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EDITORIAL

PREVENTION OF TUBERCULOSIS AND VENEREAL DISEASES.

There is no greater objective to which publicists and humanitarians can bend their efforts than that of preventing tuberculosis and venereal diseases. That much has been done for the arrest of the former is now well known and recognized, but there is much still to be done. Just thirty-two years ago some medical men were called severely to task at a meeting the Ontario Medical Association, because they voiced the opinion that tuberculosis was a communicable disease, and restrictions should be placed about the sick. Great progress has been made since then. At the recent meeting of the Canadian Health Association we are informed that the death rate from this disease has been reduced from 149 per 100,000 of the population to 91.

The following resolutions were adopted:

- (1) Urging the establishment of tuberculosis clinics in Canadian cities where none at present exists.
- (2) That the anti-tuberculosis movement be extended to the training and for the protection of the youth of Canada.
- (3) That the Department of Militia and Defence be urged to have all new recruits carefully examined by chest specialists, etc., before acceptance to the army.
- (4) Urging the pasteurization of all milk and cream used in the manufacture of butter and cheese, and that this measure be made compulsory.

The nature of venereal diseases will render prevention more difficult, but the rule *salus populi suprema lex est* must prevail. Britain has seen the need for radical methods, and Australia has adopted effective legislation. This country must come in line in due course, and the sooner the better. One of the saddest sights in all medical practice is to see an innocent wife infected with syphilis, or a child born into the

world with the stigmata of this loathsome disease; and through no fault of its own. That any one should have the right to impose such an affliction on a child is unthinkable. Crime is too mild a term for such an act. The disease must be run to earth; but this cannot be done by speaking in whispers. Sooner or later the fight must be in the open, with due exposure for the guilty, as for all crime against the rights of others.

MEDICATED WINES.

A very important amendment to the Patent Medicines Act was recently passed by the Federal Parliament. The effect is to give the License Commissioners power to proceed directly against those who put medicated wines on the market, when the same are only medicated to such an extent as not to render them unfit for beverages. Formerly the action had to be taken under the Patent Medicines Act, but now it may be taken under the Temperance Act. This is a great step onward, and may result in clearing out of the country some very objectionable preparations.

ROCKEFELLER FOUNDATION AIDS.

The Rockefeller Foundation last week announced appropriations of \$875,000 for purposes connected with the war. Of this, \$475,000 will be spent in America for medical research and relief work, and the remainder will be used to continue relief activities abroad. The Rockefeller Institute receives \$200,000 for the establishment of the Carrel Hospital, to be used for the teaching of new methods of surgical treatment of infected wounds. It is planned to erect a model hospital of 100 beds for the purpose. In addition, the institute receives \$60,000 for the instruction of military and other surgeons in new methods of diagnosis, for the preparation of serums, and for the purpose of finding improved means of treating peritonitis and shock. Funds are also provided for the study abroad of Dr. Thomas W. Salmon, medical director of the National Committee for Mental Hygiene, of mental diseases among soldiers and the provision necessary for their care at the front and in base hospitals. Dr. Salmon is to supervise the psychiatric hospitals to be established by the Government here. For the erection of a building for the Naval Psychiatric Hospital on the grounds of the United States Marine Hospital, New York, the Foundation has appropriated \$15,000. The hospital will be operated by the United States Public Health Service.—*Medical Record.*

ORIGINAL CONTRIBUTIONS

THE SURGICAL TREATMENT OF VARICOSE VEINS OF THE LOWER EXTREMITY.*

By E. R. SECORD, M.D., C.M., F.A.C.S.,

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IT is not my intention to go into any extensive discussion of the literature concerning the operative treatment of varicose veins of the lower extremity. Suffice it to say that those who have had much experience in operating on these cases, especially for the purpose of rendering men fit for the arduous duties of military service, will no doubt agree with me that the operations that we have been in the habit of performing do not cure the sufferer to the degree that we might wish.

Briefly, these methods have been:

(1) The Trendelenberg operation of ligation or excision of the upper end of the saphenous vein, for the purpose of removing the weight of the super-imposed column of blood. In certain mild cases, where the Trendelenberg sign is well marked this operation affords relief to the aching, but usually cannot be claimed to be a curative procedure.

(2) The Mayo stripping operation, added to the Trendelenberg method, is an advance in the right direction, but fails to consider an important factor in determining recurrence, viz., that the communicating veins, passing from the superficial varicosities through the deep fascia to the deeper venous channels, are left undisturbed.

(3) The Schede "garter," or circumcision operation, with its modification, the Friedel spiral incision, is useful in certain cases, but unless combined with the Trendelenberg operation, is practically certain to be followed by recurrence.

Dr. John Homans, of Boston, has made a very useful division of the etiology of these varicose conditions into two groups:

(1) The post-phlebitic.

(2) That larger group of gradual onset, due possibly to congenital deficiency, or weakness in the vessel wall.

This latter class is the most numerous, and is the one for which surgical relief is the most frequently demanded. It is to this group in particular that the following remarks apply.

If an effort is to be made to cure this condition, it would appear that there are three main indications to be met, keeping in mind that

* Read at the May, 1917, meeting of the Ontario Medical Association.

the total removal of all the varicose veins of the lower extremity is usually not practicable. These indications are:

(1) The removal of the weight of the column of blood, between the distended veins and the thorax.

(2) The removal of the possibility of recurrence, owing to the development of new venous channels, by supply from the communicating veins, perforating the deep fascia.

(3) The removal of as many as is possible of the dilated veins, together with a definite interference with the blood flow into and out of those that are left.

With these indications in mind, I have combined several of the better known operative procedures, in an endeavor to procure a real radical cure for this troublesome condition, troublesome both to the patient, and to the surgeon, owing to its tendency to recur.

This combined procedure is, briefly, as follows:

(1) The Trendelenberg operation is done in all cases. About two and a half inches of the internal saphenous vein is excised immediately below the saphenous opening. As the vein frequently branches a short distance below the opening, I consider it important that the excision should be done as high as possible.

(2) The entire removal, in one piece, of the main venous channels from the uppermost point of dilatation, most frequently the mid-thigh, down to the internal malleolus. This removal is not to be in the form of a dissection of the vein, but of a definite excision of all the vein-bearing subcutaneous tissue down to the deep fascia, and in a strip starting at the malleolus, widening out at the greatest circumference of the calf, where the greatest branching of the dilated veins usually occurs, to a width approximating one-quarter the circumference of the leg, and narrowing again to include the subcutaneous tissue bearing the main venous channels, as they pass to the inner side of the knee, and terminating at the upper limit of visible caricosity.

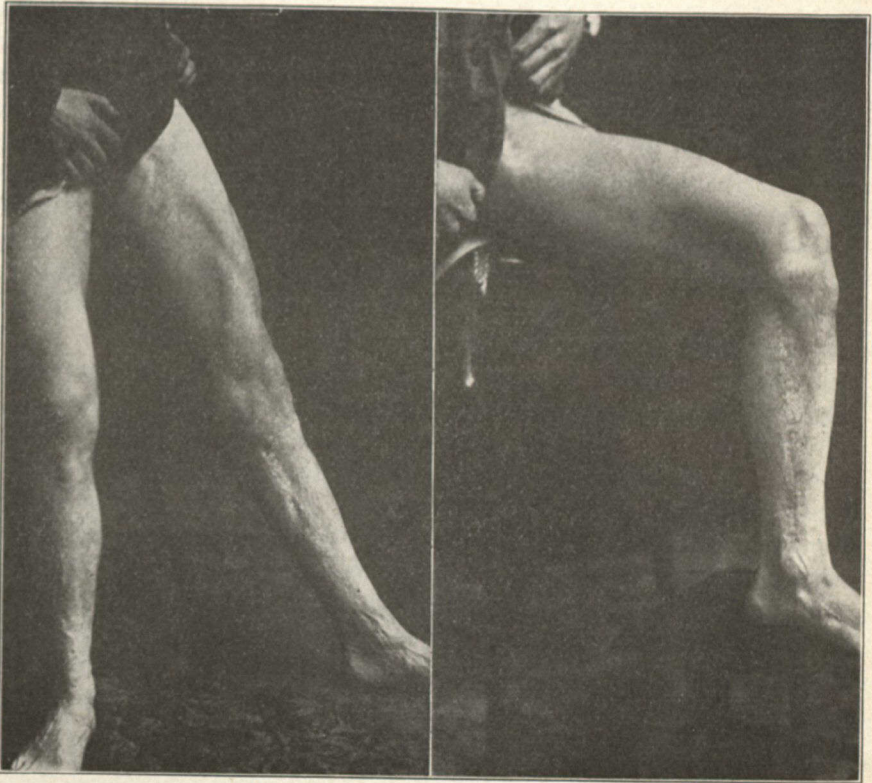
(3) The ligation of each and every communicating vein, as it perforates the deep fascia in the area thus laid bare.

(4) The obstruction of the circulation in the veins that have been left, by a modified Schede incision around the leg, down to the deep fascia, about two and a half inches below the knee, and including the entire circumference of the leg, except about one inch on either side of the longitudinal incision. In my earlier operations I made a complete circumcission of the leg, but found that the angle where the two incisions met was somewhat difficult of accurate approximation, so recently have left about an inch of undivided skin at each side of the long incision.

Both incisions are closed by skin sutures alone, without drainage.

It has been my practice to close the longitudinal incision by continuous catgut, while the garter incision is probably better closed by silk worm gut, as there is rather more tension at this point.

Step number two is the only one requiring any further explanation. The long incision is made through the skin only, and the latter with a very thin layer of subcutaneous fat is dissected back laterally for a distance of about two and a half inches on each side, leaving the most of



End results, one year after operation.

- (a) Absence of varicosity in the operation area.
 (b) Absence of any œdema of the ankle.

the subcutaneous fat, and all the varicose veins in place. Commencing below at the malleolus, the most prominent vein exposed is ligated, and the superficial tissues incised down to the deep fascia. This fatty layer, with its contained veins, is now stripped off the latter, most expeditiously by the use of gauze swabs, upwards towards the knee. As the fat is brushed off the deep fascia, the perforating veins are easily seen and

clamped, as also are the small feeders, coming in from the sides beyond the area of dissection. These are all simply clamped, until the whole strip has been removed, when they may be ligated.

The dressings are not disturbed until the tenth day, when the skin sutures are removed, the leg firmly bandaged, and the patient allowed up. Gradual use of the limb is permitted, and he is discharged three weeks from the time of the operation.

The only objections to this operation are its seeming magnitude, the length of the incision, the time required, and the possibilities of infection in such a large wound with altered circulation. In practice the only real objection is the time required, about an hour and a half for each leg, but this is certainly worth while when the radical nature of the resulting cure is considered. With regard to healing of the large wound, and the possibilities of infection, we have been agreeably surprised at the uniformly good results. We have carried out the same no-hand-contact technique that we do in our bone work, and feel that this is an important item. As soon as the longitudinal incision is made, towels are stitched to the skin edges, to prevent the operator's gloves or instruments coming in contact with the skin of the patient's leg.

The results have been extremely satisfactory. No case has shown any tendency to recurrence, and several have subsequently been accepted by the military authorities as fit for overseas service, and of these no case has been subsequently discharged owing to any disability to use the leg for any of the duties of military service. When it is recollected that the 215th Battalion, for whom I did a number of these cases, were recruiting in Brantford for about a year, and that most of the operations were done during the earlier months, the results thus, as it were, being on trial for that period, it seems to me that a more strenuous test could hardly be imposed.

FALSE SYSTEMS OF HEALING, NO. 3—CHIROPRACTIC.

BY JOHN FERGUSON, M.A., M.D., Toronto.

ITS ORIGIN.

THE purpose of this article is to discuss one of the later false systems of healing, namely, chiropractic. This cult has taken its name from two Greek words that mean done by the hand, or hand practice. These Greek words are *cheir* and *praktikos*, and we are informed that D. D. Palmer, who founded this system of treating disease by the hands only, was acquainted with Mr. Weed, who knew something about the Greek language, and that this person coined for Palmer the name chiro-

practic. We are also informed that D. D. Palmer made what he called his discovery in September, 1895.

In the announcement of the Palmer School of Chiropractic for 1915 we find some account of the origin of this system. It is told as follows: "The discovery of chiropractic was an accident, or rather the action of a great mind in being able to put two and two together and reach a firm conclusion. In 1895, D. D. Palmer was a magnetic healer practising in the city of Davenport, Iowa, U.S.A. The janitor of the building in which he was located was a colored man by the name of Harvey Lillard. Lillard was almost deaf, so much so that he couldn't hear street cars or wagons in the street when he was in the fourth storey of the building. One day D. D. Palmer had Lillard come to him, and, in securing the history of the case, was told by Lillard that several years previous he had sustained a fall from a stepladder, and when he fell he felt something pop in his back, and since that time had been hard of hearing. D. D. Palmer examined Lillard's back and found a large bump on the spine near the neck. Fortunately this bump was one visible to the eye. Palmer then reasoned that if the bump was the cause of the man's not hearing, reducing the bump should restore the hearing. He set about to do this, and, in a crude way, shoved the vertebra. In three days he had it back in its normal position, and to his great delight Lillard's hearing returned."

We are also told in this same college announcement that D. D. Palmer then began looking for bumps on the spines of other patients, "and in every instance found these bumps". The announcement goes on and states that "then he reasoned that if certain bumps on the spine caused deafness, why wouldn't other bumps on the spine cause other diseases. He started in examining other patients who came to him with other ailments, and to his further delight found these abnormalities, and also found that by reducing the bumps the ailments disappeared."

All this and more is found in the announcement of the Palmer School of Chiropractic, which claims to be "The Fountain-head of Chiropractic," and over which B. J. Palmer, son of D. D. Palmer, acts as president.

It is really a greater strain on one's imagination to credit the Lillard story than to accept and believe the legend about Creusa, who vanished into air, or the wonderful stories of fairyland. Note that the discovery was an accident, that D. D. Palmer was a magnetic healer, that the patient was a negro, that he said he was hard of hearing, that Palmer found a bump on Sambo's back, that Palmer manipulated this for some time, and then Sambo said he could hear.

Now let us see what the osteopaths think of the chiropractors. On

page 5 of Introductory Lesson No. 4 of International School of Chiropractic, we find this: "The Still College, of Des Moines (Osteopathic), says: 'Chiropractic is nothing more than massage. Don't take it up; don't listen to it; don't pay any attention to it. If you do you will make the mistake of your life. Chiropractors try to make it appear that it is the same. This is not correct.'" For once we can agree with this view from an osteopathic source. If it could only get as sane a view of its own system as it puts forth regarding chiropractic, the world would soon be rid of two of the worst impositions on science of modern times.

PITTSBURGH COLLEGE OF CHIROPRACTIC.

Let us now turn to page 8 of the Fourth Annual Catalogue of the Pittsburgh College of Chiropractic for 1915-16, and this will be found in dealing with the case of Lillard: "Mr. Lillard reminded him that a knot had been sticking out on his back since the time of the injury. Dr. Palmer examined and found this abnormality to be at the fifth dorsal vertebrae, and while his knowledge of anatomy at that time was exceedingly limited, he nevertheless correctly reasoned from cause to effect, and knew that if he removed the cause, then the effect or trouble could no longer exist. After due trial he succeeded in replacing the subluxated vertebrae, and at once there was a marked change in the man's hearing, and in a short time he was practically restored."

How wonderful must this story appear to those who know anything about anatomy. There is not the slightest connection, directly or indirectly, between the fifth dorsal vertebra and the nerve of hearing, or, indeed, any part of the ear! It is upon this incredible story that the chiropractors have built up their system of disease and their method of treatment. The announcement of the Pittsburgh College of Chiropractic is certainly correct when it states that D. D. Palmer's "knowledge of anatomy at that time was exceedingly limited." Most assuredly it was when he tried in any way to connect the fifth dorsal vertebra with the ear.

In the announcement of the Pittsburgh College of Chiropractic for 1917, on page 20, we find this remarkable statement: "We teach the rotary, the break, the double contact several anterior cervical moves and atlas moves, the T. M., heel contact, recoil, edge-contact, thumb pisiform, pisiform single transverse, two-finger double transverse, pisiform double transverse, and many other methods, contacts and holds of a strictly chiropractic nature. We teach no method except exact vertebral adjustment in this department."

The foregoing takes one's breath and makes him feel like crying,

"Hold, enough!" But there is no use in chiropractors putting forth such utter nonsense and humbug. Every educated doctor who knows his anatomy and physiology, knows perfectly well what may be the displacements of the vertebrae, and in what way these may be best corrected or treated. In all this there is no mystery; nor is there the slightest foundation for a separate system of treatment through a pretended special knowledge of the spinal column. This "spinology" is a fake. Far from being true that almost all diseases arise from distortion of the spinal column, it is the fact that very, very few diseases can claim this to be their cause, such as caries, a new growth, a rheumatic condition.

ST. PAUL COLLEGE OF CHIROPRACTIC.

In the announcement of the St. Paul College of Chiropractic for 1916-17, we find the following: "Chiropractic is a name given to the study and application of a universal philosophy of biology—the science of the cause of disease.

"Chiropractic finds the cause of disease—adjusts it. That which confuses and has bewildered the masses for ages is now a simple process when once you know how. Physicians have studied expressions, chiropractic investigates source and transmission. It is based upon the clinical hypothesis that man is a triune being, spiritual, mechanical and chemical; rather than the laboratorial deduction that he is but chemistry and physics.

"'And in the beginning God' is as true to science as philosophy. Decapitate a man—he's dead, showing that life centres in the brain and there known as mind; passes to spinal cord, and there known as nerve force; thence to spinal nerves, there known as mental impulses. That which cures or heals is innate intellectuality which resides within the body of the patient—not anything that may be taken from outside inward.

"The spine, which is composed of 24 vertebrae, separate from each other, become subluxated by jars, twists, wrenches, strains, etc., thereby causing pressure on or impingement of nerves, on their way to every organ and tissue of the body, thus causing deranged function, disorder and disease.

"The steamfitter closes the valve to shut off steam; the plumber shuts a faucet to diminish the flow of water; the electrician turns off the button to stop the flow of electricity. Chiropractic claims the same is also true of man and that pressure or constriction reduces the flow of life from brain (where originated) to tissue cell (where expressed) as function."

This has been quoted at some length from the announcement of a leading college. One could hardly imagine anything more absurd. No-

where in chiropractic is there to be found "a universal philosophy of biology." This is a wild and reckless claim. Nowhere can it be found that the laboratory sets forth man as "but chemistry and physics," and that it was left to the chiropractors to find out that "man is a triune being." Surely, the chiropractors do not claim credit for this as their discovery! The illustration about "decapitating a man and he is dead" is clumsy in the extreme. Open the femoral artery and he will also die; and that, too, without shutting off his mind. The illustration does not prove that the life centres in the brain. It is well known that a man may lose his life through injury to almost every organ he has got. The talk about subluxations of the spinal vertebrae is idle, ignorant cant, and has no effect but that of deceiving those who do not know any better. It is quite true that there may be fractures and displacements of the vertebrae as the result of injuries; but not in the ignorant sense spoken of by chiropractors. The pressure they speak about is a pure myth. To talk of man as resembling a system of plumbing, or electric wiring, is the crassest of ignorance. The biochemistry of man is quite different to the operations of any mechanical system, however perfect or complicated it may be.

ROSS COLLEGE OF CHIROPRACTIC.

Turning now to the Ross College of Chiropractic, of Fort Wayne, Indiana, on page 3 we read: "Chiropractic is logically and scientifically correct. It is based upon certain well-known and incontrovertible principles, viz., that the nerve system is the purveyor of all intelligence that make possible all the tissue and organic functions of the body. Any interference with this nerve activity will cause a disturbance of organic functions and thence a susceptibility to disease. Hence, chiropractors trace the cause of disease to the interference with nerve functions. In other words, perfect nerve function means perfect organic function; perfect organic function means perfect health; and perfect health means immunity to disease. The chiropractor produces perfect nerve function."

A partial statement of a truth is often the worst form of deception. It is admitted the functions of the nervous system are very important; but this does not justify overstating them, far less mis-stating them. Chiropractic is not scientifically correct; indeed, it is the very reverse; it is scientifically incorrect from every viewpoint. The fundamental error in chiropractic is the contention that all diseases arise from derangement of nerve function, which, in turn, lowers immunity and resistance. The fact is that most diseases do not arise in this way. Injuries and infections, for example, have no relationship to the workings

of the nerves, far less to the condition of the spinal column. Then, again, it is a gross untruth to say that "the chiropractor produces perfect nerve function." All the chiropractors in the world would be quite helpless with a case of locomotor ataxia, chronic anterior poliomyelitis, or general paresis. No system of manipulation of the spinal vertebrae could produce perfect nerve function in the many diseases to which the nervous system is subject. Misrepresentations in the name of science should cease.

THE PACIFIC CHIROPRACTIC COLLEGE.

Going now to the Pacific coast we find the following in the 1915-17 annual catalogue of the Pacific Chiropractic College, of Portland, Oregon, on page 17: "Chiropractic is a demonstrated, scientific system of mechanically removing the cause of disease, the hands only being used. It is drugless and is scientifically as far in advance of the ordinary drugless methods as these methods are in advance of the practice of experimental medicine."

The further one goes in the examination of this system of treatment the worse it becomes. In the foregoing statement there is the boldest possible stand taken on the pedestal of ignorance and retrogradism. In the first place we are told that chiropractic "mechanically removes the cause of disease." How false this is in fact of what we know about the etiology of disease. But this wonderful statement goes on to say that chiropractic is as far in advance of other drugless methods as they are in advance of experimental medicine; and here the contention breaks down, for the very good reason that these systems are not in advance of true medical science, and therefore chiropractic cannot be. Founded on the false theory of D. D. Palmer, who was a sort of "magnetic healer," and knew nothing of science in general, far less of medical science in particular, chiropractic, with a wave of the hand, dashes aside the experimental work of Jenner, Lister, Pasteur, Laveran, Noguchi, Welch, Flexner, Koch, etc., etc. The Great Teacher was right when he said: "Ye love darkness rather than light."

THE UNIVERSAL CHIROPRACTIC COLLEGE.

In the announcement of the Universal Chiropractic College, of Devenport, Iowa, for 1915, on page 2 we read:

"In 1895 the science of chiropractic was first discovered and during the intervening twenty years study and research have demonstrated that all diseases of the body, excepting wounds, are directly due to some impairment of the nervous system.

"The trained chiropractor, knowing the wonderful nervous system more thoroughly than does the electrician the system of wires covering

his city, is able to locate in a few moments any difficulty which may exist along the system.

"In another moment his deft fingers have removed the trouble and the system is again working normally. In a little while nature will assert itself, pain will disappear, health return.

"This, dear reader, is a plain and homely definition of chiropractic. A definition devoid of all technical terms, in the hope that all who read may grasp the true sense and meaning of this wonderful science of healing and prevention of disease."

This seems most remarkably simple, but the pity of it all is that it is not true. In no sense can the treatment given by D. D. Palmer to Lillard, the nigger, be called the discovery of a new science. It only proves that either the negro was deceived or that Palmer did not tell the truth. The negro might really have been under some false impression or suggestion about his deafness or the extent of his improvement. Dr. Tweedie, the eminent eye specialist, tells of a young woman who had poor eyesight, and went to a faith healer. She declared she had derived great benefit. But Dr. Tweedie found the vision the same as before the faith healer's treatment. She really thought she had been improved, whereas she had not.

No man, however trained, can locate the trouble in the nervous system with the ease set forth in the foregoing quotation. Many nervous lesions are most obscure and difficult of diagnosis even to the most experienced. It is still further from the truth to say that "in another moment his deft fingers have removed the trouble." How pitiable a statement like this appears when one mentions a disease like progressive bulbar paralysis, or optic atrophy. Once more we must protest against such statements as "that all diseases of the body, excepting wounds, are directly due to some impairment of the nervous system." This is absolutely untrue, and people holding such views should not be permitted to practise, nor should colleges be allowed to teach such doctrines on the ground that they are inimical to the public weal.

THE INDIANA SCHOOL OF CHIROPRACTIC.

Accompanying the announcement of the Indiana School of Chiropractic, of Anderson, Ind., there is a circular from which we quote the following: "Chiropractic is a scientific method of adjusting the cause of disease without drugs or instruments. It is based upon correct knowledge of anatomy, especially the nervous system. Chiropractic proves that 95 per cent. of all disease is caused by subluxated (slightly displaced) vertebrae in the spinal column. The displaced vertebrae 'pinch' the spinal nerve as it passes from the spinal column, thus hindering the

transmission of 'mental impulse' or life force from the brain to the different parts and organs of the body." The circular then goes on to state that the spinal nerves come out between bones that are movable, and in this way may be brought under pressure, and cause disease. This, then, is stated: "Chiropractic emphasizes this fact, namely, that it matters not what organ or part of the body is affected, *the cause* is usually in the spinal column."

This circular then gives a list of diseases that are treated spinally. Here is what it states: "We ask you no questions, but we do ask you not to take any medicine while taking adjustments. We simply analyze your spine, and locate your troubles—the cause of your sickness. Chiropractic has scientifically and successfully removed the causes of the *so-called* abnormal conditions, so that Nature could restore health: Headaches, eye disease, deafness, vertigo, epilepsy, insomnia, wry neck, facial paralysis, neuritis, throat troubles, pain between the shoulder-blades, neuralgia, goitre, nervousness, catarrh, dizziness, la grippe, heart disease, asthma, lung trouble, spleen, pleurisy, gallstones, stomach trouble, Bright's disease, diabetes, floating kidney, ovarian trouble, appendicitis, bladder disease, bed wetting, irregular menses, lumbago, constipation, sciatica, paralysis, rheumatism, and "fevered conditions." This circular bears the names of B. W. Lewis and O. C. Alger, and comes with the announcement of the Indiana School of Chiropractic. It is fair to assume that it has the endorsement of the school. Further, in a handbook of the college the name O. C. Alger appears as vice-president.

Here, then, one meets with a long list of most varied diseases that are treated by adjusting the bones of the spinal column. It makes one shudder to think that such statements are permitted to be sent forth, the effect of which cannot be other than to mislead those who do not understand the nature of diseases and their etiology. This is the system of healing that has called itself a scientific discovery, coined the fancy name chiropractic for itself, and wishes recognition in Ontario. The statement that "chiropractic proves that 95 per cent. of all disease is caused by subluxated (slightly displaced) vertebrae in the spinal column" should at once condemn the whole system to the outer darkness of oblivion, where it rightfully belongs.

DAVENPORT COLLEGE OF CHIROPRACTIC.

In the announcement of the Davenport College of Chiropractic, on page 12, this appears: "Here we present the reader with a chiropractic barometer, one which each of you carry in your back. It is also the switch-board by which the chiropractor sends the vital force to the different parts. In a word, here is a picture of the all-in-all of the chiro-

practic science." The picture mentioned is that of the spinal column, carrying the head and brain at the upper end, and with a displaced vertebra and injured nerve at the lower end.

On page 13 of the same announcement we find this: "Now the chiropractor, by palpation, discovers these subluxated vertebrae and with a quick thrust or movement of the naked hand, returns it to its normal place, thus removing the cause of the disease and restoring health to the organ affected. This is chiropractic pure and simple, which takes its name from two Greek words, *chiro*, the hand; *prakis*, doing, or in simple words—hand done."

In the first place, we would call attention to the very bad Greek. There are no such words as *chiro* and *prakis* in that language. But this is only in keeping with other evidences of ignorance running all through chiropractic literature. It will be noticed that this college states: "In a word, here is a picture of the all-in-all of the chiropractic science." Here we have the "backbone" first, last, and always as the *fons et origo malorum*. This benighted view of disease may suit the chiropractor who may wish to follow the follies of D. D. Palmer, deduced from his experiences with Negro Lillard, but it will not do for this scientific age.

THE NATIONAL SCHOOL OF CHIROPRACTIC.

Let us now see what is done in Chicago. In the announcement of the National School of Chiropractic, Chicago, we read on page 8 the following: "Briefly defined, chiropractic is a scientific system of treating disease by means of physiological adjustment of the spinal column. As will later be explained in detail, whenever there is a diseased condition of the body it will be found that one or more bones of the spinal column—the vertebrae—are more or less displaced, subluxated, or out of alignment. Chiropractic treatment consists of a certain process of spinal manipulation whereby these subluxated vertebrae are placed in re-alignment, thereby permitting normal function of the parts and organs supplied by the nerves involved and compressed by the displaced vertebrae."

Here, again, a college declares that the origin of disease is some displacement of the vertebrae, and the cure of disease is the correction of these displacements. It is almost beyond conception that any body of men would stand for such views; or that any State would recognize such a system of treatment and give it legal status to palm off its methods upon the people who cannot come to a safe judgment upon such a subject. It is the duty of all legislation to protect the people. The people cannot judge of the merits of any system of healing, and, therefore, it behooves the State to fix the standard. The standard of the chiropractic system should not be allowed.

On page 21 of the announcement of the National School we are told: "Osteopaths learning chiropractic adjustment keenly appreciate its value, as by it they secure quicker results and with very much less labor, than with osteopathic methods—not considering the many results obtained by chiropractic adjustment which were formerly impossible to them.

"There are few diseases which are not benefited or entirely relieved through chiropractic adjustment. It is as potent in many acute diseases, as appendicitis, typhoid fever, pleurisy, pneumonia, and tonsillitis, as in the more chronic forms of disease."

It will at once be seen that there is practically no limit to the claims for its applicability in the treatment of disease. Here lies its real danger; and the danger is great.

THE CARVER COLLEGE OF CHIROPRACTIC.

In studying the announcements of a number of chiropractic colleges, few put forth greater claims than does the Carver College of Chiropractic, of Oklahoma City. At the head of this college is Willard Carver, attached to whose name we find the letters LL.B., D.C., and beneath his name in one of the college catalogues the words: "Author, lecturer, teacher, lawyer, scientist, philosopher, constructor of the science of chiropractic." In the latest announcement of this college to hand there is an article by Willard Carver, on page 7, from which we take the following: "Chiropractic is a separate and distinct science." "Chiropractic is based upon the law of biology or life, that force acting through its organized channels—the brain and nerve system—causes all animation, ordinarily referred to as life." "The basic principle of the science of chiropractic is that the disturbance of the transmission of this force—the force of life—through its organized channels causes all functional abnormality, sickness and disease." "No other system or method recognizes, either wholly or in part, the basic biologic law, or the basic law of chiropractic." "It will be seen that displacement in its broadest sense is the only thing that can cause an interference with the transmission of the force of life. Therefore, chiropractic is the science that teaches health in adjustment, or normal relation of all parts of the organism and disease or abnormality from the displacement or disrelation of any part of the organism." "The chiropractor is the only practitioner that seeks to secure the accomplishment of absolute normal relationship of all parts."

From this same announcement we learn, by paying a fee of \$150, and attending a prescribed course, the degree S.S. (Scientific Scholar) is conferred. Then, for \$250, and attending an additional course, one

may secure the degree of D.C. (Doctor of Chiropractic). A still further course and a still larger fee of \$350, leads to the M.C. degree, or Master of Chiropractic. Then there is another course, with a fee of \$30, and leads to the degree of S.P., or Student of Psychology. There is what is called the masters' course, with a fee of \$350, and when this is completed the possible degrees are, S.S., B.C., D.C., M.C., S.P., and LL.D.

One of the amusing things noticed in this announcement is a picture on page 23, where a hand is seen wielding a club that has descended on the head of "Medicine" with such force that stars are seen flying in various directions, labelled vaccine, hipo, contagion, serum injection, calomel, germs, pills. The club is labelled "Chiropractic," of course.

Just above this picture we find these words: "We think that this hospital and its success should stimulate effort on the part of chiropractors to make it big and strong, for it is chiropractic hospitals that must 'whack' medicine and destroy the power of medical hospitals over the people, and all know that it is there the harm is being done."

Statements such as this reveal the cloven hoof and the horn of chiropractic, conceived in ignorance and nurtured on misrepresentation.

A leaflet is sent out with the announcement we received, on which is printed the "Carver Chiropractic College," and from which we take the following:

"People are constantly coming to us and asking: Do you treat rheumatism, neuralgia, heart disease, bronchitis, measles, diphtheria, dyspepsia, constipation, Bright's disease, impotency, barrenness, female disease, etc.? Our answer to these questions is that we do not treat any disease, but we remove the cause of all disease and abnormal function. We are aware that it is repeating somewhat at this place to say that the cause (no matter what its nature) is occlusion of stimulus in nerves, extending to the organ affected, and that when we adjust the displacement, removing the occlusion, the organ affected will resume its normal condition; in other words, it will be well."

Here we have once again the chiropractic view of the etiology of disease, and how erroneous it is even the chiropractor must surely know.

THE PALMER SCHOOL OF CHIROPRACTIC.

We now come to the "Fountain Head of Chiropractic," using the words in the announcement of the Palmer School of Chiropractic, of Davenport, Iowa. In this announcement there is an account of D. D. Palmer's experiences with Negro Harvey Lillard, the janitor, who was almost deaf. We have mentioned this case already, and do not here repeat it. But the announcement, which is copyrighted by B. J. Palmer,

son of D. D. Palmer, goes on to describe how the latter continued his investigations on bumps on people's backs who were deaf, and we are told this: "Palmer then commenced to examine the spines of other patients who came to him hard of hearing, and in every instance found these bumps. He set about to reduce these, and while the success he obtained with Lillard was not so easily reached in all the other cases, he ultimately accomplished the results. Then he reasoned that if certain bumps on the spine caused deafness, why wouldn't other bumps on the spine cause other diseases. He started in examining other patients who came to him with other ailments, and to his further delight found these abnormalities, and also found that by reducing the bumps the ailments disappeared. That was chiropractic in its crude stage."

As one reads this remarkable story, the thought passes through his mind if the writer of it really expects educated people to believe it, because it is so astoundingly absurd. It is not true that people who are afflicted with deafness have bumps on their backs; on the other hand, it is equally untrue that people who have bumps on their backs are deaf. There is absolutely no connection. The nerve supply to the ear does not go by this route. "Where ignorance is bliss, what folly it is to be wise!" Through his ignorance, D. D. Palmer was probably happy in the idea that he had made a discovery. He may have been a deluded enthusiast, or a designing impostor. No one can tell. The secret lies with him in his grave; but it makes no difference which way; for the whole thing is a complete farce.

On page 14 of this announcement we learn that the reason why one should study chiropractic is "because it is right"; and "it is a science based on the natural law of cause and effect—adjust the cause and you eliminate the effect." We are also told that "chiropractic has no relation to medicine or surgery, or to osteopathy, although osteopaths endeavor to claim that chiropractic is a form of osteopathy. This is distinctly untrue, however, as the chiropractor adjusts the cause of disease and osteopaths treat the effects."

We quite agree with this; for bad as osteopathy has been shown to be, it certainly would not wish to be blamed for resembling in any way chiropractic, which certainly is like the Dutchman's hotel in being "the limit." Theory on which chiropractic is founded is so ridiculous that it is outside the pale of all science, and its followers cannot be admitted to the circle of those who follow any science or line of culture for their own sakes, or by true and sound methods. It is a well-staged fake, as few people understand the spinal column, and to most it is a good deal of a mystery. It is therefore a capital camping-ground for the parasites of science.

THE HOME STUDY COURSE.

In No. 3 of the Home Study Course from the National School of Chiropractic we find the following on pages 3 and 4 as an explanation for the causation of subluxations of the spinal column: "The muscles of each segment of the spinal column are supplied by the outgoing fibres in the posterior root of the spinal nerve of that segment on each side. In a reflex act, therefore, those muscles of the spinal column, on the side that the ingoing impulse entered, will contract. If this contraction on the one side is continuous, the corresponding vertebra must inevitably be drawn toward that side. We see, therefore, that although the ligaments of the spine are strong enough to hold the vertebrae in proper position, if the potential strength of one side be increased by contraction of the ligaments the vertebrae will be drawn to that side. And thus the student will see that the possibilities of subluxations are present in the body itself, and do not necessarily depend upon external violence."

This theory is as erroneous as what is said about the functions of the posterior root. We would advise the writer of the Home Study to revise his anatomy. But this is the sort of thing one encounters everywhere in chiropractic books and articles.

WHAT N. C. ROSS HAS TO SAY.

In No. 3, Vol. 1, of the *Journal of Chiropractic*, N. C. Ross, D.C., president of the Ross College of Chiropractic, Fort Wayne, Indiana, writes this: "Health, therefore, is the expression of a co-ordination between all the various parts of the human machine through a properly working nervous system. It follows that a partial interference in any degree with the work of the nerve system will proportionately produce inco-ordination between the various structures of the body and in the same degree ill-health is sure to follow. Health is therefore the expression of correct nerve conditions. The practice of chiropractic involves the locating of the nerve interferences, and then by adjustment removes the obstruction, thus restoring the nerve system to its normal condition. The result is normal organic action, which means perfect health."

One could hardly imagine a greater amount of nonsense in the same number of words. The number of diseases that belong to the nervous system are limited, and do not by any means cover the whole field of human ailments. Then, they do not arise in the manner laid down by chiropractors. A man has an attack of influenza, which is followed by polyneuritis; another one is exposed to severe weather and suffers from facial paralysis; a third has luetic infection, followed by tabes dorsalis; and a fourth had rheumatic infection, valvular disease, an embolism and now is a hemiplegic. Here, then, goes to pieces the chiropractic

house of cards—better, house of nonsense. But, mark well, these same chiropractors are seeking legal recognition in Ontario.

WILLARD CARVER'S VIEWS.

Let us now look at the teachings of Willard Carver, who is at the head of the Carver Chiropractic College, of Oklahoma. On page 3 of his "Red Book" he says: "Chiropractic is the most exalted of all mechanical sciences, since 'the greatest study of mankind is man,' and let it be understood once for all that it is purely a mechanical science, and has absolutely nothing whatever to do with treating, healing or curing disease. Its entire purpose and object is accomplished when the displaced elements are put in place, the occlusion removed from nerves, and the stimulus has had time to restore normal power to muscles, ligaments and other tissues to maintain normal position. Incidentally, when this condition has been attained, no sickness, disease or pain can exist."

Now, this mess of thought and expression comes from Willard Carver, who is the author of a large work on chiropractic. It will be news to many to learn that the nerves send power to the ligaments; but this is chiropractic anatomy and physiology. Then, also, note that the disease is of no moment, the whole affair being some deviation in the backbone, which, when corrected by the magic "chiropractic thrust," disappears into "thin air" like the characters in the "Tempest." Well might one exclaim over this as did Celia, "O, wonderful, wonderful, and most wonderful wonderful, and yet again wonderful, and after that out of all whooping!"

But we are not done with Willard Carver. On page 4 of his "Red Book" we find this precious gem of chiropraxy: "Chiropractic teaches that all sickness and abnormal function can be removed from the body so long as the displacement can be adjusted, occlusion removed from the nerves. The nerves are not destroyed and the brain is in condition to transmit normal nerve energy." Further on he states: "Chiropractic does not teach the treatment of disease, but, on the other hand, teaches the removal of the cause of abnormality."

This sort of thing should condemn chiropractic at once. A man has had his derma penetrated by the proboscis of the anopheles, and is in an ague rigor. It is too late now to drain the swamp, and so we must give the man quinine. The chiropractor would fumble along the spine for the subluxation that made it possible for the plasmodium to make the man ill, through an arrest of nerve energy to some organ. As it happens that the plasmodium breeds in the blood corpuscles, which have no nerves, we are at a loss to see how the chiropractor can make his theory hold good.

In discussing acute diseases, Willard Carver states, on page 8 of his "Red Book": "For example, scarlet fever, chickenpox and measles are now conceded to present their various distinct peculiarities because of the character of the germ or poison producing the peculiar ailment; all of them, however, being simply fevers resulting from occlusion of stimulus." Again, on page 9 he states: "He knows when he sees the evidence of an occlusion, expressed in any acute form whatever, be it whooping cough, measles, scarlet fever, that a short course of adjusting will secure normal position of the vertebrae. When this is done the occlusion will have been removed, the wrong corrected, and the stimulus will rapidly restore normal functions. The cause of the symptoms constituting the so-called disease having been removed, the symptoms themselves will also have disappeared and the individual will be normal, or well."

The application of such a theory of disease would be revealed in its worst form in the case of anthrax, tetanus, or septicæmia from external wounds. Here there would be most acute types of infections, and without any conceivable spinal abnormality.

On the subject of chronic diseases Willard Carver has this to say, on page 14: "So-called chronic diseases, or abnormal conditions which have existed for a long time simply mean, chiropractically, an old subluxation, and an old subluxation means abnormally shaped articular elements."

For a man who has been working in a lead factory for years, and now has hardening of the arteries, the foregoing explanation would hardly answer. It may suit the chiropractor, however, who wishes to befool some neurasthenic, and fill him up with the notion that all his trouble comes from some day when he wrestled with a chum in the school yard long, long ago.

In his pamphlet, "At the Bar," Willard Carver, on page 23, makes chiropractic say of typhoid fever:

"Do you mean to tell me that typhoid fever is not a germ disease?"

"No; by the time we have the fever there are plenty of germs; for the organs I mention will be loaded with filth, that is decaying in the body, and germ life is always a part of such decay under certain heat and atmospheric pressure, such as is general at or near the surface of the earth.

"How do you kill these germs without medicine?"

"I correct the displacements, restore nerve energy, which sets up an active circulation that washes the filth out of the flesh, and the germs along with it; you see, the whole matter is very simple.

"Do you hold the same idea with regard to infectious and contagious diseases that you do of typhoid fever?

"Yes, sir; all such sickness is very similar. The different appearances of it—what physicians call symptoms—are simply differences in the kinds of filth produced in the body, and the different ways the body has of getting rid of it. This makes the difference in smallpox and so-called malarial fever, or any of the other fevers."

Now, in this theory of disease there could be no danger of infection. There must be first some displacement; and the sort of fever will depend on what "way the body has of getting rid of some filth." Such teaching as this is a crime against the public welfare, and if it became legalized would scatter all sorts of contagion to the four winds to do their worst on mankind.

On page 20 of "At the Bar" we find this: "I am master in that hour of tension, when fathers and mothers stand with pallid lips and bated breath over the couch where all their hopes are centred, while their little one struggles with croup, diphtheria or pneumonia. My quick, but certain, movements, put to place the distorted parts and the life current, being released, soon brings back to the child freedom from pain, and the joy of life and the gladsome presence so precious to those waiting in the shadow." A child ill with cerebro-spinal meningitis would have its spine twisted by such a practitioner, instead of being given a dose of life-saving serum.

The death of a child at the present day, under such treatment as that outlined in the foregoing quotation, should be regarded as a highly criminal act; for which nothing other than a long term of imprisonment should be imposed. Such practice should not be possible under the laws of any civilized country in the face of present knowledge.

In the hypothetical trial of chiropractic written by Willard Carver some of the questions and answers found on pages 16, 17 and 18 are so framed as to discredit vaccination and preventive serum and vaccine treatment.

The reference to syphilis, found on page 21, is thus stated: "Venus is no longer the queen, before my majesty and power, that in a few hours can introduce conditions that will allow Mercury to remain undisturbed for the rest of a human life. I can snatch from the lips of the injured one of the blighting draughts and set him again upon his feet, happy, free and untainted." Anyone who publishes such a statement should be made to verify it in presence of competent experts; and if he could not do so, brand the statement publicly as fraudulent and dishonest, and calculated to deceive those afflicted with the disease, and who require a very different treatment to that of manipulating the vertebrae.

With the following quotation from "At the Bar," page 21, I am through with Willard Carver: "I am especially come to raise humanity from the slough of degradation and despair in which it is wallowing, and place it upon the hills of strength, laughter, Love and Peace. My work is simple. I am near to God. I bring the power of creation, I reconstruct what Error, Ignorance and Carelessness have torn down and destroyed. I take the human family back toward the Creator's revealed plan, building the body by the light of Eternal Creative Intelligence." Thus saith chiropractic in giving his evidence.

A schoolboy was once asked to draw the picture of a cow. He did his task no badly that, fearing no one would know what the picture stood for, he wrote beneath it, "This is a cow." We do not write beneath the foregoing statement what we think of it. We leave our readers to do this.

It would be a waste of time and effort to follow further the teachings of Willard Carver. We regard them as equally unscientific as the notions held in the days of the dancing mania, tarantulism, and demoniacal possession.

PALMER'S FOUNTAINHEAD OF CHIROPRACTIC.

Before concluding, some attention should be devoted to the views of B. J. Palmer, D.C., who is president and professor of philosophy in the Palmer School of Chiropractic, Davenport, Iowa. This school is called in its announcement "The Fountain-head of Chiropractic," and on page 10 this school is called "The Mother School." As B. J. Palmer is at the head of this school, and puts himself forward as an extensive writer on chiropractic methods, it must be assumed that he is responsible for what is stated in the announcement of this school.

On page 5 we are given the reason that no science can advance without merit, but that which is not science may for a time have its day, by push and advertising. The people cannot discriminate and are ever ready to be gulled by new movements. Such acceptance by the people is not proof of real merit.

Turning to the subjects taught in this school we find the first is the Department of Philosophy, by B. J. Palmer. This subject is divided into chiropractic knowledge, the knowing why; chiropractic science, the knowing how; and the chiropractic art, the doing. Then we are told that, "It can be practically said that this is the only school that teaches a philosophy at all." This philosophy is what has been stated. B. J. Palmer personally teaches the senior class how "Medical and osteopathic theories are explained chiropractically."

The Department of Hygiene is rather peculiar. The hygiene set

forth here is that the body is kept in good condition and its own drains working properly. It is thus set forth: "It is not necessary, however, to resort to external or internal agencies to cleanse the system, but give innate intelligence a chance and the cleansing will take place as a result of the work of this internal force." In addition it is stated that "This subject is taught from a purely chiropractic standpoint. The Palmer school recognizing no need of adjuncts, but adjusts causative subluxations, relieving the impinged nerves, which will allow for the normal functioning of all organs of the body." Here one meets with a most novel sort of hygiene—sanitation is made right by twisting the spinal column.

The next subject is chiropractic orthopedy. Under this department we find osteology of the spine, syndesmology of the spine, physiology of the spine, shape of the spine, and pathology of the spine. This department deals with nothing but the spine.

Then there is a department called "Spinography." This is the X-ray study of the spine. This very remarkable statement is made: "The student is equipped, when he goes into the field, to enter any X-ray laboratory and have pictures taken as he wants them."

Some histology, microscopy and chemistry is taught. One of the most interesting things in the announcement is what is said about psychology. It had better be told by quoting the exact words: "The subject of psychology aims to present the work in a way to instruct the student in the art of approaching his patients, and not for the purpose of effecting a cure." This seems to be the sort of psychology that Bar-num knew.

There is a Department of Symptomatology. This consists of two branches: Chiropractic pathology, and chiropractic symptomatology. We are told that "it is highly essential that the chiropractor have a thorough understanding of the same to favorably impress his patients." Further, we are told: "The entire subject of symptomatology has been remodelled and outlined in concise form, which makes it easier for the student to grasp. Pathology and symptomatology are both taught as outlined, and any student, even though he is not of a scientific turn of mind, will find no difficulty in understanding and comprehending this branch."

Really this is delightful! The chiropractors have a way all their own. They can make difficult things so easy.

The next is the Department of Obstetrics. In the announcement we have these words: "We combine with this work chiropractic philosophy, wherein we meet all abnormal conditions existing in the mother prior to the birth of the child, also complications arising following the

delivery of the child." Further, we are informed that "thus far we have had absolutely no complications resulting, and we base this statement upon the fact that we have applied chiropractic philosophy, or, in other words, have adjusted for whatever condition arose."

Under the heading of Gynæcology we are told: "In this department we depend entirely upon chiropractic adjustments for relieving whatever pelvic disorder our patients may have. Clinical experience, with positive beneficial results in all cases, leads us to make this statement." Here is a brand new system of gynæcology; but one still further marvels when the announcement states that, "We teach the pathological conditions that exist here, such as all the inflammations, the different tumors, both simple and malignant, the malpositions of the uterus, and all abnormal conditions existing in the adnexa." After teaching all this, the whole treatment is "chiropractic adjustments."

Passing over the Department of Physiology, we come to that of Practice. Here we are told that it is divided into two branches: "Analysis and adjusting. Analysis embraces vertebral palpation and nerve tracing. The branch of adjusting is most thoroughly systematized and taught."

It will be seen that this department is also an affair of the spine.

There is a Department of Anatomy. This subject is studied from the chiropractic standpoint, of course. This statement is made: "Dissection work is optional, and, though not a regular and daily course, yet from time to time during the year one is able to take advantage of some work in dissection." It will be seen from this that the practical knowledge of even the anatomy of the spinal column must be very limited; and this is the part that chiropractors boast of having a special knowledge.

OTHER WRITERS.

In a circular which I have, and bearing the name of a well-known Toronto chiropractor, this appears: "The scientific method of removing the causes of disease without drugs or surgery. Remove the cause of disease by relieving the pressure on impinged nerves through spinal adjustments." Such teaching as this is perfect folly, and contrary to all experience. No form of nerve pressure could cause a cancer of the liver; and if there was such cancer, no spinal adjustment could remove the growth.

In an article on the merits of chiropractic, we find a quotation from B. J. Palmer, part of which we now use: "With every contagious and infectious disease there will be found certain definite subluxations, the location of which is reasonably constant in all persons having the same

disease." This means that to square experience with the theory there must be a tuberculosis subluxation, and another for pneumonia, and a third for typhoid fever, and so on. This is just what chiropractors tell us is the case. So that according to the displacement will be the form of disease, and the sort of germ that will go into the body be found. This shows to what extreme lengths people will go to bolster up a theory. One list of acute diseases that are caused by displacements and cured by adjustments is as follows: "Asthma, appendicitis, Bright's disease, bladder disease, bowel troubles, constipation, consumption, diarrhœa, dyspepsia, diseases of women, deafness, fevers, heart disease, infantile paralysis, indigestion, kidney disease, liver troubles, lumbago, nervous debility, neurasthenia, paralysis, rheumatism, sciatica, spinal disease and goitre."

This list is very much like what one finds on the wrappers of some proprietary medicines. It is worthy of note how comprehensive and indefinitely many of the terms are, such as "fevers," "bowel trouble," "diseases of women," etc. Under some of these terms a legion of ailments might be grouped. This is a catch-penny method of those who wish to impose upon the public.

Chiropractors put forth great claims as to the results obtained in the treatment of female diseases. What a shame that a woman with a laceration from bearing children, or a cancer of the cervix, or a papilloma of the ovary, should be imposed upon by the statement that some manipulation or adjustment of her spine will cure her! Such pretensions should be punished more severely than would be the deliberate adulteration of foods.

But if what has been said is not enough, take this: "All fevers respond very quickly to adjustment by the chiropractor." This is downright falsehood. A man has the proboscis of a stegomyia inserted through his skin and is now ill with yellow fever. No chiropractor living can show any connection between such a fever and a previous subluxation, nor would all the adjustments in the world do the patient a particle of good. Come forward, chiropractor, and play honest with the people.

In the literature of the chiropractic school there are many illustrations to show displacements and abnormalities of the spine. In one a vertebra is shown as a little to the side. A "chiropractic thrust" puts it right, and it stays "put." Nonsense! Another picture shows one of the intervertebral discs thinned at one part by abnormal pressure. The "chiropractic thrust" puts everything right again and bids the disc resume its normal shape, and it stays "put." Nonsense! Another picture shows a nerve under pressure and much smaller than it should be, and the "chiropractic thrust" removes the pressure, and, presto, the nerve

is all right and stays "put." More nonsense! Again, chiropractic, come forward and be honest with the people.

G. H. Patchen, writing about spinal displacements, says: "And there also exists an original, unique and most effective method for correcting this abnormal condition *by means of the hands alone*, using either the *spinous or transverse processes of the vertebrae as levers*." Those who know the anatomy of the spinal column know that such a statement has no foundation to rest upon; for the vertebrae cannot be made to shift their position by any such manipulation. Again, chiropractor, be honest with the people.

Chiropractic literature is full of denunciations against vaccines and sera, and speaks of them as pus and poisons. If the armies of the Allies had been subjected to spinal adjustments, as a preventative of typhoid fever, instead of anti-typhoid fever inoculation, the cause of the Allies would long ago have been lost through sickness among the troops. Once again, chiropractor, be honest with the people.

But when someone, as Hahnemann, or Still, or Palmer, thinks he has made a discovery, that is no justification for the formation of a cult within the medical profession. Lister did not form a new school. Larrey did not separate himself and set up a new cult. Harvey did not denounce all other medical men and create a body of practitioners known as the circulationists. But these new cults have formed an easy pathway into a form of practice and the making of money. Once more, chiropractor, come forward and be honest with the people.

CHIROPRACTIC THERAPEUTICS UNSCIENTIFIC.

There are undoubtedly some conditions of the spinal column that may be more or less painful and prove incapacitating to the person so afflicted. It does not follow from this that the proper treatment would be the "chiropractic trust." Let us recall some of these conditions.

1. The muscles, ligaments and intervertebral cartilages may be strained as the result of exertion, a fall, or a wrench. But these cases are not accompanied by any displacement, subluxation, or misalignment. For this reason chiropractic treatment would not be proper, even according to the theory of that cult. But, also, this sort of treatment would not be indicated, as the "thrust" would be no use for sprains, and there is no displacement. On their own theory their method of treatment is contraindicated.

2. Then there may be bony tumors in connection with the spine. These are rare, but when they do occur, one could hardly conceive of anything more brutal than the treatment outlined by the chiropractic

cult. Just imagine a vertebra that has become the location of an osteoma being treated to a sharp, quick thrust made by the hands!

3. Caries of the vertebral bones is moderately common. As a result of this disease the bodies of the vertebrae become softened, and curvatures follow. Treatment, such as the "chiropractic thrust," for cases like this would be criminal. It is opposed to every element of good practice. It is the vagary of the untrained mind being embodied in a wrongful act.

4. Sometimes one meets with deposits on the vertebral bones, or exostosis formed on them. These are usually near the articular edges. When these are present they may cause considerable pain, or interfere with movements. This condition is not the same to the slightest extent as that of subluxation. It is clear, then, that the "thrust" is not the proper treatment. It is impossible, by any manipulation the hand can perform, to thrust aside either the cause or the effect in such a case.

5. There may be a fracture of one or more of the vertebrae, accompanied by some displacement, a condition described as fracture-dislocation. This condition is the result of injury and is a severe disability. By no possible chance could the treatment enunciated by chiropractors suit such a case. The short, quick, energetic "thrust" would be wrong, and might, indeed, lead to fatal consequences. But, further, displaced vertebrae cannot be made to resume their normal relationships to each other by such treatment. It would, in addition, be quite incapable of keeping the vertebrae right, even if they had been displaced, and the "thrust" had put them where they should be.

6. There may be much pain and some change of shape in the spinal column due to an aneurism. What should be done to one who would treat such a case chiropractically, by placing the patient in a prone position on a narrow couch, and administering a sharp "thrust" to that part of the spine affected, should be answered by the criminal code, rather than by argument.

7. There may be much pain and derangement of function caused by growths on the roots of nerves, or in tissues adjoining them. There may also be new formations in or around the cord. The symptoms in such cases would be referred to the spine. Woefully lacking in suitability would be the much-vaunted "thrust" in all such conditions. The amount of damage that might be done in such cases it is impossible to imagine.

8. Inflammation or congestion of the spinal muscles and ligaments, such as are common after exposure to cold, or in rheumatic conditions, are not suitable for the crude and unscientific treatment laid down in the writings of chiropractors. Anyone who would, with violence, dig

his fingers into the muscles of a victim of lumbago should be shown the door in quick order. People will go a long way in the worship of a false idea.

9. The theory at the foundation of chiropractic is wrong, and this, of course, upsets all their speculations regarding disease and treatment. It is not true that subluxations or displacements of the vertebrae are common events. It is not true that the intervertebral fibro-cartilages are frequently distorted in shape by one edge being compressed. It is not true that the spinous and transverse process get out of alignment in the great majority of spinal columns. It is not true that the nerves would be compressed, even if there was some displacement, for the reason the foramina are so much larger than the nerves passing through them. It is not true that, if a nerve root is impinged, it would give rise to the growth of tumors, the development of arteriosclerosis, the formation of gallstones, the production of a predisposition to tuberculosis or any other infection, or the appearance of valvular disease of the heart. The chiropractic theory of nerve function is at variance with anything that is taught by sound physiology and correct anatomy. As a theory it is no more worthy of confidence than was the belief, in by-gone days, in the evil eye as the cause for the failure of the crops or the death of the cattle of an enemy. Chiropractic preventive medicine reduces itself to the examination of spines and the correction of subluxations in order that there be no predispositions acquired to any form of germ. When one looks at this sort of thing it does appear more mis-shapen than Caliban and more grossly foolish than anything Trinculo could have said. It would put old Falstaff to shame.

10. The chiropractic view of therapeutics is altogether too limited in scope, even if correct in its own field, which it is not. Surgery is therapeutic when it opens an abscess, removes a tumor, or reduces a dislocation. Electricity is therapeutics when the galvano-cautery is used to destroy unhealthy tissue, or the X-rays are employed to cure a lupus, or the faradic current sent through a paralyzed muscle. The bath is therapeutic when it is ordered for a patient suffering from hyperperexia. Change of climate is therapeutic for one suffering from chronic bronchitis. Manipulation and rubbing of a joint, stiffened by injury or rheumatism, is also therapeutic when properly applied. Drugs are also therapeutic, as witness, opium for the relief of pain, quinine for the cure of malaria, mercury for syphilis, and jaborandi to induce sweating. Obstetrics is therapeutic when it arrests a post-partum hæmorrhage. Gynæcology is therapeutic when it removes a uterine polypus. But chiropractic, poor chiropractic, is never therapeutic, except in a few cases where it acts through the mind of the patient by way of sug-

gestion. One would think that even the myopic chiropractor could see at least this much.

11. The chiropractic view as to the place where the nervous system becomes deranged is wrong, as shown by the teachings of G. H. Patchen, M.D., of New York. Here are his words: "The only place where interference with the flow of mental impulses *can occur*, to a degree sufficient to cause deranged functional activity or disease, is at the intervertebral foramina." This leaves out of account the well-known disease of the cord, such as acute and chronic anterior poliomyelitis, sclerosis of the lateral tracts, the changes in the posterior columns found in locomotor ataxia, and myelitis due to acute infections. It also ignores the forms of neuritis frequently met with that arise from such diseases as diphtheria or influenza, or from exposure to severe cold, and in no way dependent upon any derangement at the intervertebral foramina. These examples could be multiplied, but are sufficient to show that this theory is quite erroneous.

12. Another position laid down by G. H. Patchen is "that the vitality and activity of every organ, tissue and cell of the body is maintained and controlled by a force or energy, which is transformed or individualized by the brain, and then transmitted to their respective parts." It would appear that the author is not very sound in his physiology, as is proven by the fact that epithelial cells everywhere have no connection with nerves; that no nerves enter the cornea or the crystalline lens; that the blood corpuscles are uninfluenced by nerve stimuli; that the fat globules are without nerves, and that connective tissue is uninfluenced by nerves. When the chiropractor states that every organ, tissue and cell of the body is under nerve control, he states what is not so.

Are there no "cures" to the credit of chiropractors? Really, none. There are many fevers that would last only a few days under any circumstances. There are sore throats that recover in a few days untreated. There are aches and pains of an ephemeral type that soon pass away. There are derangements of digestion that are present to-day and gone to-morrow. There are some who think they have some ailment who have no real illness. There are temporary stiffness of muscles from fatigue or a chill that a day's rest or a hot drink will relieve. There are cases of pain somewhere along the spine that a manipulative treatment may help, whether by the masseur, the osteopath, the chiropractor, or by someone at home. But this is miles and miles away from a new science and a new system of treatment. Much of the results obtained through chiropractic treatment is not physical at all, but suggestion.

In this article no attempt has been made to be in any way unfair

to the chiropractic school. Nothing has been used that is not found in the announcements of their colleges, and in the writings of the leaders of this cult. If their case is a deplorable one, they must blame their own records. No body of men can afford to be unjust to science and unjust to humanity; and all cults of a special brand of healing are both, because they separate themselves from the great body of workers and propound a narrow and partial view of diseases and their treatment.

It is to be hoped that the time is not far distant when, in the interests of true science and progress, it can no longer be said that "he that is unjust, let him be unjust still."

TREATMENT OF ANORECTAL VARICES IN PREGNANCY.

F. Mortinez Suarez (*Revista de Medicina y Cirugia Practicas*, February 14, 1917) divides the treatment into hygienic and curative. As to prophylaxis he advises the taking of olive oil before each meal and the use of medicated toilet paper after defecation followed by gentle washing with warm water and absorbent cotton. Too long walks must be avoided and when sitting the patient must try to rest the weight on one buttock rather than on two. If there is prolapse of the hemorrhoidal masses at defecation they should be bathed with a boric or carbolic solution and reduced with the aid of sterile gauze and the left lateral position assumed on the bed for twenty minutes. Irreducible masses must be treated by rest in bed with the application of very hot fomentations of thymol one in 1,000, boric acid two per cent., or formol one in 1,000, followed if pain persists by the following ointment:

R̄	Zinci oxidi	2.0
	Adrenalin, 1 in 1,000	1.0
	Orthoform	1.0
	Stovaine	1.0
	Petrolati	30.0

Careful injection of four or five minims of a one per cent. solution of phenol in glycerin may cause shrinking of the varices, while in severe cases dilatation of the sphincter may be required to relieve the strangulation.—*New York Med. Jour.*

CURRENT MEDICAL LITERATURE

TREATMENT OF DIARRHEA IN BREAST-FED INFANTS.

Marfan (*Paris Médical*, February 3, 1917) advises, in slight diarrhea in breast-fed babies, that, on the first day, the child be put to the breast only every four hours for five or six minutes at a time; a few teaspoonfuls of pure boiled water may be given in the intervals. On the next day, the intervals may be somewhat shortened, the third day, the duration of the feedings increased, and thereafter a gradual return to normal feeding allowed. In more intense diarrhea, three or four feedings may be omitted, the milk being replaced by a quantity of boiled water by bottle or spoon equal to the amount of milk the child would have taken if well. Feeding as in mild diarrhea is then carried out. As soon as the treatment has been started, a search should be made for some definite cause such as overfeeding or faulty composition of the milk. Even where such a cause cannot be found, and the diarrhea seems due to a special susceptibility of the digestive tract to irritation by mother's milk, no attempt should be made to change the feeding radically unless the condition is obstinate and seriously retards development. The irritability always finally disappears, but meanwhile two feedings daily may be replaced by bottle feedings with diluted and sweetened cow's milk, or, if the child be over four or five months old, with a gruel of rice, milk, and water boiled for twenty or thirty minutes. Auxiliary treatment includes the giving of one or two enemata a day of 150 to 250 c. c. of a decoction of marshmallow root at 40° C., to be administered once or twice daily on the first four or five days, then every two or three days. Calomel should be avoided, as it aggravates and prolongs the diarrhea. Lime water may be given, one teaspoonful before each feeding, either alone or mixed with one-half part of simple syrup. For more marked effects a mixture of benzonaphthol, bismuth subnitrate, and syrup of opium with acacia and water may be used. If the stools contain much mucus, 0.25 gram of tannigen may be given two or three times a day in a little milk. In the few cases with alkaline and malodorous stools, lactic acid in doses of a little over one minim, before feedings, is sometimes effective. If insufficiency of gastric secretion is suspected, the following combination may be tried, though not indicated as often as is generally supposed:

℞ Pepsin	1 gram;
Acidi hydrochloric diluti	0.5 gram;
Syrupi	50 grams;
Aquæ distillatæ	100 grams.

M. et Sig.: One teaspoonful a few minutes after, or, fifteen minutes before, each feeding.

If, on the other hand, insufficiency of secretion seems chiefly intestinal, one may give:

℞ Pancreatin
 Cretæ præparatæ ana 5 grams;
 Sodii bicarbonatis 1 gram.

Pone in chartulas no. xx.

Sig.: Three or four powders a day a little before meals in milk or sweetened water.—*New York Medical Journal*.

HIGH EXPLOSIVES AT CLOSE RANGE.

The world has grown quite unaccustomed to mere mass measurements of war's destructiveness. Battleground tolls form only the conspicuous centre of a fringe of injury and waste in health and life which reaches out in every direction.

Thus trinitrotoluene, industrially known as TNT, is not only an efficient high explosive in actual warfare; it finds its victims in fewer numbers in the munition factories, but evidently its work upon them is no less sure if its poisonous action has found opportunity. Martland (*Trinitrotoluene Poisoning. Proceedings of the New York Pathological Society, October-November, 1916*) has cited some recent investigations made in England and in this country with the purpose of discovering the effect of this action and providing defensive measures in the handling of the substance, since our own munition factories are now busily occupied with it.

It is not in the manufacture of TNT that the risk occurs, for that is conducted in closed retorts. The workman must later, however, be exposed to the fumes of the melted substance as it is poured into the shells and to the dust as he chips and scrapes off the amount that solidifies around the top of the shell and drills the core within for insertion of the detonator.

The inhalation and ingestion of this dust produce a serious irritation of the skin and mucous membranes and resulting disturbances ranging from blurred vision to severe intestinal disorder. The patient most closely observed had, however, been exposed only to the fumes. After seven weeks of work symptoms developed which obliged him to leave his work and in less than three weeks proved fatal. The autopsy confirmed the clinical diagnosis of hepatic failure due to the extensive destruction of liver cells, which appears to be the characteristic effect of TNT poisoning.

"The picture is that of a toxic hepatitis, characterized by extensive

cloudy swelling, fatty degeneration, and necrosis of the liver cells, most marked in the region of the efferent veins, but not distinctly zonal in character; lymphocytic perilobular infiltration; bile duct hyperlasia; jaundice, and areas of extensive hemorrhage. The damage is beyond any known possibility of liver cell regeneration."—*New York Medical Journal*.

COMPLEMENT FIXATION IN TUBERCULOSIS.

Complement fixation as an aid to the clinical diagnosis of active cases of tuberculosis is discussed by S. A. Petroff, Trudeau, New York, in an article in the *American Review of Tuberculosis*. He himself worked with three antigens, a polyvalent potato broth filtrate, a sodium hydrate extraction of dried pulverized tubercle bacilli and a methylalcohol extract. The usual haemolytic system was used, the sera of patients were inactivated and the bacteriolytic system incubated for one and a half hours. By using different antigens for each patient he obtained positive reaction in 199 out of 212 clinically active cases, in 89 out of 158 quiescent cases, in 5 out of 58 cases apparently cured for more than two years, in 3 out of 78 normal individuals, in 65 out of 166 suspected cases of whom some developed tuberculosis later, and in 6 out of 41 patients suffering from other diseases, one of whom showed recent tuberculosis at autopsy. Complement fixation did not parallel the tuberculin reaction until the patient became moribund.

Guinea pigs inoculated with a virulent strain of human tubercle bacilli first gave a positive complement fixation test on the fifth or sixth day after inoculation which persisted for about two weeks and then gradually decreased. When a bacillus of low virulence was used producing only a localized tuberculosis, the positive reaction persisted for a longer time. Rabbits, inoculated first with human and subsequently with bovine tubercle bacilli, gave strong positive complement fixation reactions with the methyl alcohol extract antigen, while those inoculated with only the bovine strain usually gave a negative reaction with this antigen. A tuberculous cow gave a strongly positive complement fixation test at the height of general tuberculin reactions. After a lapse of five months the complement fixation test was negative and 1.5 c. c. of concentrated O. T. subcutaneously injected did not cause tuberculin reaction. The animal was then repeatedly injected intravenously with sodium hydrate antigen with the gradual development of a strongly positive complement fixation test.

Of 376 cases giving a positive complement fixation test for tuberculosis, Wassermann reactions were obtained in 82 with cholesterinized heart extra antigen.

PERSONAL AND NEWS ITEMS

Surgeon-General Gorgas, of the United States army, has appointed Dr. Elliott G. Brackett, of the Army Medical Reserve Corps, to be director of the department of military orthopedics. The department of military orthopedics in France is under the control of Major Joel E. Goldthwait.

The thirty-two United States military hospitals that are being built will cost \$14,500,000. By fall there will be accommodation for 5 per cent. of the army, while in France there is to be accommodation for 20 per cent. of the army.

On first September the New England Relief Funds amounted to the following: French wounded, \$246,649; American, \$223,949; children's, \$214,116; surgical dressings, \$122,296; Polish, \$81,476; Italian, \$44,132; French blind, \$3,467; war dogs, \$1,100.

Sir Watson Cheyne, Bart., was elected recently without opposition as member of Parliament for the Universities of Edinburgh and St. Andrew's. He said that great problems confronted the medical profession, as many members had been killed, many had been maimed for life, and many had been ruined by leaving their practices.

The war council of the American Red Cross has appropriated \$10,000 for the eradication of malaria from the Columbia, S.C., cantonment and its immediate vicinity. The Red Cross representatives are working in close co-operation with the South Carolina Board of Health and with the Public Health Service. Around the Columbia cantonment will be created a one-mile zone free from the only species of mosquito guilty as a carrier of malaria. The war against the malaria-carrying mosquito will be carried on at all the army training camps.

The American Red Cross has appropriated \$800,000 to secure sanitary conditions in and around the military encampments.

Mr. George W. Brackenridge, of San Antonio, Texas, has given \$50,000 to enable Columbia University to open its doors to women students of medicine this autumn. The existing buildings will be extended to provide additional laboratory facilities for work in chemistry, pharmacology, pathology and bacteriology.

At a conference recently held between the Red Cross Committee on Co-operation, the Red Cross Medical Advisory Board, and committees representing leading nursing associations of the United States, estimates were presented showing that approximately 14,000 nurses may be called into war service within the next eighteen months. This number should be able to care for an army of 2,000,000 in the field. More than 12,000 are already enrolled in the Red Cross, available for instant service.

On July 9th Dr. Henri Roger was elected Dean of the Paris Faculty of Medicine, in succession to the late Professor Landouzy. Dr. Roger is professor of experimental pathology and is the author of a work on infectious diseases and of a treatise on general pathology now in course of publication. He has also won distinction in the field of literature, and a play of his entitled "L'Épreuve," produced at the Theatre Antoine, had a considerable success.

Announcement has been made that besides applying the income from the \$100,000,000 given the Foundation by John D. Rockefeller to war relief work, the principal will be drawn upon this year to the extent of \$10,000,000. Already appropriations aggregating \$6,425,873 have been made from this draft upon the Foundation's investments. They include \$5,000,000 given the Red Cross, \$340,000 for work about the training camps for American soldiers, \$402,500 for medical research in the mobile hospital in France, to the National Committee on Mental Hygiene, and to the Rockefeller Institute for Medical Research. A fund of \$300,000 was also set aside to build and equip the hospital, under the control of Dr. Carrell, to teach new methods of war surgery. A number of relief associations have also received large sums.

Following a settlement of the contest of the will of Mr. Brady, who died last February, leaving a large share of his \$3,000,000 estate to charity, plans have been announced for the James Buchanan Foundation of Urology, which is to be established in connection with the New York Hospital. The work of the Foundation will be carried on temporarily in the laboratories of the hospital, but the trustees plan to erect a new building in the near future, costing about \$500,000, in which there will be chemical, physical, pathological and bacteriological departments. The Foundation will be under the direction of Dr. Oswald S. Lowsley.

Dr. R. D. Rudolf, of Toronto, who is in England, is acting as consulting physician to Canadian hospitals.

Dr. A. S. Moorhead, of Toronto, is in France acting as surgeon under Col. H. A. Bruce.

Major Frank M. Walker, M.B., of Toronto, has been awarded the Military Cross for gallantry and devotion under fire. He went through a barrage fire to attend the wounded.

Surgeon-General N. Keefer, of Toronto, retired from the Indian army, recently sent to King George the sum of \$47,500 to be used in the care of wounded soldiers.

The University of Toronto Base Hospital, which for a long time was stationed at Saloniki, has arrived in England, where it will take up duty in attendance upon Canadian soldiers. It was a very busy hospital while in Greece.

OBITUARY

GEORGE BURNHAM, M.D.

In the death of Dr. George Burnham, of Peterboro, at the age of 72, a well-known and highly respected medical practitioner has passed away. He had been ill with heart trouble for some time, and a few days before death was seized with an attack of apoplexy. His wife died last year, and his nearest relative, a nephew, Capt. George Burnham, is overseas. Dr. Burnham took an active interest in local affairs. The death occurred on 17th September.

GEORGE H. CLEMENS, M.D.

Dr. George H. Clemens, of Toronto, died suddenly on 23rd September. On Saturday he was bowling, and was found dead in bed on Sunday morning. For some time he had been suffering from some form of heart disease. He graduated in Toronto in 1880, and was in his 61st year at the time of his death. He had practised in Toronto for over twenty years.

BOOK REVIEWS

PATHOGENIC MICRO-ORGANISMS.

- A Practical Manual for Students, Physicians and Health Officers. By William Hallock Park, M.D., Professor of Bacteriology and Hygiene, University and Bellevue Hospital Medical College, and Director of the Bureau of Laboratories of the Department of Health, New York City, and Anna Wessels Williams, M.D., Assistant Director of the Bureau of Laboratories of the Department of Health; Consulting Pathologist of the New York Infirmary for Women and Children, assisted by Charles Krumwiede, Jr., M.D., Assistant Director of the Bureau of Laboratories, Assistant Professor of Bacteriology and Hygiene in the University and Bellevue Hospital Medical College, New York City. Sixth edition, enlarged and thoroughly revised, with 209 engravings and 9 plates. New York and Philadelphia: Lea and Febiger, 1917. Price, \$4.75.

The work on bacteriology by Dr. W. H. Park has been long and well known to the medical profession, and, because of its many merits, has now reached the sixth edition. Everything that one could wish is to be

found in this volume upon the subject with which it deals. It is full, reliable, clear and accurate. The methods of investigation are well set forth, and will prove of the utmost value to the laboratory worker. The illustrations are very fine and throw much light upon the text. This work can be recommended as a general textbook to all, but especially to those who are devoting their time to this field of study and investigation.

NUTRITION AND DIETETICS.

Nutrition and Clinical Dietetics. By Herbert S. Carter, M.A., M.D., Associate in Clinical Medicine, Columbia University; Associate Attending Physician to the Presbyterian Hospital; Consulting Physician to the Lincoln Hospital, New York; by Paul E. Howe, M.A., Ph.D., Assistant Professor of Biological Chemistry, Columbia University, New York, and by Howard H. Mason, A.B., M.D., Instructor in Diseases of Children, Columbia University, New York; Associate Attending Physician to the Presbyterian Hospital; Attending Physician to the Hospital for the Ruptured and Crippled, New York. Philadelphia and New York: Lea and Febiger, 1917. Price, \$4.00.

This is a new book on this subject, but it is a good one, and will soon find a place for itself among the current works of the day on dietetics. The authors have tried to work in the best that is to be found in the most recent literature and to confirm this by actual observation and laboratory studies. We have much pleasure in recommending this book to our readers, as they will find in it all that is required to guide the busy practitioner on the matter of diet and nutrition.

ORTHOPAEDIC SURGERY.

A Treatise on Orthopaedic Surgery. By Royal Whitman, M.D., M.R.C.S., Eng., F.A.C.S., Assistant Professor of Orthopaedic Surgery in the College of Physicians and Surgeons of Columbia University, New York; Professor of Orthopaedic Surgery in the New York Polyclinic Medical School and Hospital; Associate Professor to the Hospital for Ruptured and Crippled; Orthopaedic Surgeon to the Hospital of St. John's Guild; Consulting Orthopaedic Surgeon to St. Agnes' Hospital for Crippled and Atypical Children, White Plains, to the New York Home for Destitute Crippled Children, and to the New York State Board of Health, etc., etc. Fifth edition, revised and enlarged. Illustrated with 704 engravings. Philadelphia and New York: Lea and Febiger, 1917. Price, \$6.00.

This superb work on orthopaedic surgery needs no introduction to the medical profession; much less any set recommendation. Long ago it has established for itself a place, and has come to be regarded by all as one of the best works on this branch of surgery extant. It is full of information, and that also of the most trustworthy character. The illustrations are all very fine and lend greatly to the usefulness of the book. It would not be proper to omit due praise to the publishers for the care they have taken to make this an ideal work.

PROGRESSIVE MEDICINE.

A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by H. A. Hare, M.D., and by L. F. Appleman, M.D. Vol. III., September, 1917. Diseases of the Thorax and its Viscera, including the Heart, Lungs and Blood Vessels, Dermatology and Syphilis, Obstetrics, Diseases of the Nervous System. Philadelphia and New York: Lea and Febiger. Price, per year, \$6.00.

This number keeps up the high standard of all that have gone before it. It is a pleasure to review "Progressive Medicine," as one feels the matter it contains is always good, and well selected, so that those who may have the good fortune to read the publication will not be disappointed. The contributors to this number are Edward P. Davis, William Ewart, William S. Gottheil, and William G. Spiller. These names are well known and are guarantee enough for the merits of the volume.

 RADIAL FRACTURES.

Fractures of the Lower Extremity or Base of the Radius. By Lewis Stephen Pilcher, A.M., M.D., LL.D., of Brooklyn, New York, Consulting Surgeon, Bushwick, German, Jewish, St. John's and Bethany Deaconess' Hospitals, Norwegian Deaconess' Home and Hospital, New York Skin and Cancer Hospital, Editor of the Annals of Surgery. With 132 illustrations. Philadelphia and London: J. B. Lippincott Company, 1917. Price, \$2.00.

Dr. Lewis S. Pilcher has long been known as an outstanding writer on surgical subjects. Like all good writers, he does not wear out, but grows in favor with the passing years, and his new contributions to surgery. This one is unique in several respects. In the first place, it deals with an important part of surgery that has not been too well cultivated. In the next place, it is illustrated in a most superb way. Then, lastly, the treatment is set forth in the clearest manner. We recommend this book and cordially congratulate the author. The publishers have done their part well. We predict many good opinions for this book.

 REGIONAL SURGERY.

A Treatise on Regional Surgery. By various authors. Edited by John Fairbairn Binnie, A.M., C.M., F.A.C.S., Kansas City, Missouri. Vol. I., with 351 illustrations. Philadelphia: P. Blakiston's Son and Company. Price, \$7.00.

This volume deals with the surgery of the head, bronchial system, the thorax, and the breast. The present volume contains 650 pages, and is well illustrated. Thirteen prominent surgeons have contributed to this volume. It is not always true that a multiplicity of counsel means

wisdom, but it does in this case. Each chapter rivals the others for excellency, and the hand of a careful editor is seen throughout in avoiding overlapping and duplication. The work is illustrated with much skill and artistic taste. There is also no small share of credit due the publishers for their courage in undertaking so large and costly a work that will run into two more volumes. The profession are to be congratulated that so fine a work has been placed within their reach. This is the most important point of all.

POLIOMYELITIS.

Acute Poliomyelitis. By George Draper, M.D., Associate in Medicine, College of Physicians and Surgeons, Columbia University; Associate Attending Physician, Presbyterian Hospital, New York City. With foreword by Senior Flexner. With 19 illustrations. Philadelphia: P. Blakiston's Son and Company, 1917. Price, \$1.50.

This is a most interesting and instructive book. The author has had an unusual opportunity to approach this subject in a thoroughly intelligent manner. He has made the very best use of a large number of cases to study and elucidate the peculiarities of the disease. It is well worth careful study.

OBSTETRICS.

A Textbook for the Use of Students and Practitioners. By J. Whitridge Williams, Professor of Obstetrics, Johns Hopkins University; Obstetrician-in-Chief to the Johns Hopkins Hospital, Baltimore, Md. Fourth enlarged and revised edition, with 17 plates and 685 illustrations in the text. New York and London: D. Appleton and Company, 1917.

Professor Williams has come to be regarded as an authority on the subjects of obstetrics. To the general practitioner this is a most important topic, and such a work as the present edition of Dr. Williams' work on obstetrics is a veritable boon. It would seem like a wasted effort to recommend this book; and yet its merits are so numerous that it must receive more than an ordinary passing notice. It is worth noting that the author does not speak very highly of "twilight sleep." It is quite uncertain in 25 per cent. of the cases, and those where it does produce complete anæsthesia there are often very unpleasant features. He is of the opinion that it will pass into disuse. He is in favor of chloroform, and thinks that with care it is safe and pleasant. This opinion of the German "Dämmer Schlaf" is very welcome. We have regarded twilight sleep as a good deal of a humbug. In the hands of a very competent person it may do fairly well, but for the average practitioner, especially in country practice, it will not suit. It is also worthy of note that the

author is so conservative in his methods. The best plan is given and then a very careful use of it. He condemns the use of the curette in puerperal infection. The finger is all that should be employed. The routine use of douches, containing bichloride and other chemicals, he also discourages, especially when given intra uterine. The management of the breasts after confinement is very judicious. The work is worthy of every confidence. That it is a comprehensive volume is shown by the fact that it contains over one thousand pages, not one of which could be spared.

THE FUNDUS OCULI.

The Fundus Oculi of Birds, especially as viewed by the Ophthalmoscope. A Study in Comparative Anatomy and Physiology. By Casey Albert Wood. Illustrated by 145 drawings in the text; also by sixty-one colored paintings prepared for this work by Arthur W. Head, F.Z.S., London. Chicago: the Lakeside Press, 1917. Price, \$15.00. Publishers, H. A. Fox, 7 West Madison Street, Chicago, Ill., U.S.A.

Three things are here combined, namely, original research, excellent text, and charming illustrations. To form any notion of the amount of original research the author must have expended upon the production of this unusually high-class work one must examine it carefully. Every page and illustration bear the marks of the painstaking investigator. The illustrations are the results of personal research and study. This volume should be of the greatest interest to all who are engaged in the study and treatment of diseases of the eye, and as a work of the best type of scientific work it should find a place in every general and medical public library.

WAR AND THE EAR.

The Otitis and Deafness of War, Their Diagnosis, Treatment and Prospects. By H. Bourgeois and M. Sourdike, and preface by Medical Instructor Toubert, 1917. Price, 4 francs. Publishers, Masson and Compagn, Librarians of the Academy of Medicine, 120 Boulevard Saint-Germain, Paris.

This is one of a series of small volumes that have been issued on special medical and surgical phases of the war. This is an excellent brochure on the subject which it covers. It is well written and illustrated. The copy that has come to hand for review is in French. It would bear translation for the use of those who cannot read this language.

DISEASES OF THE EYE.

A Manual of Diseases of the Eye. By Charles H. Mayo, M.D. New York: William Wood and Company, Publishers.

This, the ninth edition, is in every respect fully up to the standard

of the others. A careful revision, with the necessary alterations and additions, brings it up-to-date. It is an excellent book for the practitioner and student, and to the oculist also a very necessary one for speedy reference, being so succinct and clear.

PALUDISM.

Macedonian Paludism, the Clinical and Haematological Characteristics, and the Principles of Treatment. By P. Armand-Delille, P. Abrami, G. Paiseau and H. Lemaire. With a preface by P. Leveran. Publishers, Masson and Company, Librarians of the Academy of Medicine, 120 Boulevard Saint-Germain, Paris. Price, 4 francs.

From a large experience the authors lay down some very useful rules for the treatment of ague. Quinine is the chief therapeutic agent, which may be given by mouth, or by injections into the muscles or beneath the skin. The book is an excellent one on ague.

MISCELLANEOUS

REPORT OF POLIOMYELITIS COMMITTEE.

The special committee appointed by the New York City Department of Health to study last year's epidemic of poliomyelitis and suggest means for combating the disease, rendered its report to Mayor Mitchell recently. As a result of the study of 2,496 cases diagnosed as poliomyelitis by the Department of Health out of a total of 9,023 cases in the city, the committee concludes that: (1) Infantile paralysis is communicated by personal contact. (2) Slight and non-paralytic cases are the most frequent sources of infection; as these cases arouse no suspicion, others come more in contact with them. (3) The disease usually develops from three to ten days after exposure. (4) Previous good health does not give immunity from attack. It was also found that the disease is slightly more prevalent among males than among females, and that the fewest number of cases occurred among nursing children and the greatest number among children who were receiving various forms of cow's milk. By far the greater part of this second group, however, were being fed on bottled pasteurized milk in which no germs of the disease could be present. Several cases of suspected milk infection disclosed upon investigation no evidence that the disease was so carried, and it is, therefore, concluded that the epidemic was not caused by contamination of the milk or other food supplies.—*Medical Record*.

SIR W. C. MACDONALD'S GIFTS.

McGill University, Montreal, has to lament the death of its chancellor, Sir William Christopher Macdonald, the multi-millionaire, who with an unsparing hand lavished benefactions upon her, in the aggregate amounting to \$10,690,165. About half of this went in establishing the agricultural and affiliated colleges at Ste. Anne de Bellevue. The science building, the McGill Union and the university campus are also a result of his liberality. Among other benefactions, he gave the two Macdonald Buildings of Manual Training and Domestic Science at the Ontario Agricultural College, Guelph, at a cost of \$175,000, and contributed generously to Montreal hospitals and consolidated schools elsewhere. Under Sir William's will the following bequests were made: The Royal Institution for the Advancement of Learning (McGill), University for Macdonald College, \$1,000,000; McGill Conservatorium of Music, \$300,000; endowment of a travelling scholarship, in the Faculty of Law, \$20,000; Montreal General Hospital, \$500,000; Montreal Maternity Hospital, \$100,000; the Crematorium, \$100,000; the Faculty of Medicine, \$500,000. It is infinitely to the late chancellors credit that notwithstanding his princely donations he never presumed to interfere in the internal administration of the institutions which experienced his liberality.

HOSPITALS IN FRANCE IN NEED.

Many of the smaller hospitals in France, after almost three years of continuous work for the wounded, send word that their supplies are completely exhausted.

Letters are constantly received direct from the hospitals, showing how great is the need, not only for the large ones at the front, but for the smaller ones several hours away by train. It is easy to see how they are overlooked, as the source of supplies is in Paris, and naturally the hospitals at the front and those in the comparative vicinity of Paris, are the first served.

In the small town of Poitiers there are 15 hospitals, all trying to support their wounded on the thirty-five cents a day per man allowed by the Government. This in peace time might be inadequately, but in war time it is pitiable, with food so dear and coal at \$50 a ton.

What is wanted is: Food, such as cocoa, rice, lump sugar, prunes, oxo, malted milk. Hospital supplies—pyjamas, socks, shirts, towels, blankets, hot-water bottles, old linen. Clothing—new or otherwise, but good enough to send, for men (discharged soldiers), for women, and

children refugees, so lately rescued by the English and Canadians. Monetary assistance also gratefully received.

FREE DIAGNOSIS OF VENEREAL DISEASES.

Dr. J. W. S. McCullough, of the Provincial Board of Health, Ontario, announces that on and after the 20th instant facilities will be provided in the laboratories of the Provincial Board of Health, at Toronto, Kingston, and London for the free diagnosis of venereal diseases. Outfits for taking specimens will be supplied to all physicians for this purpose. These outfits may be procured from the laboratory of the Board, No. 5 Queen's Park, or from the Board's branch laboratory, Queen's University, Kingston, or the Board's branch laboratory, Ottawa Ave. and Waterloo St., London, Ont.

On and after this date outfits may be procured from the same laboratories for the purpose of taking specimens for the diagnosis of typhoid, diphtheria and tuberculosis. Sterilized bottles for sending water samples may also be procured from any of these laboratories.

ONTARIO MEDICAL OFFICERS' CONVENTION

The Ontario Health Officers' Association held its sixth annual meeting in the Medical Building of the University of Toronto, on Tuesday and Wednesday, the 29th and 30th of May. The attendance was upwards of 300.

The meeting was held as a general session during the first day, and upon the second day was divided into a general session and one upon public health administration. Dr. A. J. Macaulay, M.O.H. of Brockville, made an ideal presiding officer.

Suitable reference was made to the death of the late vice-president, Dr. Vardon, of Galt.

The first session included a discussion on venereal diseases, the paper, with slides, being given by Dr. Gordon Bates, of Toronto. The discussion was carried on by Drs. C. H. Hair, C. E. Trow, and others.

The subject of infantile paralysis was presented by Dr. H. W. Hill, M.O.H. of London, who gave a most instructive paper upon this subject. Papers upon the same subject were given by Drs. Durocher and Cruickshank, of Windsor, and by Dr. Green, of Stoney Creek. There was a free discussion led by Dr. Amys, M.O.H. of Peterboro.

In the afternoon session, after a short address by the president, Dr. C. J. Hastings gave, on behalf of the Mayor, an address of welcome.

This was succeeded by the address of the day given by C. E. A. Winslow, professor of public health, Yale School of Medicine, New Haven, Conn., upon the subject of "Safeguarding the Health of Young Children." Professor Winslow's address gave a description of some practical methods of life-saving. He pointed out that the campaign carried on in New York, has reduced the infant mortality rate in that city, from 154 in 1900 to 93 in 1916, which means a saving for that city of over 8,000 lives a year. Recent estimates of the comparative value of various lines of public health endeavor shows that infant welfare work offers one-fifth of the total possibilities of life-saving which are open to the health department.

Professor Winslow pointed out that every community of 10,000 inhabitants should have not a "milk station" merely, but a baby's clinic and dispensary where children may be brought for weekly examination and from which public health nurses may go out to carry instruction to the home of the individual mother. In larger cities there should be such a station for every 20,000 of the population. The nurses should also undertake the prenatal care of mothers. The experience of Boston has shown that such care may result in cutting the infant mortality to one-half the figure prevailing among families not receiving prenatal advice. For the rural communities there should be public health nurses backed by available competent pediatric knowledge which might be secured by co-operation with the infant welfare organization of the nearest city (*or with that of the Provincial Board of Health*).

The essayist said that the deaths of infants are due principally to three great groups of causes: (1) Prematurity or congenital debility and other causes operating at the time of birth, (2) Gastro-intestinal infections, (3) Pneumonia and other respiratory diseases. The machinery of the infant welfare station helps in dealing with all of these groups, the more especially with the second, namely, summer diarrhœas and other digestive disorders. Means of procuring adequate and safe milk supplies are indicated in the paper, and the value of inspection and pasteurization pointed out. The importance of measles and whooping-cough as public health problems were discussed, especially in the very earliest years. The fatality of whooping-cough is five times as great under one year as over five years; of scarlet fever, ten times as great, and of measles twenty times as great. These facts indicate the great necessity for the protection of young children against infection. Schools should never be closed during epidemics. The services of the public health nurse should be secured and an examination of school children made every morning for the detection of the disease in its earliest stages.

The whole paper is of the greatest value and should be read by every health officer.

The Hon. W. D. McPherson, Provincial Secretary, made a short address of welcome to the members of the association, in which he showed evidence of intense interest in public health matters. His address was received with great enthusiasm.

Dr. Chas. J. Hastings and Dr. J. F. Hanly each gave comprehensive addresses upon public health nursing.

Dr. F. D. Canfield read a paper on "The Adrenals," and the veteran chairman of the Provincial Board, Dr. Adam Wright, spoke upon "Rest and Sleep as Factors in Disease Prevention."

On the second day the morning session of the association was carried on in two sections. The general session included papers upon "Sex Hygiene," by Dr. N. W. Woods, and "Mendelism," by Dr. Jas. Roberts. There were two splendid papers on the subject of tuberculosis, the one by Dr. D. R. Craig and the other by Dr. A. R. Hanks. Dr. Jenner discussed "The Public School as a Place of Instruction in Practical Sanitation."

In the section on Public Health Administration there were papers upon the difficulties of medical officers by Drs. Macdonald, D. A. Kidd, and F. H. Mitchell, on the "Education of the Public," by Dr. H. Logan; upon the Public Health Act, by Dr. A. Nichol, and upon the "Relationship of the District Officer to the M.O.H. of the Municipality," by Dr. G. F. Richardson.

Most excellent papers upon "Ways and Means of Conducting Public Health in the Average Town," was given by Dr. C. A. Patterson, and upon "Some Practical Points in Enforcement of the Regulations," by Dr. H. Ross.

Dr. W. Doan, of Harrietsville, and Dr. F. King, of St. Catharines, gave interesting papers upon their experiences as Medical Officers of Health.

On the afternoon of this day the session was entirely taken up by papers on the subject of epidemiology. Measles, scarlet fever and diphtheria were discussed by Drs. A. A. Metcalfe, J. C. Hutchinson and A. H. Speers. Variola was the subject of a paper by Dr. J. P. Boyle, while disinfection was discussed by Drs. R. K. Anderson and James Campbell.

The matter of communicable diseases was the subject of papers by Drs. J. H. Howell, W. R. Mason and Jas. M. Potts, while Dr. S. F. Millen ably handled the question of typhoid fever in rural communities. All these matters were the subject of general and wide discussion.

Drs. Fitzgerald and McCullough answered the question submitted in the Question Drawer.

The officers and committees elected were as follows:

President—Dr. H. W. Hill, M.O.H., London.

1st Vice-Pres.—Dr. G. F. Cruickshank, M.O.H., Windsor.

2nd Vice-Pres.—Dr. E. A. Williamson, M.O.H., Kingston.

Secretary—Dr. J. W. S. McCullough, Toronto.

The Committee on Papers and Arrangements comprises Drs G. A. Dickinson, J. J. Harper and J. W. S. McCullough.

MEDICAL PREPARATIONS

FALLACY OF PHLEBOTOMY.

A few decades since, bleeding or phlebotomy was the universal practice with physicians in the treatment of pneumonia. This procedure usually served to reduce the fever and inflammation, and at least tended to give temporary relief by lowering the temperature and pulse rate. This was frequently misleading, as the temperature and rapid pulse beat would often return in a few hours with renewed activity, thus proving the fallacy of the procedure. In many cases of pneumonia the patient is anemic and phlebotomy is detrimental and positively contra-indicated, the loss of the vital fluid only made it the more difficult for the patient to recover. However, at the present time there is no necessity for phlebotomy, as we have in our hands an agent which accomplishes all of the good effects of phlebotomy with none of the possible evil effects. The preparation, Antiphlogistine, applied over the chest wall bleeds the patient into his superficial capillaries—and may be used with much benefit on all cases of pneumonia.

“Recently I was called to see E. C., a girl of 8 years. On careful examination I diagnosed the case as one of pneumonia, with all the characteristic symptoms of this disease. Her condition was critical. Pulse 150, temperature 105. The first step was to at once apply Antiphlogistine warm and thick, enveloping the thoracic wall completely. I gave a few small doses of calomel, Dover’s powders and ipecac; then veratrum viridi and salicylate of sodium. On my visit the following day I found my patient somewhat improved. I ordered a fresh application of Antiphlogistine every 12 hours. The case continued to improve and in seven days the girl was so much better I dismissed the case. I consider Antiphlogistine the *sine qua non* in the treatment of pneumonia.

“WILLIAM S. RANDOLPH, M.D.,
“Oakhurst, Texas.”

TYPHOID FEVER.

Attention is directed to a timely announcement which appears elsewhere in this journal over the signature of Parke, Davis & Co., and bears the caption, "Typhoid Fever." Prophylaxis, diagnosis and treatment, in logical sequence, are briefly and comprehensively considered in this advertisement.

Typhoid Vaccine, Prophylactic, is suggested as a suitable immunizing agent. This product is a twenty-four-hour culture of the typhoid bacillus, grown on inclined agar and suspended in physiologic salt solution to which has been added 0.2 per cent. trikresol as a preservative. It is accurately standardized. That this vaccine confers immunity from typhoid fever has been shown by an abundance of clinical evidence.

In the diagnosis of typhoid fever the Typhoid Agglutometer has undoubtedly done much to popularize the Widal test and to extend the usefulness of that valuable diagnostic aid. Parke, Davis & Co. supply two forms of the agglutometer, designated as No. 1 and No. 2. Directions for use accompany each outfit.

For the treatment of typhoid fever, Typhoid Phylacogen is an agent of established value. A marked effect of its use in all favorable cases is an early subsidence of the fever and a prompt establishment of convalescence. The technique of dosage and other particulars of the treatment are covered in Parke, Davis & Co.'s literature on Typhoid Phylacogen.

SANMETTO IN PREGNANCY.

In pregnancy, where elimination is deficient, as indicated by headache, slight disturbance of the digestion and diminution of solids and urea in the urine, Sanmetto in connection with calomel is remarkably effective. The calomel acts upon the cells of the body, those of the liver especially, effecting proper removal of the waste and accumulated toxins. Sanmetto increases the activity of the kidneys, in this way promoting the removal of excrementitious products from the blood, and at the same time acts as a systematic tonic enabling the body to more completely dispose of its waste products through its organs of elimination, and resist the evil effects from systemic absorption or auto-toxins.

MODERN MARITAL THERAPY.

Amid the veritable swarm of new medicinal agents of all varieties that have been introduced to the therapist during the last twenty years,

and in spite of the great advances in general medicine during the same period, there has not as yet been proposed any remedy which can successfully compete with iron in the treatment of anemic and generally devitalized conditions. This metallic element, in one form or another, is still the sheet anchor in such cases, and when intelligently administered in proper form and dosage can be depended upon to bring about marked improvement, provided serious incurable organic disease is not the operative cause of the existing blood impoverishment. The form in which to administer iron is, however, very important. The old, irritant, astringent marital medication has had its day, and properly so. Probably the most generally acceptable of all iron products is Pepto-Mangan (Gude), an organic combination of iron and manganese with assimilable peptones. This preparation is palatable, readily tolerable, promptly absorbable, non-irritant and still distinctly potent as a blood builder and general tonic and reconstructive.

TANLAC.

A new panacea for the cure of all ailments of the stomach, kidneys and liver, catarrhal affections, of the mucous membranes, rheumatism, nervous disorders, and the like is offered to the public under the name of Tanlac. The label on the bottle neatly avoids the Pure Drug Act by claiming to be only a "tonic and system purifier". An analysis of Tanlac in the laboratory of this Department shows the following:

Alcohol	16.4 per cent.
Glycerin	2.0 per cent.
Licorice	Present
Aloes or Cascara	Present
Gentain	Present
Alkaloids (Berberin)	Trace

The presence of a trace of tartaric acid shows that wine is the base of this medicine. The 16 per cent. alcohol gives it the "kick" that makes a fellow feel good and ought to fill a long felt want in "dry counties". Aloes is a laxative. Gentain is a bitter drug, a so-called tonic. If the reader wants to be cured by the Tanlac route at one-fourth the expense, let him get a quart bottle of good sherry, and 2 drams each of aloes, gentain, licorice and carcara. Mix (if you wish) and you will have Tanlac so near that neither you nor the manufacturer can tell the difference. This formula will give four times the quantity found in an ordinary \$1 bottle of Tanlac.—*Special Bulletin No. 53, Dairy and Food Dept., Michigan, Feb. 12th, 1916.*