PROCTOLOGIC SOCIETY.

Abstract of Proceedings of 11th Annual Session.

(Continued from February issue.)

"A REPORT OF TWO CASES OF ANOMALOUS SIGMOID".

By ARTHUR HEBB, M.D., of Baltimore, Md.

One case was an extremely long sigmoid, reaching from the mammary line to a point midway of the thighs, when withdrawn from the abdomen; the second case was a short sigmoid, with a mesentery three-fourths inch in length, situated above the crest of the ilium, on a line with the lower border of the last rib, coming off from the descending colon. It was only four inches in length. The descending loop, with no mesentery, ran down over the bifurcation of the left iliac artery and ureter; then forward, hugging the left side of the pelvis and down over the anterior and posterior branches of the internal iliac artery where it joined the rectum.

"NEVUS OF THE ANAL REGION WITH REPORT OF A CASE ASSOCIATED WITH INTERNAL HEMORRHOIDS".

By LEWIS H. ADLER, JR., M.D., Philadelphia, Pa.

The author of this paper mentioned the rarity of this condition as an anal affection. The patient whose condition was detailed was a male, aged forty, whose habits were good. From birth he had a noticeable fullness at the anus, which as he grew older occasioned him considerable annoyance when walking and at stool. When twenty years old he had an operation for hemorrhoids performed, which temporarily gave relief. As time went on his hemorrhoidal trouble returned and the external congenital fullness became worse. Bleeding frequently attended efforts to have an evacuation, though the bowels were never what might be called costive.

Examination prior to operation, revealed a mass of thickened skin, of a dull purplish hue, surrounding the anus, about two inches in width and elevated from the surrounding skin about

one-sixteenth of an inch. Scattered over this area were numerous hairs. The anus was quite patulous, and, upon bearing down, a hemorrhoidal mass protruded and the external portion, around the anus, visibly increased.

A diagnosis was made of nevus associated with internal hemorrhoids, and an operation was advised to which the patient readily consented. At this time, he was apparently in fair physical condition and by no means markedly anemic, although his color was far from normal and he lacked what might be termed resistance. His weight at the time was 151 pounds and his usual weight being stated to have been 170 pounds.

An operation was performed, on March 29th, five days after he was first seen by the writer. The patient took the anesthetic very badly; it requiring over a half hour to get him in a condition to be placed upon the operating table. After the removal of the hemorrhoids, which were as large as any the writer had ever seen—the tissue composing them being much thicker and denser than is usually encountered, in ordinary cases—the patient's condition was that of profound collapse. The usual clamp and cautery method was used for the removal of the five hemorrhoidal masses present. After the administration of a hypodermic injection of atropin and strychnine, the patient rallied, and the nevus was then excised. The removal of the latter caused very little loss of blood, so little that its absence was remarked upon by several of those who witnessed the operation, and during its removal numerous veins were noticeable upon the under side of the growth, which stood out in their distended condition and showed a characteristic bluish color.

By the time this step was completed, the patient's condition was bad again—the pulse weak, and the skin moist. The usual dressings were applied; no attempt being made to unite the edges of the wound and the patient was removed to his room, where a hypodermoclysis was promptly given to which was added four ounces of whiskey. His condition gradually improved, but within five hours he was dead. The manner in which he died led to the inference that death was due to a cardiac embolism.

The pathological findings of the specimens removed as made by the pathologist of the hospital, Dr. James A. Kelly, showed that the growth was that of a simple nevus.

"APPENDICOSTOMY AS AN AID TO THE TREATMENT OF MALIGNANT AND INTRACTABLE DYSENTERY".

By JOHN L. JELKS, M.D., Memphis, Tenn.

In reference to this subject, the author stated that when amebic infection had become very chronic or had extended into all the parts of the colon beyond the use of local measures, and, in some instances, of acute malignant cases, appendicostomy should be performed and irrigation practiced through the appendiceal stump. The water is allowed to pass out through the rectum into a catch-basin and is not an unpleasant method of treatment. Dr. Jelks prefers the method suggested by Dr. James P. Tuttle, of New York City, who conceived the plan of allowing the appendix to remain undisturbed after

anchorage, for a sufficient time (three or four days), to establish adhesions about the proximal end, before cutting away the distal portion and using the appendical stump-lumen through which to irrigate with the desired solutions.

Dr. Jelks practiced this method and irrigated the colon with formalin-boric, copper-phenol-sulphonate, quinine and normal salt solutions with gratifying results. It was observed, however, that irrigations thus given did not effect a cure. Topical applications (per sigmoidoscope or rectoscope) were in all cases used in conjunction.

The method as used by Weir, and as advised by Tuttle, is practically free from danger, and the author believes is not more hazardous than appendicostomy and the after-effects are not at all unpleasant to the patient in the ways and degrees that a colostomy must be. He sees no great danger of hernia or wound infection if proper precautions are taken in dressing the same. By this method one may practice almost continuous irrigation of an inflamed colon and rectum with no special degree of pain or discomfort to the patient—the appendix being used as a nozzle, directing the solution into the colon.

He does not advise appendicostomy except in a small percentage of cases, mostly chronic ones, but in these, he insists that it is a most valuable aid to treatment and that the operation itself is practically free from danger, as is appendectomy when the appendix is not the seat of infection.

The author concludes his article by stating that in all cases requiring appendicostomy we should not permit the stump to close before the expiration of one year. He has been forced to reopen an appendical stump three months after closure and resume irrigations. This was accomplished in his office, but it may become a difficult matter to find the lumen of a closed appendix.

"PRIMARY GONORRHEA OF THE RECTUM IN THE MALE".

By ALFRED J. ZOBEL, M.D., San Francisco, Cal.

The writer stated that a review of the literature for the past five years showed very little to have been written on the subject of rectal gonorrhoea, and the cases reported have been rectal gonorrhoea in the female and for the most part secondary to an infection of the genital tract.

It was also stated that gonorrhoea of the rectum in the male is almost always the result of sodomistic practices, and when so, can be considered of the primary type. The condition has been rather rare in this country, but since the influx of foreigners from those countries where unnatural practices are common, more cases are now seen.

The cases reported by the writer were seen in the rectal clinic at the San Francisco Polyclinic and were in American born boys of 16, 18 and 20 years of age, respectively. They belonged to the tramp class and were of a rather low order of intelligence. They were ignorant of their true condition and came to the Clinic with a self-made diagnosis of "piles". When made aware of the true nature of their trouble it had a markedly depressing effect upon them, which in one case, after a few weeks, developed into a condition resembling the neurasthenia which

often accompanies a chronic posterior urethritis.

The symptoms complained of, briefly summarized, were: all complained of such soreness about anus and rectum that they did not care to stand; while walking was an effort and caused great pain. At the time of bowel movement they suffered such excruciating pain that they hesitated to pass their feces, and had become quite constipated. Two were annoyed by discharge from the anus, while one was unaware of its presence, although it was found on examination. In one, the discharge was streaked with blood, and bleeding was noticed at the time of defecation. One complained of an itching sensation about an inch up from the anal aperture, and had severe pain on the drawing in of the anal sphincters. Their appearance was febrish, worried and haggard, and they felt weak, ill and distressed.

It was impossible to make a digital or instrumental examination at the first visit on account of the severely acute pain caused thereby. Therefore, whenever there is the least suspicion of the possibility of a specific inflammation of the anus and rectum, the case should be treated as if it actually exists, and the ultimate diagnosis left to the future. When the acute symptoms have subsided under treatment, there can be seen excoriations and fissures about the anal orifice and in the canal, with marked redness and infiltration of the mucous membrane of the anus and rectum, together with the presence of a purulent secretion. Examination of this secretion shows the presence of the gonococcus.

The author believes that gonorrhoea of the rectum in the male is a much more common condition than is suspected by the general profession. Many of the latter even do not know that such a condition could exist.

The treatment is directed towards keeping the parts clean; relieving the severe rectal symptoms; reducing the inflammatory exudates; keeping the fecal movement soft; healing the ulcerations and destroying the infective agent.

The author further brings out the important point, which he deems worthy of consideration, that there seems to be no reason why complications, such as gonorrhoeal arthritis or an endocarditis could not arise. But so far as he is aware no cases endocarditis or arthritis resulting from gonorrhoea have been reported, yet it would be well for the internist to bear in mind that an examination of the rectum might furnish the clue in a baffling case, where the etiological factor is missing.

OPERATION FOR ANAL PRURITUS.

THOS. CHAS. MARTIN, M.D., of Washington, D. C.

The use of a solution of cocain and adrenalin secures local anesthesia and a dry visible field. Radiating incisions do not endanger the nutrition of the parts. Corrugation of the flaps may be effaced by traction of their margins. A skin-tag may be removed within an elliptic incision, which by suture may be given a linear form. Radiating wounds require no suture, coaptate automatically when the patient is in extension, and heal by first intention.

BRAXTON COUNTY SOCIETY.

BURNSVILLE, W. VA., April 27, 1910.

Editor West Virginia Medical Journal:

The next meeting of the Braxton County Medical Society will meet in the office of the Rumsell Brothers in Gassaway on the evening of May 10. A full turnout of the membership is most earnestly requested. The following is the programme:

- "Effects of rheumatism on the heart".....
 Dr. L. L. McKinney
 "What the attitude of the profession should be toward the prescribing druggist"....
 Dr. J. A. Rumsisel
 "The medical almanac in rural districts"....
 Dr. H. M. Bourn
 "Remedies to be carried by the country doctor".....Dr. Norman Goad
 Dr. Goad is the youngest member of our society, but one of the best equipped.

Dr. Bourn is the humorist of the society, and we shall no doubt have something rich and racy from him.

J. W. KILD, *Secretary*.

BARBOUR-RANDOLPH-TUCKER SOCIETY.

Our April meeting was held at the Court House in Elkins April 5th, afternoon and evening. Twenty-five physicians were present and much time was taken in discussing as to who should and who should not practice medicine in our state.

Resolutions were passed in regard to employing an attorney whose business it shall be to prosecute illegal practitioners, and to ask the State Association to consider taking the same action.

Resolution was passed endorsing our belief in the use of antitoxin as a preventive and cure of diphtheria, and same to be published in our local papers. This latter resolution was ordered published because many lay people believe that antitoxin kills more than it cures.

Dr. H. W. Daniels and Dr. W. U. Carwell were elected delegates to the State Association.

Dr. W. J. Judy read a paper on Diphtheria and Dr. S. G. Moore conducted a Round Table on the same. These gentlemen very ably handled the subject and brought out a general discussion from all present.

Dr. T. M. Wilson read an open letter, which showed that even a doctor can be a humorist.

Hon. A. M. Cunningham honored the society by reading a paper on "The Law in Relation to the Physician." This was the principal feature of the night session, and the members were individually benefited by Mr. Cunningham's paper.

Our next meeting will be at the society's summer resort in Davis, W. Va.

T. JUD. McBEE, *Secretary*.

THE CABELL COUNTY SOCIETY.

Officers—President, Dr. J. E. Rader; Vice-President, Dr. W. D. Row; Treasurer, Dr. I. R. LeSage; Secretary, Dr. Jas. R. Bloss.

Censors—One year, Dr. I. C. Hicks; two years, Dr. K. C. Prichard; three years, Dr. G. W. Tooley.

ANNUAL PROGRAM FOR 1910.

- February 10, 1910.—Carcinoma of Stomach with Metastasis in Liver. (Specimen). Dr. Bloss.
 March 10, 1910.—Appendicitis. Dr. Lesage. Discussion opened by Dr. Hogg.
 April 6, 1910.—Displacement of Uterus. Dr. W. S. Cardner (Baltimore). Discussion opened by Dr. Rader.
 May 12, 1910.—Ocular and Aural Vertigo. Dr. T. W. Moore. Discussion opened by Dr. Hawes.
 June —, 1910.—Gall-tract Surgery. Dr. Jos. Ransohoff (Cincinnati). Discussion opened by Dr. Enslow.
 July 14, 1910.—Summer Diarrhoea in Infants. Dr. Prichard. Discussion opened by Dr. Vinson.
 August 11, 1910.—Complications of Labor. Dr. Fitch. Discussion opened by Dr. Buffington.
 September 8, 1910.—To be filled.
 October 13, 1910.—Uremia. Dr. Campbell. Discussion opened by Dr. Swann.
 November 10, 1910.—Pelvic Cellulitis. Dr. Cummings. Discussion opened by Dr. Brandebury.
 December 8, 1910.—Neurasthenia. Dr. F. W. Langdon (Cincinnati). Discussion opened by Dr. Bloss.
 January 12, 1911.—Pneumonia. Dr. Taylor. Discussion opened by Dr. McGuire.

Reviews

SURGERY: ITS PRINCIPLES AND PRACTICE.—In five volumes. By 66 eminent surgeons. Edited by W. W. KEEN, M.D., LL.D., Hon. F.R.C.S., Eng. and Edin., Emeritus Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Phila. Vol. V: Octavo of 1274 pages, with 550 illustrations, 45 in colors. Philadelphia and London: W. B. Saunders Company, 1909. Per volume: Cloth, \$7.00 net; Half Morocco, \$8.00 net.

The fifth and concluding volume of this encyclopedic work has made its appearance. We feel that the distinguished editor, the learned and faithful corps of collaborators and the enterprising publishers are to be congratulated on the completion of their ambitious undertaking. In these days, when collaborated works issue from the press with such frequency, it becomes more and more difficult for each succeeding one to establish a sufficient reason for its existence. In the present instance this difficulty has been signally overcome, and at the same time this particular field has been so thoroughly exploited, that it will be a long time before the medical and surgical world will feel the need of another such thorough going over. The first chapter by Matas on the *Surgery of the Vascular System*, occupies 350 pages, or about one-fourth of the volume, and contains 103 of the 550 illustrations. The thoroughness with which the subject is treated is commensurate with its importance. Then follow chapters on *Surgery of the Female Genito-Urinary Organs* by Montgomery, Fisher and Bland; *Sur-*

gical Technic by Gibbon; *Ligation of Arteries in Continuity* by Bickham (properly should have been included in Chapter I); *Operations on Bones and Joints* by Warbasse; *Amputations* by Bickham; *Plastic or Reconstructive Surgery* by Roberts; *Surgery of Accidents* by Estes; *Surgery of the Parathyroid Bodies* by Chas. H. Mayo; *Intracranial Surgery of 5th and 8th Nerves* by Frazier; *General Anesthesia and Anesthetics* by Hare; *Local and Subarachnoid Anesthesia* by Lennander and Zachrisson; *Surgery of Infectious Diseases* by Armstrong; *Use of the X-Ray and Radium in Surgery* by Cadman; *Legal Relations of the Surgeon* by H. L. Carson, Esq.; *The Laboratory as an Aid to Surgical Technic and Diagnosis* by Coplin; *Surgical Organization of a Hospital* by Ochsner. Each of these subjects is treated by an expert in that particular field, and it may safely be taken for granted that nothing of importance has been overlooked or omitted. The work as a whole has all the merits and some of the defects that belong to undertakings of this kind. We are not exactly in love with the "Corps of Collaborators" idea. It smacks too much of the hurry of commercial enterprises. And the work of these collaborators, each acting independently of the others, when thrown together lacks evenness and continuity, and there is apt to be much repetition and overlapping which no amount of care on the part of an editor can straighten out. Furthermore, the personality of the editor shrinks to that of a mere figure-head, and instead of the work representing the fruitage of his acquired knowledge and experience, it is merely a compilation by others, to which he lends the prestige of his name. But, doubtless, owing to the wide boundaries of modern medicine and surgery, the day of the individual treatise is past, and we shall have to accept the work of the collaborator as, on the whole, notwithstanding the indicated blemishes and defects, the best that we can hope for. In the present instance these have been reduced to a minimum, and we can with confidence commend the work to our readers as perhaps the best exposition of the science and art of surgery that is now extant. It is greatly to be regretted that there is no general index to the entire series. The absence of one seriously impairs its usefulness as a work of reference.—L. D. W.

DISEASES OF THE STOMACH AND INTESTINES.—By ROBERT COLEMAN KEMP, M.D., Professor of Gastro-Intestinal Diseases, New York School of Clinical Medicine. Octavo of 766 pages, with 279 illustrations. Philadelphia and London: W. B. Saunders Company, 1910. Cloth, \$6.00 net; Half Morocco, \$7.50 net.

A few typographical errors—apt to occur in first editions—are detected. Fig. 1 would be more conveniently referred to were it changed so that the left margin would be the top.

In the preface the author states it to be his endeavor to "select simple and practical methods"; in the opinion of the reviewer he has succeeded admirably.

The chapters dealing with general methods of examination are good, the procedures being de-

scribed with particular care as to simplicity and practicability. One point particularly commendable in the treatment of the various diseases is the plain and practical way that the author has explained how to treat separate conditions and symptoms. The chapters dealing with Ulcer and Carcinoma of the Stomach, Gastroptosis, Appendicitis and Diverticulitis are particularly valuable ones.

In the opinion of the reviewer the author too frequently recommends the use of various meat extracts and proprietary food preparations as being of value in supplying nutrition; nor is he judicious in his recommendation of certain widely advertised proprietary remedies, that have been shown not to be superior to the U. S. P. preparations, in many cases inferior.

Taken as a whole, however, the work is clear and practical—a very valuable book for the general practitioner.—J. R. E.

MODERN SURGERY: GENERAL AND OPERATIVE.—By J. CHALMERS DACOSTA, M.D., Professor of Surgery and of Clinical Surgery in the Jefferson Medical College, Philadelphia. Sixth Edition, Greatly Enlarged. Octavo of 1502 pages, with 966 illustrations, some in colors. Philadelphia and London: W. B. Saunders Company, 1910. Cloth, \$5.50 net; Half Morocco, \$7.00 net.

It is less than three years since this Journal gave a most favorable review of this most excellent work. This sixth edition has received thorough revision, as is observed by alterations on almost every page. Much new material has been introduced, bringing the work thoroughly up to date. The reader can here find every good new thing in surgery, and is thus saved the labor of searching the Journals. For example, Murphy's method of treating acute peritonitis, Horsley's operation for chronic spinal meningitis, Crile's arterio-venous anastomosis for effecting transfusion, Cushing's operation of decompression in brain tumors, the Lorenz treatment of hip disease by weight-bearing and fixation, Wright's views on inflammation, the Bier treatment of inflammation, Wassermann's reaction for syphilis, are a few of the late things introduced in this edition.

Dr. DaCosta wields a most graceful pen, and his book is one that can be most heartily commended. We know of no more satisfactory one-volume work on surgery.

INTERNATIONAL CLINICS.—Vol. I. Twentieth Series. J. B. Lippincott Company. \$2.00. Edited by Dr. Henry W. Cattell, Phila., assisted by Osler, Musser, Billings, Clark, Ballantyne and others. Some of the widely known contributors to this new volume of this widely known series are Emil Beck on Bismuth Paste, B. Sachs on the Newer Diagnostic Methods of Syphilis of the Nervous System, Halstead on Tuberculosis of the Thyroid Glands, Laphorn Smith on Progress of Gynecology and Abdominal Surgery, Tom A. Williams on Treatment of Tabes Dorsalis Progress of Medicine in 1909 is treated by Dr. A. A. Stevens; "Treatment," John H. Mus-

ser, "Medicine," and Jos. C. Bloodgood, "Surgery." These summaries make this volume an exceptionally valuable one.

THE CONQUEST OF DISEASE THROUGH ANIMAL EXPERIMENTATION.—By J. P. WARBASSE, M.D., Surgeon to the German Hospital, Brooklyn; Member of Am. Assn. for the Advancement of Science, etc. D. Appleton & Co., No. Y. \$1.00.

A duodecimo of 180 pages, this book is filled with information touching the benefits that have resulted from animal experimentation, a subject upon which every physician should be thoroughly informed. The author is a close student and graceful writer, and his book can be read with great interest and profit. It is an excellent antidote to much of the stuff put forth by the antivivisection crusaders, who manifest greater interest in dogs, cats and rabbits than in the welfare of the human race.

POCKET THERAPEUTICS AND DOSE-BOOK.—By MORSE STEWART, Jr., B.A., M.D. Fourth Edition, rewritten. Small 32 mo. of 263 pages. Philadelphia and London: W. B. Saunders Company, 1910. Cloth, \$1.00 net.

This is an excellent little pocket manual. Every physician, no matter how much experience or learning he may have, will have use for just such a book. The experienced physician will keep it on his table for ready reference occasionally, and the beginner will find it convenient to carry in his pocket, especially in the country.

The dose table is very complete and accurate. The doses are given in grains, grams and cubic centimeters, so that one may familiarize himself with the metric system. Doses of the different sera are given and of all the different officinal preparations. There is a complete table of solubility, and a table of poisons and antidotes. Also condensed therapeutics in the form of an index of diseases and remedies.—G. D. L.

PAMPHLETS RECEIVED.

36th Annual Report of the Cincinnati Sanitarium.

This report shows this old and well established institution to be in a prosperous condition under the able management of Dr. Langdon and his assistants. Number of patients present during the year was 267. Discharged recovered 67, improved 75, unimproved 32, deaths 9. Daily average of patients under treatment 90. Patients were received from no fewer than thirty states, and from Canada, Egypt, Germany, Mexico and Spain.

The Rat and Its Relation to the Public Health.—

This is a pamphlet of 250 pages prepared by the Surgeon-General of the U. S. Public Health and M. H. S. Natural History of the Rat, Plague Infection in Rats, Rat Leprosy, Organic Diseases of the Rat, the Flea in Relation to Plague, Rodents in Relation to Transmission of Plague, Rodent Extermination are a few of the subjects

discussed by various writers in this highly instructive document.

Proceedings of the National Confederation of State Examining and Licensing Boards.—(9th Annual Convention, June, 1909). While the work of this organization is said to be but to counsel and advise, yet the results of its discussions are certain to be beneficent. The next meeting will be held in St. Louis, at the Southern Hotel at 10 a. m. June 6th.

Congenital Word-Blindness as a Cause of Backwardness in School Children.—By E. B. McCREADY, M.D., Pittsburg.

Diseases of the Female Breast.—By ALEXIUS MCGLANNAN, M.D., of Baltimore.

Small-pox in the United States.—By JOHN W. TRASK, M.D.

Incised Wounds of the Liver.—By ALEXIUS MCGLANNAN, M.D.

So-Called Reflex Neurotic Symptoms and the Psychic Factor.—By DR. TOM A. WILLIAMS, Washington, D. C.

The Treatment of Gonorrhoeal Epididymitis.—By JULIUS J. VALENTINE, M.D., New York.

Chronic Headache—Neurological Advances Regarding Its Diagnosis and Treatment.—By TOM A. WILLIAMS, M.D., Washington, D. C.

Medical Outlook

THE CUTANEOUS AND CONJUNCTIVAL TUBERCULIN TESTS IN THE DIAGNOSIS OF PULMONARY TUBERCULOSIS.—As the result of a careful consideration of this important subject in the *Archives of Internal Medicine* of May 15, 1909, Hamman and Wolman conclude as follows:

1. In adults the cutaneous tuberculin test is of value in diagnosis only when it is negative.
2. The frequency of its occurrence runs roughly parallel with that of the subcutaneous test.
3. The conjunctival test is of value principally on the positive side, a definite reaction indicating the presence of an active tuberculous lesion.
4. The most satisfactory results are obtained by using the two tests simultaneously. Both being negative speaks for the absence of any active tuberculous focus; both being positive, for its presence; the conjunctival negative and cutaneous positive is no information of value.
5. It cannot be admitted that the conjunctival or cutaneous reactions have any prognostic value.
6. The same conjunctiva should never receive a second instillation. The reaction so obtained is valueless for diagnosis and the procedure not without danger.
7. The authors believe that with proper precaution the conjunctival test may be used without danger of permanent injury to the eye.

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Original Articles

AMEBIC DYSENTERY; ITS PREVALENCE, ETIOLOGY AND TREATMENT.

James A. Nydegger, M. D.,

United States Public Health and Marine
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As practitioners of medicine we are at this late date only beginning to fully realize, that in order for a person to contract "tropical dysentery," the former popular name for amebic dysentery, a residence or sojourn in the tropics, or even near the tropics, is unnecessary. In making this statement I am aware that a goodly number may still hold views to the contrary. It is true that amebic dysentery is relatively much more frequently met with in the tropics, as we know and as statistics show, nevertheless it is also the common variety of dysentery prevailing throughout the United States. Doubtless this statement will also apply equally as well to all other countries of corresponding latitudinal boundaries. I quote from one of the most distinguished members of the profession, Dr. Osler, who, in his *Practice of Medicine*, submits a most striking proof of the frequency with which amebic dysentery occurs in the United States. He states, the reports of the Johns Hopkins Hospital from the year 1889 to 1898, a period of nine years, show that during that time there were treated in the hospital 182 cases of amebic dysen-

tery, the vast majority of which cases came from one state alone, Maryland. These reports further show that the cases of acute and chronic dysentery admitted have been almost exclusively of the amebic type. It is a rule at this hospital, I believe, to make a thorough microscopic examination of the stools of all cases coming with the symptoms or history of diarrhoeal or dysenteric disturbances. It is probable that a close analysis of hospital admissions in other cities in the United States, with the enforcement of the above rule, would result in showing in a corresponding manner that an equally large number of cases of amebic dysentery were admitted for treatment.

It is of more than passing interest to state in this connection that the first reported study of amebic dysentery in the United States, as far as has been ascertained, was the work done by Osler and his associates, Councilman and Lafleur, at the Johns Hopkins Hospital in 1890, and subsequently. In a short time following their publications there appeared the observations of others in this country and elsewhere concerning this type of the disease. In 1859 a European observer discovered the ameba and pointed out the so-called relation of this organism to dysentery. There is at present a large amount of literature on this subject, which has accumulated mainly in the last decade, or since the date of the Spanish-American war.

The outbreak of the Spanish-American war and the occupation of Cuba, Porto Rico and the Philippine Islands by our troops, and the subsequent return of the troops

from these places to the states, many of them invalided with this disease, gave to the officers of the several medical corps of the government and the general practitioners of the United States an unusual opportunity for study and observation, and greatly stimulated interest in this widely prevalent disease.

As has been stated, not a great length of time has elapsed since we almost universally believed that this type of dysentery belonged solely to the tropical countries, and if encountered elsewhere it was held to have been contracted in those countries, or possibly from some article coming from there. Now we know that many cases of this type of dysentery have been reported from the various northern sections of the United States and from other northern countries, and as having originated in persons who have never been away from their immediate sections. A recent writer in one of our medical journals reports cases of amebic dysentery as having originated in an isolated district in a high mountainous section of Tennessee. Another writer reports a case as having originated in Nova Scotia, the person in whom it occurred never having been outside of that country. Stefanski, a Russian observer, reports cases of this type of dysentery as originating in Russia. Fitcher (Baltimore) reports having treated in that city cases of amebic dysentery coming from some seven or more states in the union. The writer saw a case of dysentery of the amebic type in a high and isolated mountainous section of West Virginia. This was during the dry season, when the water in the streams was low, which would in a way lend support to the theory of the source of the infection as being connected with the water.

Dr. Long, of the Public Health and Marine Hospital Service, in a recent report concerning amebic dysentery in San Francisco, summarizes the results of the investigation of 48 cases, in all of which motile ameba had been demonstrated in the stools. All of these patients had been closely questioned as to their movements, habits and modes of life, in order to determine if possible where the infection was obtained. As a result it was found that while 33 gave a history of having contracted their infection in the tropics, 15 had un-

doubtedly contracted the disease on the Pacific coast of the United States, and six of these cases were undoubtedly contracted in San Francisco or vicinity, having resided in the city previously for periods ranging from three and a half to seven years before admission to hospital. And thus one might continue to enumerate almost indefinitely instances of occurrences of cases of this type of the disease similar to the foregoing and in parts remote from the tropics. All of these reported instances go to show that amebic dysentery is by no means a type of dysentery confined to the tropics. Our southern states are full of it. Especially is this the case in the great basin of the Mississippi river and its tributaries. This type of the disease is also prevalent in the northern, western and eastern portions of the United States to a greater extent than many of us know or would perhaps believe.

There can now be no doubt that amebic dysentery can be contracted outside of the tropics. Just how infection occurs is not thoroughly understood. The water we drink and uncooked articles of food, such as lettuce, cresses and the like, are held chiefly to convey the organism. A theory has been advanced that the cases of infection occurring away from the tropics resulted from eating uncooked tropical fruit on which the ameba had been imported. While this theory may in some few instances appear to satisfactorily explain the source of the infection, there are many instances on record to which it could not possibly apply. We know there are so-called resistant forms of the amebae, somewhat analogous to the gamete forms of the malarial parasite, and these forms have been described by several observers. These "encysted amebae" are believed to be necessary, under certain conditions, for the transmission of the disease from one person to another. Thus these "encysted or quiescent forms," contained in the dejecta of one suffering from amebic dysentery, reach the water, and in this form reach the intestine, where they develop into active amebae. These "encysted forms" are regarded by some as the most dangerous form of the organism. It is possible that this particular form of the organism which has been shown to withstand drying from eleven to fifteen months, may be imported from the tropics on fruit. The fruit chiefly imported

from the tropics is the banana. While it is admitted that the banana in a ripe or partial state of decay may prove to be a good culture medium for the amebae, at the time when loaded on vessels at the ports of shipment all bananas are quite green. Oranges and lemons and the other few fruits which are imported from the tropics in a limited quantity are by their nature not well adapted to the sustaining of the organism during the period of importation. The assertion may then be made, it seems, that no one so far has established any scientific fact in support of the theory of the importation of the amebae on tropical fruit, and until such has been done it must remain only a very remote supposition.

From the foregoing remarks one may be permitted to arrive at the conclusion that amebic dysentery is a very widely prevalent disease, and while it is more prevalent in the tropical countries, it is also a most common disease in the temperate zones, and that the infection, while it may be imported in a few instances on fruits, is believed to be carried chiefly in the water, most probably in the encysted form, and in it is received into the system.

Much has been added in recent years to our knowledge of the etiology of amebic dysentery through the researches of Musgrove, Clegg and Strong in the Philippines; and Grassi, Colandraccio and Quinck and others in Europe. Cassagrandi and Barbagallo, pupils of Grassi, first described the development of the ameba coli. Schaudinn subsequently confirmed their observations as regards the development of the ameba coli, but did not stop here. He described the development of an ameba, a so-called separate and distinct ameba, to which he gave the name of *ameba hystolitica* (ameba dysenterica), and claims this organism is the cause of all true amebic dysentery. He maintains that this ameba is characterized by difference in size, in that it is larger than the amebae coli, difference in appearance, in form and particularly in development from the ameba coli. Ameba in man vary in size, being from fifteen to twenty microns in diameter, or from a small to larger than a large white corpuscle, and are made up of a clear outer zone, or ectosarc, and contain a nucleus and one or two vacuoles. The movement con-

sists of from slight slow protrusions of the protoplasm, to almost complete change of form, when active. The general form is round or ovoid, and with the movements noted make their appearance characteristic, and when once recognized can not be mistaken for any other organism. But Schaudinn's observations as to the development of the ameba were confined to the study of the ameba that are found in the intestine of mice. And since the amebae of man and of the mouse possess a similarity of characteristics, by reasoning on their analogy, he arrived at the conclusion that the cycle of development of the ameba in man is the same as the developmental process of the ameba in the mouse. He also states the harmless amebae, (amebae coli) do not attempt to penetrate into healthy epithelium, while the dysenteric amebae, with their tough outer coat or ectoplasm, squeeze themselves through and penetrate everywhere. He holds, furthermore, that in the so-called cases of amebic dysentery the vast majority are due to some form or other of bacterial infection, the amebae being present merely by chance, just as they happen to be in healthy intestines. He also holds that a very few of these cases are true amebic dysentery, and that these few cases are brought about by the invasion of the tissue by the ameba hystolitica. This latter process, he states, is easily observed in the freshly infected cut intestine of a cat. Schaudinn's claim to a separate and distinct ameba as being the cause of dysentery has been only partially accepted. His observations in this respect have not as yet been fully confirmed, and until this has been accomplished they can not be fully accepted. In this connection it must be borne in mind that many excellent observers in widely separated sections, and working under ideal conditions, have so far failed to confirm all of Schaudinn's observations relative to his ameba hystolitica.

We know amebae are found in some instances in stools of perfectly healthy persons. Some recently reported observations, however, go to demonstrate that the presence of the amebae in the stools of apparently healthy persons may be regarded as the forerunner of an attack of dysentery. Among 300 persons examined in Manila, Musgrove found 101 infected with

amebae, 61 of these had dysentery, the remaining 40 had no diarrhoea. In the next two months eight of the forty patients died, and showed amebic infection of the bowels. Within the next three months the remaining 32 had dysentery. These are facts which can not well be disregarded. We must look on these findings of Musgrove as very important, and to be always borne in mind should amebae be found in stools of persons apparently healthy. It is certainly not unreasonable to argue that the intestine may in some instances harbor the amebae for months before the clinical symptoms of dysentery may begin to appear. The bacilli diphtheria are found in the throats of healthy persons. The same may be said of the presence of the pneumococci in the sputum of healthy individuals. Only when the margin of resistance of the individual is lowered, through some cause or other, the organism may become effective and pathogenic.

It has been accepted by some that two or more varieties of amebae have been recognized. On the other hand it has been shown that cultures of amebae grown from a single individual show great variation in individual members of these cultures. So far, Schaudinn has not worked out the full cycle of development of his so-called ameba hystolitica, but from the few cases he has been able to study he believes he has found enough distinct characteristics to justify him in maintaining the form observed by him to be a new species, and holds that all real tropical dysentery cases are due to the same species.

It is claimed by some that two or more varieties of amebae have been recognized in man, but it has not been conclusively proven that these amebae are pathogenic to man. Many of the leading investigators, including Musgrove and Clegg of the Philippines, whose studies have been thorough and exhaustive, hold a distinctly opposite view from that of Schaudinn, and claim that all amebae of the intestinal tract are pathogenic and say that, if there are two species, the one pathogenic and the other one not, it is at any rate quite impossible to distinguish between the two. There are no good and sufficient grounds for believing that the ameba hystolitica is found only in cases of dysentery originating in the

tropics, and ameba coli in cases of dysentery originating in the temperate regions.

Some hold that amebae are in no instance an etiological factor as to the cause of dysentery, but are found accidentally associated with it. Others hold that all amebae are non-pathogenic and are normally found in the intestines of healthy persons, and that when the resistance of the person has become lowered or when the amebae gain access through an ulcer or otherwise into the mucous membrane of the bowel they then become pathogenic. It can readily be seen from the foregoing that much confusion and doubt still exists as to the etiology of the so-called amebic dysentery.

The points remaining to be cleared up are: 1, Whether there are one or more forms of amebae found in the intestine of man; 2, if the latter, whether there is a pathogenic and a non-pathogenic form of the organism; 3, if only a non-pathogenic form exists, to ascertain under what conditions the organism may become pathogenic, and if not, 4, whether the organism is found in association with dysentery as a mere matter of chance. A thorough and comprehensive study of the cycle of development of the so-called various forms of the amebae should lead to the establishment of these much desired proofs.

That the presence of the amebae in the stools may be one of simple association or accidental is emphasized in the following observation: Amebae are reported as having been found in the stools of those suffering with pellagra. An observer in North Carolina recently reports as having found amebae present in the stools of over seventy-five per cent of a large number of pellagrins examined by him. He further states that the symptoms of pellagra and amebiasis are at times so much alike that it is often very difficult to tell which disease one is dealing with. The mucous membrane of the alimentary canal suffers from catarrhal and other changes in pellagra, and it is quite probable that the amebiasis noted as being present in the greater number of cases of this disease observed is merely one of association, due to the altered condition of the mucous membrane, which makes the lumen of the bowel a more desirable habitat for the amebae than would be the normal intestine.

This type of dysentery occurs in the mild, acute and chronic form. In the mild form there may be vague symptoms; lassitude, weakness, slight abdominal pains and occasional diarrhea. Infection may be present a month or two before the individual is aware of it. This form is quite common in the tropics. Many cases of the acute form have a sudden onset. There may be a chill. There is severe pain and tenesmus. Stools are frequent (ranging from ten to thirty-five or forty in the twenty-four hours), soon becoming bloody, or mucus and blood occur together. Temperature is present, but usually not high. In very severe cases there may be a passage every few minutes of blood and mucus. The patient may become rapidly emaciated, and the heart action grow feeble, and may die within a few days of the onset. While many of these cases recover under appropriate treatment, the majority drag on and become chronic. In the chronic form the disease may be mild or sub-acute from the onset and gradually pass into a chronic stage, which is specially characterized by alternating periods of constipation and diarrhea. In these diarrheal attacks there may be all the symptoms of a beginning acute attack: pain, tenesmus, fever, malaise and passage of blood and mucus in the stools. These attacks of diarrhea may recur every few months for a period of several years. I have personally treated a case of this description lasting over four years. There are usually digestive disturbances, which may be marked. There is anaemia and the nutrition is lowered, and the patient becomes sallow and sometimes markedly emaciated; although in temperate regions this feature is not so pronounced as is seen in the chronic cases in the tropics or in those coming from there. Liver abscess occurs in a portion of these chronic and mild cases, due to the passage of the amebae to the liver, and there setting up inflammation. The changes in the colon are ulceration, thickening and induration, as a result of the action of the amebae. In chronic cases of some duration the colon can readily be rolled under the fingers like a piece of rubber hose or tubing. With the proctoscope ulcers are visible everywhere in the rectum and sigmoid flexure, and show as small, yellowish elevated spots with a

reddish surrounding area. These ulcers, which show as mere points on the surface, are often shown to extend for an inch or more under the overlying mucous membrane, and hence the difficulty of ridding the intestine of the amebae, which are so securely protected in these little tracts.

The finding of motile amebae in the stools of one so suffering makes the diagnosis positive of the so-called amebic dysentery. I have found the best method of obtaining a proper specimen of the stool for microscopic examination, is to administer a saline purge to the patient, and have the second or third stool, which is thin and watery, passed into a warm vessel; usually a basin sitting in another basin containing warm water, and with a wire loop fish up a fragment of blood-stained mucus. In cold weather it is necessary to use warmed slides and a warmed stage, so as not to destroy the motility of the amebae. Amebae are very sensitive to cold. The motility is lost at 70 degrees Fahrenheit, and is not regained if left in that temperature a short period of time. A positive diagnosis can not be made unless the motile organism is detected. Non-motile amebae too strongly resemble squamous epithelia, etc., for a diagnosis to be made with certainty. Once recognized in the motile state the organism can not be mistaken. Right here I wish to say a few words with regard to mistakes that are frequently made by those using the microscope, but who are not thoroughly familiar with the appearances of the amebae. I have had a number of cases referred to me with the statement that the amebae had been found, which on examination showed no amebae, but some form of the flagellates to be present; either the trichomonis intestinalis, trichomonis hominis, or lamblia intestinalis, which are actively moving parasites normally having their habitat in the intestine, and possess no pathogenic significance.

The treatment of amebic dysentery may be summed up under three heads: Rest, diet and medication, etc., and will vary somewhat, depending on whether in the acute or chronic stage. The majority of the cases of so-called amebic dysentery begin in the acute form, while a certain number occur in the mild and sub-acute forms from the onset, and merge into the chronic form.

When does acute dysentery become chronic, is a question that is sometimes asked. Dysentery which does not recover and fails to respond promptly to treatment will soon reach the chronic stage, and the time is not a matter of months, but rather of days and weeks. Rest in bed in the acute stage is one of the first essentials. The use of light flannels next to the skin, even in the tropics, is important. The intestine should be given physiological rest as far as possible. In the acute form the use of solid foods is interdicted. Liquids, principally in the form of milk, boiled, pure or diluted, are best borne. Broths, albumin water and strained soups and the like may be given. For the pain and tenesmus it may be necessary to administer morphine hypodermatically, or better still, in the form of a suppository inserted in the rectum. After a few days, when the pain and tenesmus have somewhat subsided, local treatment of the involved intestine may be commenced. At first large, low rectal injections of warm saline solution may be resorted to with much benefit and comfort to the patient. Later quinine solution in strength of from 1 to 5000 to 1 to 1000 and at a temperature gradually reduced to 55 or 60 degrees Fahrenheit, should be given once or twice daily in amounts of from one to one and a half quarts. The patient should lie on the back and the solution be allowed to flow in gently from a bag, at a height of from 15 to 20 inches above the body. Quinine is claimed to have a destructive action on the amebae, and the low temperature of the water also destroys them. Every third or fourth day a saline, such as Rochelle salts or magnesium sulphate, should be administered in fractional doses hourly until free evacuation of the bowels has been obtained. By this process the large bowel is cleaned out, the amebae are carried away in the discharges, and the tenesmus is greatly lessened. Ipecac, which has been so highly lauded by some in the treatment of this disease, has not proven efficacious in my hands. Indeed, I consider the suffering from nausea and the discomfort one has to undergo, when the use of this drug is resorted to, is not counterbalanced by the benefit derived from its use. Many patients having amebic dysentery and reported as having been cured by the

use of ipecac and having been followed up, subsequently have been known to relapse into their former condition, and become as bad as before the ipecac was administered. From observations I have had in its use I could not ascribe to it great merit in the treatment of this disease. This form of treatment has been found satisfactory in many parts of the world, such as South Africa, the Philippines and in parts of India. Acetozone administered by the mouth has been highly recommended by some, in the belief that it acted directly on the amebae, but has now fallen into disuse. One thing we have learned in the past ten years in the treatment of amebic dysentery, which is confined to the rectum, large intestine and cecum, and that is to be effective, the treatment must chiefly be applied locally. In the chronic stage the treatment is somewhat altered from that in the acute stage. Here the person is usually much reduced in flesh, is weak and anemic, and must be provided with a nourishing dietary. Milk, eggs, beef in the form of broiled rare steak or roast, broiled lamb chops, chicken, stale toasted bread, strained soups, etc., will usually fill the food requirements. The patient should lead a quiet, well-regulated life and should be at rest in bed during the acute exacerbations. The digestion in this form is very frequently impaired and should receive appropriate attention. The use of carbohydrate foods should be refrained from as much as possible so as to lessen gastric and intestinal fermentation. High colonic irrigations of cold saline or quinine solutions in amounts ranging from one to two and a half quarts will frequently prove beneficial. The posture of the patient and the changing of the position so as to allow the solution to flow into all parts of the colon are points to be carefully carried out in the administration of the injections. The use of solutions of protargol and formalin administered in the above manner are sometimes resorted to. When the amebae in their course upward from the rectum have found lodgment in the cecum and it becomes involved, (indeed, some now claim the cecum is first involved, but this has not been satisfactorily proved) injections per rectum are no longer of much benefit. In such cases resort to surgical measures is indicated for relief, and

in the hands of the most of those who have had recourse to this method of treatment good results have been almost invariably obtained. Appendicostomy is much preferable to cecostomy, and in the relief of these cases can be said to have won an exact place in surgery. The operation, if possible, should be resorted to before the latter stages have been reached when there is great prostration and marked changes in the submucous tissue of the large intestine. It is unnecessary to describe the operation. An inch and a half incision, separation of muscle fibres, bringing out the appendix through the incision, removal of meso-appendix, suturing cecum to wall of abdomen around the base of appendix, and closure of incision, allowing appendix to project beyond abdominal surface for two days until adhesions are thoroughly formed, when it is cut off and a tube is inserted through the stump into the cecum. By the washing out of the bowel through the appendix with large quantities of the various solutions, we find, instead of numerous offensive stools, one flushing suffices to remove the accumulated feces and leaves the intestine in a state of rest, and the amebae are carried out of the intestine in the solution; wherein lies the element which chiefly contributes to the successful outcome of the irrigation treatment.

It is remarkable how little sloughing, discomfort and leakage follows the operation of appendicostomy, and how inoffensive the presence of the fistula is to the patient and his associates in the ward. By approximating properly the separated muscle fibres they act to compress the appendix at that part and form a valve, which freely allows a tube to be inserted and closes again when the tube is withdrawn, thus practically preventing leakage. A small pad of gauze is placed over the fistula when the tube is not worn, and one change daily will suffice. The fistula should not be closed by operation. It will usually take care of itself, and acts as a kind of a safety valve for any possible future recurrences of the disease. This method of treatment of amebic dysentery has proved a valuable one in my hands in a considerable number of cases, and I believe it should always be resorted to in chronic cases, when other methods of treatment have failed, unless otherwise contraindicated.

PLACENTA PREVIA; ITS PATHOLOGY AND TREATMENT.

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Placenta previa has an ominous sound to the obstetrician, because it indicates one of the most serious complications of pregnancy, which, fortunately, is rather rare, yet when occurring means great danger to the mother and still far greater risk to her unborn child. It means, as you are all aware, that condition where the placenta is implanted into the lower segment of the uterus, and lies either wholly or partially over the os internum.

Some authorities give two varieties and some three. Lusk gives us three varieties, viz.: 1. Placenta previa centralis, when, after dilatation of the os, the placenta only can be felt. 2. P. P. partialis, where, when the os is dilated, a portion of the membranes can be felt, as well as a portion of the placenta. 3. P. P. lateralis or marginalis, when the placental border stretches down to but not beyond the margin of the inner cervical ring. Many authors omit the second variety as being included in the third. It is worthy of note that the placenta never becomes attached to the cervical canal. The relative importance of these varieties will be shown when we come to the question of prognosis.

The method of its occurrence is that, when the ovum is imbedded close to the os internum, the decidua serotina develops there, and later the placenta is formed. The decidua serotina, we must remember, is that part of the decidua vera upon which the ovum lies. When the ovum is inserted so closely that in the course of its growth the villi of the fetal chorion extends, over the os internum, then we have a placenta previa.

Causes. Shroeder gives two. First, that there may be too great width of the uterine cavity, and secondly, an abnormal smoothness of the mucous membrane by which descent of the ovum is facilitated towards the os internum; that this occurs most frequently in multiparae in whom the uterine cavity is wider, and where a previous leucorrhoea has made the membrane

smoother. Mueller does not agree with this, but attributes it to an early impending abortion, which is arrested at the lower uterine segment where the villi attach themselves, and thus enable the arrested ovum to continue its development. There may be other explanations; if so, I have overlooked them.

Frequency. Lusk, quoting Mueller, gives its frequency as about one in one thousand labors. Certainly it is rare, and unless a physician has a large obstetric practice, he may go through life without seeing a case. Of course those in large cities making obstetrics a specialty may see more in their own or in consultation work, especially those engaged in hospital work. The chief clinical feature of placenta previa are hemorrhages of varying degree occurring in the latter half of pregnancy, or after labor has commenced. It may occur at almost any time, and Lusk states that it causes the pseudo-menstruation of pregnancy. It also creates a predisposition to abortion or later premature labor. These hemorrhages may or may not depend upon the detachment of the placenta, before or during labor. It occurs six times oftener in multiparae than in primiparae and is frequently accompanied by prolapse of the cord, or is complicated by adherent placenta and abnormal presentations are very frequent. Hemorrhages may be due to accidental causes, as well as to the contraction of labor pains.

Mueller states that in complete placenta previa the first hemorrhage occurs most frequently between the twenty-eighth and thirty-sixth weeks of pregnancy; while in the lateral variety it occurs mostly after the thirty-second week and later. However, in this form none may occur until the commencement of labor. The hemorrhages usually come on suddenly; there is no premonition or pain, and they are not dependent on any apparent external cause. May be moderate in amount, or be so excessive as to exsanguinate the patient, or even prove fatal in a very short time. Or again the bleeding may be slight, but continuous, a continuous drain exhausting the patient and causing a dangerous anaemia. When the hemorrhage is excessive, premature labor is apt to occur. When placenta previa is lateral, the bleeding is not apt to occur until normal labor commences and the pla-

centa becomes partially detached. The bleeding comes from the mother's vascular system, for the large lacunae are opened up in which the maternal blood circulates between the villi of the chorion; so therefore, rarely if ever does the fetus lose blood.

The worst hemorrhages occur in the early or first stage of labor, and depend on the extent of the area of the placental segment attached to the uterine surface. When there is much, the placenta previa is most likely of the first variety. The hemorrhage may cease spontaneously; or, after rupture of the membranes, may be arrested by the pressure of the presenting part of the fetus upon the bleeding surface.

The prognosis is necessarily very unfavorable, both to the mother and child; much more so to the latter.

Statistics vary so much that I do not care to quote them. Those given by later authorities report much more favorable results than formerly given. However, I have seen no reports of results in a large collection of cases. It is very evident that the results are influenced by circumstances, promptness and skillfulness of the help, by location, whether in country, city or lying-in hospital practice. Authorities say that puerperal sepsis is a frequent sequela, because of the necessary manual interference. Mortality in mothers is greatest in the central form. The earlier the hemorrhage the greater the fetal mortality.

Diagnosis. Lusk says that in the first half of pregnancy there are no signs by which the existence of placenta previa can be recognized. In the later half, any sudden hemorrhage without apparent cause should excite suspicion. Digital examination will reveal a soft and boggy vaginal fornix, obscure ballottement, a long wide and soft cervical canal which is rather patulous. These symptoms indicate placenta previa. When the lower surface of the placenta is actually felt, it can be distinguished by its rough granular surface, and the diagnosis is nearly certain.

Treatment. Having made our diagnosis before labor sets in, or better, during the last months of pregnancy, and hemorrhage having occurred once or twice, we must decide what to do. Shall we attempt to carry the patient along until such time as the child is viable, or shall we interfere at once

and produce premature labor in behalf of the mother's interest?

We must remember that in the early months these accidental hemorrhages will mostly end in an abortion, to be managed as are other cases of similar kind. While in the later half there is apt to be premature labor so frequent that probably not one-third of all cases come to full time. Many authorities advise us to attempt to carry them to full time, while others say as soon as a hemorrhage occurs terminate pregnancy, as the danger of delay is too great for the mother, for us to run the risk. Circumstances must govern us in this matter. Fueth says: "Produce immediate delivery after the first hemorrhage, as there is too great danger from further hemorrhage, or a septic infection from other modes of treatment, unless the patient can be watched continuously until delivery." In hospital practice this may be done, but with private cases it is hardly practical.

Lusk says: "On theoretical grounds corroborated by the results of prompt interference, it is obligatory, as soon as a diagnosis is made, or hemorrhage occurs, to terminate pregnancy." Barnes says: "If the pregnancy has advanced beyond the seventh month it will, as a general rule, be wise to deliver at once, for the next hemorrhage may be fatal. We cannot tell the time or extent of its recurrence, and when it occurs, all perhaps we shall have the opportunity of doing will be, to regret that we did not act when we had the opportunity." Grandin and Jarman advise "as soon as a hemorrhage occurs or a diagnosis is clearly made out before it happens, to call a consultation to decide as to emptying the uterus. That this allows us to save nearly 90 per cent of the infants instead of nearly a mortality of that per cent, and a saving of 98 per cent of the mothers." This applies where there is no temporizing with the tampon, or worse of all, the use of ergot.

How shall we proceed? If possible, use gradual dilatation, by one of the forms of rubber inflatable dilators, as Barnes' dilators, Braun's colpeurinter, or other forms, all constructed on the same lines to safely and gradually aid dilatation. After the os is sufficiently dilated, then carefully perform bipolar or bimanual version after the manner taught by Braxton Hicks, being

very careful to avoid rupturing the membranes. If the vertex presents, we may rupture the membranes in hope that pressure of the presenting part will act to control the hemorrhage. If this fails, then introduce the hand or fingers, seize a foot and perform podalic version, and when the breech reaches the os, cease traction and let the hips act as a tampon, controlling the hemorrhage until dilatation is complete, then deliver as rapidly as possible. Some authors do not agree with this last advice, but say, after the hips are engaged let nature take its course and finish the delivery, because efforts to save the child have cost many maternal lives. Where we have no dilators, and the os is firmly closed, then firmly tampon the vagina with aseptic gauze, under strict aseptic precautions, and wait for dilatation to take place.

Dr. DeLee, (So. Journal of M. and S.) insists that "we must try to save blood all the time, both before and after delivery. He advises immediate delivery of placenta and brisk massage over the uterus, and a hot uterine douche of sterile water, and if necessary, pack the uterus with a long strip of sterile gauze, one-half yard wide and thirteen yards long. Shock and anaemia must be met by intravenous transfusion of normal salt solution when practical, or by hypodermoclysis and high rectal saline enemata, and not to forget that pressure on abdominal aorta with the hand helps mightily." Now I have compiled the views of some authorities representing the conservative views prevailing here and abroad.

Of late years, encouraged by the great success attending modern abdominal surgery, a more radical treatment is being urged by some obstetric surgeons, both at home and in Europe, especially in Germany; that Caesarian section be early resorted to, at or near full term, in the interest of the child, and as also affording greater safety for the mother, when done before the mother has been infected by efforts to deliver by other methods. It is well to bear in mind that those who advocate these views are obstetric surgeons connected with well-conducted maternity hospitals, not general practitioners. In Germany these hospitals are much more numerous and conveniently placed than in this country, and patients resort to them much more frequently and willingly than with us. Here can be found

most skilled operators and all the facilities for such work. These men urge that as soon as the general practitioner finds that he has a case of placenta previa, he should tamponade with aseptic gauze with strict asepsis, and send the patient to the maternity for this form of treatment, i. e., by one of the modes of Caesarian section, viz.: the original, the Porro, the Sanger, or the extra-peritoneal operations. In this country some are advocating vaginal Caesarian section. However, most of the German authorities do not agree with these radical methods, and show that careful analysis of the limited statistics offered by these radicals do not give better results than follow more conservative methods. However, the general practitioner has not these operators or facilities at hand; he has to do the best he can under the circumstances surrounding him, and has to ignore the one great advantage claimed for this method, i. e., the saving of the child for that of the mother. When every city or large town has its maternity, its skilled obstetric surgeon, and all parturient women go to the hospital for confinement, as advocated by Prof. Zinke of Cincinnati, then perhaps Caesarian section will be the method, because maternal and fetal mortality will be almost nothing—perhaps (?) Until this millenium comes, the general practitioner had better stick to our older methods.

Again, some radical operators are offering the ligation of the uterine arteries, or the clamping of them with clamps applied to the vaginal fornix, to control hemorrhage while delivery is being secured, or manual pressure of the abdominal aorta, or encircling the body at waist with a rubber tube or tourniquet, (properly wrapped) applied very tightly to constrict the aorta and thus control hemorrhage.

What of personal experience? Mine has been fortunately limited. I have seen three cases in perhaps 100 or 1200 deliveries. Case first was a multipara living some six or seven miles from my home. From various causes there was a failure to secure a physician until the patient had been in labor twenty-four hours. When I reached her at midnight of the second night, the hemorrhage had ceased. The case was one of a marginal placenta previa, os fully dilated, no labor pains, complete inertia. She was very exsanguinated. The surroundings were

miserable and filthy. No means of doing good aseptic work. I did podalic version, and delivered a dead fetus. No further hemorrhage. The patient lived about 16 hours, and died as the result of loss of blood. This case occurred twenty-three years ago, before the days of saline transfusion.

Case second occurred twenty years ago, just after I moved to Parkersburg. The patient lived twenty miles from that city. Was about six months pregnant. Second pregnancy. She had had several hemorrhages, no physician nearer than ten miles. I was most convenient, she living on the B. & O. R. R. I kept her in bed for several weeks. Any exercise, as getting up, caused recurrence of the bleeding. Dr. Harris being my consultant, we agreed as to the necessity of bringing on premature labor, which I did at her home. She made a complete though slow recovery.

Case third I saw with Dr. Frank Keever, of Parkersburg. Multipara seven and one-half months pregnant. Had been two or three hemorrhages. As she lived out of town, we decided, in the interest of the mother, to terminate pregnancy. It did not seem possible to carry her safely to term. We did a podalic version and delivered her of a dead fetus. Mother made a prompt recovery.

In conclusion, happy is the man who never meets with this complication, but every practitioner of the obstetric art should always be on guard, and try to have a clear and decided picture in his mind as to what is needed, formulate his plan, and have courage to carry out the treatment promptly, fearlessly, and with the most thorough asepsis possible.

A swelling in the inguinal region, painful to the touch is, of course, often an inguinal adenitis (e. g., following gonorrhoea). But orchitis in an undescended testicle should be kept in mind.—*American Journal of Surgery*.

A large dose of antipyrin or quinine will clear up a frontal headache due to acute catarrh of an accessory sinus, by its astringent action on mucous membrane and consequent improvement of drainage.—*American Journal of Surgery*.

THE PROGNOSIS IN TABES DORSALIS.

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At one time a diagnosis of locomotor ataxia felt like a sentence of death to the patient, for many would sooner have died at once than suffer the agonizing pains in the limbs and back, the vice-like grip of the girdle sensation, the nauseating horror of the gastric crises, the inanition, the sickening rectal tenesmus, and inconvenience and distress of chronic cystitis, and finally a motor disability so marked through ataxia as to make locomotion an effort and pain rather than a pleasant exercise.

A vague picture of this kind still floats in the back of the mind when tabes dorsalis is envisaged, even by those who know that such a gloomy prognosis is now the exception rather than the rule, so difficult is it to dismiss the prepossessions derived from the classics.

Now, recent investigations go to show that tabes is not a passive necrobiosis of the sensory neurone in the posterior columns. The death of the posterior column fibres is secondary to an inflammation of the posterior root with which they are continuous. (For the demonstration of this the reader interested may consult the author's articles: *Am. Jour. Med. Sci.* 1908 and March, 1910; *Med. Record* (Treatment), April 10th, 1909; *British Med. Jour.*, Oct. 2, 1909; *International Clinics*, Spring, 1910; (Prognosis) *Med. Record*, Feb. 6th, 1910; (Diagnosis) *Archives of Diagnosis*, July, 1909.)

It is there shown that tabes is syphilitic, and that no mystery attaches to its pathology. Now, syphilis is amenable to mercury more or less constantly, and yet many therapeutists believe that tabes is not thus amenable, while others report great improvement and even arrest under its use. How account for the discrepancy?

We must remember that tabes is a late manifestation of syphillitis, and appears to be a sign of lowered resistance to the virus,

for in some cases it ensues relatively early, and very often indeed, first shows itself, or when present becomes greatly aggravated, as a result of privations, excesses and intoxications, as so clearly appeared among the Russian officers during the war with Japan. Now, the researches of Vincent (These de Paris, 1910) show that a slow meningitis is present long before nervous symptoms appear. We detect this by the increase of lymphocytes in the cerebrospinal fluid taken by lumbar puncture. In one of his cases, a meningitis lasted four years before marked improvement occurred under treatment, which had been begun on account of facial paresis and spasm.

So slow a response is less usual, however, than is such an improvement as is shown by two of my own cases of meningo-encephalitis, as well as by the six which Dana reported in 1904. None of these cases had yet developed tabetic symptoms, which shows the importance of detecting tabes *before it begins*, so to speak. To do this, a knowledge of the pathology helps one to interpret early symptoms which may or may not be tabetic; thus fleeting twinges in the limbs and perineal region, occurring now and then for a few days and then passing off for weeks, are highly suggestive of irritation of the roots. I have two cases of this kind, both in medical men. In the first, pretabetic irritation was derided by many English neurologists; but the patient followed my treatment in spite of this, and after a few months was free from symptoms which had troubled him over four years. I insisted upon courses of injections of soluble mercurial salts deep into the gluteal muscles.

The other case has taken the French pill of double iodide continuously for six years, and it is only lately that he has been troubled by the paresthesia in the legs, most marked in the morning. He naturally took a gloomy prognosis, but changed this after his improvement upon temporary stoppage of mouth medication and the cessation of tobacco.

In another case of meningo-encephalitis, nervous erethism and anxiety, after improving three weeks, the patient suddenly became worse; but these symptoms were quickly removed by diminution of the proteins at the evening meal and a better regu-

lation of the patient's exercise, as well as a complete suspension of smoking.

Thus *prognosis depends upon treatment*, and this consists of more than a mechanical exhibition of mercury, for the resistance of the patient must be fortified by the hygienic measures we employ in other granulomata, e. g. tuberculosis.

But the prognosis depends primarily upon *early diagnosis*, for it must be remembered that the secondary degeneration of the fibres of the diseased roots can never be repaired. An ataxic who learns to walk by means of the exercises devised by Fraenkel improves, not because the nerve paths grow with exercise as does a muscle, but because he educates himself to utilize the few which remain; in other words, he forms a new walking automatism.

The early *bladder pains* with retention and partial incontinence which so frequently usher in tabes, are very often treated as simple cystitis, not only by general practitioners, but by genito-urinary specialists. The drugs and instruments used are most damaging to a mucous membrane, of which the trophicity is lowered by the disease of the spinal roots concerned in its supply, and the treatment causes a real cystitis, trophic or inflammatory in a bladder whose greatest need is protection from the slightest trauma. The case is strictly analogous to the conjunctivitis which so easily occurs after damage to the ophthalmic division of the fifth nerve, the trophic nerve of the eyeball. The inflammation of the conjunctiva can always be prevented by protecting it from the minute traumata of particles of dust.

The moral should be obvious, and every case of retention of urine and pain in the bladder, if there are no cellular elements or irritating substances in the urine, should be referred for an examination of the nervous system, in view of the possible presence of an incipient tabes, for a chronic cystitis is a serious complication, and must be weighed in the prognosis of tabes dorsalis.

A not uncommon prodrome of tabes is sudden *diplopia*. Oculists may fail to assign this to its true cause, viz.: implication of one of the oculo-motor nerves in the meningeal exudate which precedes tabes. Thus a patient whom I saw as a paretic had two years before consulted a leading

ophthalmologist here for a diplopia. All the satisfaction he received was a pair of correction lenses. Had the cause of his diplopia been ascertained the prognosis would have been very different, and he would have been saved from physical and mental ruin.

A very common error which aggravates prognosis is, to treat as a simple or *nervous dyspepsia* what is in reality a series of gastric crises due to posterior root irritation. The narcotics used to assuage the path of these particularly injure the patient's nutrition, so important a factor in the prognosis. Besides this, no radical remedy is given; and degeneration of root and posterior column is unchecked; whereas the early giving of mercury by injection usually arrests the pain in a few weeks by aborting the evolution of the radiculitis, which is their cause.

A conjunction which is quite common is that of aortitis with the syphilitic meningitis which causes tabes. The pupillary changes which were formerly attributed to implication of the sympathetic by the enlarged aorta, are now known to be merely concomitants of the same pathogen, viz. syphilis. Hence, every case of aortitis should be referred for a careful examination of the nervous system, so as to anticipate the evolution of a tabes dorsalis by the detection of its prodromes and their appropriate treatment. Of course, the aortitis cannot be repaired, but it may not be lethal in extent, and like the rest of the syndrome which has been named after Babinski, it is susceptible of the arrest which mercury often brings.

1758 K street.

A RARE CASE.

Washington W. Stonestreet, M. D.
Morgantown, W. Va.

My reasons for so heading this are its rare condition, and its long prior history. I have never read anything having a similarity, in the various text books or journals.

I was called hurriedly in the small hours of the morning to see a woman who was in extreme agony. After a few questions I discerned that she had been unable to micturate for the last several hours, and prior to that had been voiding but a small quan-

tity, accompanied by extreme pain. I immediately prepared^d to catheterize. After examination I discovered a protrusion of a lightish, calcareous substance at the mouth of the urethra, in fact extending two inches from the mouth, completely obstructing the passage of either urine or catheter. I acknowledge I was nonplussed.

On palpating over the pubic region, I found the vesical walls very much distended and extremely tender. I also noticed a marked display of cicatrix formation produced, as I found upon further questioning, by several prior operations performed by surgeons of note.

Upon taking traction on this calcareous extension, I found it increased her pain. I decided to anesthetize. Calling in another physician, we proceeded. After putting patient to sleep, we tried to catheterize, but found it absolutely impossible. The urethral walls were so enormously distended as to produce a slight hemorrhagic condition. Upon making traction we found that we could draw out the protruding object. After doing so to the extent of about four inches, we, upon examination of this material, found it to be folded on itself, so to speak. It seemed to be calcareous deposits ranging in size from the head of a pin to twice that size, imbedded in a fibrous material.

We decided that relief must be had, although neither of us had ever seen or read anything of the kind, so we proceeded to make further traction. Fortunately we entirely removed this deposit, which was followed by a gush of urine to an enormous amount, affording the patient immediate relief.

We saw the patient later in the day, found that she had been voiding a great deal of water, mixed with the following: Blood, pus, and a good deal of this same calcareous deposit of a coarse, or sand-like nature.

We wanted to wash out the bladder, but patient begged so pitifully for us not to, saying that she felt so much better, that we decided to refrain. Examination of her urine elicited no marked abnormal changes, except a high state of alkalinity, and slight elevation of specific gravity.

We saw patient several times afterwards, and she continued to improve and is having no trouble at the present time.

I had her to drink only distilled water, and follow the ordinary line of treatment.

Past History: Thirty-five years of age, married; occupation, housework; has just given birth to her first child, which is about two months old; well developed and normal. Has had vesical trouble for the past twenty years, been an inmate of the Allegheny hospital, Pittsburg, Pa., and a hospital in Baltimore, Md., and the case has been one of much discussion as to its diagnosis, and it has been under many noted physicians' care.

During her pregnancy she suffered constantly. Ever since the elimination of this deposit she has had relief.

ASPIRIN POISONING.

James E. Cooper, M. D., Cameron, W. Va.

The following case recently came under my observation, and is of peculiar interest for the reason that toxic symptoms from the administration of the salicylates are not frequently seen:

Mrs. C. M., age 50 years, rather stout, weighing about 160 pounds, height 5 feet 4 inches, general health fairly good, is suffering from some nervous manifestations due to menopause. No evidence of any organic disease.

Saw patient April 13, 1910, at 1 o'clock p. m. Complained of pain in right lumbar region, aggravated by motion of any kind. Some general stiffness of voluntary muscles. Excretions rather sluggish. Gave the following: Hydrarg. Chlor. Mit. Gr. 5. Caffeinae Alk. Gr. 8. *Aspirin* Gr. 60 M. Div. in capsule No. 8. Sig. One capsule every four hours.

The woman's husband was called away on business and entrusted the giving of the medicine to a neighbor woman. She gave one capsule every thirty minutes until all the capsules were given.

The husband returned about 8 o'clock p. m., and becoming alarmed at the existing condition of his wife, at once 'phoned me what had happened. Saw patient again about 8:30 p. m., with the following condition:

Considerable general cyanosis, extremities cold, heart's action 70 and very weak, intermitting every third or fourth beat. Skin rather harsh and dry. Mind per-

fectly clear. Some nausea and vomiting at intervals.

Removed stomach contents at once by means of stomach tube. Stomach washings consisted of nothing more than some mucus and biliary coloring matter. Applied external heat to back and extremities. Gave strychn. gr. 1-30 hypodermically.

Patient began to rally after two hours of effort, and has made an uneventful recovery.

Cameron, West Virginia,

April 25, 1910.

(In connection with this case it may be of interest to note that an idiosyncrasy against aspirin has been observed, although the amount taken by Dr. Cooper's patient was excessive. Bulloch reports the case of a man aged 48 years, who after one dose of 10 grains, was seized with violent itching over the whole body, but chiefly of the head. The skin felt burning hot and became very edematous. Tongue and eyelids much swollen. A sense of great oppression around the throat and chest, a sensation as if dying from suffocation, and an inability to speak. Improvement set in within twenty minutes, perspiration commenced, the sensation of impending death disappeared, and the edema rapidly diminished. But intense thumping of the heart continued for several hours, preventing sleep. This patient was subject to asthma and urticaria. The symptoms were not unlike those at times following the use of antitoxin in asthmatic patients.—Editor.)

Clinical Lecture

CATARRHAL JAUNDICE.

By John V. Shoemaker, M.D., LL.D.,
Professor of *Materia Medica, Therapeutics, Clinical Medicine and Diseases of the Skin in the Medico-Chirurgical College and Hospital of Philadelphia.*

Gentlemen:—The patient before us this morning is suffering from a condition characterized by a discoloration of the tissues as a result of absorption and retention of the bile.

E. S., aged 65 years; widow for 25 years; height 5 feet 6 inches; weight 125 pounds.

She has been losing weight during the last few months. Occupation, housework; nativity, Russia.

Chief complaint on admission: Pain, insomnia, eructation of gas and itching of skin.

Family history: The patient states that her father died 28 years ago from an unknown cause. Her mother died when she was nine years old as the result of a fire, probably smothered by smoke. She has no sisters but had one brother who died from rheumatism. She has no knowledge of her uncles, aunts or grandparents.

Previous Personal History: She was a nine months baby and was breast fed. Had small pox at six months; measles later; typhoid fever at six years. She also had a recurrence of typhoid fever at 39 years of age. She has also suffered from several attacks of grip, and acute articular rheumatism involving the joints of the wrist, elbow, ankles and knee at the age of 34.

Social history: She is a widow. Her husband died of chronic alcoholism at the age of 65. She has eight children, of whom two are living and apparently in good health. One died of grip at the age of 25 years; one was born dead and the remainder died during childhood. She has had no miscarriages.

Menstruation began at sixteen years. It was from the beginning regular, with no pain, and the quantity of blood was in fair amount. Menopause at 48.

Habits: She states that she does light work around the house, takes plenty of rest but no exercise. She eats her meals fairly regularly and partakes of tea and coffee in moderate amounts. She denies any venereal diseases.

Present illness: The patient states that she has suffered from pain for fourteen years. This pain was irregular and became more pronounced as time went on. The pain was mostly confined to the epigastrium. She had a feeling of soreness and the region below the ensiform was tender. About one month ago an itch came on which was very irritating. Then a general discoloration became evident; insomnia, anorexia with eructations of gas were present, associated with constipation. A bowel movement was only obtained by the use of salts. After eating she experienced a sensation of fullness and was troubled with flatulence, fetid

breath, nausea and vomiting. Upon rising in the morning she has pains in her legs.

Physical signs: Upon inspection her skin presents a yellowish discoloration which is more marked on the skin of her face and forehead, and upon palpation the lower border of the liver projects a little below the ribs. Percussion reveals an increase in the hepatic area which is also confirmed by palpation. No other abnormal sign can be elicited.

Urinalysis:

Color	straw
Sediment	negative
Specific gravity	1.028
Reaction	acid
Albumin	negative
Glucose	negative
Indican	marked reaction
Bile	marked reaction
Urates	moderate
Cylindroids	few
Casts	negative
Leucocytes	few
Epithelial cells	few

Examination of blood:

Erythrocytes	4,100,000
Leucocytes	8,600
Hemoglobin	84%

Diagnosis: The diagnosis is made from the history of habitual constipation with clay-colored stools, the lemon yellow color of the skin and eyes, presence of bile and indican in the urine, the coated tongue, fetid breath and itching of the skin, all of which are typical symptoms of catarrhal jaundice. A differential diagnosis between hepatogenous and hematogenous jaundice should always be made.

Differential diagnosis:

<i>Hepatogenous Jaundice.</i>	<i>Hematogenous Jaundice.</i>
1. Occurs with gastro-duodenitis, catarrh of the bile ducts, etc.	1. Occurs with fevers, blood diseases, etc.
2. Urine contains bile coloring matter.	2. Urine contains bile acids.
3. Albumin negative.	3. Albumin positive.
4. Nervous symptoms not so severe.	4. Prominence of nervous symptoms.
5. Faeces clay colored.	5. Faeces dark colored.

Etiology: The most frequent cause of such an inflammation is due to an extension of inflammation in gastro-duodenal catarrh into the common bile duct. In this case the cause is attributed to the use of improper foods, and the acute diseases of

which the patient suffered. This disease may be attributed to faulty cooking and improper mastication, as well as to exposure to wet and cold. It may also be brought on as a result of mental and physical overwork, anxiety, prolonged use of irritants, such as tea, coffee, alcohol, etc.

Pathology: The liver is swollen and possesses a lighter color than is normal. The biliary capillaries are distended with bile. The mucous lining of the common duct is swollen and inflamed, and the catarrhal process may extend into the cystic and in some cases into the hepatic duct. Suppuration does not take place in this form of cholangitis. The gall bladder is distended and the bile is absorbed by the lymphatics and ultimately reaches the circulation and discolors the tissues.

Treatment: The successful treatment of this patient depends upon the proper diet as much as it does upon the proper medication. She must partake only of liquid diet such as milk, broths and albumen water.

Massage and well regulated exercise are both valuable adjuncts in the treatment of this affection, to stimulate the normal functions of the liver. Medicinally one of the best chologogues is hydrargyri chloridum mite in combination as follows:

R
 Hydrargyri chloridi mitis.....gr. i
 Pulveris ipecacuanhaegr. ss
 Sodii bicarbonatisgrs. xx
 Misc. Fiat cacheta No. 1.
 Signa. One cachet at night before retiring.

These three drugs act synergistically to stimulate the flow of bile and evacuate the bowels.

The patient also receives the fluid extract of hydrastis, minims xx, four times daily. Other drugs that may be employed are acidum nitrohydrochloricum dilutum, the preparations of podophyllum, iridin, rhu-barb, leptandra and euonymin.

If there is associated gastritis with much mucus, it is well to give at least a drachm of sodium phosphate in half a cup of hot water before breakfast.

To relieve the itching of her skin the following combination will be quite serviceable:

R
 Creosotim. xv.
 Magnesii carbonatis5 ss.

Glycerini -----f̄ss
 Liquoris calcis -----f̄ij
 Aquae hamamelidis-----q. s. ad f̄vj.
 Misc. Signa. Apply locally as required.

Correspondence

THE CLINICS OF PHILADELPHIA.

Editor W. Va. Medical Journal:

I have just returned from a sojourn of nearly three months in Philadelphia, with Dr. W. W. Babcock, surgeon-in-chief to the Samaritan hospital. Several of our physicians have written to me for my opinion of Philadelphia for post-graduate work. As I spent the winter of '07 and '08 there, I feel that I know something of what Philadelphia has to offer. However, I do not know what other places may have.

"The City of Brotherly Love" has not received its share of post-graduate students. Those coming from the west and south stop at the Hopkins, then to New York, when through with New York their time is about up. I made it a point to inquire of men who had been to Chicago, Rochester, Baltimore, New York, and other places, as to how the work in Philadelphia compared with what they had seen. Not one spoke unfavorably of Philadelphia. Dr. Reber's experience may be of interest. Some years ago he came from the west to take up eye work. He says he found them too cold in Boston, could not get near them. In New York they wanted to know how much money he had to spend. In Philadelphia the only question was: "How long could he stay; how hard could he work?" So I find if one goes to Philadelphia and looks around for a few days to find out just where he wants to work, he will not be disappointed. Whatever line of work one wants can be had there and the treatment accorded the visitor can not be surpassed.

It is rumored that the University of Pennsylvania has bought the Polyclinic. If so, that school will no doubt be greatly improved. My interest was entirely in surgery. I saw but few changes since my visit of two years ago. The most marked change was in the lessened amount of abdominal drainage. Cholecystectomy I saw but seldom, certainly not nearly so often as two

years ago. Cholecystostomy seemed to be the operation of choice.

When not working at the Samaritan I spent most of my time at the clinics of Drs. Hirst, Clarke and Deaver. Dr. Price operated but twice after I got to the city. I was fortunate in seeing both operations. He has been seriously ill for weeks, but at the time of my leaving had, I learned, almost recovered. His hospital was very ably conducted by his assistants, Drs. Kennedy and Hughes. I did not have the pleasure of seeing Dr. Hughes operate, but saw Dr. Kennedy a number of times. His work is good and is patterned to the last detail after that of Dr. Price.

Dr. Deaver is doing a great deal of work and attracts many visitors. While I was in the city the German Hospital Conference was started. It met every Tuesday and Friday afternoon. Its members are the physicians attending Dr. Deaver's clinic. This gives them an opportunity to meet Dr. Deaver and discuss the work with him. I was exceedingly well impressed with Dr. Deaver's candor. When bad results come, as they do to all, he never tried to escape the blame, but took it all upon himself. It takes a big man to do this.

Dr. Barton Cooke Hirst, of the University of Pennsylvania, is most courteous and affable, as is his brother, John, who assists him. Dr. Hirst believes that one can not be a good obstetrician or gynecologist without combining the two. He has a hospital within a hospital, as it were. The obstetric department of the university is within the University hospital grounds, but is under a separate roof. Legally under the same management as the rest of the medical department, as a matter of fact it is run entirely by Dr. Hirst. This and his other hospital connections, notably the Howard hospital, affords him a large amount of clinical material. He is doing his repair work on the seventh day after labor. Says there will be no infection from the operation, that the cervix can be repaired and better results gotten than at any other time. I had the good fortune to be invited to see his ninetieth Caesarean section. This is a larger number than has ever been done by any other English-speaking man.

Dr. Clarke, gynecologist of the University of Pennsylvania, is a fine man in every way and a most excellent teacher. I do not

know of his equal in this respect. As is well known, he was associated with Dr. Kelly for many years before coming to Philadelphia. He is doing some original work on the large intestine. His method of skin disinfection is certainly simple and easy of application. He sprays on a solution of iodine the morning of the operation, and while the patient is on the table. He says he has never seen it blister seriously but twice.

Dr. W. W. Babcock has perhaps the second largest surgical practice in the city. He is the only surgeon to the Samaritan hospital, and does not have to divide up the service, as do nearly all the other surgeons. He has a very large private practice; his waiting room is crowded and many have to wait for hours for their turn. I think it is due almost entirely to him that the Samaritan now ranks anywhere from the fourth to the second in point of size of the surgical service in Philadelphia. Every bed in the surgical wards is full and often a number of cots are in use. A very considerable addition was made to the hospital this year. Unfortunately, the Samaritan is about five miles from the heart of the city and the visitor finds it considerably out of the way. I think the doctor's strong points are originality, adaptability and independence. He does not care a rap where the idea comes from if it is a good one. If from some obscure doctor, it is just as welcome as if from some great university. In his work he is quick, gentle and dextrous. His knowledge of pathology is great, his standard of asepsis the most exacting. Fearless, no case that offers even the remotest hope is ever turned away. His operation for extraction of saphenous veins is much ahead of any other. His perineorrhaphy, or some modification of it, is, in my opinion, the operation of the future. I found Dr. Kelly's first assistant doing this operation altogether. Dr. Clarke's first assistant does it very often. Dr. Kelly does it often and spoke to me very highly of it. It is hardly necessary to say that Dr. Babcock has done more work with stovaine anesthesia than any other man in the United States. I have seen him use it probably hundreds of times. I can not speak for him, but think he regards it as in the experimental stage so far. Certain I am that he is continually changing his technique. Very slight changes in most cases. While

in Baltimore I saw Drs. Kelly, Halstead, Young, Finney, Cushing, Gardner, Blake, Harrison and others, but not often enough to feel that I could intelligently criticize their work. Rightly or wrongly, I felt that the Hopkins did not care for the work of others. They are diligently seeking the light, but they want it to appear first at the Hopkins. This was in marked contrast to what I saw at the University of Pennsylvania. I do not include Dr. Kelly in the above criticism. As for their methods, I will say that it seemed odd to see heavy gloves like those undertakers wear, needles large enough for veterinary use, and silver wire that most operators discarded years ago.

However, we can not all think alike, and the future alone will tell. Altogether I had a most pleasant and profitable winter.

A. P. BUTTS, M. D.,

Davis, W. Va., April 19th, 1910.

HONG KONG, CANTON AND THE CHINESE.

ON BOARD THE "CLEVELAND," OFF THE ISLAND OF FORMOSA, DEC. 27, 1910.

Dear Doctor Jepson:

In my letter from Canton, I dealt altogether with our experiences in Borneo and the Philippines. China was too big a proposition to be included in that letter. It needs a whole one to itself. So I have deferred that topic until the leisure afforded by our sail to Japan would permit me to give more time to the recitation of our experiences in that wonderfully strange country.

The morning of December 23d found us entering the narrow channel that leads into the harbor of Hong Kong. The passage is crooked and at times so narrow that the further progress of our big ship almost seemed impracticable. We threaded our way between islands and headlands, which rose steep and rugged many hundred feet above the water and afforded model sites for defensive works to protect the harbor. With our glasses we could easily see the huge guns mounted at every favorable point, ready on the instant to thunder a "thus far and no farther" to the unwelcome intruder. We soon passed the narrow entrance and anchored in the beautiful harbor. It is completely land-locked, capacious, easily defended, in fact, one of the

finest in the world. We found it crowded with ships of every country in the world, among which it was cheering to see two of our armored cruisers, the Pennsylvania and the West Virginia. As we steamed past them you may be sure we gave them our heartiest salute. Hong Kong, or as the English call it, Victoria, is on the island of Hong Kong, at one of the mouths of Pearl river. It is built partly on a narrow, level strip of land between the base of the hills and the water front, and partly on the sides and on the tops of the high, steep hills or mountains, they might be called, as one of them, "the peak," is 2000 feet above the sea. The city is very picturesque. The steep mountain sides are terraced and made accessible by fine roads and cement walks, while drains and conduits are provided to effectually take care of the torrents of water that fall here at certain seasons. Fine dwellings are scattered about the high grounds to the very tops of the hills. An incline railway, 1400 feet long, carries one to within 600 feet of the top of "the peak," the rest of the ascent is made by chair, carried by two or three coolies, or on foot. At the top of "the peak" there is a fine observatory and from it a magnificent view of the city, harbor, islands and waterways is had—one of the finest in the world. The city is a great business mart. It is solidly built of granite and of a type that speaks for permanency. The harbor front, especially, shows an unbroken line of massive, five-story granite buildings with the inevitable colonnade and balcony at every floor, which is a feature of the architecture of all tropical latitudes. A splendid modern hotel is within a block of the landing. The streets are beautifully paved and clean. Street travel is by trolley car, "rickshaw" or chair, the latter usually carried by two coolies. The general aspect of the city is that of a prosperous English commercial port. The Chinese quarter or portion does not give the impression of oriental civilization that one would expect. The harbor literally swarms with the small Chinese house-boats, called sampans. They are moored, several deep, along the harbor retaining wall. Each of these is the abode of a family. They are from ten to twenty or more feet in length, made of heavy planking with a curved bamboo roof over the middle half. They are propelled by sail or oars. The women usually navigate

them, and frequently we would see women with babies strapped upon their backs working at the heavy oars. Even little children 6 or 8 years old would take hold of an oar or catch up a rope and make a lashing as expertly as an old time boatman. Besides their human dwellers, one sees all the usual domestic animals stowed about these boats. Chickens, dogs, pigs are as much at home as they could be on *terra firma*. These boat dwellers are in great, one might better say, vast numbers on all Chinese waters, and are a unique and most interesting feature of these strange lands. The population of the city is mostly Chinese, but the English do most of the heavy business. There is a considerable garrison maintained here, and we are again greeted with the sight of the tall, straight, slender, red or white turbaned Sikhs, so familiar to us throughout India, where they are almost the only natives taken into his majesty's armed service. These fellows are fine, martial looking and never seem to forget their dignity and soldierly bearing. They have a most remarkable likeness to each other. Their thin faces, inky black beards and hair worn moderately short, their full, large black eyes make up a physique strikingly alike. They are, all in all, a handsome, picturesque, thoroughly soldier-like lot, and in addition, Britain has found that she can depend on their fidelity.

On our way from Manila, various alarming stories had been circulated about the ship to the effect that the populace of Canton were in a very ugly mood about our proposed visit to that city, and that it would be highly dangerous for us to go there as the authorities were fearful that they would be unable to restrain the mob. A considerable amount of telegraphing went on between the steamer's agents and our conductor on the one side and the U. S. consul at Canton and minister at Peking on the other. Word was finally received that the Chinese authorities were prepared to give us safe conduct, so on the 24th in the morning the section of the party to which I was assigned started up the river to that city, 90 miles above Hong Kong. These alarming rumors had aroused so much apprehension that many did not undertake the trip, and some, after reaching the city, feared to leave the boat. The trip up the river, which takes seven or eight

hours, is a delightful one. We went on one of the regular river packets. These boats are large, clean and well conducted, as fine as any river boats anywhere. One part of the boat's equipment that arrested instant attention and caused some misgiving, was the presence at various places on the decks and in the saloon, of gun and cutlass racks liberally provided with these weapons, all ready for instant use. It appears that the days of danger from sudden attacks by river pirates are not yet past, and all boats carry a sufficient armament for the protection of the passengers and crew, and these are expected, when occasion arises, to arm themselves for the fray from this "ready to use" armamentarium. Fortunately, or otherwise, we were not called on to show our prowess. At first the river is very wide, so wide that at times but one shore is in sight. As we ascend it grows narrower, until at the city of Canton it is about twice the width of the Ohio at full stage, but apparently much deeper. The banks are low and flat, but a few miles back the land rises into rather high hills. Native villages, pagodas and the omnipresent "sompans" are the noticeable features. As we reach the outskirts of the city the river-dwellers grow more numerous, and before the dock is reached, the river on the city side is half covered with their "sompans." These are moored close against each other twenty or thirty deep along the shore. Open waterways or streets are maintained at intervals so as to allow any boat to be taken out into the open water. The number of people living in these boats is variously put at from 100,000 to 300,000. While the accommodations on these boats are necessarily meagre and restricted, they are in many respects superior to many of the residence districts of the city itself. The situation may have its advantages too in a political way on account of the facilities it affords for increasing or decreasing the voting population of the various wards as political exigencies require. When our boat reached the dock our party, about 70, were met by a police escort and conducted to our hotel, about five minutes walk from the landing. It was easy to see that had the populace been at all hostile we should have had about the same show as the much mentioned "snow ball in Hades." The street along the water side was a wide one for

Canton, probably twenty or twenty-five feet, and it literally swarmed with men. Our progress was much like what it usually would be towards the entrance of the big circus tent just before the performance begins, or to the waiting street car after it is over. And this was Canton wherever we went. In order to facilitate our sight-seeing, we were divided up into parties of seven, and with each party an English-speaking guide, and two or three soldiers. We were carried in chairs, two or three coolies to each one. Canton is said to contain upwards of two million people, and one can well believe it. The native city is walled around and just outside the wall are the residences and business houses of the foreign element, English, French, German, American, etc. The city is a very old one, its history running back 1500 or 2000 years before the Christian era. Its streets are very narrow and irregular. They range from three to eight feet in width, and awnings or projecting lattice shades from the upper stories of the buildings almost completely shut out the sun. They are paved with granite slabs, 10 or 12 inches wide and long enough to reach clear across the street. No vehicles except chairs are seen on them, and it is rare to see any animals. We saw four ponies in all, each ridden by a presumably superior personage. The houses are built of stone, or brick stuccoed, are two to four stories, with an occasional one having more. Like all the oriental cities we have seen, the shops open directly upon these narrow streets, and all the various handicrafts and business are carried on in full view of the passerby. Usually, similar industrial or mercantile shops are grouped together. One district for shoes, another for silks, another for jewelry, etc. The blacksmith, the carpenter, the cabinet maker, likewise. In many parts, however, they are mingled indiscriminately. A butcher's shop may be next to a clothing store, and next, just across the five-foot street a store with the richest silk or linen embroideries. A jeweler's shop with priceless stones and gold and silver work will be next to a dried fish stall or a native restaurant. Apparently there is no aristocracy of location, democratic confusion reigns uncurbed. The streets being so nearly roofed in, they are usually rather dark so that many of the lower rooms re-

quire artificial lighting. This is done with candles, lamps or electricity. As for the contents of these shops, they are beyond my powers to catalogue. Exquisite ivory carving, wood working, weaving, printing, precious stone cutting, tailoring, shoemaking, in fact about everything that human hands ever essayed to do, you see going on right before your eyes. And it is all done with such deftness, patience, attention to detail, thoroughness and surprising skill that one is tempted almost to call it perfection. Their implements and devices are mostly peculiar to themselves, yet one sees the sewing machine wherever work adapted to it is carried on. The streets are usually filled to their capacity with the constantly ebbing and flowing stream of humanity. The good-natured tolerance of the people towards all the various and necessary obstacles to traffic and locomotion is wonderful. A jam in one of the narrow lanes, with the meeting of opposing streams of pedestrians, produce or merchandise carriers, chairs with their bearers, is patiently overcome. No quarreling, no angry contending. The only sounds heard, and these are almost continuous, are the warning shouts of the chair carriers to let those ahead know what is coming. All this shows how far advanced these people are in civilization, that is to say, in the evolution and development of those qualities which enable men to dwell in comfort and peace and safety when crowded together in dense masses. Friendliness and civility were universally accorded us, and not a sign of hostility or ill-nature was anywhere shown. The dress of the men was the universal blue or black trousers and loose coat; the women, many of them mincing along on their small deformed feet, as a rule wore the same colors brightened up by a scarf or sash. It seemed incongruous to be spending Christmas among this people. Not that they lack religion. Like all orientals, they have a great deal more of it than we have. Their sacred pagodas, temples and places of worship amply attest their status on that matter. Our Christmas was spent in a chair tour, escorted by police, to the various places of interest to which strangers may be taken. Among these are the Hall of 500 genii, the Flowery Pagoda, the water clock, the execution ground, etc. This latter is in almost daily use, and the

visitor to it is apt to come upon a gruesome sight. Removing the heads of criminals is a very flourishing industry here, and it is almost a daily occurrence for one or more poor wretches to satisfy the demands of injured justice by submitting to the ceremony. The executioner strikes off the heads with a heavy sword, and head and body are allowed to remain on the ground, uncared for, until the following day, exposed to the gaze of the curious. I know, of course, nothing of their laws or criminal jurisprudence, but I imagine that penalties must be summary and severe, and perhaps more or less arbitrary. Indeed I was told that on the occasion of our visit a proclamation was posted throughout the city, ordering anyone who offered to do us any violence to be beheaded immediately. We saw the headsman, a grim, grisly, elderly man, tall and athletic. He is credited with having officiated at more than six thousand executions.

By way of farewell to Canton, one cannot but admire the orderly way in which the almost incomputable conveniences and necessities of this vast city are provided for. Patience, good nature, mutual concession, orderly conduct, in a word, civilization, alone could make it possible. The wonderful skill of its artizans and handicraftsmen are beyond belief almost; their products astonishing in their perfection, adaptation and beauty. The world can come here in quest of the richest and finest in fabric or handiwork, and find that which more than satisfies, and yet these people are benighted heathen, so we think. Our next point is Japan. L. D. WILSON.

Selections

TRAUMATIC NEUROSES FROM A MEDICAL POINT OF VIEW.

Archibald Church, M. D.,
Chicago, Ill.

We may classify the results of injury to the nervous system perhaps as follows:

1. Organic injury, including the surgical injuries.
2. Traumatic neurasthenia.
3. Traumatic hysteria.
4. Combination of these three.
5. Traumatic epilepsy.

6. Traumatic insanity.
7. The litigation psychosis.
8. Various combinations of the preceding.

(2) Marked neurasthenia may be caused by traumatism and is exactly like the neurasthenia which develops without traumatism. I need not go into the symptoms of neurasthenia after traumatism, but they are exactly like those in neurasthenia which occur in the overworked school teacher or the overworked farmer, but when following trauma the condition is likely to be emphasized by certain conditions. It may be exaggerated by suggestions of hopelessness on the part of friends; by legal advice; or even by medical solicitude and tactlessness; it may be associated with the prospect of profitable litigation, so that a psychical atmosphere is developed to which I will refer later.

(3) Traumatism may cause hysteria, and this is usually in proportion to the amount of fright which accompanies the physical shock, and in inverse proportion to the physical injury. If the injury occurs during sleep or under such conditions that there is no preceding fright or fear, hysteria almost never develops; but when prior to the injury there is a chance for building up a sense of fright or fear, hysteria is likely to be manifested.

(4) Hysteroneurasthenia. Pure traumatic hysteria in women is not rare, but you almost never find a case in the male sex unattended by neurasthenia, so that these two conditions are commonly found associated. As a matter of fact we do not find typical cases of either singly except in females; a rule, of course, honored by exceptions. Combinations in these cases being common, we have a third syndrome—hysteroneurasthenia. Bayley has proposed a condition marked mainly by mental features which he calls cerebraesthesia. But the mental features of this group are the common complaints of neurasthenia, and I see no necessity for establishing this additional class. Neurasthenia, indeed, is always a psychosis; in it there is fear of not getting well, lack of mental stamina, worryment, depression, irritability and some loss of self-control. So with hysteria; it is a disturbance of the brain and of brain function. Both are psychoneuroses.

(5) Epilepsy is another psychoneurosis, which is frequently a cause for a suit for damages. Indeed, there is no case of head injury in which the assertion is not made with a certain degree of positiveness that the patient is likely to develop epilepsy. Every medical witness is asked in the case of a skull injury whether it is not possible that epilepsy may develop. And the physician must truthfully say that it is possible. But what is the degree of probability? In the first place, epilepsy is a very common disorder, and a great many cases occur which are not easily recognized. In Illinois there is one case of epilepsy for every 350 of the population. Now as epilepsy is practically a disease occurring between fifteen and forty years, you see what a large proportion of all those in the productive years of life are epileptics. It is strange, by that fact alone, that it does not more frequently figure in damage suits.

Turning to the statistics of the Franco-Prussian war, we find among the soldiers of the Prussian army, as shown by the surgical records, that there were 8,985 cases of head injury, practically 9,000 cases; and out of these only 46 developed epilepsy; that is 5 per 1,000, or one-half of one per cent. How common it is for head injuries to come into hospitals, and yet the subsequent development of traumatic epilepsy is extremely rare. Great injury may be done the skull and brain and be followed by no untoward condition. This is so, particularly in children, but also in adults. It would almost appear that the best way to avoid epilepsy is to get a head injury. It must be borne in mind, however, that soldiers are not potential or actual epileptics; they are a picked body of healthy men and discharged if they present this condition. When we say on oath that it is possible for epilepsy to develop after head injury, we should also say that this possibility is a small one.

(6) Insanity is another condition which may follow traumatism, but I am glad to say that traumatic insanity is absolutely rare. The insanity that follows the administration of anesthetics is even rarer. Some years ago I investigated 2,254 cases of insanity to see what proportion gave a history of head injury, and to determine in how many the insanity was properly attributable to the injury. I found that but 3 per 100 had "alleged" head injuries. These sta-

tistics, while made up from the statements of friends and relatives, showed that many of the alleged head injuries were of the most insignificant character. For instance, a girl bumped her head while getting some apples in the cellar, and three years later she became insane. In some way her condition was thought to be connected with this injury, whereas now we would recognize the case as a typical one of dementia praecox. A large proportion of the head injuries were of this character. Separating those that were not questionable, only 1 in 300 could, in any reasonable sense, be attributed to traumatism.

Turning again to the figures of the Franco-Prussian war, in 13 of the 8,985 head injuries insanity developed, that is $1\frac{1}{2}$ per 1,000. The natural liability to insanity is greater than that, just as in the case of epilepsy. In most cases of insanity there is no single cause; usually there are a multiplicity of causes.

But insanity does certainly occur as a result of head injury, that is to say of brain injury. There is a well-defined clinical type of acute insanity which follows directly after head injuries, and which appears after a few hours, days, weeks or months, during which period there is a continuous chain of symptoms linking the mental disturbance with the traumatism. I recall a case following injury by a fall from a bicycle. There was immediate unconsciousness, and later the patient was speechless, with loss of power on the right side and mental obscuration. An opening an inch and a half in diameter was trephined over the motor area on the left side of the head, and when the dura was reflected the cortex was seen to be black. This ecchymosis extended beyond the visible limits of the skull opening, so another was made over the parietal region on the left side, and the same condition was found. A third and fourth were then made on the right side, and here the contusion was equally pronounced. The boy recovered from the operation and regained his speech and motor power, but in a few days became maniacal. This condition lasted several months, then subsided gradually but permanently. The patient has been fairly successful in journalistic work for the past twelve years. This I give as a type case. Seventeen such cases are reported by Meyer of Johns Hopkins, who is to have charge of

the new Phipps Psychopathic Hospital. Brush of Brooklyn, collates twenty-eight. Other small groups are reported by Kraepelin, Peterson, Kellogg. These are not large numbers, not even running into the hundreds; it is a rare condition. About half such cases recover, one-quarter die, and the remainder make partial recoveries, have relapses or develop a terminal dementia. In all of these cases other conditions are also found which have a bearing on insanity, such as alcoholism, arteriosclerosis and previous attacks of insanity.

After any laceration of the brain, or hemorrhage, or softening, or tumor, or any gross lesion, there sometimes develops a dementia, organic in origin, due to loss of brain tissue. If these injuries occur early in life, as in childhood, the intellectual qualities already attained may recede, and if such injury occur during intra-uterine life idiocy may result, and thus we have traumatic dementia, imbecility and idiocy, respectively.

(7) There is a variety of mental disturbance which is of particular significance; what I might venture to call a litigation psychosis of a hypochondriacal complexion. Those who have suffered injury attributed to the carelessness of someone else become mentally centered upon themselves, their grievances and gloomy prospects, with emotional attitudes of moroseness or vindictiveness. The patient makes up his mind that "those fellows will have to pay for it," and each twinge of pain is added to his credit account; it is stock in trade to him, an addition to his capital, and hopelessness becomes a delusion as clear-cut as the delusions of hypochondriacs, who feel sure they have cancer or syphilis. It is perfectly impossible to disillusionize such a patient. When a physician suggests that an injury may be very serious the patient readily adopts that point of view, and the condition readily runs into a litigation psychosis, almost always associated with hysteria, neurasthenia or combinations of the two. Such patients are often represented to be of changed character; that they can't bear to have children around, and are morose, gloomy, apprehensive and forgetful. But if an investigation is made it will be found that the "loss of memory" is at strange variance with the accurate knowledge of all that pertains to the conditions of personal health;

everything else falls into obscurity in comparison with this. These conditions give ground to the assertion that the patient is "changed," and is going to become insane, and this is utilized in the claim for damages. This mental condition usually rapidly subsides after litigation has been terminated.

I wish to be well understood when I assert that traumatic hysteria, traumatic neurasthenia and traumatic hysteroneurasthenia of a severe grade are serious conditions. I take it that no medical man who knows these conditions intimately would hesitate between the choice of amputation of the leg and a marked case of traumatic hysteria. It is a serious condition, and the prognosis is not good. Patients with hysteria may get well, but in bad cases hysteria may persist to the end of life. In recovered cases individuals may again be made decidedly neurasthenic by a traumatism of insignificant character. Unusual strain or stress of any kind at any time may throw them back into this slough. This is especially true if hysteria occurs after the age of forty, and even to a greater degree in those showing a marked change in arteries. Complete recovery is the exception. Substantial recovery is the rule.

In making a diagnosis of the traumatic neuroses it is our duty to recognize the gravity of the condition. The longer the case is allowed to lay in court, the longer the individual is allowed to watch himself and his conditions, the worse it is likely to be. Physicians, lawyers and friends should try to secure an early settlement of the case. In proportion as these cases are settled early they become insignificant. We are more the creatures of our emotions than we realize, and our good emotions benefit as much as depressing ones do us injury. Avoid long litigation and counsel an early settlement as a health measure.

I will incidentally call attention to a number of organic diseases of the nervous system that sometimes find themselves related to medico-legal questions.

The query frequently arises whether locomotor ataxia is caused by traumatism. The prevailing idea is that it may be hastened or intensified by trauma, but finds its origin in a long antecedent syphilis. But the man who has active syphilis may have it localized in any region or organ by traumatism. So too, tuberculosis may be localized by trau-

matism, and there is some evidence that brain tumor in rare instances owes its localization to an injury. But there is no evidence, so far as I can find, that locomotor ataxia or paresis has ever been caused solely by traumatism. That it may have been precipitated by traumatism is, of course, plausible.

So, too, the effect of electricity on the nervous system, including the effect of lightning, comes up when people are said to have been blinded by a flash, or when they have been injured by acting as conductors of the electrical current. I can find, however, no evidence of any organic change in the nervous system due to electricity in any case in which death has not occurred at once; that is, if death does not take place instantaneously, the injury is the same as from mental and physical shock or fright. What is true of electricity is true of lightning. There has never been a serious organic injury to the nervous system from these causes that did not result fatally. The fatal result is probably due more to the cardiac effect than to electrical influence upon the cerebrospinal system.

Other conditions sometimes attributed to injury are multiple insular sclerosis and paralysis agitans. The question is still undecided, but the traumatic influence is open to every doubt.

Then there is the late apoplexy of Bollinger, in which a hemiplegia of hemorrhagic character, supposed to be secondary in some instances to a small initial softening, occurs a few days or even weeks after a head injury. In the nature of things the sequence of pathological changes must be a matter of speculation in the non-fatal cases, and even in those which die it requires a radical assumption to attribute the apoplexy to the trauma after the lapse of any considerable number of days.

My plea is that we individualize every case, carefully limit our diagnostic conclusions to what are relatively well-known conditions, and refuse to be satisfied with such a catchall as "traumatic neurosis." It is also incumbent on us as medical men that we carefully guard ourselves from contributing to the upbuilding of the subjective and mental features of these traumatic cases. And finally all—lawyers, medical men, laymen, and the public at large—should co-operate in stamping out those who

foster litigation to the immense disadvantage of the injured and the robbery of the public, because in the ultimate analysis the public pays the bills.—*Cleveland Med. Journal*, April, 1910.

Abstracts

THE CARDINAL PRINCIPLES FOR THE SUCCESSFUL FEEDING OF INFANTS.

Dr. Thos. M. Rotch, in the *Interstate Medical Journal*, May, 1910, treats this subject very fully. We here attempt to give the essentials of this article. The human infant thrives best on milk, and as a general rule no barley water or other ingredient should be added during the first year. Infants vary in development, physiological and physical; an infant should not be forced to sit or stand until sufficiently developed anatomically. Nor should the amyolytic function be forced to convert starch into sugar until this function is sufficiently developed, and this is not usually before the eleventh or twelfth month. Human milk has never been found to contain starch in any form. When the exceptional infant thrives on starch, it is because the development of the amyolytic function is more advanced than usual.

The infant also has its power of digesting the fat, sugar and proteid content of the milk grow gradually. If the infant's nutrition seems to need other food element than those found in milk, starch may be carefully tried, hoping that the amyolytic function is sufficiently developed.

The milk of different animals differs in quality. The milk of different breeds of cows differs as to percentage of fats, sugars and proteids, and the percentages have to be changed to suit the individual infant's digestion. The fats especially of different breeds differ, the sugar and proteids less so. This difference in the fats seems to exist in the proportion of the stable glycerides in the fat to the volatile glycerides. The latter are what are most likely to produce indigestion, hence the milk that contains the smallest proportionate amount of volatile glycerides is best suited for infant feeding. Human milk contains a small and Jersey milk a large amount of these. The fat of

Holstein milk contains less of the volatile glycerides than in any other breed of cows, thus more nearly approaching human milk. The emulsion in Holstein milk is also much finer, less easily disturbed and more easily restored than that of any other breed, thus more nearly resembling human milk. If Holstein milk can not be had, do not use the Jersey, but the milk from some of the common grades, as Durham, Devon or Ayershire; and the milk from the herd is preferable to that from one cow, which may chance to contain something deleterious. If the family has one Holstein, the milk may be tried, and may be satisfactory.

Cheap milk is as a rule dangerous milk. Its costs money to put on the market the best milk. Necessities are (1) an honest milk dealer; (2) a clean cow stable; (3) clean milkers; (4) healthy cows tested for tuberculosis; (5) absolute protection from bacteria and dirt, and rapid delivery from the milking house to the consumer; (6) absolute care to keep the milk cold and clean in the infant's home; (7) absolute cleanliness of bottles, nipples, and hands of the person who feeds the infant; (8) the proper intervals of feeding from 2 hours at first, gradually increasing to 3 hours according to the infant's development rather than its age; (9) the milk to be warmed to a temperature of 98 or 100 degrees, and kept warm by a cozy during the feeding.

Begin with a little less milk than the infant will take. Judge of its progress in development by its weight. Starting with one ounce, gradually increase to 2 ounces in 2 months, then 3 or 4 ounces, and by 6 months 6 ounces, but always watching the weight, the increase of which should be about one ounce a day for the **first** half year, and one and a half ounce in the second half year. Large babies must be fed a correspondingly larger amount. These rules are for healthy infants. Attention to little details must not be neglected.

Modified milk is milk with anything added to it. When possible it should be modified in a milk laboratory by those trained in the work. To properly modify milk is a difficult problem. It is simpler to write a prescription with the different ingredients named, and have it filled by those skilled in the art of making the proper changes. It is first necessary to properly diagnose the kind of a case to be dealt with, and determine

whether you have a case of normal digestion. Next, what is the stage of development of the digestive power? The infant may be six months old with a four months digestive power, or *vice versa*. The strength of the food mixture must be regulated accordingly. Or the infant may have an idiosyncrasy which prevents it from digesting certain elements in the milk or certain combinations. To fit the food to the special infant, is the problem presented, and do not attempt to give simply the average food for an average group of infants of the same age. Thus we must change the percentages of the fats, sugar and proteids, according to the individual digestion. The proper combinations we can not at first accurately know, and hence must start with low percentages and gradually increase each element in turn, so as gradually attain a percentage combination of fat 3 to 4 per cent, sugar 6 to 7 per cent, and proteids 1 to 2 per cent. If the infant is growing well and steadily gaining in weight, this shows that the percentages and caloric values of the food are correct. These percentages are then retained until toward the end of the year, when they are gradually changed until they are similar to the whole milk. For example, in a premature infant it is safe to start with 1 per cent of fat, 5 per cent of sugar, 0.25 per cent whey proteid, and 0.15 per cent casein. In an infant at term you may start with 2 per cent fat, 6 per cent sugar, 0.50 per cent whey proteid, and 0.25 per cent casein. In either case gradually increase the fat to 4 per cent, the sugar to 7 per cent, the whey proteid to 0.80 per cent, and the casein to 0.75 per cent. About the middle of the year an undivided proteid of 1 per cent can be substituted for the divided proteid. Toward the end of the year gradually increase the proteid to 3.50 per cent and reduce the sugar to 5 per cent. After this the cow's whole milk can be given and a cereal can be added to the food. It is not well to increase all the constituents of the milk at once, because, in case indigestion occurs, we cannot tell which element is at fault. By noting certain symptoms, and by observing the character of the fecal contents, and having a chemical examination made of them, we may learn which of the contents of the food is at fault.

A gain in weight is our first object. But condensed milk, rich in sugar (sucrose),

may cause this and at the same time so affect the metabolism that the proper nutrition of the bones and muscles is interfered with and rickets results. First, therefore, see that digestion is good, and then, by making needed changes in the food provide a suitable caloric value, which will make up the balance on the side of nutrition and in this way accomplish a normal metabolism for the individual case. Lack of nutrition is shown by failure to gain weight or by a loss. We must try to determine what constituents of the food are not being utilized or are disturbing the digestion, and then lessen the percentage of the disturbing factor, increasing one of the others as soon as possible so as to keep up the nutritive value of the food. The stools of an infant should be smooth, homogeneous, semi-solid, not formed, of different shades of yellow, according to the different amounts of fat, and have a weakly alkaline or neutral reaction.

Fats—The amount of fat in an infant's food should be adapted to its power of fat-digestion. The nutrition which is dependent on fat suffers when the percentage of fat falls below 1, and the digestion suffers when the fat percentage is above 4. Vomiting as a symptom of functional disturbance of the stomach is not entirely a gastric symptom. Disturbance of the intestinal tract, either organic or functional, may cause reflex vomiting without gastric disturbance. An excess of fat, beyond the capability of fat-digestion, is prone to cause spitting up or regurgitation, or vomiting of soft, flaky curds soon after taking food, and the eructation of gas of a rancid-butter odor. Generally there is no odor. There may be distaste for food and frequent discharges, gray or white in color, dry or creamy, acid, and of rancid odor, and with little gas.

Curds—There are two kinds in the stools. One is from the casein, large and tough; the other from fat, small and soft.

Carbohydrates—Five classes are used in infant feeding. (1) Lactose (milk sugar). (2) Maltose (malt sugar). (3) Sucrose (cane sugar). (4) Dextrose (grape sugar). (5) Starch. These give different results, but dextrose is the only one capable of being to any extent absorbed into the circulation, representing the final product into which the others are changed. Lactose should be generally used, but if there be lactic acid fermentation, maltose should be for a time

substituted, as it reaches the point of lactic acid fermentation more slowly. If butyric acid fermentation is in excess, lactose must be used, for it is slow in such conversion. In lactic acid fermentation there is a sharp odor of sour milk, and in the butyric acid there is a cheesy or rancid-butter odor. Vomiting is generally due to lactic acid. Gas is due to carbon dioxide from sugar changed into lactic acid. The lactic acid fermentation causes loose, sour-acid smelling stools that excoriate the skin around the anus. In such cases the sugar must be reduced. The author cautions against the too early giving of starch in infant foods, since it taxes digestion more than any of the carbohydrates.

Proteids—These in milk are whey proteids and casein. The former do little harm. The latter often cause great disturbance. The following table shows the possible combinations of these proteids where the percentage of fat in the food varies from 1 to 4 per cent and that of sugar from 4 to 7 per cent.

Whey Proteids, Per cent.	Casein, Per cent.
0.25	0.25
0.50	0.25
0.75	0.25
0.75	0.50
0.80	0.25
0.80	0.50
0.80	0.75
0.80	0.60
0.80	0.90
0.75	1.15
0.60	1.25

An excess of proteids causes vomiting of large tough curds, and movements pale green and white, with tough curds of a more or less foul odor. A strong alkaline reaction suggests proteid putrefaction. In proteid indigestion keep reducing the casein, and if this is not sufficient, peptonize the food either partially or completely.

Alkalies are added to the food for their effect on casein. (1) Moderate alkalinity favors the production of hydrochloric acid in the stomach and thus favors the digestion of casein. (2) The stomach may be relieved in the digestion of casein by a lesser or greater amount of alkali. This must be proportionate to the amount of milk and cream given. Taking lime water as an example, 5 per cent in the mixture produces a slight

alkalinity, and assists in the digestion of casein by delaying its coagulation in the stomach, and passing it on to be taken care of in the duodenum. Of other alkalies, citrate of soda (not really an alkali) decalcifies the casein so that it is not affected by rennet, and therefore forms with the acids of the stomach soft friable flakes instead of tough curds. It requires .20 per cent to each ounce of the milk and cream used to facilitate the digestion of the proteids, and .40 per cent to prevent the action of the rennet and insure the production of soft curds. Soda bicarbonate may be used for the same purpose. Lime water generally does well. S. L. J.

1. I will not permit myself, if possible, to *speak while angry*. If I must speak before I can control my anger, I will force myself to speak in a low tone of voice. I will not make a bitter retort to one person who speaks to me in anger.

2. I will *not gossip* about the failings of another, nor permit any other person to speak such gossip to me. Gossip will die, with all its baleful, deadly train of slander and broken hearts and blighted lives, when it can not find a listener.

3. I will *respect weakness* and defer to it on the street car, on the train, in the store, and in the home, whether it be in man or woman.

4. I will always *express gratitude* for any favor or service rendered to me on the spot and at once. If prevented from doing it, then I will seek an early opportunity to give utterance to it in the most gracious way within my power.

5. I will not fail to *express sympathy* with another's sorrow or to give hearty utterance to my appreciation of good work by another, whether the party be friendly to me or not. One button-hole bouquet offered amid life's stress of trial is worth a thousand wreaths of roses laid on a man's coffin who died discouraged and broken-hearted.

6. I will not talk about my personal *ailments*. If my shoulder is rheumatic or I have the gout in my big toe or my knee joints are stiff, it will be one of the subjects on which I am silent and not open to interview.

7. I will *look on the bright side* of the circumstances of my daily life, and will seek to carry a cheerful face and speak cheerfully and hopefully to all I meet.

8. I will neither *eat nor drink* what I know will detract from my ability to do my best work and be of the most service to myself and others.

9. I will *speak and act truthfully*, living with sincerity toward God and man.

10. I will strive to be *always ready* for the very best that can happen to me. I will seek to serve the highest opportunity, to do the noblest work, to rise to the loftiest place which God and my abilities permit.—*Exchange*.

The West Virginia Medical Journal

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Editorial

If the JOURNAL does not reach you by the 10th, drop us a card.

The next annual meeting of our State Medical Association will be held in Parkersburg on October 5th, 6th and 7th.

CONTRACT PRACTICE.

Much has been written on this topic, and many bitter things have been thought and not a few of them said anent the physician who engages in this sort of practice. The subject is one which admits of honest difference of opinion, especially since there are many forms of contract practice. In this State the most familiar form is that of mining companies making a contract with a physician to attend to all medical, surgical and obstetrical work of the families of the miners employed by the respective companies, a fixed sum being retained for the physician from the wages of each miner. To this form of contract practice there can

not reasonably be any serious objection, especially since the compensation is fairly large, and is certainly greater in the aggregate than the physician could reasonably hope to collect privately from the same patrons if he charged them a full price per visit. The same may be said of those physicians who attend the families of a large number of mill workers, as a number do about Wheeling, Benwood and in other manufacturing communities.

But what shall be said of lodge practice? There are a large number of fraternal organizations in the country, and these are on the increase. Many of them, in addition to the life insurance feature, have provision for sick benefits, and others provide medical services for the sick and injured members and their families. It is said that some of these societies pay the physician the established price per visit. We have heard of this being *promised* as an inducement to physicians of high character to accept the position of lodge physician, but we have never known of a case in which the promise has been kept. Such exhibition of generosity must be exceedingly rare, if indeed it is ever displayed. We do know that generally the sum paid is miserably inadequate and degrading. For example, a physician of excellent standing in this city was offered a position of lodge physician for which he was promised \$2.50 per year for attending each member and his family. The offer was in no way tempting and was promptly declined.

It seems, from a recent letter issued by the president of one of these fraternities, that they are having some difficulty in securing physicians who are willing to degrade themselves by accepting the miserable pittance offered, namely, two dollars per annum for medical and surgical (and sometimes obstetrical) services to each member of the lodge and his whole family and dependents. In addition to this he must attend every lodge meeting and make stated reports of his professional work; failing in which, a fine is imposed.

A most serious result of this system of securing medical services at less than a day laborer's wage, is the organization of associations for the sole purpose of procuring such cheap service. Such an organization has been formed in Salt Lake City and perhaps in other places. Monthly dues are

paid for this purpose alone, and for this the doctor is expected to forget his obligations to his profession, himself and his family, and sell himself to the lowest bidder. There are a number of serious objections to any physician accepting the position of lodge physician. It is undignified thus practically to underbid one's brethren in the same community, a custom long since condemned by the organized medical profession. It will ultimately lead to complete professional demoralization, if practiced by the better members of the profession. The lodge physician is bound to be imposed upon by many needless calls, and thus he is kept busy by a practice which, while bringing him little compensation, so fully occupies his time that little opportunity remains for the study of cases, or for self-culture either in the profession or along other lines of study. It may be safely said that no physician who has a high regard for his own services or the dignity of his calling, will accept a position that will pay him from ten to twenty-five cents per visit, and may bring him even less. Consider the trying anxiety of an obstetrical case, and the dread responsibility of a fracture or dislocation case, either of which may plunge him into a suit for malpractice; and then compare the services rendered with the pitiful compensation. Working men themselves, the chief beneficiaries of this form of practice, should decline to enter into an arrangement that compels men of education to engage in the very thing that the labor unions so bitterly denounce, namely, the cutting in prices of labor, in effect "black sheeping".

A number of medical societies have taken action to disbar from membership any member of the profession who accepts the post of lodge physician. Among these are the Oakland Co. Society of Michigan and the Orange Practitioners' Society of New Jersey. The secretary of the Washington (Pa.) Co. Medical Society thus writes in *The Bulletin*:

The doctor who is doing lodge practice for three dollars a year for a family, or part of a family, is certainly a ass. He is not only a ass in the eyes of a real doctor but he is a silly ass in the eyes of the very men who employ him. No self-respecting mechanic or working man will argue this point with you even if he does avail himself of such services. Quite recently one of this class had a severe accident happen to him, and wanting a good doctor sent for one

and after he found out the extent of the injury, wished to avail himself of the silly ass who did it for three dollars a year but was told that he could do so if he wished; however, the charge would be just the same to the end as if he changed now. This was right, and such people should be taught a lesson.

While many doubtless agree with the writer of the above, holding, and generally correctly, that the families receiving the services of the lodge physician get no more than the value of their money, yet it may be wiser to take a more charitable view, and by calm reasoning try to show these physicians that they are lowering their own dignity and the esteem in which the profession generally is held, and that ultimately loss will result to themselves, not only in the forfeiture of the respect of their professional brethren but of that of the people, for they can scarcely expect the patronage of the more intelligent and prosperous, when these people come to know that they hold their services at so low a value. Dr. Thomas, writing from Meadville, Pa., to the *Jour. A. M. A.*, says, that the lodge physicians of that community were kindly approached on the subject, and he thus tells the result:

Without bitter condemnation, but with friendly reasoning, every doctor in the city signed the resolution agreeing to cease contract practice work for lodges and fraternal societies. The fact that for \$2 a physician was expected to treat for a year all members of a family, be the members two or a dozen, was easily shown to be unfair to the public and an injustice to the profession. The public, with few exceptions, see the matter in the same light, and up to the present, no one has been prevailed on to come from the outside to enter into a contract to do the work abandoned by local physicians.

The course here adopted seems wise, as it is certainly kind, and we advise any society that is having any cases of the kind that need looking after, to follow the example that in the case cited turned out so pleasantly and satisfactorily. "With malice toward none and charity for all" is a doctrine that must not be allowed to die; and in dealing with the matter here presented it would be well for each one to search his own life and conduct and remove the blemishes before proceeding too vigorously to eradicate the faults of others.

Other forms of contract practice may be considered at another time. Our purpose here is chiefly to deal with lodge practice, which is such a growing evil that it seems to demand some attention. S. L. J.

LAST CALL.

The annual meeting of our State Association is not many months away. We last month extended to the members the invitation of our secretary to send him the titles of papers to be written. He wishes us to repeat the invitation, and to make it urgent. Let no member be so modest as to await a personal invitation. Commence your papers now, and you will have leisure to rewrite, correct and improve, and thus the editor's labors will be lightened. Let us give the beautiful city of Parkersburg the best meeting we have ever held.

PAY YOUR DUES NOW.

Why? 1—Because you owe them and the time limit for payment was April 1st.

2—Because we must know how many copies of the JOURNAL to print each month. All copies that go to those who fail to keep alive their membership are lost, and we who do pay have to foot the bills.

3—The Postoffice Department has ruled that no monthly publication can be sent to those who are in arrears more than four months, unless the postage be prepaid. So if you fail to receive next month's JOURNAL, you will know the reason. *Pay your dues now.*

Those who are inclined to allow their interest in the Am. Med. Ass'n. to decline should carefully ponder these words of Prof. Welch of Johns Hopkins, a man esteemed throughout the world for his scientific attainments, and loved for his personal qualities by all who know him. Said he: "During the past decade the results accomplished by this association in the organization of the profession for higher standards in varied fields of medical activity have been perhaps the most significant event in American medicine. The Association should receive the loyalty and active support and cooperation of all physicians who have at heart the best interests of the profession and the advancement of American medicine." Entire loyalty to the A. M. A., however, should not prevent us from seeking such changes in the rules or management of the Association as give promise of even greater efficiency and more united support of the members. We note that the Illinois State Association, at its re-

cent meeting in Danville, voted its approval of certain changes that have been persistently pressed by Dr. Lydston. Not all of these seem to us to be necessary, but no harm can come from their careful consideration by the House of Delegates of the Am. Med. Ass'n. at its coming meeting.

The *American Journal of Surgery* has introduced a new department of *Surgical Sociology*. This will consider various phases of the relations existing between the needs of society and the responsibilities of the surgical profession. More specifically, it will concern itself with the prevention of surgical diseases and injuries. Industrial accidents and safety devices; "Fourth of July injuries;" the care of cripples and those otherwise handicapped by surgical afflictions; special hospitals, clinics, sanatoria and convalescent homes; some surgical aspects of district nursing, playgrounds and factory regulations; the prevention of blindness—at birth and in the factory; social conditions that affect pregnancy and parturition—these are some of the many problems with which the new department shall deal. The editor invites communications and suggestions touching these topics.

A NEW JOURNAL.

The *American Journal of Physiological Therapeutics* is a handsome bi-monthly of 60 pages, published in Chicago, and edited by Dr. Henry R. Harrower. It will deal with Hydrotherapy, Dietetics, Electrotherapy, Radiotherapy, Phototherapy, Vaccine and Serumtherapy, in short with every form of treatment except that by drugs. The editor has the aid of Pope, Abrams, Eberhart, Nieswanger and other good men, and we wish for the *Journal* abundant success. \$1.00 per year.

The May issue of the *Am. Jour. of Clinical Medicine* is an unusually interesting one. "A Talk With Young Graduates," by Geo. F. Butler, merits careful reading by our younger men, who will also be interested, if not entirely convinced by Dr. Abbott in "The New Doctor's Opportunity."

Secretary A. B. Butt, of Davis, has a supply of the revised Constitution and By-Laws of the State Association and will be glad to send a copy to any one on request.

REPORTS OF COUNCIL ON PHARMACY
AND CHEMISTRY.

DR. CURRY CANCER CURE COMPANY.

This company, says the *Journal A. M. A.*, October 9, was engaged in treating, through the mails, patients afflicted with cancer. R. W. Ramsey was its secretary and manager and the advertisements informed prospective patients that their letters might be sent to him if they preferred, in order to insure secrecy. The concern advertised to cure cancer in 10 days by means of "a discovery that has startled the medical world." It had, it claimed, "a sure cure for cancer, so sure that it can be absolutely guaranteed." When a victim answered an advertisement, pamphlets and testimonials were sent to him, together with a question blank, on which he was to indicate the symptoms of his disease. He was informed that by answering the questions on the blanks sent him the company would be able to study his case "from the standpoint of successful specialists." If no reply was received to this letter, the company sent a series of "follow-up" letters urging the prospective victim not to delay. In those cases in which the question blank was filled out, the company sent the victim a letter in which it stated that it could cure him permanently by its treatment in from ten to twenty days at a cost of \$25. At its hearing the company submitted samples of the "remedies" by which these marvelous results were purported to be brought about. They were analyzed in the Department of Agriculture and found to consist of ordinary antiseptics, escharotics, narcotics, tonics and laxatives. The Assistant Attorney-General in summing up his opinion of the whole matter said that the Dr. Curry Cancer Cure Company had not succeeded where the profession has failed and they were not honestly endeavoring to cure patients. On the contrary, their pretensions to have discovered a cure for cancer were false and fraudulent. He recommended, therefore, that a fraud order be issued against the company and its manager, a recommendation which the Postmaster General accepted and the order was issued.

THE BYE CANCER CURE.

In *The Journal A. M. A.*, October 16, a somewhat full account is given of the B. F. Bye "cancer cure," which has recently been put out of business by the postal authorities. Bye has been engaged in treating persons with cancer, through the mails. When his methods were investigated, it was found that the sanitarium he was supposed to have was purely imaginary. Bye is said to be a graduate of an extinct Indianapolis medical school and has never had any private practice. His entire medical experience has been gained in the mail order "cancer cure" business. In his advertisements, Bye led his victims to believe that he had discovered a combination of vegetable oils which would cure practically every case of cancer. For his "treatments" he asked \$25, which if not accepted, was later reduced to \$12.50. The "cure" when analyzed by the gov-

ernment chemists was found to consist, essentially, of cotton seed oil and some ordinary tonics. To determine the percentage of "cures," the postoffice authorities investigated some 20 cases in which Bye's treatment had been used. It was found that but one of these patients claimed to have been cured, and in this one case a surgeon had removed the growth before the Bye treatment was undertaken, and the surgeon reported that the growth he removed was not cancerous. In recommending that a fraud order be issued against Bye, the Assistant Attorney-General summed up the case as follows: "According to the evidence submitted the medical profession knows of no drug or combination of drugs which can be relied on to cure cancer. That Dr. Bye has not succeeded where the profession has failed and that he is not honestly endeavoring to cure patients, but that his pretensions to have discovered a cure for this disease are false and fraudulent and asserted merely to deceive and defraud suffering humanity, is revealed by the analysis of his medicines and the finding that they are merely cotton seed oil and some ordinary tonics." The recommendation of the Assistant Attorney-General was followed and the fraud order issued.

CANCEROL.

Another of the numerous "cancer cure" fakes which the postal authorities have exposed, is dealt with in the *Journal A. M. A.*, November 6. This time it is that of L. T. Leach and his "cure" Cancerol. Leach is said to be the son-in-law of D. M. Bye, who some time ago operated a similar business in which Leach was employed in the capacity of manager; later Leach started a "cure" of his own. When a prospective victim answered one of Leach's advertisements he was sent a pamphlet and other matter which conveyed the impression that Leach had discovered and offered a treatment which would cure practically all cases of cancer. The cost of the treatment was \$25 a month. When the medicines which Leach used in his business were analyzed by the government chemists, they were found to consist essentially of cottonseed oil (Cancerol) and simple tonics. The inspector obtained the names of persons who had paid money to Leach, and by correspondence received reports of the results of the treatment in about forty instances. Examination revealed that but seven out of the forty claimed to have been cured, and that in but two cases was the patient examined by a local physician who diagnosed the trouble as cancer. In eighteen other instances in which the local physician had examined the patient and stated that the trouble was cancer, the patients found no benefit from the treatment. In no case had there been a microscopic examination of the growth, so that it cannot be positively said that in any case the disease was a true cancer. After showing the mendacity of Leach's claims, the valuelessness of his medicines and the worthlessness of his "cures" the Assistant Attorney-General, thus sums up the case against this man as follows: "Dr. Leach's pretense that he can properly diagnose cases of cancer, and prescribe remedies for them without personal examination mere-

ly by this correspondence scheme is without any scientific or proved foundation, and he must well know that it is mere pretense. What is undoubtedly the fact that out of the many cases submitted to him and diagnosed by him as cancer, there are some which are not cancer at all, but simply non-malignant sores which in some instances yield to the treatment, is what affords him a basis on the recovery of such cases to claim that he has cured cancer." The Postmaster-General on the recommendation of the Assistant Attorney-General, issued a fraud order against Leach.

ANUSOL HEMORRHOIDAL SUPPOSITORIES.

W. A. Puckner and L. E. Warren, Chicago (*Journal A. M. A.*, October 2), publish from the Chemical Laboratory of the American Medical Association the results of an examination of these suppositories bought in the open market. This examination was made on account of the objections of the agents in the country, Schering and Glatz, to the former publication of an analysis by a German chemist, J. S. Suyver, who found that these suppositories "contained no anusol." Anusol, according to the manufacturer's statement when this product was first submitted to the Council for Pharmacy and Chemistry some time ago, is said to be the "iodo resorcin sulphonate of bismuth having the following rational formula: $[C_6H_2 ISO_2O(OH)_2]_3Bi$." According to this formula the anusol suppositories should contain

"Iodin	6.77 per cent.
Sulphur	1.71 per cent.
Bismuth	3.71 per cent."

Examination showed that the suppositories contain about 0.08 per cent. iodine, or 1.2 per cent. of the amount claimed; 0.28 per cent. sulphur, or 16.3 per cent. of what is claimed; 0.71 per cent. bismuth, or 19 per cent. of what is claimed; and zinc equivalent to 16.5 per cent. zinc oxid, or about 100 per cent. of claim. From the standpoint of the iodine content alone the authors say, assuming that all the iodine found is present in the form of "anusol," the result of the examination of the product (as found on the American market) verifies for all practical purposes Suyver's statement that anusol suppositories contain no anusol. The quantity of iodine present is so small (about one eighty-second part of what is required by the formula) as to be unworthy of being seriously considered. They also say that the presence of sulphid in appreciable amount showed that the sulphur was present, at least in fact, in the form of sulphid and not as sulphonate as claimed. This also is in a measure in accord with the findings of Suyver. They also reproduce the analysis of samples submitted to the Council two years ago, which, in a general way, corresponds with the recent analysis. They say in conclusion: "Whether judgment be based on the determination of the bismuth, the sulphur or the iodine, the results just given clearly show that the claims made concerning the composition of 'Anusol Hemorrhoidal Suppositories' are not substantiated by the facts." Details of the quantitative analysis of this preparation will appear in the annual report of the Chemical Laboratory

of the American Medical Association or they may be had on request.

COCA-BOLA AND OXY-TONIC.

The *Journal A. M. A.*, January 1, in its Department of Pharmacology, calls attention to the exceedingly valuable work in the interest of public health that is being done by some of the state agricultural experiment stations. It reproduces two articles by Mr. E. F. Ladd from recent issues of the *Bulletin of the Agricultural Experiment Station of North Dakota*. The first of these refers to Coca-Bola, a product labeled as being produced by Charles L. Mitchell, M.D., Philadelphia, and advertised as a chewing paste of the leaves of the cocoa plant, each ounce containing 0.71 grams of cocaine. It appears in the form of flat cakes or plugs divided into squares, to be used by chewing one of the small squares at occasional intervals through the day. No cautions are given as to the cocaine habit, apparently. The laws of North Dakota prohibit the sale of such compounds containing cocaine. The danger of inducing a cocaine habit is self evident, as the product put up in the form of a chewing gum and advertised as harmless might readily take the place of chewing gum with young people. In the judgment of the writer of the report, no man who will allow his name to be connected with a scheme of this kind should be permitted to disgrace the profession of medicine by using the title M.D.

In a later issue of the *Bulletin* a comparatively recent recruit to the nostrum ranks—Oxy-Tonic—is described. It looks like, smells like, tastes like, and analyzes much like the older much exploited Ligozone, one of the many fakes exposed by Mr. Adams in the "Great American Fraud" series. It is advertised as a tonic germicide, free from spirits or drugs of any description whatever, and a sample examined was labeled "Oxy-Tonic, or Antiseptic 'Pick-me-up' for Internal and External Use." It is claimed that it has no drugs in its composition, is a positive specific in diphtheria, and a true kidney remedy, stimulant to the nervous system and to nutrition. "All organic weaknesses, nervous debility, premature declining power, drains and kindred affections yield speedily to Oxy-Tonic." They also say: "Oxy-Tonic is of special interest to ladies. The benefits to be derived are marvelous. You can treat yourself at home," etc. The analysis given shows that it contains sulphuric and sulphurous acid which are recognized as drugs and poisons, though the manufacturers say it contains nothing but pure water impregnated with oxygen and other germicidal gases, and elsewhere claim that it is perfectly harmless. In one place they name not less than forty-eight diseases or ailments for which Oxy-Tonic is prescribed. In other words it seems to be another "cure-all," according to the claims of its promoters.

Much information concerning the nature of an injury to the elbow can be derived by comparison of the joints on both sides posteriorly, the patient facing away from the examiner.—*American Journal of Surgery*.

State News

IN MEMORIAM.

Dr. Thos. B. Camden, of Parkersburg, one of the oldest and most prominent physicians of that city, died suddenly of apoplexy on April 17th. The day before he was on the street looking after some business affairs.

About 6 o'clock Saturday evening, the 16th, he was taken suddenly ill, and three hours later became unconscious. Physicians worked with him throughout the night, but were unable to revive him.

Dr. Camden had been failing in health for nearly four years. At times, however, his condition would improve, and he was able to look after business matters. He had been examined by specialists in the east on several occasions, but none of them successfully diagnosed his case.

Dr. Camden was born in Lewis county, West Virginia, August 16, 1829. He graduated from Jefferson Medical College in 1854. For many years he practiced medicine in Weston and was later made superintendent of the insane asylum at that place, a position he held for ten years. In 1855, he was married to Miss Susan E. Holt, daughter of the late Rev. Jonathan Holt. To the union six children, five sons and a daughter, were born. They are Harry P., and Dr. Rolla Camden of Parkersburg; Richard P., of New York; Guy L., of Seattle; Bernie H., of Detroit, and Mrs. J. S. Lewis, of this city.

In 1883 the family moved from Weston to Parkersburg and have been well known and prominent residents. The deceased was a brother of the late Senator J. N. Camden, and of John S. Camden, of Parkersburg; Edward Camden, of Sutton, and L. D. Camden, of Baltimore.

In his early life Dr. Camden affiliated himself with the Episcopal church. He was a vestry member of the church at Weston for many years, and held the same position here for twenty-five years at Trinity Episcopal church. Two years ago he resigned on account of failing health. Dr. Camden never took active part in politics. His life was one of quiet.

Some years ago he was a member of the State Medical Society, and contributed a number of articles for several medical journals and to the Society's transactions. He was a man of intelligence, and his practice as a physician was State-wide. In later years, however, his advanced years and failing health would not permit a very extensive practice. He belonged to no fraternal organizations. For many years and up until the time of his death he was a director of the First National bank of Parkersburg.

In September, 1905, Doctor and Mrs. Camden celebrated their golden wedding anniversary. Had he lived until next September he could have celebrated his 55th wedding anniversary.

Funeral services were held in Trinity Episcopal church.

The medical profession of the city met and passed appropriate resolutions.

DR. D. MAYER.

This venerable member of our Association died in the Jewish Hospital, Cincinnati, O., on May 20th, from uremia. Dr. Mayer in former years was very active in the State Association, serving as its secretary and later as president. He was very methodical and accurate in his business methods, and he will be remembered as one of the most ready and fluent debaters in the Association. He was also a most genial and agreeable companion, and while very positive in his convictions and free in the expression of his views, his manner was so agreeable that he made no enemies. He leaves a large family and many friends to mourn his death.

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DR. JOSEPH McNUTT.

Dr. Joseph McNutt, aged sixty-eight, dropped dead on the street at Princeton, Thursday morning. Death was due to apoplexy. The deceased was one of the best known physicians in Mercer county, and was a Confederate veteran.

* * *

Dr. Robert Wriston and Miss Minnie Davis, of Beckley, were married at the home of the bride's parents in May, and left immediately thereafter for an extended bridal trip to Washington, D. C., and other eastern cities. The ceremony was performed by Rev. John Martin, pastor of the Methodist Episcopal Church, South, and was witnessed only by the immediate family of the bride and a few intimate friends of both contracting parties. The bride is the second daughter of Ex-Sheriff John F. and Mrs. Davis, and is one of the most popular girls in the city. She has many personal charms and is one of the most attractive girls in Beckley society.

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THE HUNTINGTON GENERAL HOSPITAL

A new corporation has taken charge of the property of the Huntington Hospital Association, and opened a new hospital, with the following named officers: Dr. J. E. Rader, president; Dr. Karl C. Prichard, first vice president; Dr. C. T. Taylor, second vice president; Dr. A. F. Haynes, secretary, and Dr. C. C. Hogg, treasurer. The hospital is well-manned and is equipped for both medical and surgical work. The physicians and surgeons are all members of the State Medical Association, which indicates that they are progressive men. May success attend the new institution.

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The next meeting of the State Board of Health will be held July 11th-13th, in Charleston.

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Dr. Ira P. Champe, of Charleston, returned a few weeks ago from an extended visit to New York, where he took a post-graduate course in medicine.

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Dr. Fisher, of Leewood, has gone to New York to do post-graduate work.

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Dr. W. D. Hicks, formerly of Huntington, is now located in San Antonio, Texas.

Dr. B. A. Owen, of Huntington, has gone to Oklahoma and other western States with the possibility of moving there, provided he can find a better place than West Virginia. He'll never do it.

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Born, to Dr. and Mrs. S. M. Stone, of Tomsburg, Kanawha county, a son, April 11, 1910. "May he live long and be happy."

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Dr. S. L. Jepson, of Wheeling, had a short but pleasant visit to the Capital city in April, where he delivered his address on "The Social Evil and the Venereal Peril" to an audience of nearly five hundred. The courtesy of Dr. Churchman and a number of the other "Loys" was highly appreciated.

* * *

A tuberculosis dispensary has been opened in Wheeling. The medical attendants are Drs. A. Wilson, W. H. McLain, Thurman Gillespie, Harriet B. Jones and J. Edward Burns. The patronage already received indicates the need of such an institution. Its work will no doubt be largely educational. The prospects are fair for the establishment of a sanitarium in the county at an early day. Dr. Jones is entitled to great credit for pushing this important work.

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Our associate editor, Dr. G. D. Lind, has recently changed his location, going from Richwood to Johnstown, Harrison county. The Doctor is in a fine county, and we hope he may find the change profitable.

Society Proceedings

THE CABELL COUNTY SOCIETY.

HUNTINGTON, W. VA.

MAY 19, 1910.

A meeting of this Society was held at the Hotel Frederick, Thursday evening, May 12th. Dr. Moore read a paper on "Trachoma." A number of interesting cases were reported.

Drs. A. K. Kessler, H. L. Crary, A. J. Watts and C. W. Warneck, all of Huntington, were elected to membership. The application of Dr. B. D. Garrett, of White's Creek, Wayne county, was referred to the Board of Censors. Dr. Haynes, formerly of Sun, Fayette county, was admitted to this Society on transfer from that county. Dr. Haynes is now located in this city.

After much discussion, the final action on the plan for malpractice defense as reported by the committee of the State Association, was deferred until the next meeting.

The committee which had been appointed to investigate the matter of incorporating this Society, reported and, after discussion, it was decided to incorporate and the committee was instructed to secure a charter, etc., from the Secretary of State.

At the request of Dr. Fitch, the secretary read a deposition of a woman who is suffering with tuberculosis, stating that a man calling himself Rev. William Raybould had been trying to get her to take his medicine, had collected money

from her for this medicine, etc. This person, so far as can be learned, has no license and is not a graduate in medicine. On motion, this deposition was sent by the secretary to the secretary of the State Board of Health, with the request that it be investigated at once and the prosecution of the man taken up immediately.

J. A. Bloss, Sec'y.

LITTLE KANAWHA AND OHIO VALLEY SOCIETY.

PARKERSBURG, W. VA., MAY 14, 1910.

The Little Kanawha and Ohio Valley Medical Society met April 7th at the Chancellor hotel. Present, 11. Dr. N. Yeardley read us a thorough paper on the anatomy and physiology of the hip.

In the absence of the gentleman who was to read a paper on diseases and injuries of same, Dr. M. McMillen took up the discussion of that subject, and gave us an interesting account of the principal diseases and injuries of the hip, after which was held a general discussion.

The Society met May 5th at the Chancellor hotel. Present, 10 members. The gentleman who was to give us a paper being absent, we had a report of cases of interest from members. The secretary was requested to write to the United States Senators of this State and our Congressman from this district, urging their support of the Senator Owen bill to establish a Department of Health.

Considerable discussion was had how best to increase the interest of the profession in our Society meetings.

We are having a slight outbreak of smallpox in our midst. Our health authorities have it well under control.

Dr. Clarence Casto, one of our members, is confined to bed with an acute inflammation of the knee joint.

W. H. SHARP, Sec'y.

OHIO COUNTY SOCIETY.

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Book Reviews

DISEASES OF GENITO-URINARY ORGANS CONSIDERED FROM A MEDICAL AND SURGICAL STANDPOINT; INCLUDING A DESCRIPTION OF GONORRHOEA IN THE FEMALE AND CONDITIONS PECULIAR TO THE FEMALE URINARY ORGANS—BY EDWARD L. KEYES, JR., M. D., *Clinical Professor of Genito-urinary Surgery, New York Polyclinic Medical School.* Cloth. Price, \$6.00. Pp. 975 with 195 illustrations. New York: D. Appleton & Co., 1910.

The work of review ceases to be a task when one is invited to turn the pages of so interesting and all-embracing a book and covering in so thorough a manner the field of Genito-Urinary Medicine and Surgery. Intended primarily for the student and general practitioner, it may well be used also as a "Vade Mecum" for the urologist.

The subjects treated comprehend the diseases of the urinary organs, both male and female, and the diseases of the male genital organs are considered from the medical as well as from the surgical standpoint.

The chapter on syphilis is in the nature of a brief resume, demanded here because of the current methods of collegiate teaching, and by no means out of place. An important and forceful chapter deals with the care and sterilization of instruments, and the author emphasizes the fact throughout the book that the practice of asepsis in genito-urinary instrumentation is quite as important as it is in general surgery.

The importance of the pathological laboratory as a help in diagnosis, as well as the cultivation of painstaking and systematic methods in history taking and examination, are declared with emphasis.

The photographic illustrations on pages 45, 46 and 47 intending to demonstrate the technic of the passage of metal instruments are rather amateur from a photographic viewpoint, and not in keeping with the other high merit of illustration.

Doctor B. S. Barringer in chapter five on Cystoscopy, has contributed much material meat. He has wisely described Cystoscopy as a surgical operative procedure, requiring the same aseptic technic as any other surgical procedure. Dr. Barringer expresses a decided preference for the instrument devised by the lamented Tilden Brown, omitting even the mention of the ingenious universal cystoscope of Brandsford Lewis, whose recent instructive demonstrations before the American Urological Association have been widely published.

Dr. Keyes makes a timely warning with regard to the use of strong solutions of cocain in the technic of cystoscopy, and extols the use of alypin, using as much as 25 c.c. of a 1 or 2 per cent solution, claiming for it a toxicity less than that of cocain. He makes mention of a death from cocain in a patient of Prof. John A. Wyeth, after the introduction of a drachm of a 2 per cent solution of cocain into the urethra.

Palmer Findley, in his recent work, "Gonorrhoea in Women," makes the sweeping statement that "nowhere in the English and American literature is the subject of Gonorrhoea in women presented in its entirety." Surely this author has not read the very complete chapter from the pen of Dr. Emily Dunning Barringer, in Dr. Keyes' book; a subject usually omitted in treatises of this sort, it is certainly a welcome addition and should be read and assimilated by the student and practitioner. Doctor Keyes is to be congratulated in selecting an observer of so wide an experience as Dr. Barringer, wielding a pen second to none among the women in medicine.

The chapters on Gonorrhoea, in their prophylaxis, sociologically and dealing thoroughly with every phase of this modern curse, should be read by every practitioner of medicine. This subject, like the other disease described, is handled in a scholarly style, free from ambiguity, developing a technic throughout, and a mass of therapeutic logic, discriminating, sound and up-to-

date, and as a monographic library companion this book is well worth every cent of the price.

This work is very fittingly dedicated to Prof. E. L. Keyes, Sr., the father of the author, and the nestor in the field of American Urology.

FRANK LEMOYNE HUPP.

THE SEXUAL LIFE OF WOMAN, IN ITS PATHOLOGICAL AND HYGIENIC ASPECTS—By E. HEINRICH KISCH, M. D., *Professor of the German Medical Faculty of the University of Prague; Physician to the Hospital and Spa of Marienbad; Member of the Board of Health, &c., &c.* Only authorized translation into the English language from the German, by M. EDEN PAUL, M. D. With 97 illustrations in the text. Pp. 686. Price, \$5.00. Rebman Company, New York, 1123 Broadway.

In the preface to this ambitious volume the author says: "In the following pages, the Sexual Life of Woman will be considered both in relation to the female genital organs, and in relation to the feminine organism as a whole; in relation both to the physical and to the mental development of the individual; and in relation alike to the state of health and to the processes of disease. * * * With considerable attention to questions of education and personal hygiene, both of which are greatly influenced by the processes of sexual life." The work is in three parts: (1) The epoch of the menarche, or the beginning of menstrual activity, with the phenomena and disorders that accompany it; (2) the epoch of the menopause, or the period of sexual activity, in which the pathology of the various disorders of this period is discussed, together with the phenomena of fertility, sterility, and ovarian and uterine disease; (3) the epoch of the menopause, its phenomena, pathology and hygiene.

The author has been writing upon these subjects for thirty years, and in this concluding summary of his work, he has dealt with the subject with characteristic German thoroughness and bluntness. But little is said "on the topics of pregnancy, parturition, lying in and lactation, since these are adequately discussed in works on midwifery." The book is a fine specimen of the bookmaker's art, the illustrations are excellent and a full index concludes the volume.

—L. D. W.

THE INTERNATIONAL MEDICAL ANNUAL, 1910—A Year Book of Treatment and Practitioners' Index. E. B. Treat & Co., New York. Price, \$3.50.

For eighteen of the twenty-eight years of its publication, this valuable work has been coming to us, and we therefore know something practically of its usefulness. We prefer it to all similar publications because of its brevity and at the same time its comprehensiveness. It embraces all advances in materia medica, gives a complete review of medical and surgical progress, and, in short, condenses for the reader the valuable recent advances in the medical profession, not neglecting preventive medicine.

The book is a small octavo of over 700 pages and contains many illustrations, a number of them colored. As Examples, Deaver and Ashurst treat Abdominal Surgery; Prof. Charteris of Glasgow, "Materia Medica;" Henry Fenwick, London, "Urinary Surgery;" Prof. Still, "Medical Diseases of Children;" Jos. Priestly, "Sanitation and Law." We repeat our advice of former years, don't waste money in binding your journals (except ours), and purchase this Annual each year.—S. L. J.

PAMPHLETS RECEIVED.

A STUDY OF THE ANATOMY OF WATSONIUS (N. G.) *WATSONI*, OF MAN and of nineteen allied species of mammalian tentaculid worms of the super-family Paramphistomoidae—BY CH. WARDELL STILES and JOSEPH GOLDBERGER. Bulletin No. 60 Hygienic Laboratory, U. S. Public Health and M. H. Service.

PROCEEDINGS OF THE THIRD ANNUAL MEETING of the Association of Life Insurance Presidents. This document contains valuable papers on the prolongation of human life, in which insurance companies have been recently actively interested. Dr. Weyman has a paper on "Work of the Federal Government in the Matter of Health Conservation;" Dr. Rosenau writes on "The Organization of a Public Health Militia;" Dr. E. W. Dwight tells of "The Latent Powers of Life Insurance Companies for the Detection and Prevention of Disease," and a general discussion is presented on the "Movement to Prolong Human Life."

Surgical Treatment of Tuberculous Pleurisy, Lung Abscess and Empyema—EMIL G. BECK, Chicago.

The Diagnostic Value and Therapeutic Effects of the Bismuth Paste in Chronic Suppurative—EMIL G. BECK, Chicago.

The Newer Tuberculin Tests; Their Diagnostic, Prognostic and Therapeutic Values—S. SIMON—Denver.

Medical Outlook

SPINAL ANESTHESIA.—This has been brought into prominence recently by the visit to this country of Dr. Jonnesco, of Boucharest, although several American surgeons have used the method in several hundred operations each.

Doctor Jonnesco has used his method in a number of cases with great success, and his words deserve attention. His conclusion regarding his method are well worth reproduction. They are as follows:

1. The fundamental principles in spinal analgesia are that puncture of the arachnoid may be performed at all levels, and that to the anesthetic, whether stovaine, tropacocaine or novocain, strychnine should be added.

2. Puncture of the arachnoid at whatever level is harmless, and the fear of pricking the cord unfounded; even if it happens, it is not harmful.

3. The medio-cervical puncture is useless and dangerous; mid-dorsal puncture is difficult and useless; superior dorsal puncture between the first and second dorsal vertebrae, and dorso-lumbar, between the last dorsal and first lumbar vertebrae are easy, and suffice to obtain analgesia of all regions of the body.

4. The addition of neutral strychnine sulphate to the anesthetic preserves the full antiseptic power of the solution, and at the same time neutralizes its injurious action upon the bulb. Thanks to this addition, superior spinal analgesia can be performed without danger.

5. Among known anesthetic substances, stovaine, tropacocaine and novocain seem to be the best; any of them may be used with the addition of strychnine.

6. The strychnine and the anesthetic substance need not be sterilized, a process which would destroy some of their properties.

7. The water used for making the solution must be sterilized but not distilled.

8. The injection should consist of 1 cc. of solution, the amount of strychnine and anesthetic substance being varied.

9. The technique is simple, requiring only a Pravaz syringe and the usual needle for lumbar puncture.

10. There are no contraindications for general spinal anesthesia, which always succeeds if the liquid penetrates into the arachnoid cavity, and if the dose of anesthetic is sufficient.

11. General spinal anesthesia is absolutely safe; it has never caused death, nor produced any important complications, early or late.

12. General spinal anesthesia is infinitely superior to inhalation anesthesia. Owing to its simplicity, it is within the reach of all, and as there is no contraindication it may be employed with any patient. As it can be performed by the surgeon himself it does away with the attendance of a person often inexperienced, and never responsible.

13. In operations on the face, or the throat, where analgesia by inhalation is difficult and often incomplete, spinal analgesia is a great resource. In laparotomies, owing to the "abdominal silence" it determines, it is very much superior to analgesia by inhalation.

14. The facts stated in this paper will prove how in science a condemnation *a priori*, like that pronounced by Professors Bier and Rehn* is precipitate and ill-founded.

15. I am firmly convinced that general spinal analgesia will be the analgesic method of the future.—*British Med. Journal*.

*Professors Bier and Rehn have strongly condemned this method, and the mortality thus far reported is greater than that from either chloroform or ether.—Editor.

EXTRACT OF CORPUS LUTEUM IN DISTURBANCES OF ARTIFICIAL AND PHYSIOLOGIC MENOPAUSE.—MORLEY, in the November number of the *Journal of the Michigan State Medical Society*, reports his results in 18 cases. This report is a continuation of the one that appeared in the August number of the *Detroit Medical Journal*. The author used an extract made from the corpora lutea of beef

ovaries rather than an extract of the entire ovary, as the consensus of opinion seems to be that the internal secretion of the ovary is produced by the yellow body. The extract is given in five grain doses, three times a day, one-half to one hour before meals. His results in 18 cases may be summed up as follows:

Five were cured, 12 were improved and one obtained no relief. Included in the 12 cases that were improved are grouped those that are still taking the extract. A permanent cure may result in a few of the cases under treatment. Of the 18 cases, 14 suffered from disturbances of operative or artificial and four from those of natural or physiologic menopause. While the results obtained in so small a group of cases do not warrant the drawing of any definite conclusions, still the author thinks that the results are favorable enough to justify a continuance of the treatment in other cases, where there is a disturbance incident to artificial or physiologic menopause. (Since the specific symptoms for which this "extract" is given are not named, and since the "disturbances of the menopause" cease without treatment, we fail to perceive what is accomplished by this new treatment.—Editor.)

The Indiana University School of Medicine has put its seal of disapproval upon the division of fees or the paying of commissions for patients referred by passing the following resolution:

"Resolved, That any member of the faculty or teaching staff of the Indiana University School of Medicine who shall be shown to be guilty, either directly or indirectly, of fee splitting, making an offer to split a fee, paying a commission for patients referred, or any violation of Article 6, Section 4, of the Principles of Medical Ethics of the A. M. A., shall be considered as having so impaired his usefulness as a member of the faculty or teaching staff of the School of Medicine by such unethical example to students, as to make his further connection with the faculty undesirable."

We wish to commend the Indiana University School of Medicine for taking this emphatic stand in the matter of the reprehensible practice of division of fees, in whatever form it is carried on. The practice, however disguised, is dishonest in principle, and no reputable and conscientious physician can afford to engage in it for a moment.—*Jour. A. M. A.*

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