Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for scanning. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of scanning are checked below.

L'Institut a numérisé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de numérisation sont indiqués ci-dessous.

- ☐ Coloured covers / Couverture de couleur
- ☐ Covers damaged / Couverture endommagée
- ☐ Covers restored and/or laminated / Couverture restaurée et/ou pelliculée
- ☐ Cover title missing / Le titre de couverture manque
- ☐ Coloured maps / Cartes géographiques en couleur
- ☐ Coloured ink (i.e. other than blue or black) / Encre de couleur (i.e. autre que bleue ou noire)
- ☐ Coloured plates and/or illustrations / Planches et/ou illustrations en couleur
- ☑ Bound with other material / Relié avec d'autres documents
- ☐ Only edition available / Seule édition disponible
- ☑ Tight binding may cause shadows or distortion along interior margin / La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure.

- ☐ Coloured pages / Pages de couleur
- ☐ Pages damaged / Pages endommagées
- ☐ Pages restored and/or laminated / Pages restaurées et/ou pelliculées
- ☑ Pages discoloured, stained or foxed/ Pages décolorées, tachetées ou piquées
- ☐ Pages detached / Pages détachées
- ☑ Showthrough / Transparence
- ☑ Quality of print varies / Qualité inégale de l'impression
- ☐ Includes supplementary materials / Comprend du matériel supplémentaire
- ☐ Blank leaves added during restorations may appear within the text. Whenever possible, these have been omitted from scanning / Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été numérisées.

☑ Additional comments / Commentaires supplémentaires: Continuous pagination.

The Canadian Practitioner and Review

Vol. XXXV. TORONTO, APRIL, 1910. No. 4

Original Communications

THE VAGARIES OF FIBRO-MYOMATOUS TUMORS.*

By J. F. W. Ross, M.D., C.M., Toronto.

Mr. President and Members of the Brant County Medical Association:

I regret that owing to the shortness of the notice it was impossible to prepare such an address as befits the occasion, and I offer my apologies for the imperfect presentation of the subject. I decided to look back into the years that have gone and endeavor to pick out some points that may prove of value in a consideration of the effects of fibro-myomatous tumors upon the life history of women.

It was my privilege in 1878 to hold the position of House Surgeon at the Toronto General Hospital; that is now 32 years ago. It is interesting to watch the evolution of practice that has taken place in that time, and there is no department in surgery in which the changes have been more varied or the practice has been more improved than in the surgical treatment of fibro-myomatous tumors.

During a pilgrimage to the Mecca of abdominal surgery, Birmingham, about the year 1889, I had the privilege of assisting that great pioneer, Mr. Lawson Tait, with many of his operations during a period of some months. While ovariotomy for the removal of ovarian tumors had been perfected so that the mortality was greatly reduced, the operation of hysterectomy for the removal of myomatous tumors was still in its infancy, and was accompanied by a high death-rate. This was so great that one Edinburgh surgeon looked about him for some other remedy than the knife, and began the use of the electric current as advocated by Apostoli of Paris. After much investigation and careful trial this treatment was not satisfactory and proved to

*Read before the Brant County Medical Association, Brantford, March 1910.

be at times dangerous, owing to the degenerative changes that it was liable to set up in the tumors. Many of us looked about for some improvement of surgical technique, and eventually the operation at present adopted was evolved, and is now performed with as low a mortality, in skilled hands, as the operation of ovariotomy. It is my opinion that such operations should only be undertaken by men of special training, in well equipped operating rooms, under the most advantageous circumstances. About the year 1890 the operation for removal of fibroid tumors of the fundus uteri was performed with the assistance of the Koeberle serre-noeud. Tait used as a primary precaution against hemorrhage a rope clamp, of which the rope was made to encircle the tissues about the cervix, after the peritoneum together with the bladder had been stripped down off the tumor surface; the Koeberle serre-noeud was placed so as to constrict the cervical structures, taking care to avoid the ureters, and after a severance of the ovarian and uterine arteries. The serre-noeud produced constriction of the stump and gangrene of its distal portion, notwithstanding the tanning effect produced by the application of Perchloride of Iron dissolved in Glycerine. The patient did well until about the sixteenth or seventeenth day when a leakage took place from this foul mass into the general cavity of the peritoneum and a general septic peritonitis resulted, followed very shortly by the death of the patient. Even after recovery from such an operation an immense funnel-shaped granulating opening was left, through which a subsequent protrusion of the intestines took place; this was certainly anything but ideal surgery. We then became bolder and found that a direct dissection down on to the vessels enabled us to control the hemorrhage, and that the use of cat-gut sutures to the stump controlled any little oozing that might be caused owing to a lack of ligation of the azygos vagina artery. The operation was then still further improved by a readjustment of the cut peritoneum over the surface of the stump, so that the stump became with the ligatures applied, practically extra-peritoneal. At first it was considered desirable to place a drainage tube in the cul-de-sac of Douglas, but in later years even this was found to be unnecessary. In my hands and those of my assistants these operations have now become entirely satisfactory and the mortality is almost nil. It is essential, of course, that the operator should see to it that all hemorrhage is properly controlled before the abdominal cavity is finally closed. There is another point in favor of operation, namely, the fact that the tumors are not now allowed to grow to the gigantic proportions of those tumors

formerly met with, and furthermore we do not have such extensive adhesions to deal with. As a consequence of the great success of the modern operations I fear the pendulum has swung rather too far to the other extreme, and that now young women are practically unsexed and are denied the opportunities of motherhood owing to the rather ruthless use of the knife on fibroid tumors as soon as they make their appearance. As fibroid tumors have vagarious ways it is desirable that we should be fully aware of these peculiar changes, in order that we may deal with these cases more intelligently. Let us take up the question systematically.

Position.—Fibroid tumors have been named according to their position. The classification adopted has been sub-peritoneal, intramural and submucous; we have also myomatous tumors growing from the myomatous structures about the cul-de-sac of Douglas in the broad ligament and in front towards the bladder; we have also fibroid tumors growing in either the anterior or posterior lip of the cervix.

(a) *Sub-peritoneal Tumors.*—Sub-peritoneal tumors seem to have certain characteristics not met with as frequently in the others; they have a tendency to become pedunculated and may often be found roughened on the surface owing to calcareous degeneration, and as a consequence of this they may produce intraperitoneal dropsy that simulates the dropsy found accompanying malignant disease in the peritoneal cavity; they may become fixed to other organs and may eventually derive their blood supply through the adhesions in the new situation; they may become twisted and gangrenous or gangrenous owing to thrombosis of the vessels.

(b) *Intramural Tumors.*—Intramural tumors frequently give rise to menstrual pains and increased menstrual flow before they can be made out by the examining finger. When the uterus of a young unmarried woman is found somewhat enlarged and when this enlargement is accompanied by menstrual pain and increased flow, we must suspect the presence of an intramural fibroid. The ultimate destiny of the intramural variety is generally sub-peritoneal or sub-mucous, as the constant contraction during menstruation, producing the pain already spoken of, tends to force the little nodule outwards or inwards.

(c) *Submucous Tumors.*—The submucous variety may be very small or may be large enough to simulate pregnancy at the 4th or 5th month, or even later. I have on two occasions been forced to dilate the cervix and introduce my finger into the uterus to satisfy my mind that the case was one of large submucous fibroid, filling the uterine cavity, before proceeding to

amputate the uterus supra vaginally through the abdomen. I have seen similar cases in the practice of others, and on two occasions they simulated a pregnancy at full time. In each of these the abdomen was closed, as the operators felt they had made a mistake and that the cases were cases of pregnancy, and in each case a few days later the uterus was removed by a second operation, thus readily demonstrating how such submucous edematous growths can simulate pregnancy. Many of the submucous growths cause alarming hemorrhages and continued illhealth; eventually they may become polypoid and may be extruded from the uterine cavity into the vagina or forced outside the labia. I removed, at intervals covering several years, three such polypi from one patient.

(d) *Other Varieties.*—Those growing in the neighborhood of the cul-de-sac of Douglas, either in front or behind the rectum, become a very serious bar to delivery, and I have performed cesarean section on three occasions, owing to the presence of this condition. Growths growing in the cervix, either in front or behind, may also become a serious menace to delivery; I have, however, seen such large growths gradually compressed and pushed above the pelvic brim and the patient delivered without mishap when we were quite prepared to perform cesarean section. Tumors growing in the anterior lip of the cervix produce serious bladder disturbances; retention of urine being one of the most common of these. The removal of growths situated either in front or behind the cervix or in the cervix itself is necessarily fraught with much danger; in front damage to the ureters, behind damage to the pelvic vessels. On one occasion I was forced to remove a tumor growing in the anterior cervical lip and causing retention of urine, and after the removal there was an opening in the vagina large enough to admit a fist. The patient was prepared for death upon the table, but fortunately rallied from the shock and made a good recovery, contrary to the expectations of all those connected with the case.

Changes in the Tumor:

Congestion.
Edema.
Cystic degeneration.
Necrosis with or without suppuration.
Calcareous change.
Malignant disease.
(a) Myxomatous degeneration.
(b) Sarcomatous degeneration.

Congestion.—No matter where situated in the pelvis, fibroid

tumors are affected by the presence of an intra or an extra uterine pregnancy and by menstruation; in either of these conditions the capsule of the tumor carrying the blood supply becomes much congested, and, as a consequence, for the time being, the tumors increase in size; owing to the fact that pregnancy is continued over a period of nine months the congestion remains continuous and the growth of the tumors is much greater; the menstrual congestion coming on but for a short time and ceasing does not add so rapidly to the size. In cases of pregnancy I have often considered that it is a race between the fetus and the growth as to which can grow the fastest. It is well to remember that ovarian tumors frequently cause a temporary cessation of menstruation, and that when such a temporary cessation of menstruation occurs in the presence of a fibroid tumor before the menopause, it is always due to pregnancy; this is an important point, as under such circumstances the uterine sound should not be used; it is oftentimes the unexpected that happens, and a woman with a fibroid tumor may go for years without becoming pregnant, and may then suddenly miss a menstrual period. When examination is made the tumor will be found softened and considerably enlarged.

Edema.—The edema of fibro-myomatous tumors is an extraordinary condition not seen anywhere else in the body; fluid is poured out in the meshes of the myomatous tissue and a separation of the long involuntary muscle fibres takes place; the tumor looks as if waterlogged, and on the surface has a sense of false fluctuation; this sense of fluctuation so closely simulates genuine fluctuation that the presence of disseminated and not encysted fluid can oftentimes only be made out by an incision into the tumor. The cause of this edema outside of that form that accompanies myxomatous degeneration is not very well understood, unless it is due to an obstruction of the blood supply or a damming back of the venous circulation. I have seen one such tumor 60 pounds in weight; I saw another enormous tumor removed from a woman in England, where it seemed as if the woman was peeled away from the tumor, and I have myself removed a tumor of upwards of 40 pounds in weight. We do not see these edematous tumors as frequently now as we did a few years ago, owing to the fact, as already stated, that hysterectomy and ablation of the growth is not fraught with such a high mortality; the mortality having now been reduced, in skilled hands, to equal that of ovariotomy. It is extremely difficult to say when the edematous tumors are myxomatous and malignant and when they are simply myxomatous and innocent.

I always feel suspicious of the malignancy of an edematous fibro-myoma. In the cases in which I have seen the disease return in the form of pseudo myxoma, in the peritoneum there is nothing to indicate that the tumor was malignant at the time of its removal. A microscopical examination should be made of all edematous fibro-myomata removed. Enormous edematous fibro-myomatous tumors may entirely disappear, or almost entirely, subsequent to the onset of the menopause. I have a distinct recollection of two patients who had such edematous tumors. One of them declined to submit to surgical measures until after the marriage of her daughter. She was confined to the house for about two years with terribly swollen limbs and enormously distended abdomen; she subsequently recovered perfect health, and it is not long since I met her, a very active woman for her age. The other woman was an invalid for several years, and the tumor in her case similarly disappeared and she was restored to health. Of course it is a terrible penalty to pay and we do not always have such a favorable termination, but these patients were seen before the days when supra vaginal amputation of the uterus had such a small mortality as at the present time, and surgeon and patient alike dreaded operative interference.

Cystic Degeneration.—The cystic degeneration of these tumors is not a true cystic degeneration originating in glandular structure. Small hemorrhages take place here and there into the substance of the tumor and these hemorrhages are followed by the formation of cysts. There seems to be a difference between ordinary cystic degeneration of fibro-myomatous tumors and the true fibro-cystic tumors of the uterus. Cystic tumors of the uterus are very rarely met with, whereas cystic degeneration of fibroid tumors is not infrequent; in either case these growths require to be removed, as they have a tendency to increase in size or to undergo necrotic change. I have seen but two cases of marked fibro-cystic tumors of the uterus, and we have not a single specimen in our Pathological Museum. I removed one such tumor from a negress in one of the hospitals in Pittsburg some years ago, and the other tumor I saw removed by Mr. Lawson Tait.

Necrosis With or Without Suppuration.—This is a very serious condition and imperils life. The first case of necrosis of a fibroid tumor I met with was one into which a hand and arm had to be introduced through the vagina and up into the tumor to dislodge the broken down tissue. The patient made a very slow but excellent recovery. Necrosis occurs as a consequence of

thrombosis of the blood vessels; this thrombosis seems to be produced by excessive congestion and increased coagulation of the blood, such as occurs in pregnancy; by pressure produced by uterine contractions subsequent to the administration of Ergot; by constriction of the pedicle of a myomatous polypus, and by a disturbance of the parts such as is unavoidable in the performance of an abdominal operation. I have seen numbers of cases of gangrene and necrosis of fibro-myomatous tumors before and after delivery; when it occurs before the delivery of the patient the condition is particularly dangerous; these patients are liable to become pyemic and to lose their lives. If delivery has taken place there is then a chance that the contents of the sloughing tumor may be extruded and that the sloughing tumor may be reached by the surgeon. The treatment under such conditions should consist in as thorough a cleansing of the parts as possible, and a removal of as much of the necrotic tissue as possible. The antiseptic that is perhaps most serviceable is bichloride of mercury; this should be used as a douche into the uterine cavity once or twice a day, and perhaps it may be considered advisable to pack the uterine cavity with iodoform gauze; a hysterectomy under such circumstances is not to be thought of; to open up by incision a large area necessary in performing this operation in the presence of a fetid and extremely poisonous gangrene is very unwise. When, during pregnancy, a tumor becomes necrotic, an abdominal hysterectomy will give the best results, and is then indicated. Operation must not be long delayed if we hope to save the patient; necrosis in such cases is generally indicated by a sudden tenderness over the tumor, accompanied by high elevation of temperature, and accompanied in all probability with chills, together with increased pulse rate and sudden rapid increase in the size of the growth. The necrosis of fibro-myomatous tumors is liable to occur after the removal of ovaries and tubes, or in other words, after the operation of oöphorectomy for fibroid; sometimes the tumor becomes inflamed under such circumstances, but does not become completely necrosed. After the removal of a fibroid tumor I have been surprised on a number of occasions to find evidence of old necrotic changes. When polypi are extruded from the cervix or from the vagina they are liable to become gangrenous. In the early stages of such gangrene the tumor simulates very closely malignant growth, and it is necessary for the surgeon to discriminate between the two; in either case there is a very considerable malodorous discharge, frequently tinged with blood poured out from ulcerated areas. When such tumors have been

removed the differential diagnosis can readily be made by making an incision into the tumor substance, and by examining a section of the tumor under the microscope. These polypi can be very readily removed, as the thrombosis of the vessels at the pedicle prevents hemorrhage, provided the pedicle is separated below the upper limit of the occlusion of the vessels. I have seen such black tumors as large as a man's head, between the thighs, entirely outside the labia. The so-called red degeneration is nothing more nor less than the early stage of necrotic change; the tissue has the appearance of being acutely inflamed and hence looks red.

Calcareous Degeneration.—Calcareous degeneration is more frequently found in the sub-peritoneal variety of fibro-myomatous growths; these growths become roughened on the surface, and owing to the presence of intraperitoneal fluid they are liable to simulate malignant disease; they may be found bobbing about in the fluid, and may as a consequence feel much like fetal parts. I have several times operated on such growths, when a diagnosis of probable malignancy had been made, and we were afraid that operative interference would be useless; under such circumstances it is always wiser to open the abdomen. When the tumors are removed, often by means of ligatures round the pedicle, the peritoneal dropsy disappears and the patients resume a normal condition.

Malignant Change.—Myxomatous degeneration in fibro-myomatous tumors is in my experience fairly common in proportion to the number of cases that undergo malignant change. I have never seen any other malignant change except myxomatous degeneration and sarcomatous degeneration; myxomatous degeneration is particularly prone to recur after removal of the tumor; this recurrence presents some interesting features; the peritoneal surface of the intestines and the parietal walls appear as if injected with gelatine, the bowels become stiffened and partly rigid as a consequence of this thickening of the coats; the disease has been called pseudo-myxoma-peritonei. The patients gradually become weaker and weaker and finally die with some of the symptoms of intestinal obstruction. When sarcomatous degeneration occurs in the tumor the tumor becomes rapidly enlarged, there may be some elevation of temperature, the patient's general health is not particularly affected, and there are no other changes to be noted; it is only after the tumor has been removed and has been cut into that the sarcomatous change is determined; the microscope then completes the diagnosis. After removal of the tumor the patients may be free from re-

currence for a considerable time, or the disease may recur at an early date. I have never seen carcinomatous degeneration of a fibroid tumor, but feel satisfied that when carcinomatous disease is met with in the presence of a fibroid tumor it is merely a coincidence and has nothing to do with the presence of the fibroid. I have always found the carcinomatous growth growing definitely from the glandular structures of the endometrium.

In the presence of pregnancy fibro-myomatous tumors do not seem to have any particular tendency to produce miscarriage. When it is considered desirable to empty the uterus, owing to existing circumstances, it is usually necessary for the surgeon to procure an abortion. I have found it desirable after one or more consultations to produce miscarriage in a number of cases. If a young woman has had no children and is troubled with a small myomatous tumor, I believe that in most cases when the tumor has reached an important size that miscarriage should be produced, and, as a consequence, she is given the benefit of the subsequent involution. Many fibro-myomatous tumors disappear after the first miscarriage; I have seen them disappear after labor at full term; in fact they disappear, or almost disappear, as a consequence of the process of involution. If a woman has not had progeny and on the other hand is willing and anxious to submit to cesarean or Porro cesarean operation at any time when it is found to be necessary or desirable, in order that the life of the mother or of the mother and child shall be saved, her wish should be gratified. Under modern conditions cesarean operation may be safely performed, but it must be remembered that it may be necessary, in the presence of fibroid tumors, to perform the Porro cesarean operation in order to control hemorrhage and thus remove from the woman all chance of subsequent motherhood. I have advised young women with fibroid tumors of small size to become married as a prophylactic measure, with the hope that either childbirth or miscarriage would be beneficial by checking the growth of the tumor. To illustrate my point, let me state further that my first experience was obtained by a rather rude awakening. A missionary lady from Africa, between 35 and 40 years of age, married. I saw her, in consultation with the late Dr. J. E. Graham, and we found a pregnancy nestled in between three large fibroid tumors; miscarriage was produced, and I asked her to return at a subsequent date, in order that I might remove the uterus. During the process of involution she was advised to take a certain treatment, and the treatment got the credit for what occurred; the tumors almost entirely disappeared, she again became preg-

nant and was delivered of a living child; surely this should be a warning to those who advise the removal of small myomatous growths. It is argued that these growths should be removed, for fear that they may become malignant; I consider that this is erroneous teaching, as the growths seldom become malignant, and to prevent carcinomatous disease of the uterus we would be compelled to remove the organ from every woman. After the childbearing period is passed and after the growth has reached such proportions that the chances of motherhood are nil, then I believe the surgeon is justified in operating. In patients who have been suffering great loss of blood from time to time I have been able to tide them over until the coming polypus has made its appearance, when its removal cures the patient, relieves her of her symptoms, and restores her to health.

And now, in conclusion, let me say that as motherhood is the rounding out of the life history of woman, and as the uterus is an organ that is essential to this end, we must, as physicians and surgeons, see to it that it is not ruthlessly mutilated by the knife, but rather that every effort shall be put forth to preserve it intact, and to improve the health and save the life of the patient.

SOME NOTES ON FUNCTIONAL NEUROSES.*

By Dr. Campbell Meyers.

As the proposed Psychiatric Clinic is being discussed this evening I thought some notes on the Functional Neuroses, especially in regard to the inadvisability of treating these in Psychiatric Clinic, might be of interest to the Section of Medicine of this Academy.

There are I think, two points of view especially to be considered in regard to the treatment of the Functional Neuroses, viz., the Theoretical and the Clinical. In consideration of the theoretical, I would first like to direct your attention to some of the current theories in regard to a common Function Neurosis, viz., Hysteria. First we have the *Psychological Theories* and these have much in common, and are the most widely accepted. Binet, as a result of his experiments, concluded that in hysteria there was a condition of double consciousness, that is, two streams of consciousness flowing side by side, relatively independent and separated by Amnesia. Next, we have the theory of Dr. Pierre Janet, who believes hysteria to be entirely a mental malady. The essential points in his theory are the tendency to disintegration, splitting up, or, as he says, doubling (deboublement) of the personality, and the identity of the hysterical and the hypnotic states, based upon the common factor of suggestibility. The theory of Sides is similarly a dissociation theory, but he lays more stress upon the process of dissociation, and the independent, automatic activity of the sub-conscious ideas or systems. The theory of Freud, the most important and significant feature of which is the tracing of every cause to a trauma of sexual nature; not only does the hysteria always originate in sexual traumatism, but the original traumatic moment must have been in childhood—in the pre-pubescent period. Freud has traced this class of trauma to very early life, three and four years of age, and in one instance actually to one and one-half or two years. If we turn to the *Physiological Theories* we find, chief among these, the definition of Sollier, who defines hysteria as follows: "Hysteria is a physical, functional disturbance of the brain, consisting in a torpor or sleep, localized or generalized, of the cerebral centres. This definition, has, I believe, much to recommend it. Again, there are the *Biological Theories*, among which may be mentioned that of Snyder, who holds hysteria

*Read at Medical Section of Academy of Medicine, Toronto.

to be a mode of reaction in persons of naive, simple, infantile mentality. A mentality lacking in development, and defective in judgment and critique. Finally we have the Clinical Theories, and chief of these is that of Babinski. The fundamental proposition of Babinski is that the hysterical phenomena are distinguished by the fact that it is possible in certain subjects to reproduce these phenomena by suggestion with rigorous exactitude, and cause them to disappear under the influence of persuasion. He suggests, therefore, the term Pithiatism for this disease. I cannot conclude these theories without mentioning that of Bernheim, who expresses the view that the disease hysteria, such as is described, does not exist. So much then for the theoretical side of one of the common functional neuroses. Let us now turn to the clinical side and observe the results of treatment of the functional neuroses. (1) In a Psychiatric Clinic and (2) in a Pavilion of a General Hospital, in which the insane as well as the functional neuroses are treated.

In the "Report of the Commission on the Methods employed in caring for and treating the Insane," published in 1908, the formation of a Psychiatric Clinic in Toronto was recommended, presumably along the lines of the Psychiatric Clinic in Munich, in which much excellent work is being accomplished. The question of the admission of nervous diseases to these clinics, with which the Commissioners state they are heartily in accord, is spoken of as follows by Prof. Kraepelin: "In a number of newly formed clinics, the treatment and teaching has also been extended to the province of nerve disease. Griesinger, and after him above all Westphal, and his school have strongly emphasized the fact that mental diseases simply form a special group of nerve diseases, and therefore may not be separated from them. We hope to conquer a large province, which up to the present the isolation of the insane asylum has made difficult. The large group of so-called nervous diseases, that is, the patients who really need the help of the Psychiater and who are not in the ordinary sense mentally affected or who could not be taken to an asylum, we claim with a perfect right." As a result of their investigations the Commissioners state (page 11), "It is recommended that all acute mental and nervous diseases, of whatever form or cause, be admitted to these hospitals."

In view of these statements the question naturally arises, does the Psychiatric Clinic afford the most suitable measures for the treatment of the Functional Neuroses? I believe it does not, and my reasons are as follows:

(1) If we consider the treatment of the most frequent

functional neuroses with which we have to deal, viz., Neurasthenia, what do we find in relation to its treatment in the Munich Clinic, remembering always that the study of mental and nervous diseases is more advanced in Germany than in Canada, and consequently there would be less prejudice in the minds of the people against going into a Clinic where the insane are treated. The "Report of the Royal Psychiatric Clinic in Munich," which was published in Canada, 1908, shows that not a single case of neurasthenia was treated in this Clinic. It might be said that perhaps neurasthenia is diagnosed differently in Germany to what it is in this country, and in reply to this I would state, that in the attendance of the out-patient department of this Psychiatric Clinic, that neurasthenia is at the head of the list of diseases. Why then was it not treated in the Clinic? Evidently because, even in Germany, it was not considered expedient to do so. If we now turn to another common functional neurosis, viz., Hysteria, what do we find in this Report? This states "That the most frequent cause of admittance to the Clinic, particularly in the case of women, is hysterical convulsions, young girls who had an attack after a scene with their lovers; men who were seized with an attack during a row, and at times under the influence of alcohol, were brought to the Clinic. Next to these attacks, states of bewilderment, and in the case of the women also excessive outbreaks of emotion, with violent excitement, are responsible for bringing the patients to the Clinic." Surely it would be fair to assume that the physician or the friends of these patients considered them at least temporarily insane and sent them to the Psychiatric on this account. The results of treatment of these cases is interesting. The Report says that, "By far the majority of patients could be dismissed after a short residence in the Clinic," and again, "Of the eighteen patients, sixteen were allowed to go home."

If we now turn to Epilepsy, we find in the Report that "A large number of persons (16% of the total number of patients) was brought to the Clinic on account of intoxication," or again, "A great number of our patients often wanted to commit suicide." We find in fifty men and nine women attempts at self-destruction by hanging, drowning, poisoning, etc. There is still one other class of patients admitted to the Clinic in which functional nervous troubles perhaps play a small part. These are classified as Psychopathic Personalities. The Report states in regard to the cause of their admission: "The most frequent cause for the bringing of the patient to the Clinic was an un-

successful attempt at self-destruction or threats to do so. The result in these cases was that eighty-three out of one hundred and five cases could be allowed to return to their homes."

I have quoted this Report at some length, as the Psychiatric Clinic in Munich is considered, I believe, the best or one of the best in Germany, and a consideration of the type of functional neuroses which are admitted there, as well as the results of treatment, would enable you to judge, from a practical standpoint, whether such a solution, for the treatment of the functional neuroses in Canada would be satisfactory or the reverse. I hold such a solution would be a fatal mistake.

I would now desire to direct your attention to a General Hospital in which mental and nervous diseases are treated in one of its pavilions. I refer to Pavilion F. of the Albany General Hospital. Here, in an up-to-date building, insanity has been treated with marked success for the past seven years. If, however, we examine into the last report we find that during this whole period less than 3% of neurasthenia and less than 2% of either hysteria or epilepsy were admitted. The other functional neuroses were admitted in even fewer numbers. As this is the result, where treatment takes place in a General Hospital, how much greater would the difficulty be in persuading persons suffering from the functional neuroses to go to a separate institution, in which the insane are treated. The above are the definite results of endeavoring to treat mental and nervous diseases in the same building, and surely these results are convincing proof, that the attempt to do so must end in failure. Then why begin it in Toronto? There is, on the other hand, a clinical method of treating the functional neuroses, which I believe is the most applicable to Canada to-day, viz., their treatment as a separate department of internal medicine. It is now nearly four years since this method was inaugurated by the formation of Nervous Wards for the treatment of the functional neuroses at the Toronto General Hospital. While only a small beginning has been made here, the results demonstrate that the principle is eminently satisfactory. The insane are not admitted for treatment, any doubtful cases of insanity being transferred to the asylum as soon as sufficient observation has confirmed that diagnosis. The study of these cases in which the borderland *stage* of their disease has been reached is most interesting, and often fills one with regret that suitable active measures had not been taken earlier to avert, when possible, this already advanced stage of their disease. The absence of the insane in the building allows the treatment of the hysteria, without the constant sugges-

tion of mental disease, and both this class of patients and the neurasthenic come without the least hesitation to these wards. Hence these patients will come *early*, a most important consideration in view of success in their treatment. The results of treatment are such as could only be obtained in a separate department, and under the charge of those specially interested in this branch of medicine. Not that I think for a moment that the treatment in the general wards of this hospital is in any way inferior to the best on this continent, but the details of treatment, so essential to success in these cases, cannot in general wards be properly carried out. The proof of this may be seen in the fact that during the past year, especially, a number of patients suffering from functional neuroses, who were treated for weeks and sometimes for months in the general wards, without any benefit, were, in a corresponding time, discharged well through treatment in the nervous wards.

In collecting these few and very imperfect notes on the functional neuroses I have endeavored to lay before you some views, both from a theoretical and a clinical standpoint. I would ask you, however, to remember that the theoretical views must and will change, while the clinical type of disease must ever remain the same, and consequently its treatment merits the greater attention. For example, because hysteria may theoretically be considered a mental malady, it does not follow, that clinically, it can be best treated in the same building as the insane. The attention now given by the profession the world over to the functional neuroses is most gratifying. Had this attention been given earlier, in all probability Christian Science, Dowieism, etc., would never have come into existence. A new era, however, has come, and let us hope that in Canada a careful consideration of all available information, derived from every source, will enable us to make each step in advance on a solid foundation.

MEDICAL THOUGHTS, FACTS, FADS, FANCIES AND FABLES.

By S. Sprague, M.D., Perth, Ont.

Is osteopathy, which ranks as second place to Christian Science, but which has not its back bone—and recognized as among the modern cults, to displace and disgrace our noble profession, its disciples and the work of our honored and well established and endowed national universities—to be allowed a legitimate and legal standing in this enlightened age in this our province? When I consider the fact, duly noted in the public papers, that Major Craig, of East Wellington, has presented a petition from the Board of Trade of Mount Forest, praying that an institution of osteopathy there should be incorporated, my reflections are many, and my first view is: Does Major Craig, as M.P., consider he is in any sense advancing the best interests of medicine—if osteopathy is medicine? Will not the intelligence of the good people of Mount Forest and the M.D's. of the electoral district embracing the Wellingtons oppose such attempts? Is medicine so debased that an M. P.—in this our province—would and should seek to establish in the interests of a Board of Trade an institution for osteopathy? Is an osteopathy *institution, college or university,* whose work is that of graduating *Doctors* in osteopathy, to be allowed in this Province, where flourish the Toronto University, Western University and Queen's University, with medical faculties? If we—our Parliament—are to grant this Mount Forest request, Chiropractics, Vito-pathy, Christian Science and other modern and visionary cults, madnesses and delusions of crowds will attempt similar appeals for legislation.

To those who are ignorant of osteopathy and are indifferent to the attempts made by fakirs, under various namings and titles to hurt the medical profession, we would refer McKay's work, "Popular Delusions," as illustration that this progressive age is not silencing the work or ambition of the Iconoclast or Socialist in demolishing time honored institutions—even our universities, the pride of our country—and attempting to place within their sacred walls such mud gods as those named. The Emmanuel movement, encouraged by a few reverend gentlemen, who style themselves more frequently *Doctors* than *Rev. Doctors,* is in evidence, according to one writer of the degeneracy of the church's influence, such I fully endorse and also believe that

they and such as they are jealous of the growing power and influence of the cultured and cosmopolitan doctor; whose profession demands men of the best manhood and highest culture; whose practice knows no one church; whose ideals are lofty and that they lift all there is of life in altruistic labors, and that they will bring the glory of and honor of the nations into medicine.

Medicine, more ancient than the Golden Fleece or Golden Eagle, whose history is well blended with that of the earliest of divinities; whose position is that of "First of all arts," and without whose association and brilliancy all others would sink in gloom is, and has been ever assailed, not only by the church, which during its embrace smothered and paralyzed its ambitions, but by money and molluscous men, who increase in numbers and impetuosity to destroy the work of our patient and successful workers and the profession at large. To state a fact, we have those in our ranks, but they are few, yet considered leaders, who most shamefully have befouled their own nests, and the dejections thereof have been and are being used to fertilize cults—antagonistic to medicine, encouraging to superstition, and blots on works in medicine as taught by the masters.

To further emphasize my statements, I state that the deficient therapeutic knowledge, too often possessed by recent graduates, and no ways improved by the scanning of the ordinary medical journals and their advertisements, has encouraged theorists and "the don't know how's" to listen to the destroying angel, known as medical nihilism, and to listen silently to the awakenings of embryonic cults, the vaporings of fakirs, parasites, defamers, and blear-eyed outcasts and socialists of the dynamite brand.

The fool says there is no God, and the same fool says "drugs are of very little use," and by this statement an endorsement is made to the fact that he knows very little of drugs. For, however great his acquirements in anatomy, physiology, chemistry and pathology, he has not learned this fact, that they all conserve to a common centre—and that centre is therapeutics, the constant study in text books of master minds—not of price lists of drug houses—by those who are honoring and have honored medicine and their own names, and have been as divine blessings to the public.

It is indeed lamentable that our professors are those—in too many instances—who know nothing of country practice, in fact, medical practice, city or town, mere book worms, each believing that his own subject will make the finished doctor, but as a practitioner of medicine such professor would be starved if engaged in practice. As a rule it takes a young M.D. some five

years, if not longer, to learn this simple fact that as regards therapeutics he is very ignorant, and is already in the clutches of the ready-made drugs company, and an unpaid vendor, and unsatisfied prescriber, a poor results obtained of drugs, and whose purchase keeps his pocket wallet very much wrinkled. He soon learns, if not too bigoted, that the ordinary druggist, next door, knows more of drugs than he, and can give him some very useful primary lessons—and even post-graduate instructions for his financial and professional interest—and the best of all for the benefit of the sufferer. Yes, it becomes young and old in practice not to become theorizers, medical anatomizers, day dreamers, or visionaries in therapeutics, but possessors of all such knowledge that the Pharmacy College may give us ground work for the Mat. Med. and Therapeutics of the medical course. Although "God knows we're not the thing we should be, nor are we even the thing we could be," yet, we are struggling for the light and must confess "the years teach much which the days never knew," and constant and personal study of the masters, even if fools deride. We must as learned men and as philosophers investigate, weigh and study and not forget our duty to our profession in the maintenance of its honor. And if you are not making it your vocation, but an avocation, it would be better for your respectability, as well as that of medicine and your fellow practitioners and your community, that you disgrace us no longer. Better it would be if you, by self study, could realize that you are a stumbling block and in the way—as an obstruction to the honest, struggling, studious brother who is in love with our profession, and has no side studies or supports detracting him from his labors.

Brother, when recently you carelessly or carefully read the pamphlet entitled, "Antipyrine, Acetanilide and Phenacetin," by Uriel S. Boone, Ph.G., M.D., and which, no doubt, is on your desk, what were or are your conclusions in regard to the substance of the booklet? As these pamphlets evidently were sent to all medical men, and no doubt dentists, and even druggists in the U. S. and Canada, it looks as if Boone, by the pamphlet, is doing what appears dirty or unclean work for some chemical company in attempting to preserve patent compounds and to eulogize their actions, or was he—Boone—down at the heel, and for a mess of pottage, so far run down as to associate his name as the author or compiler of such literature? I again must state it is a dirty bird that befouls its own nest, and that none of the said dirt should remain under my humble roof, and where are my gods of medicine. I returned the—to me—profane

literature, and if you, yes, if all of us honest men, would do this we would free our desks and walls and our dispensaries from many decidedly obnoxious advertisements of the detractors of our good names.

We, as medical men, lead, too frequently, lives which prevent us from that fraternal interchange of opinions so essential to our professional advantages, and jealousy and over-estimation of self, associated with careless and indifferent reading, both tend to dwarf the intellect and usefulness of many good men. Yet, he is loyal to the profession, and if thoroughly awakened and encouraged he would soon learn that others, likened unto himself, are and have been in slumber, while our temples are and have been ruthlessly defamed by fakirism, and whereas he should be considered

"The pillar of the nation's hope,
The centre of the world's desire."

Such an honor is being seized for and by others not of our ranks.

Hippocrates says: "The physician is a philosopher and is God like,"

(IETROS PHILOSOPHOS KAI ISOTHEOS.)

and as such he should consider himself, and would undeniably be if he became more frequently associated with his fellow practitioners and studied their aspirations and experiences in practice, thus would he become no longer an "easy mark" among men; a better citizen—certainly a better doctor—even considered as

"Homo fervidus et diligens ad omnia paratur,"

and equally prepared to denounce the evils threatening our profession, and to arouse and encourage interest in the establishment of Dominion Medical Registration, our first and most patriotic desire; if "physicians are the natural attorneys of the poor, and that all social problems shall be largely worked out by them," as Virchow says, it is demanded that every man among us should be fervid and diligent and well prepared for his labors in these interests. God said, "Let there be light, grim darkness felt his might and fled away."

"Sweet is the usufruct of versatility."

Selected Articles.

REGARDING SERA.

In the *Journal of the American Medical Association* for 22nd January there appeared a series of articles on the important subject of sera. Synopses of these papers are here given:

Federal Control of Serums, Vaccines, Etc.

The law passed by Congress regulating the interstate trade in therapeutic serums, vaccines, etc., passed seven years ago, is explained and its working described by M. J. Rosenau, Washington, D.C. It provides for a complete system of governmental supervision over the establishments producing vaccines, viruses, serums, toxins, antitoxins, and analogous products. This oversight consists in inspections, licenses and methods of control or testing in the governmental hygienic laboratory. The law requires the proper labeling of the product with its correct name, with the name, license number and address of the manufacturer, and the date beyond which the article cannot be expected to be effective. It also provides penalties of fine or imprisonment and revocal of license for violation of its provisions. This supervision only applies, it must be understood, to interstate traffic in these articles. Before the law was passed it was found that irresponsible persons were making and marketing biologic products without sufficient care or knowledge to insure safety and reliability. Four of these firms were at once refused licenses and went out of business and the applications of others since have been refused for the same reasons. Most of the remainder have been required to modify their establishments or to improve their methods to bring them up to the government standards. Since the law was adopted there has been great improvement in the potency and safety of the products and it has been enforced without fear or favor. In general, the manufacturers have reached a high state of efficiency. The inspections are made at least once a year and oftener when necessary and include a very searching inquiry into the methods, the personelle, and the efficiency of the equipment. Foreign establishments have to undergo the same inspection before their products are admitted for sale into the United States. The license is issued by the Secretary of the Treasury for the manufacture of a specific product. General licenses, authorizing the manufacture of more than one biologic product, are not permitted. The government does not guarantee the efficacy of the product. Some serums of as yet unproved efficacy are given

licenses, and it is the province of the medical profession to determine their value. Samples purchased in the open market and those obtained directly from the manufacturer are constantly being examined in the Hygienic Laboratory at Washington, and if any are found questionable the manufacturer is required by the Surgeon-General of the Public Health and Marine-Hospital Service to withdraw it from the market. During the past year fifteen establishments were reinspected and relicensed and four additional ones licensed. Certain states and municipalities have found it convenient to manufacture their own products, but the general government has not gone further than to exercise a legal surveillance.

Vaccine Virus.

M. J. Rosenau, Washington, D.C., describes the modern method of producing vaccine virus. The caterial is usually taken from the vesicles when fully developed, which may be somewhere between the fifth and eighth day after the animal has been vaccinated. It should be taken only from typical unbroken vesicles, and is usually obtained by scraping with a curette. The vaccine pulp thus obtained may be purified with glycerine or other substances. Glycerine is best and is mixed with the pulp in the proportion of from 40 to 50 per cent. This acts as a preservative and antiseptic for the ordinary bacteria. It is impossible to exclude some harmless bacteria from the virus, strong antiseptic measures being impracticable, we must depend on cleanliness and asepsis in every stage of the production. The old-fashioned dry points are more liable to be contaminated, and the new federal regulation prohibits interstate traffic with them. Manufacturers have made an imitation of these dry points, which furnishes a very convenient method of vaccinating, by putting a drop of glycerinated virus on ivory or glass points hermetically sealed in paraffin or glass. These are safe and satisfactory. All vaccine virus is tested according to modern methods for virulent germs, and these tests include animal inoculations. The tests must be satisfactory before the virus is placed on the market. Special tests are made to determine the absence of foot-and-mouth disease and tetanus spores. All establishments manufacturing vaccine virus for the interstate traffic must be under government supervision. Rosenau makes a plea for the admission of vaccine virus into the Pharmacopeia. It is the oldest and best specific preventive known and a drug in the broadest sense of that term. One advantage would be in giving it an official and legal name to avoid the confusion liable to exist with other substances called vaccines used in therapeutics. Other substances such as diphtheritic serum have been admitted into the Pharmacopeia and

vaccine virus is recognized in the Belgian and Swiss pharmacopeias.

Diphtheritic Antitoxins.

W. H. Park, New York, describes the process of eliminating portions of the non-antitoxin serum substances of the horse serum used for diphtheritic antitoxin, and says that there are now two globulin preparations thus prepared on the American market. In answer to the question as to whether they have the same curative effects as the whole serum, he says that he has carefully watched the results following the injection of the whole serum and of the Gibson and Banzhalf modification. The rashes and after-effects are undoubtedly much less after the Gibson injections than after those of the whole serum, and somewhat less after the Banzhalf modification than after that of Gibson. Curiously enough, certain types of rashes are eliminated. The urticarial reactions still frequently follow. Certain French and Austrian investigators have asserted that the curative value of diphtheritic serum was only partly in the antitoxin and even that the antitoxin was the least important part. Their results would make it seem that the amount of serum rather than of the antitoxin units was effective. These assertions were mainly based on certain animal experiments which have been repeated by the author in Frankfurt and later under Ehrlich's direction. The serums used in Vienna were fortunately obtained by Ehrlich, and he was surprised to find that they had been very inaccurately tested. The author's results were exactly the reverse of those of the Austrian investigators, and strengthen the conclusion that the antitoxin is practically the only curative element in the serum. This applies also probably to tetanus antitoxins. So far as animal tests can be depended on, Park is positive that the globulin preparation contains all the curative substances of the whole diphtheritic serum and that this is in the antitoxic element.

Tetanus Antitoxin.

J. F. Anderson, Washington, D.C., describes antitetanic serum as that of certain animals, usually horses, immunized to the toxins of the tetanus bacillus. It is marketed in both the liquid and the dry forms. Some manufacturers make also an antitetanus globulin. All tetanus antitoxin sold in interstate commerce in the United States must conform to the official standard adopted by the Public Health and Marine-Hospital Service. The immunity unit for measuring the strength of the antitoxin is ten times the least quantity of antitetanic serum necessary to save the life of a 300-gram guinea pig for 96 hours against the

official test dose of a standard toxin furnished by the United States Public Health and Marine-Hospital Service. This unit recommends itself for its simplicity and is superior to the three European units now being used, which are admitted to be not entirely satisfactory. There is no present standard for veterinary use. Anderson gives a table showing the variations that existed in the unit strength of tetanus antitoxins before the promulgation of the American standard. The antitoxin is used both as a prophylactic and curative agent in tetanus. Used as a prophylactic, the dose is 1.500 units; as a curative, it should be given in doses of 3,000 to 20,000 units, repeated during the course of the illness. The dried and powdered serum has been used as dusting powder for wounds. The liquid serum is marketed either in syringes ready for use or in glass vials. Each syringe of tetanus antitoxin made by the American producers contains from 1,500 to 5,000 units; the unit value per cubic centimeter varying from 150 to 500 or 600. The affinity of the nerves for the toxin and its subsequent binding by them explains why the antitoxin is often of so little value after the symptoms have developed. It can, however, neutralize any new toxin that may be formed in cases where the focus has not been removed, and therefore should be always used in tetanus. Tetanus antitoxin is now recognized in the Belgian, French, and Swiss pharmacopeias. It should also be admitted to the American pharmacopeia, as its value as a prophylactic alone entitles it to admission. Anderson sums up the benefits obtained by the federal government control of the therapeutic serum as follows: "1. The physician can be assured that every package of tetanus antitoxin now contains at least the number of units claimed. 2. All serums are now examined for, and are required to be free from, bacterial or toxic contamination. 3. The amount of preservative contained in the serums is not excessive. 4. There has been a progressive increase in the potency of tetanus antitoxin without a corresponding increase in cost. 5. A uniform standard having been established, definite amounts of tetanus antitoxin can be used so that data will gradually be collected as to the amount of serum necessary to be used for immunizing and curative purpose."

Serums and Vaccines.

L. Hektoen, G. H. Weaver and R. Tunnicliff, Chicago, give a brief preliminary report of the results of their study of the various antistreptococcus and antipneumococcus serums and of streptococcus, staphylococcus and pneumococcus vaccines found on the market. The antigenic properties of the so-called vaccines were tested by injections on rabbits with subsequent opsonin de-

terminations. Distinct antigenic properties were possessed by all the streptococcus and staphylococcus vaccines tested. The pneumococcus vaccines were inert in rabbits, so far as the opsonic examinations are concerned. Streptococcus opsonins were not found in any of the serums tested and activation by fresh serums was not accomplished to any extent. Attempt to obtain protective curative effects by antistreptococcus serums in rabbits and guinea-pigs and in a more limited scale in mice, failed. The serums seemed often to reduce resistance and to hasten death. In the antipneumococcus serums it was impossible to demonstrate antibodies for pneumococci. The authors believe that any claims for usefulness of antistreptococcus and antipneumococcus serums rest on impressions from results of clinical cases in man, and have in most cases no foundation in experimental tests whatever.

Antirabic Virus.

A. M. Stimson, Washington, D.C., describes the method of preparing and using the antirabic virus according to the Pasteur method. According to this method, the spinal cord of a hydrophobic rabbit is dried for a time over caustic potash at a temperature of 23 C., which causes it gradually to lose its virulence. In the treatment, persons who have been bitten by rabid animals are first inoculated with a cord which has lost its virulence, and on successive days thereafter with virus from cords that have greater and greater potency. The virus therefore consists of the spinal cord material of the rabbit plus the micro-organism of rabies and its products, artificially modified as to its pathogenic properties. It is administered subcutaneously in emulsion and the immunity induced is of the active type, the patient producing in his own body the antibodies, which are demonstrable in the blood. It has been shown that this virus, like that of smallpox, can be preserved at least three weeks in neutral glycerine or by the addition of antiseptics, which enables it to be sent where it is needed. The treatment is purely prophylactic and has no influence after the disease has developed. The treatment fails in cases in which the incubation period is too short or in some rare cases in which the patient seems unable to develop the antibodies. The treatment usually takes three weeks with daily injections, and is available at about twenty institutions in the country. The virus can also be supplied to the health officers with laboratory facilities by the United States Public Health and Marine Service.

Vaccine Therapy.

The general principles of vaccine therapy are explained by M. W. Richardson, Boston, who also describes its special appli-

cation in typhoid and other disorders. It is important, he says, to bear in mind, first, the fundamental distinction between passive and active immunity. In the use of a passive immunity the aid to the patient comes from without through an intermediary and the protection given is short, though its immediate power may be great. Diphtheria is the one disease in which passive immunity has proved its worth most emphatically, though almost as remarkable results have been obtained by it in cerebrospinal meningitis and more or less success in dysentery, cholera, typhoid fever, tetanus, snake poisoning, etc. In the use of vaccines, however, we aim to produce an active immunity. Already manufactured immune substances are not used, but we endeavor to stimulate the patient's organism by introducing into it more morbific material so that it may be manufacturing an increased amount of protective bodies to inhibit the growth of the invading germs. Success in this presupposes that the patient is not already overwhelmed with poison and can respond to the added stimulation. To bring about the desired bacterial destruction it must not be made too rapid or destructive so as to aid instead of inhibit the disease process. By bacterial vaccine is generally meant a culture of the special organism sterilized by heat or otherwise and suspended in known proportions of normal salt solution. Living organisms attenuated in number or virulence have been used in a few cases. Theoretically, this would seem to be most effective, but manifestly it would be attended with some serious dangers. We should keep in mind, however, the greater efficiency of living organisms in sterilizing the germs so as to change their characteristics as little as possible. Strong, in the Philippines, found that by using plague bacilli of attenuated virulence he could produce a much stronger immunity than is ever produced by dead bacilli, and similar results have been obtained in other diseases by other investigators. As a general rule, it is better to use autogenous vaccines, and if good results are not obtained with stock vaccines resources should be had to the autogenous kind. Definite rules as to dosage cannot be given, but it is advisable to start with what is below the usual dose and gradually increase. The interval between doses will also vary in different cases. Generally speaking, it is well to allow two or three days between the inoculations. The good results with typhoid vaccines in the British army and its use among United States soldiers are noted. The literature of the subject is gone over and the author gives his own experience with 28 cases of typhoid thus treated. The results of the treatment were not so striking, but the effect of the inoculation

seemed to be favorable as regards relapses, and he has little doubt of its value as regards this particular feature of the disease. The use of vaccines of *Micrococcus neoformans,* specially recommended by Wright in malignant disease, is mentioned. The Doyen antiserum obtained by the inoculation of animals with this organism is, Richardson says, without utility. There can be little doubt, he claims, that infection from the urinary tract due to the colon bacillus is favorably affected by vaccine treatment. The subjective improvement is often striking, and pain and frequency of micturition are quickly relieved. The character of the urine, however, changes but slowly, and the complete elimination of the bacteria is rare. Mention is also made of inoculation by Wright and Reed and by Turton, for gall-bladder fistula after operation and with colon bacillus in appendicitis.

Gonococcus Serum and Bacterin.

E. A. Thomas, Philadelphia, says that there can be no doubt as to the value of one or both of these agents in the treatment of gonorrhea and its sequels. While he still makes it a practice to determine the opsonic index in the treatment, he is becoming more and more convinced that it is not necessary, and he is therefore governed almost entirely by the clinical symptoms. He emphasizes the necessity of progression in doses, beginning with the minimum and steadily increasing until tolerance is established. Repeated small doses at long regular intervals and too frequent inoculations of too large doses may both cause harm by inducing hypersusceptibility. The best results, he thinks, are obtained by the use of autogenous vaccines, and stock preparations should only be employed when the others are impracticable. When he has used stock vaccines he has used those standardized in the William Pepper Laboratory of Medicine at the University of Pennsylvania. While the bacterins may retain their potency for a considerable period, his experience has shown the best results when they were used fresh and prepared every two to four weeks. He has never seen the slightest good results from pyocyaneus bacterins and would discourage their manufacture.

Tuberculin.

E. R. Baldwin, Saranac Lake, N.Y., says that tuberculin represents the toxin of the tubercle bacillus and is the diametric opposite of an antitoxin. It depends for its diagnostic value on a special sensitiveness acquired by the tissues after a tuberculous infection and the clinical value of a tuberculin reaction is generally proportionate to the smallness of the dose and the quick-

ness and degree of the response. The more recent the infection and the more extensive the disease, the more delicate is the reaction, unless the disease is rapidly progressing or there is grave constitutional weakness. In such cases tuberculin serves no useful purpose. The reaction occurs with increased frequency as age advances and can be obtained in a large percentage of apparently healthy adults. Repetition of the same or increased dose is capable of arousing a latent sensitiveness from a former or healed disease, hence this method, especially when subcutaneously employed, is mainly useful in excluding active tuberculosis, and the interpretation of positive results must be made with care. They do not necessarily establish the diagnosis of an existing disease, which must be made in other ways. He describes the different forms of tests, recommending the cutaneous test of von Pirquet as harmless and most suitable for general use. Other tests may be needed in adults, but this is suitable as a preliminary in all cases. The subcutaneous test is the last resource and the most searching in tuberculin diagnosis. At present it may be regarded as necessary in most cases. Its dangers have been over-estimated, but it is potent for harm if carelessly used. It should never be employed when a satisfactory diagnosis can be made otherwise, when a fever of 99.5 F. or over is present, or when the patient has a rapid pulse, gives a history of hemorrhage or has already extensive signs in the chest. It should never be used in suspected Addison's disease. The tuberculin should be fresh and the dosage accurate, and if there is the least reaction the subsequent dose should not be increased. The interpretation of the results in tuberculin diagnosis must take into account the size of the dose required to produce the reaction, the promptness with which it develops and the local and general reactions accompanying it. The therapeutic use of tuberculin may be for the following objects: to diminish the sensitiveness to the toxin and to create intermittent local reactions and thus stimulate the disease focus to heal or be absorbed. Baldwin doubts the production of any recognizable immunity, any specific resistance obtained is gradually lost after stopping the treatment. Only patients in a comparatively quiescent stage of the disease are likely to be benefited, and progressive tuberculosis of any form is a contraindication. Focal reactions can be best observed and applied with safety when the focus is localized in the skin, bones, joints, etc., and the lungs are not involved. For therapeutic use, the choice of tuberculin lies chiefly between the solutions and emulsions or vaccines. In general, the dosage is more controllable with solutions, and reactions are less frequent from emul-

sions, though, owing to their uncertain absorption, unexpected reactions may occur if the dose is much increased. The dosage is at present empirical, each individual case must be an experiment, and until some standards are established the solutions are the safest. Careful clinical oversight is the most satisfactory guide; opsonic determinations, while useful in the hands of a few laboratory workers, are impracticable for the general practitioner. The subcutaneous method is the only satisfactory one for the therapeutic administration of tuberculin. Inunctions have a possible field in the treatment of skin tuberculosis, otherwise they are impracticable. The emulsions have experimentally some immunizing power against the disease in animals, but the amounts which can be given with safety in man are too small to produce this effect. The details of the technique of tuberculin injection vary with the preparation used and the experience of different observers. They are, therefore, not gone into by the author, whose purpose is merely to state the general principles which should guide and safeguard the use of tuberculin.

Inoperable Sarcoma.

L. Loeb, Philadelphia, says of the treatment of inoperable sarcoma by the streptococcus and prodigiosus toxins, that it is a vaccine treatment and differs from certain other vaccines by not being a specific remedy. These two toxins have no etiologic relation whatever to sarcoma, for the cure of which they are employed. The basis of the method of treatment is in this case an impirical one; it was noticed that an attack of erysipelas in persons afflicted with cancer, in a number of cases led to a retrogression of the growth and even to a cure. Certain acute infectious diseases, however, may also cause a retrogression of cancer. Fehleisen, after his discovery of a streptococcus as the cause of erysipelas, made some inoculation experiments in cancer patients with some beneficial results, and other surgeons likewise reported cures. The living bacteria were employed, however, and sometimes proved dangerous. It was a step in advance, therefore, when Spronck recommended the use of the toxins instead of the living germs, and W. B. Coley only a year afterward began a systematic study of their use in the treatment of sarcoma. Since that time he has persistently continued in this line of work and has improved it by adding the toxins of *B. prodigiosus* to the streptococcus toxins. Later it was found that the toxins did not have to be derived necessarily from the germs of erysipelas, and it is even likely that toxins or other bacteria may serve the same purpose. The toxins are injected in gradually increasing doses in a part of the body distant from the tumor, and later, if pos-

sible, into the tumor itself. Dr. Coley gives the following data of the treatment in sarcoma: "In 430 cases treated, the tumor disappeared under the influence of the toxins in approximately 11 per cent. of the cases; 6.5 per cent. of the patients treated have remained without recurrence over three years after the cessation of treatment. In 3 out of these 430 cases death followed, probably as a direct or indirect result of the treatment. According to Dr. Coley, in 13 cases of sarcoma of long bones, observed partly by himself and partly by other surgeons, the use of the toxins has rendered amputation of the limb unnecessary; in other cases, however, the toxin treatment was without effect. In a series of 22 cases in which the toxins were used after primary operation, 4 patients are now well after periods of from 3 to 8 years, and 9 after periods of from 1 to 3 years; in 5 cases recurrence took place in spite of the toxin treatment; the remaining patients are still under treatment or the cases are very recent." Loeb has collected the statistics of the experience of a number of prominent surgeons and concludes that the treatment of inoperable sarcoma by this method leads to a cure in approximately from 4 to 9 per cent. of cases, and some results obtained suggest that it may be useful as a postoperative procedure in diminishing the number of recurrences, and that in another certain number it might limit the need for amputation of the limb in cases of sarcoma of the long bones. The manner in which it acts cannot be definitely stated, but it is probable that the toxins and their reactions on the local and general syndrone often have an unfavorable effect on the life and growth of the sarcoma cells.

Antivenins.

H. Noguchi, New York, gives the facts of the present medical status of the antivenins. There are three fatal constituents of snake venoms, the neurotoxins, hemorrhagins, and fibrin ferments. In the colubrine snakes the neurotoxins are the most important, as are the hemorrhagins in the viperine snakes. Fibrin ferments are present in both classes, varying with the species. The Australian snake venoms contain all three in prety equal proportions; the venom of marine snakes contains only the neurotoxins; the Indian and African colubrine snake venoms contain chiefly the neurotoxins with a negligible amount of hemorrhagins. The venom of the pit vipers of America and Asia contains chiefly hemorrhagins, with secondary amounts of neurotoxins and fibrin ferments. The true vipers owe their poisonousness to the hemorrhagins and sometimes to powerful fibrin ferments in their venoms. Death from snake venom is due to various causes according to the predominating element. The

death from the neurotoxins is due to paralysis of the respiratory centres. The fatal issue from the viperine snake bites of India and Australia is due to rapid intravascular thrombosis or secondary poisoning or infection causing marasmus. In the crotaline or rattlesnake bite, death is caused by occasional hemorrhages in vital organs or setting up of cachexia or septicemia. In excessive absorption death may result also from the neurotoxins. The local effect of the rattlesnake bite is very important. The minimum fatal doses of all venoms can be accurately determined by animal tests. It is influenced, however, by the mode of introduction into the body. With the neurotoxins this makes little difference, but the minimum lethal dose of fibrin ferment containing venoms is very much smaller when injected into the circulation than when subcutaneously, and this is also true of the hemorrhagin containing venoms. Hemolytic principles of venom are not important as regards fatality. Each snake has its own particular venom acting in its own way. The neurotoxins of the cobra are different from those of the *Bungarus,* and the hemorrhagins of the rattlesnake are different from those of the copperhead. The fibrin ferment of the daboia venom is entirely different from that of other snakes. This fact is extremely important in employing antivenins. There are several different kinds of antivenins produced, each for a different snake, though two of them, Calmette's and McFarland's, are made up to be polyvalent, though their action in that way is a feeble one. The standardization of these antivenins is different according to the different investigators, and their methods are briefly described. The therapeutic dosage is large, but in practice there are more favorable conditions sometimes which prevent snakes from injecting their maximum amount. The crotalus bite, for example, according to Mitchell, does not very often cause death, and that of the cobra or any other snake may be so little above the fatal dose that a few vials of antivenin may neutralize it. In rattlesnake poisoning, death is not so immediate, and we may expect much benefit from its antidote. All antivenins should be administered by injections into the veins or muscular tissues, and in crotalus poisoning it is advisable to inject the antivenin both around the wound and intravenously. The favorable effect of a ligature in case of the daboia bite is noticed. The venom causes a quick intravenous thrombosis and prevents the absorption of the rest of the venom into the general circulation and gives a favorable opportunity for the use of the remedy. We must endeavor to get much stronger preparations of antivenins than hitherto. Their utility is naturally increased when used promptly. Only the specific antivenin for the species should be used.—*Canada Lancet.*

THE WASSERMANN REACTION—ITS CLINICAL VALUE.*

By David Edward Hoag, M.D., New York.

Instructor in Neurology, New York Polyclinic Medical School; Assistant Attending Physician, Department of Neurology, University and Bellevue Hospital Medical College.

It is now nearly twenty years since pathologists began to realize the value of the blood serum as an aid to diagnosis. In 1895 H. E. Durham and his assistant Greenbaum, while working in Gruber's laboratory in Vienna, discovered that immune serum could agglutinate bacteria. Positive results were obtained in several cases. A few months before Greenbaum had published his results, Widal, in Paris, applied the test, and wrote a succession of papers describing the technique and was proclaimed the discoverer of the reaction bearing his name, he being the first actually to apply the reaction to the diagnosis of typhoid fever. It was prophesied at that time that serum diagnosis would in the future be applied to many other diseases besides the enterica. Of the more recent advances in the application of serum diagnosis to the detection of infectious processes being at work, none promises to be of more importance than the serum diagnosis of syphilis.

Statistics show that next to tuberculosis, syphilis is the most important cause of death in man. In 1906 Wassermann, or, more properly speaking, Wassermann, Neisser, and Bruck, first described a method of diagnosis of syphilis by means of the blood serum. This reaction occurred between the serum of syphilities and a watery extract of syphilitic fetal liver. This fetal liver produces a reaction of fixation in the presence of syphilitic serum, but produces no such reaction with the serum of normal individuals or those suffering from other diseases. In order properly to understand the Wassermann reaction, it is necessary to become familiar with the reaction of fixation, or what is known as the Bordet-Gengou phenomenon. Also we should understand the principle of hemolysis. Bordet and Gengou in 1901, five years previous to the description of the Wassermann reaction, found that when bacterial emulsions were injected into animals they were rendered immune to the particular bacteria used. Bacterial emulsions were called antigens. Animals injected with these antigens developed certain defensive bodies known as anti-bodies in their serum, in the process

*Read at a meeting of the Medical Society of the New York Polyclinic, Nov. 1, 1909.

of becoming immune. Wassermann, in his modifications of these phenomena, substituted bacterial extracts instead of bacterial emulsions. Hemolysis is the power possessed by the serum of one species of animal to dissolve corpuscles of another species of animal. Hemolysis shows an absence of antibody in the serum of the patient, while absence of hemolysis shows the presence of specific substances, and therefore the presence of specific infection.

Although it is not my desire to inflict upon the members of this society burdensome detail of technique, much of which is of value only to the pathologist or laboratory worker, still I deem it important for the benefit of those gentlemen for whom this society is presumed to be instituted, as well as for those members of the society who are not familiar with Wassermann's reaction, to review briefly its technique. We must keep in mind certain terms: antigen=bacteria, antibody=result of bacteria, complement present in all normal blood serum, its office being to complete the action of what pathologists know as the amboceptor, socalled because it has an affinity on the one end for antigen, and on the other end for complement

I will now give the technique employed by Swift, of the Carnegie Laboratory, to whose courtesy and ability I am very much indebted in my experiences along this line. Various materials used are: (1) Suspected serum obtained by venous puncture or from the finger or ear. The blood is allowed to clot, and the clear serum is removed, then heated to 56° C. to destroy the complement. (2) Complement of guinea pig serum. (3) Antigen, alcoholic extract of fetal syphilitic liver. (4) Red blood cells of a sheep or other animal, freed from complement by careful washing with salt solution. (5) Hemolysin, consisting of blood of the rabbit, the animal having been injected three or four times with the washed red blood cells of the sheep.

Two tubes with following contents are prepared: Tube 1, antigen, extract of liver of syphilitic fetus, plus serum to be tested, plus complement of guinea pig serum; tube 2, red blood cells of sheep, plus hemolysin. Contents of tube 1 are incubated for one hour, then added to tube 2, and then put in the ice chest over night and the results are read in the morning. If the serum from tube 1 had come from a syphilitic individual its relation to the antigen would be a specific one, and complement would be absorbed thereby. So that when the contents of tubes 1 and 2 were mixed, no hemolysis would occur. If the serum was not from a syphilitic individual the complement would not be absorbed, but would remain active to cause hemolysis in tube 2.

Hemolysis as observed in the test tube is a tingeing of the contents a transparent red color, the red blood corpuscles being disintegrated and hemoglobin liberated. If hemolysis has not occurred the red blood cells settle to the bottom of the tube. Numerous controls are necessary to show that the antigen or serum when used alone does not inhibit hemolysis. Also sera that have previously shown positive and negative results, respectively, must be introduced if the investigator is at all conscientious. It will thus be seen that the reaction is cumbersome and exceedingly complicated, and will probably always remain a laboratory test.

Noguchi, of the Rockefeller Institute, has described what promises to be a much simpler test, and in experienced hands possesses a good deal of reliability. It is a modification of the original Wassermann test in that the relative quantity of the different factors—complement, ambocepter, corpuscular emulsion, and antigen—are known and definite. Reagents are employed in liquid form, or the various reagents are preserved in stable form upon dried filter paper ready for use. The quantity of blood serum required is small. It has been hoped that this modification might prove of value as a bedside test.

Both of these methods are still in their infancy, and the technique not yet perfect, yet they have given to us a large amount of positive diagnostic data. Many investigators have adopted various modifications of Wassermann's method. Each has its advantages in different hands. It would seem that each observer should select some method and adhere to same.

* * * * * *

In the latest report of Gay of the Harvard Medical School, which is one of the most recent contributions upon the subject, he has attempted to cover all the literature upon the subject for the past three years. This comprises over 220 articles. The observations cover some four or five thousand cases of syphilis. Since these reports came from a dozen different sources, with probably a variable technique, it is surprising to note the uniformity of opinion regarding the accuracy of this means of diagnosis.

Estimates were given of the diagnosis in the various types of syphilis in the following percentage: Primary syphilis, average estimate of positive percentage of reaction, 75; secondary syphilis without symptoms, 75; secondary syphilis, with symptoms, 90; secondary syphilis, average percentage, 71; general paralysis, average percentage, 81; tabes, average percentage, 67.

These observers likewise examined about six hundred controls

from normal individuals and from those suffering from other diseases, and with the exception of two diseases, scarlet fever and leprosy, all the cases gave a negative reaction. This shows that although the reaction as yet may not be absolutely specific, it is certainly of great diagnostic value.

Butler of Chicago, in his report, where he refers to finding the reaction positive in cases of scarlet fever, as well as in cases of leprosy, states that the inhibition of hemolysis was but slight in comparison with the complete inhibition in syphilis. In any event these two diseases would hardly come in conflict with syphilis in differential diagnosis. Swift points out that those cases in other diseases than syphilis where a positive reaction is obtained, speak most strongly for the use of syphilitic organs in the test.

Max Nonne of Hamburg was one of the first to make use of the reaction in neurological practice, but maintains that spinal fluid should also be tested for verification. Neurologists appreciate the importance of any method that will enable them to state positively whether a suspicion of syphilis is justifiable or not.

Prof. Pritchard very aptly stated in his paper on "Neurological Syphilis," read before the Tri-State Medical Society and printed in the *Polyclinical Journal*, Vol. xii, No. v, that a neurologist is one who knows all about syphilis and a little about neurology. That this maxim is undeniably true any neurologist will admit, and he will further admit that one of the first things that he is on the lookout for, while attempting diagnosis, is whether or not there is a syphilitic taint in his patient. This is often difficult to determine in the absence of symptoms. In fact, it is a practice among many neurologists, based upon results of experience, to treat a large number of diseases of the nervous system by anti-syphilitic remedies. In making a diagnosis it has to be determined by signs bearing a direct casual relationship to the nervous symptoms for which the patient is asking advice. The patient's remembrance of onset, duration, and course of the symptoms is often imperfect and vague. They often cannot or will not remember. Such facts as they can remember are often the same as in cases of so-called neurasthenia, and are misleading. In many cases, especially in women, there may be no history of syphilitic infection or no signs on the body, and yet the character of the disease may clearly point to the possibility of syphilitic origin. We may treat a patient by antisyphilitic remedies and he may recover and still we have no proof that the patient has had syphilis. A

person suffering from an affection of the nervous system, giving a positive Wassermann reaction, is much more liable to be suffering from syphilitic affection than one who is admittedly syphilitic, but has shown no signs, owing to treatment. Heretofore we have had no reliable diagnostic measure in cases where no symptoms are present and infection is denied. Cases under treatment show a positive reaction much less frequently than those untreated. While a positive reaction indicates that the individual has had syphilis, it does not necessarily prove that the particular lesion from which patient is suffering is syphilitic. It is a well-recognized observation in neurology that exactly those cases of syphilis that run a mild course and clear up early are often later the subjects of tabes or general paresis. The virus may have a selective action upon the cerebrospinal system. Wassermann was led to the hypothesis that long years of antibody production on the part of the nervous system lead to pathological degeneration of it. The presence of these antibodies in the serum of syphilitics may be irrespective of length of time that has elapsed since the first infection. Sachs believes that although much stress has been laid upon the value of the reaction in the diagnosis of tabes and general paresis, its principal value lies in its corroboration of our belief in the syphilitic origin of these two diseases. In cases presenting symptoms of either general paresis or tabes, but not marked, or marked by symptoms of so-called neurasthenia, the reaction might prove valuable. We must not infer, however, because a patient possesses neurasthenic symptoms, and it is proved that he has had syphilis, that he will develop general paresis. He may have been well treated early in the disease and his present symptoms be due to other causes. The reaction would throw much light on these obscure cases. Sachs believes that the reaction may prove of more value in the diagnosis of a number of other conditions, namely, between multiple sclerosis and cerebrospinal syphilis; central gliosis and specific myelitis; in cases of intracranial pressure, whether due to malignant neoplasm or to syphilitic gumma. In cases of epilepsy and hemiplegia, it would always be a matter of scientific interest, if not of therapeutic value, to know if the cause was specific. Butler's conclusions, based upon experience, are that the reaction is positive in 100 per cent. of cases of primary syphilis and in 95 per cent. of secondary syphilis. In tertiary and latent cases, parasyphilitic diseases, and visceral syphilis, he believes the reaction positive in 60 to 75 per cent. of cases. He believes with Swift that the reaction may be made a reliable guide as to treatment, since such reaction

is influenced by treatment. A positive reaction would indicate activity of the specific virus. A negative reaction is therefore not of necessity of negative value. The patient's destiny may thus be controlled. He may be protected from the serious ravages of late syphilis of internal organs, or possibly the parasyphilitic affections, by the institution of vigorous antisyphilitic treatment.

Although we have a valuable therapeutic aid, we have not had a satisfactory diagnostic measure. In skin lesions where syphilis is manifestly present it cannot have more than a confirmatory value, and the fact that the reaction is found positive so frequently in this condition renders its use in more obscure cases a fairly certain diagnostic sign. There are a number of irregular skin manifestations that cannot surely be diagnosed as syphilitic. Formerly the therapeutic test was applied when such condition presented itself. The Wassermann test might justify our suspicions, and proper treatment could be at once instituted, thus saving valuable time. If negative reactions were obtained, the saturation of the system with damaging drugs might be prevented. Butler again draws our attention to the difficulty of diagnosing visceral syphilis. If gummata exist they are often located so that they do not interfere with the function of any organ, and may be out of reach of the palpating hand. Syphilis of the liver often resembles in symptoms malignant growths of same, which are inoperable. There may be no history or evidence of past syphilis. Lesser, in his post-mortem studies of visceral syphilis, found thirty cases of liver gumma that had gone unrecognized clinically. Very many cases of gumma of the heart and lungs are never diagnosed. We thus have in the Wassermann reaction what would seem a valuable aid to the surgeon and internist, valuable especially in early diagnosis. Knowing the wide prevalence of syphilis as an etiological factor in a large number of visceral conditions, it should receive consideration and the blood be examined for reaction.

Castelli, after reviewing the subject at length, makes a plea for the recognition of the value of the reaction from a social standpoint. Unrecognized and untreated cases of syphilis creating degeneracy and insanity, it puts us in position to advise more scientifically upon the question of marriage. He believes that in addition to its value as a tremendous factor for benefiting our fellow-beings, it might become an important factor in dispensation of justice where we could recommend courts to leniency in those cases where previous syphilitic infection had produced a derangement of mental poise.

In drawing to a conclusion this rather chaotic arrangement of experiences and opinions, I realize that many important considerations relative to the reaction and its value may have been omitted, not by intent, but through lack of time and space. My own experience with the reaction has taught me that in the study and analysis of groups of cases submitted to the test some discrimination is necessary, as in the analysis of any symptom. In my opinion the clinical value is well established, but it is difficult sometimes to find a satisfactory scientific explanation. The controversy has already assumed voluminous proportions. The unwary reader is tempted to feel that the test itself must be a doubtful one, in view of the differences of opinion that exist as to the details of its explanation. The specificity of the test is the matter of paramount importance. The uniformly negative results found in controls and a large percentage of positive reactions in luetic, or even suspiciously luetic cases, tend to establish the reliability of the test. It is upon these two points that the reliability of any blood test depends.

If we will regard reaction as a symptom and measure it in the same light as other symptoms, we will appreciate its true value. Physicians should recognize in the Wassermann reaction a valuable addition to their armamentarium, become thoroughly conversant with its possibilities, and utilize it at every opportunity.—*Medical Record.*

THE CLINICAL VALUE OF CARBON DIOXIDE SNOW, WITH DEMONSTRATION OF THE NEW ICE COMPRESSION MOULD

By Walter Irwin LeFevre, M.D., Cleveland.

Only within the past few years has carbon dioxide been utilized in the treatment of disease. Its use was popularized by an American physician—Dr. Pusey, of Chicago—and at present it is considered indispensable in the armamentarium of the dermatologist. Commercially, it has been used many years, but there also its field of usefulness has expanded until to-day its manufacture engages the attention of the largest chemical companies.

Medicinally, besides its uses in skin lesions, it is used in giving baths. These are of two kinds, the water and the air bath. In the air bath the patient is placed in an ordinary "sweat cabinet" and the gas is introduced at the bottom, a lighted candle near the top serving as a simple indicator to show when the cabinet is full. The gas being heavy fills from the bottom up; so when the candle is extinguished the cabinet is full. In the water tub bath two methods are employed. A simple and cheap way is to place a cup or so of acid sulphate of soda and soda bicarbonate in the bottom of the tub; fill the tub with water and the carbon dioxide will be evolved and will collect upon the surface of the body. The other way is to introduce the gas into the bottom of the tub from the ordinary storage tank. These baths are said to be very stimulating and are used for restoring "the vigor of youth."

In dermatology, carbon dioxide has proved very valuable in a number of diseases and conditions. It is easily handled, almost painless in its application and positive in its action. With it a degree of reaction can be obtained ranging from an erythema to necrosis, depending upon the pressure exerted and the length of contact. With the carbon dioxide ice a temperature of about 110° below zero is obtained, so that when the skin is touched with it there is at first a slight sting, but almost instantly the surface is frozen and hence anesthetized. Five to ten seconds is sufficient time to destroy a mole or vascular nevus. In a short time a blister forms if the skin is not broken, with more or less edema of the surrounding tissue, but unless the area treated is quite large the patient does not suffer much pain. It can be used upon any accessible part of the body.

Personally, I have found it useful in warts, moles, birthmarks (both vascular and hairy), tattoo marks, epithelioma, lupus, lupus erythematosus, lichen planus, and xanthoma palpebrarum. Others have reported good results also in keloid, keratosis, indurated eczema, chloasma, and powder stains. Its field of usefulness is growing and it has proved a valuable agent, especially in some of the conditions which have been intractable to other measures. Its chief advantage, though, over other destructive agents is in the cosmetic results obtained. It is even superior to electrolysis in this respect, and is not to be compared with caustics, escharotics or surgical means.

The compression ice mould which I use is a convenient, rapid and economical method of handling carbon dioxide. It consists of a triple-barrelled screw syringe; the two inner tubes are of brass, perforated with fine holes, and between the two is a layer of chamois skin. The other tube is of fibre; being a non-conductor, it does not become very cold. The syringe is screwed directly to the valve of the tank, and the plunger is set so as to hold as much snow as is desired. The rapid evaporation of the liquid carbon dioxide produces such an intense cold that the cylinder is soon filled with the snow. This is then compressed into ice, taken out of the mould and applied directly to the part. In the compression the temperature is reduced and the ice is hard and dry, so it can be fashioned into any shape with a penknife. A cone of the ice about one-half inch long will last about 15 minutes in the open air, and for about 60 minutes if wrapped in chamois skin.—*Cleveland Medical Journal.*

THE TREATMENT OF SYRINGOMYELIA BY RADIUM.

If there is a branch of medicine in which any novel method of treatment ought to be welcomed and generously tested it is that of neurology. The number of cases of a chronic nature with which the practising neurologist is confronted is so considerable that they constitute a reproach. He is powerless to arrest the insidious progress of myopathy or to check the nuclear degeneration of bulbar palsy. Syringomyelia is an excellent instance of a chronic nervous disease of which the chapter on treatment is as yet unwritten. Nevertheless, we owe to our French *confrères* an advance in the therapeutics of that malady that is deserving of serious consideration. Two years ago M. Beaujard and M. Lhermitte published an article on the radiotherapy of syringomyelia, in which they announced that exposure of a syringomyelic patient to the action of the X-rays had been followed by a recession of the symptoms. Similar results in one or two cases have been obtained by, among others, Professor Raymond. In the *Progrès Médical* of Dec. 18th, 1909, Mlle. Fabre and M. Paul Touchard, of the Salpêtrière, report a series of five cases of syringomyelia handled in an analogous fashion by exposure to radium, with surprising effect. As our readers may remember, the emanations of radium are known as alpha, beta and gamma rays, respectively, the penetrating power of which increases in this order. The alpha rays are arrested by the skin, whereas the beta rays penetrate deeper, and the gamma rays will pass through bone itself. For their purpose the investigators employed a flat tray, the surface of application of which was 6 centimetres square, containing 1½ centigrammes of pure radium bromide, and a nickel screen, three-tenths of a millimetre thick, sufficient to allow only beta and gamma rays to filter through. The applications were made daily to the vertebral column, at various levels, alternately to the right and left of the spinous processes. At first the duration of the exposure was restricted to 10 minutes, but evidence of the innocuousness of the applications led to their being extended to as long as an hour and a half. The record is certainly an encouraging one. All five cases improved, three of them to a remarkable degree. All showed increased mobility of the limbs, with diminution of stiffness. One patient's hands had been quite helpless, in a *main-en-griffe* position, but after radium treatment she was able to flex, to extend, and to separate the fingers; a second was enabled to resume his work as a draughtsman after six months' disuse of

pencil and compasses. Another remarkable fact was the disappearance in one case of the trophic disturbances characteristic of Morvan's disease after exposure to the action of radium during several *séances*. The effect of the metal on the muscular atrophy so frequently noted in syringomyelia was less obvious, as it was also on the variable anesthesias and analgesias of the disease. The rapidity with which improvement set in is striking. After three or four exposures the "succulent hand" of one case had altered for the better very appreciably and muscular force had returned. Amelioration, in at least two cases, has continued and persisted long after the cessation of radium treatment. From the theoretical standpoint there is reason to suppose that the action of radium on the syringomyelic cord is analogous to its accepted action on neoplastic tissue. By some mechanism unknown to us the rays check the proliferating tendency of the cellular elements of new growths, and on this analogy it is perhaps only in developing cases of syringomyelia that they are likely to be of service.—*The Lancet.*

TREATMENT OF DYSPEPSIA.

By Jogendar Lal Chandra, L.M.S.,

Late Professor of Anatomy, College of Physicians and Surgeons, Calcutta.

Dyspepsia in the truest sense of the term is not a disease; it is, like fever, a symptom of some latent disease; it arises from the disorder in the digestive system whether functional or organic. It is induced by imperfect mastication, bolting of meals, too much fluid with meals, hard mental or physical work immediately after eating, too cold or too hot food, food badly cooked, excess of tobacco smoking, etc. Greasy and fried foods cause dyspepsia because the gastric juice cannot penetrate the coating of fat.

Acute dyspepsia is caused by too large meals, errors in diet, excess of alcohol, etc. *Treatment.*—Assist vomiting by tickling the fauces; milk with sodi citras is the ideal food; the dyspepsia usually passes off in two or three days. During convalescence, give Liq. Bismuth et pesin Co. in drachm doses after meals.

Atonic dyspepsia is due to deficiency of the hydrochloric acid in the gastric juice. The food undergoes butyric acid fermentation.

The indications for treatment are (*a*) to remove dietetic errors, (*b*) to stimulate the secretory and motor powers of the stomach, by alkalies with nux vomica, carminative and bitters before meal. Sodi bicarb acts as a stimulant to the gastric juice, increasing the secretion of hydrochloric acid and thereby aids digestion, but not of pepsin; hence it is given immediately before meal in small doses.

The following are the best prescriptions for atonic dyspepsia:

Sodi bicarb. .....gr. 10
Sodi citrat. .....gr. 7
Inf. Cascarilla .....ad..oz. 1
M. ft. for a dose: Sig. Half an hour before each meal.

Writer's favorite formulæ are:—

Elix. Papain .....dr. 1
Taka—diastas .....dr. 1
Sp. Chloroform .....min. 10
Essence Menth. pip.....min. 10
Aq. Ptychotis .....ad..oz. 1
M. ft. for a dose: Sig. One twice a day after meal.

Glycerini acidi pepsin.....dr. 1
Acid Hydrochloric dil.....min. 10
Tinct. Nucis Vomica.....min. 4
Tinct. Cardamom Co. .....min. 20
Aq. Carui .....ad..oz. 1
M. ft. for a dose. Sig. One twice a day after meal.

Acid dyspepsia (Hyperchlorhydria) due to hypersecretion of hydrochloric acid in stomach; pepsin remains constant in amount. Treatment is mainly dietetic. Prof. Savill is of opinion that proteid diet relieves the condition, while the writer has learnt from experience that hyperchlorhydria is induced by constant proteid overfeeding.

Sodi. Bicarb. neutralizes any free acid present; therefore it is given two or three hours after food in large doses. Soda mint tabloid to be sucked an hour after meal.

The writer recommends:

Strontium Bromide .....dr. 3
Ext. Gulancha liq.....oz. 1½
Ext. Nucis Vomica liq.....min. 20
Ext. Cascara Sag. liq.....oz. 1

Dose, a teaspoonful with water twice a day after meal.

Atropin Sulph. gr. 1/100 tabloid. Duboisin hydrochlorate gr. 1/640 after meal. Hopogan (magnesium peroxide) relieves pain by neutralizing excess of acid, and it is antiseptic. It is a

white, tasteless powder, given in milk. Dose, 20-30 grains to be taken an hour after meal. In gouty diathesis with hyperchlorhydria and fermentation it acts miraculously.

Nervous dyspepsia depends upon the disordered condition of the nerves of the stomach. Ext. Sumbul liq. acts admirably in this form. Cocaine hydrochlor. gr. ¼ given three times a day in milk will cure the disease. Chloretone gr. 2 dissolved in water has cured a case under writer's treatment like a charm.

Fermentative dyspepsia is due to fermentation. The writer's well-tried prescriptions in this form are:

Sodi Sulpho-carbolat .....gr. 3
Tinc. Nucis Vomica.....min. 4
Tinc. Carminative .....min. 10
Inf. Calumba .....ad..oz. 1

M. ft. for a dose: Sig. One quarter of an hour before meal.

Benzo-naphthol .....gr. 2
Taka diastas .....gr. 2
Sodi Bicarb. .....gr. 5
Pulv. Carb. Lig.....gr. 5

M. ft. for a pulv. Sig. To be given in wafer paper twice a day after meal.

In irritable dyspepsia arsenic in drop doses before or after meal acts well.

Liq. Arsenicalis .....min. 3
Potas. Bicarb. .....gr. 10
Inf. Calumba .....ad..oz. 1

M. ft. for dose. Sig. One twice a day after meal. When pain is the urgent symptom, use the following:

Bismuth Salicylat .....gr. 5
Pulv. Tragacanth Co.....q.s.
Acid Hydrocyanic Dil.....min. 1
Liq. Opii sedativus.....min. 4
Aq. Auranti floris .....ad..oz. 1

M. ft. for a dose: Sig. One thrice a day. Heroin hydrochlor. gr. 1/12 tabloid once or twice a day.

In dyspepsia of liver origin, bryonia acts well.

In dyspepsia with oxaluria, nitro-muriatic acid with nux vomica and bitters is very efficacious.

For dyspepsia with uterine trouble, drop doses of laudanum with nux vomica and uterine sedatives are good.

For dyspepsia of scurvy, lime juice and pepsin, a drachm or two to be diluted with cold water twice a day after meal.

Hygienic treatment:—

Rest in the beginning; later systematic exercise, change of air, sea voyage or summer in mountain.

Abdominal *massage,* when skilfully done, strengthens the motor power of the stomach and aids peristalsis.

Lavage may be practised when other means fail. Physician should bear in mind the undermentioned important points, *viz:*

(*a*) Time taken by the patient at the meal.

(*b*) Quantity and quality of food the patient eats.

The writer recommends his dyspeptic patients to chew each morsel as many times as the number of teeth before swallowing. By this simple method he has cured several cases where there was objection for alopathic system of treatment.

Dietetic treatment:

Dietetic errors are the fruitful source of dyspepsia and gastritis; too frequent meals, habitual overfeeding, irregularity of the meals, will in time derange any stomach; deficiency of food and long restriction of food induce dyspepsia.

The writer recommends the following:

1. Raw papaya boiled in water.
2. Pine apple juice aids digestion.
3 Banana fruit as food.
5. Somatose.
6. Milk.
   (*a*) Milk with sodii citras.
   (*b*) Fermented milk.
   (*c*) Peptonised milk.
   (*d*) Cider whey. Add equal part of Devonshire cider to fresh milk; keep it till curd is formed; remove the soft curd. It is used in nervous and fermentative dyspepsia.
   (*e*) White wine whey. Add three ounces of pure sherry to a pint of boiling milk, remove the curd. Used in obstinate dyspepsia.

No definite list of food can be prescribed. "One man's food is another man's poison." However, the following is an ideal menu of diet as prescribed by the writer in most obstinate cases of dyspepsia:

Early in the morning—6 oz. of warm water to be taken by sips; it prevents fermentation and washes out the stomach.

8 A.M.—Juice of "helancho" and raw milk each half a chattack.

9.30 A.M.—Good cold shower bath.

10 A.M.—Rice *"dad khani"* or *"basmati"* to be boiled in cocoanut water on a slow fire; wash the warm rice in

water and serve. Boiled banana fruit and raw papaya; soup of "*gadhal*" herbs; fried "*mourala*" fish; soup of black fish "*koi*," "*magur*," "*singee*," milk and rice.

Drink little, or better no water during the meal.

When meal is over, lie on the left side for half an hour so that the food may lie long in the fundus of the stomach.

No mental or physical labor at least half an hour before or after the meal, to have the full benefit of more blood in the abdomen, which indirectly aids digestion.

11 A.M.—A glass of fresh cocoanut water; where it is not available, a glass of soda water is a good substitute.

2 P.M.—Milk, or better fermented milk or fresh curd.

4 P.M.—Fruit juices of papaya, pomegranate, oranges, grapes, etc.

7 P.M.—Barley water; *mung* soup, fish soup, milk.

Sweets forbidden except "palm *misry*" and "cocoanut *gure*." "*Balam*" rice causes acidity, therefore not allowed in dyspepsia.

9.30 P.M.—Patient should go to bed.—The P. M. in *The Antiseptic*, Madras, December, 1909.

THE TREATMENT OF LOCOMOTOR ATAXIA

By Graeme M. Hammond, M.D.

Recognizing the futility of anti-syphilitic treatment to materially benefit true cases of ataxia, it occurred to me several years ago that if we could maintain nutrition of the degenerated cells and maintain the nutrition for a definite length of time that possibly the degenerative process might be arrested or at least delayed. About eight years ago I began treating ataxia with gradually increasing doses of strychnia until doses of $\frac{1}{2}$ grain three times a day, or even more than this, were reached. During this time a great many cases have been treated, so that I am prepared now to state with some definiteness what this form of treatment has been able to accomplish. In no instance have I ever seen a case of locomotor ataxia cured, but I have seen pains disappear, and control regained over the bladder and bowels, and locomotion decidedly improved. In most all cases the

advance of the disease is checked, and a great deal of improvement follows. I have never seen the Argyll-Robertson pupil or the Romberg symptom disappear, nor the knee jerks ever come back, but these symptoms, when present, do not seriously interfere with the patient's life nor materially add to his discomfort; and if we have the means at our disposal of checking the growing ataxia, and even of improving that symptom, of stopping pain, and of giving better control of the bladder and bowels, we are able to do a great deal to alleviate the suffering of a class of patients whom we have not been able to materially benefit heretofore.

My method of administering this treatment is as follows: beginning with a dose of 1/30 of a grain three times a day, at the end of a week I increase this dose to 1/20 of a grain; and at the end of another week to a 1/16. These doses are given in tablet form by the mouth. At this time I give, in addition to the tablet of 1/16 of a grain, one drop of a solution containing one grain of strychnia to one ounce of water; next day two drops are given; next day three drops, and so on, each day increasing one drop until doses of thirty drops three times a day are reached. As thirty drops of this solution just equal a 1/16 of a grain, I am able to discontinue the drops and to substitute for them another tablet containing a 1/16 grain; thus the patient will then take two tablets each containing 1/16 of a grain three times a day or 1/8 of a grain at a dose. I maintain this dose for three months, then increase the dose with the solution the same as before until a dose of 3/16 is reached. I maintain this dose for at least three months, and then gradually increase as before. In this way the increase in dosage is made so gradually that few patients appreciate any difference. Seldom do we find any improvement in the patient's condition until a dose of 1/4 of a grain three times a day is reached, though the patient's general health improves long before this period. After a maximum dose of 1/2 grain is reached it has been my custom to maintain this dose for about a year and then to gradually reduce it. I now have patients under observation who have not had any strychnia for over two years, and who show no signs at present of relapsing.—*The Post-Graduate.*

OPHTHALMOLOGY AND OTOLOGY.

IN CHARGE OF J. T. DUNCAN.

Treatment of some Eye Diseases by the General Practitioner.

In the *Virginia Semi-Monthly (Medical)* four diseases are spoken of by Wilkerson. He gives the diagnostic points of each:

I. Conjunctivitis.—Always a discharge; pupil always dilates freely; cocaine dilates pupil; sensation of burning, pricking and of foreign body; some photophobia.

II. Ulcer of Cornea.—Usually a discharge; great photophobia; the continuity of cornea has been broken at some point; there is usually a decidedly white, ulcerated spot. When there is any doubt as to whether the cornea is involved, this can be determined by instilling first a solution of cocaine, 2 per cent., followed in two to five minutes by an instillation of fluoresceine, 1:100 followed again by a drop of cocaine. If there is an ulcer this will stain it yellow, and it becomes very distinct.

III. Iritis.—Small, usually ragged, irregular pupil; discolored iris, deep-seated inflammation; pupil not dilatable with 2 per cent. solution of cocaine; pain in eye and temple, worse at night; little or no discharge; normal tension; some photophobia.

IV. Glaucoma.—Hard eye; great pain in eye and temple, sudden in onset; steamy cornea, slightly dilated pupil, but regular. Shallow anterior chamber.

Wilkerson then gives the following "dont's" in ophthalmology:

1. Don't treat an eye until you know what is wrong with it.

2. Don't use a poultice of any kind on the eye. Poultices have done more damage than they have ever done good. They mask the symptoms and cause rapid ulceration and breaking down of tissues.

3. Don't use atropine in the eyes of persons above the age of forty years, unless you are absolutely certain that you have a case of iritis.

4. Don't use acetate of lead in ulcers of the cornea. You will get a lead deposit in the cornea.

5. Don't use cocaine in ulcers of the cornea. It causes a degeneration of the epithelial membrane and invites ulceration.

6. Don't treat your chronic headache and migranous patients

for years with pills, purgatives, and coal-tar preparations, but send them to a competent oculist and have them fitted with glasses.—*New Albany Med. Herald.*

On the Use of Mercury by the Ophthalmic Surgeon. In the *Therapeutic Gazette* is a most suggestive article on this subject by Burton Chance. Of course mercury in some form is always used in cases where any "specific disease" is suspected; but the plea of the author is that this form of treatment is most valuable in many cases where there is no suspicion of syphilis. The elder Hutchinson taught that mercury and the iodides are apparently specifics in maladies which are not syphilitic at all. . . . . It is quite probable that the physiological operations of mercury manufacture a substance which may be regarded as an auto-antitoxin. Mercury therefore may be used to antagonize the effects of infection, and is in clinical experience a most valuable antidote. Again, mercury is an energetic diuretic through an increase in the renal metabolic activity; the vessels are flushed, and the epithelium is so affected that a more favorable passage for the retained excrementitious products is effected.

It has long been my habit when treating phlyctenular disease of the conjunctiva and cornea to prescribe fractional doses of calomel or of "gray powder," interrupting the course, however, by one of a mineral acid. I have had in mind that in these conditions there has been a blocking of the secretions. The mineral acid has had an astringent action on the glands which the calomel has stimulated into a greater activity. By the small doses, through the pouring out of an increase of the immunizing products, metabolism has been enhanced.

Likewise, in states of glaucoma I commonly employ calomel for a few days, succeeding it by small doses of the red iodide, each to be used in connection with saline beverages, believing that by increased alkalinity of the blood the endogenous antitoxicity of the blood is increased through the destruction of waste products and the consequent enhancing of osmosis.

After speaking of the power of small doses of mercury over "chronic or local infections," he says that disturbance of the circulation in the uveal tissues, producing a sluggishness of action of the iris, cloudiness of the aqueous and vitreous, bogginess of the choroid and retina, with undue hyperemia of the optic disk, sometimes in persons who believe themselves to be in perfect health, can be entirely dispelled by a few doses of fractional amounts of calomel. And again, sometimes such an individual is delighted at a singular exaltation of spirits supervening on such a short course of the mild chloride, in spite of his former asseverations of good health.

It is seldom that ophthalmologists see very young infants with iritis or parenchymatous keratitis, or other diseases requiring mercurial treatment. After three years of age, however, the frequency of these diseases begins to be marked. In this group of cases we may employ the official ointment. In most young children I get satisfactory and prompt results by suspending the mercury in cod-liver oil and have it rubbed up in lanolin. The proportion must be varied to suit the case, but an average formula may be: Mercury, 3 parts; cod-liver oil, 5 parts; lanolin, 2 parts.

The effects of mercury upon iritis can be watched from day to day, and as the dangers arising from inflammation of this membrane are chiefly from the effects of the exudation of lymph, the value of mercury as an antiphlogistic is supreme. When promptly administered the damage caused by exudation into the pupil, or by attachment of the iris to the lens, may be averted through the antiplastic property of mercury. Here rapid action can be had by drachm quantities of the ointment rubbed thoroughly twice, even thrice, daily, increasing the absorption by energetic diaphoresis, by the hot-air bath or by prolonged hot bath.

The retina is commonly affected when the choroid is diseased, so the treatment designed for the one includes the other. In hemorrhagic retinitis, mercury is of signal usefulness, not only in hastening the absorption, but in preventing the organization of the exuded plasma. It appears, however, to have but little effect when organization of the effused material has already taken place. Syphilitic chorioretinitis, when observed early, is promptly affected.

In toxic amblyopias, mercury hastens the elimination of the poison. Ocular palsies, in syphilitic and parasyphilitic affections, are usually well influenced by mercury. In some cases they have shown improvement by the end of the third day. In such favorable cases, not only was one drachm used by inunction three times daily, but a prolonged hot bath every third night.

Without doubt mercury is of inestimable value in sympathetic ophthalmia. It is conceded that this dreadful condition is dependent upon the passage of toxins within the ophthalmic circle. We have not yet been able to define the nature of these toxins nor isolate with certainty exactly which bacteria give rise to them. Certain it is that mercury, through the instrumentality of the internal secretions, neutralizes and antidotes their virulent action. No other form of medication is as rapid nor as sure. Therefore it is imperative to use mercury immediately

in wounds of the ciliary zone, especially if the wound be a clean one, for suppurating wounds are usually less likely to be followed by sympathetic disease.

In the treatment of wounds of the eyes, mercury favors early union, hastens the absorption of plastic exudation, if it does not prevent it, and to a great extent prevents the systemic infection.

Angina Pectoris.

Allbutt in the *British Medical Journal* gives the following directions as to treatment:

Never bring on the pain; every renewal of it keeps up the sum of stimuli. If for this end absolute stillness in bed be required, then bed it must be, with the corresponding reduction of food. Thus, if at first the attacks are not abolished, they will be mitigated, and will gradually taper off. The subsequent imprisonment must be determined by the sagacity of the physician, guided by the sensations of an intelligent patient. At the same time all those measures, medicinal, dietetic, and other, which are known or supposed to reduce arterial pressures will be enforced. Sir Lauder Brunton's potent means, the nitrites, are indispensable.

To guard against vagus inhibition, atropine must be administered regularly. In very painful cases morphine may be needed also. An ice-bag applied cautiously and intermittently to the upper thoracic spine may prove helpful. The possibility of syphilis must be thoroughly discussed and tested by pathological and clinical methods; and if discovered, or even suspected, resolute treatment, chiefly by mercurial inunction and the iodides, must be prescribed. Empirical experience suggests that iodides in some dose should be administered in all kinds of disease. Specific remedies for any general morbid condition, as for acute rheumatism, gout, etc., will not be forgotten.

Of new remedies two have seemed in the author's experience to be efficacious, more especially in angina minor—namely, (*a*) the high-frequency current, and (*b*) the administration of the lactic acid bacillus by the method of Metchnikoff. Baths and massage cannot be prescribed in any urgent stage of the disease. Causes of eccentric irritation must be discovered and neutralized. The patient must be warned never to swallow quickly, nor to bolt large morsels. Diuretin and aspirin have their advocates. Chloroform is very dangerous in angina. In syncopic failure of the heart artificial respiration should be tried.—*Therapeutic Gazette.*

Editorials.

ANGLO-SAXON CONSOLIDATION.

One of the most interesting functions that this Continent has known for a long time was the Banquet of the University Club, held in Albany, N. Y., Saturday evening, March 19th. Among those present were the President of the United States and many of her leading citizens, the Governor-General of Canada and Minister of Finance Fielding. During the address of His Excellency Earl Grey, he said: "So far I have spoken in my capacity as Governor-General of Canada. May I now say one word at this university dinner as a university man talking to university men, as a Rhodes Trustee, and one of the Executors of Cecil Rhodes' will? May I be permitted to refer for one moment to the terms which rooted in the grave of Cecil Rhodes are destined one day to bear immortal fruit? What was Cecil Rhodes' great dream? What were the methods that prompted him to give to your 49 States a magnificent present of Oxford scholarships. They were prompted by the consciousness that we are projects of the same stock, that we are inheritors of common ideas, that we are the joint trustees of Christian truths. The hope that filled the great heart of Cecil Rhodes, that found imaginings, was that one day the English speaking people of the world—of your Republic and of all the free Democracies of the British Empire—would be joined together for worthy purposes in a great Anglo-Saxon consolidation, strong enough perhaps to stop unnecessary wars, and powerful and high-minded enough to lead the nations in the march of progress and reform. In this hope Cecil Rhodes founded his scholarships. He reverently prayed that they might one day prove an effective stepping stone to the attainment of that Anglo-Saxon consolidation which would appear to be the chief head of suffering humanity. Perhaps some day, through the munificence of an American benefactor, a further stepping stone may be established in a similar endowment of scholarships in one of your great American Universities for the most promising men that can be selected from the various parts of Great and Greater Britain, thus providing further

opportunities to the various units of the English speaking people all over the earth to acquire a better understanding of and a greater love for one another, and additional securities for the permanent peace of the world and the unchecked advancement of our highest hopes."

DR. SHEARD AS MEDICAL HEALTH OFFICER.

It is generally recognized by the citizens at large that the resignation of the positions of Medical Health Officer and Chief of the Street Cleaning Department, by Dr. Charles Sheard, is a calamity for the City of Toronto. It was certainly a grand thing for that city to have at the head of its Health Department a man of undoubted ability and virile independence. It was indeed remarkable that one such as he should have worked so indefatigably for Toronto for so many years.

Dr. Sheard received his medical education in Trinity Medical College, and graduated from Trinity University in 1878. During his student days, in addition to his high standing on the class list, he gave evidence of great ability as a public speaker. Immediately after graduating he was appointed a member of the teaching staff of Trinity Medical College, where he gained a high reputation as a teacher, especially in Physiology and Clinical Medicine. When amalgamation of Trinity and Toronto Universities took place he was appointed Professor of Preventive Medicine, which position he still holds.

Dr. Sheard became Health Officer of Toronto a little more than seventeen years ago, and has had charge of the Street Cleaning Department for about five years. The *Mail and Empire* speaks thus, and correctly, as to his work: "His administration of a civic department was almost unique on account of its entire freedom from aldermanic influence. His independence was of a type that brooked no interference, and he conducted the affairs of his Department on purely business lines." We may add to this, that, in addition to his great executive ability, he has an intimate knowledge of both scientific and practical medicine, including Hygiene.

We hope Dr. Sheard will retain his position as Chairman of the Provincial Board of Health, and also as Professor in the Medical Faculty of the University of Toronto. As to his plans for the future we know little or nothing, but we certainly hope he will take a long holiday, as he has scarcely had one for these seventeen years; and we join his vast host of friends in hoping that he will enjoy it thoroughly.

ROYAL BIRTHS IN ENGLAND

One interesting function that a Home Secretary in England must discharge is attendance at all Royal births, as the information is a very serious concern in a possible heir to the throne. It insists upon a member of the Government being present whenever a Royal babe is born. This is to convey the assurance that there will be no substitution, "the fraud of the day," practiced on an innocent public. In commenting on this the *Daily Mail and Empire* of Toronto says: "How even a prescient Home Secretary like Winston Churchill can tell one new born babe from another of the same sex is a puzzle that should interest hospital nurses."

THE ONTARIO MEDICAL COUNCIL.

The medical practitioners of West Toronto territorial district held a very large meeting in the Academy of Medicine, Toronto, March 2nd, under the Chairmanship of Dr. J. S. Hart, the representative of the district in the Council. There was a lengthy discussion on that phase of the Medical Act, Sec. 6, that seems to permit certain Universities or Colleges to have representatives in the Medical Council, although they do not establish or maintain a Medical Faculty. The University of Ottawa, Trinity University, Trinity Medical College, and the Royal College of Kingston, are each at the present time without a teaching faculty in medicine.

It was held that the only universities that should be represented are those of Toronto, Queen's and London, as they are the only ones that have Medical Faculties in existence.

The declining state of the finances of the Medical Council was fully discussed, and it was urged that the Treasurer of the Ontario Medical Council should have the fullest details as to the disbursements and the funds of the Council for traveling expenses, examiners' expenses and daily payments of members.

With regard to the size of the Medical Council, it was held that seventeen territorial, five homeopathic, and eight members from universities were too many, and that the number should be cut down by eliminating the universities which have no Medical Faculties and reducing the territorial representatives to nine and the homeopathics to two. The stand which Dr. Hart had taken on all important questions in the Council was endorsed.

THE MEDICAL PROFESSION IN FRANCE.

The Third Congress of Physicians of France will be opened in Paris April 7th. We learn from a letter which appeared in the *British Medical Journal* March 12th that the object of the promoters is to bring together, without distinction of grade or standing, all doctors practising medicine in France, and to ask them to discuss their various professional interests. It is said that physicians to-day do not derive from their calling alone money enough to provide against old age, and that those who have no resources other than the income obtained from practice must go on working indefinitely, and that it is something more than love of their work which causes so many physicians to die in harness, struggling desperately to retain the favor of patients who distrust their age more than they honor their experience. This is a bitterness which our forefathers did not know, a bitterness bravely and proudly hidden, but not the less touching to those who discover the secret.

Among the causes given for the condition of things are the following: 1. In France during the last forty years the cost of

living has been nearly doubled, while the interest on saved money invested in securities has diminished by two-fifths. 2. The abuse of hospitals, especially in cities and large towns. 3. The organization and growth of friendly societies, which are not inclined to treat the physician with proper respect. 4. Overcrowding in the profession from over-production of doctors. The number has been almost doubled within twenty years. 5. The low standard of entrance examination.

In order to provide a proper remedy for the conditions mentioned, many doctors now propose that there should be an examination for admission into a school of medicine, and that the number of the applicants admitted should be properly adjusted to the needs of the population.

WESTERN UNIVERSITY.

The Honorable Mr. Justice Meredith has recently written a letter to the public press, which is worthy of careful consideration. In it he makes certain positive and definite statements as follows:

The Western University is not in any sense a sectarian institution.

The Toronto University has no stauncher friend than the Western University.

But the University of Toronto is hampered by overcrowding, which prevents it from doing full justice to its students and itself.

With an area of over 260,000 square miles and a population approaching 3,000,000, Ontario should drop the one university in one place idea.

Germany with an area considerably less than that of Ontario has 21 universities well dispersed through its domain, with an average of about 1,500 students each.

New Zealand with an area of about 100,000 square miles and a population of less than one million has one university with four well distributed branches, all the teaching being done at the branches, the principal institution being the examining body only.

Things have come to such a pass that something must be done. What is the best remedy, Surely it will be found in the opening of the doors of the Western University wide enough to take in as many as now overcrowd the University of Toronto.

Formerly it was feared that the opening of the doors of the Western might draw with it provincial aid which Toronto wanted and needed, but happily that has all passed away. In the intimation that the grant to Toronto is to be half a million a certainty is reached which is satisfactory to everyone.

The grant to the Western cannot mean anything taken from Toronto except its hampering over-load of students. It would mean a triple great benefit. 1. Relief to the University of Toronto. 2. The saving of a vast amount of money to parents of Western students. 3. The opening to many, who could not afford, or would not send their children to Toronto, of the means of giving them a University education.

We learn from President Falconer, in an article published in the *Mail and Empire*, March 22nd, that there are registered this season in the University of Toronto and its Faculties, 3,974 students, of whom there are 642 in the Faculty of Medicine.

Under the circumstances would it not be a graceful and kindly act for the university men of Central and Eastern Ontario to ask our wealthy Government to give some assistance to our younger sister institution of the West.

THE GENERAL HOSPITAL EX-HOUSE SURGEONS' ANNUAL MEETING AND BANQUET.

The Association of ex-house surgeons of the Toronto General Hospital held its fifth annual meeting in Toronto, March 28th, under the chairmanship of Dr. C. S. McGillivray, of Whitby. On the same evening its fifth annual banquet was held in the King Edward Hotel. Among the after-dinner speakers were Drs. Roland Hill, T. S. Cullen, Samuel Johnston, Parsons, Chas. O'Reilly, and Middlebro, Mr. T. H. Cameron, and Messrs. Flavelle and Haney. Dr. G. B. Smith, of Toronto, was elected President for the coming year.

A PRINCELY GIFT.

Thus does the Toronto *News* characterize the generous act of Mr. Jno. C. Eaton in offering to build the whole Surgical Wing of the New General Hospital as a Memorial to the late Timothy Eaton. This is an admirable, indeed a magnificent, way to perpetuate the memory of one of the greatest and best men this Dominion has produced.

After the announcement of the gift, February 16th, the following telegrams passed between Sir James Whitney and Mr. "Jack" Eaton:

John C. Eaton, Winnipeg: The government and the legislature appreciate highly your munificent gift to the hospital. An order-in-council has been passed appointing you a member of the board of hospital trustees in place of Dr. Orr, who resigned in order to make the vacancy. It is of great importance that you should be associated in this way with the trust. And I take it for granted that you will accept.

J. P. Whitney.

Sir James Whitney: Your kind message received. I appreciate the honor you have conferred on me, and also the exceeding kindness of Dr. Orr.

John C. Eaton.

Personals.

The Lady Grey Hospital for Tuberculosis was opened at Ottawa February 15th.

Dr. Charles J. Hastings, of Toronto, started on a trip to Vancouver and Prince Rupert, March 24th.

Dr. A. H. Garratt, of Toronto, went to Atlantic City, March 24th, for a brief holiday.

Dr. Forbes Godfrey, M.P.P., of Mimico, returned from Bermuda, March 27th.

Dr. E. J. Barrick, of Toronto, left on a trip for Winnipeg, and the North-West Territory, March 26th.

Dr. Roland Hill visited Toronto March 28th, and delivered the " address of the evening " at the T. G. H. ex-house surgeons' banquet.

Dr. George McDonagh, of Toronto, after a short stay in the South of France, thoroughly recovered his health. At last accounts he was in London, and expected to return to Canada about the end of April.

Dr. Fred N. G. Starr, of Toronto, has been appointed one of the Vice-Presidents of the Section on Surgery for the next meeting of the British Medical Association, which will be held in London, England, in the latter part of July.

Dr. Thos. S. Cullen, of Baltimore, visited Toronto, March 28th, and was presented with a gold-headed cane, Mr. Larkin's prize for the best contribution to medical literature offered for competition among the ex-house surgeons of the Toronto General Hospital.

Dr. W. A. R. Michell, who graduated M.D. from the University of Toronto in 1902, delivered an interesting address before the Aesculapian Club at Toronto on the evening of February 11th. After graduating Dr. Michell spent some years in New Zealand, and then joined the Shackleton Antarctic expedition as surgeon for the party. On his return to England he received from His Majesty the King a handsome bronze medal.

Obituary.

CHARLES NORTON MALLORY, M.D.

Dr. Mallory, of Delta, Ont., died, after a prolonged illness, February 24th, 1900. He graduated from Queen's University in 1888, and soon after commenced practice in Delta.

LESLIE NEWELL, M.D.

Dr. Newell died at his late residence in Sarnia, February 11th, aged 48. He received his medical education at Trinity Medical College, and graduated M.D. from Trinity University in 1887. Soon after graduating he settled in Sarnia, where he soon acquired a large practice. During recent years he suffered much from rheumatism, and died of Bright's disease.

Book Reviews.

SURGICAL DIAGNOSIS. By Edward Martin, M.D., Professor of Clinical Surgery in the University of Pennsylvania. Illustrated with 445 engravings and 8 plates in colors and monochrome. 772 pages. Lea & Febiger, Publishers, Philadelphia and New York.

The general tone of this volume is exceedingly good. It has covered the whole range of surgical diseases, some not surgical, and endeavored to compress its many parts and descriptions into too small a space. There are so many admirable points about the work that it is probably unfair to point out what we consider the weak points. As an instance, the chapter on the upper extremity is quite worth the price of the volume and of the utmost importance to the general practitioner. It deals with the injuries to the hand and wrist that are common in everyday practice, and also with the more obscure. But where there is a chapter on surgical skin diseases we think that it would have been better to have dealt with the skin lesions in that chapter rather than mix them up in different portions of the work. The chapter on the skin is not a great addition to this book, because so many of the diseases described are not truly surgical, and as we mentioned above skin lesions are mentioned in the chapters on the face and the extremities.

In Chapter IV. the definition and description of Shock we consider altogether too indefinite. It dismisses the subject with too little consideration, because Shock is one of the most important and least understood conditions that we meet in surgery. The diseases of the nervous system are most admirably dealt with by Dr. Weisenburg, and from a clinical standpoint is as concise and accurate as it possibly could be in the space allowed for so important a subject. The illustrations and diagrams lend very materially to the understanding of the conditions.

We congratulate the publishers on the great success of this volume from a typographical and illustrated standpoint. They certainly have spared no expense to illustrate this volume completely, and the illustrations are of a very high order.

Those of our readers who are interested in the various forms of physiologic therapeutics (including hydrotherapy, electrotherapy, massage, hyperemia, etc.) will be glad to know that it is proposed to shortly inaugurate a new journal devoted solely

to the delineation of the progress made in these lines of therapeutic endeavor.

The American Journal of Physiologic Therapeutics will be published bi-monthly, and the subscription price will be $1.00 a year. The names and addresses of all interested physicians should be sent in, and those desirous of subscribing at once may enclose their remittance when writing. It is to be hoped that a widespread interest may be aroused in this matter. Write *now*, while this is fresh in your mind, to *The American Journal of Physiologic Therapeutics*, 72 Madison Street, Chicago.

PROGRESSIVE MEDICINE. A quarterly digest of advances, discoveries and improvements in the medical and surgical sciences. Edited by Hobart A. Hare, M.D., Professor of Therapeutics and Materia Medica, Jefferson Medical College, assisted by H. R. M. Landis, M.D. March 1, 1910. Vol. XII., No. 1. Lea & Febiger, Philadelphia and New York. $6 per annum.

The subjects dealt with in this volume are both medical and surgical, as well as those dealing with children, nose, throat and ear. The articles are, as always, the very best of their class, and we repeat what we have many times said, that there is no book in the English language to compare with it.

HIGH FREQUENCY ELECTRIC CURRENTS IN MEDICINE AND DENTISTRY: Their Nature, Actions and Simplified Uses in External Treatments. By S. H. Monell, M.D. Finely illustrated with special instruction plates. 8vo, 448 pages, extra cloth, price $4.00 net. Published by William R. Jenkins Co., 851-853 Sixth Avenue, New York.

A wonder book of simple things. Interest begins at once in the first chapter, in which electricity and its mysteries are defined. This particularly is conspicuous in the section, "Life Phenomena and Electricity," which tells what science has found out about how nature works in the human body, all explained in the most interesting manner. Then follow two chapters on Physiologic-Medical Properties of High-Frequency Currents, including a wonderful mass of convincing facts. And the section following these chapters concerning what others are doing with high-frequency currents will prove astonishing. Word pictures of treatment follow, and then twenty of the most absorbing chapters teaching in detail the advancement in treatment of various stages of diseases in which high-frequency currents can be made of benefit to patients. Every one of these twenty chapters is built on the physiologic foundation of the preceding sections.

"High-Frequency Currents in Medicine and Dentistry" was written to assist the progressive surgeon, physician and dentist, and for all who have electricity in their homes. The use of high-frequency currents has been made a household necessity as well as a medical and surgical boon.

A MANUAL OF MIDWIFERY. By Henry Jellett, B.A., M.D., F.R.C.I., Professor of Midwifery, Trinity College, Dublin; etc. With the assistance in special subjects of W. R. Dawson, M.D., F.R.C.P.I.; H. C. Drury, M.D., F.R.C.P.I.; T. G. Moorhead, M.D., F.R.C.P.I., and R. J. Rowlette, M.D. Second edition, with 17 plates and 557 illustrations in the text. London: Bailliere, Tyndall & Cox. 1910.

When the first edition of this text-book appeared we had much pleasure in giving a detailed review, and at that time expressed the opinion that it was a very valuable book both for the student and the practitioner. The only difficulty so far as students are concerned is the size of the book, being somewhat too large for the ordinary student's needs. It is, however, an admirable book for the general practitioner, as it expresses fairly well the views of the great Dublin School of Obstetricians, which in some respects at least is the best in the world. We consider the second edition better than the first, and that means a great deal. One of the most important improvements is the new arrangement made whereby Acute Yellow Atrophy, Hyperemesis, Gravidarium and Eclampsia have been grouped together in a chapter entitled Auto-Intoxication of Pregnancy.

THE PREVENTION AND TREATMENT OF ABORTION. By Frederick J. Taussing, M.D., Lecturer in Gynecology, Medical Department Washington University; Obstetrician to the St. Louis Maternity Hospital. Fifty-nine illustrations. St. Louis: C. V. Mosby Co. 1910.

This is recommended especially for the general practitioner and is in all respects an admirable book. The author's descriptions of preventive and actual treatment are excellent. We have no adverse criticism of any sort to offer so far as they are concerned. We desire, in addition, to say that the publishers have done their work in a manner that is worthy of all praise.

THE PRODUCTION AND HANDLING OF CLEAN MILK, including Practical Milk Inspection. By Kenelm Winslow, M.D., M.D.V., B.A.S. (Harv.), formerly Instructor in Bussey Agricultural Institute and Assistant Professor in the Veterinary School of

Harvard University; author of a text-book on Veterinary Materia Medica and Therapeutics, Chairman of the Committee on Milk of the Washington State Medical Association, etc. And ESSENTIALS OF MILK BACTERIOLOGY. By H. W. Hill, M.D., Minnesota State Board of Health Laboratories, Chairman of the Committee on Laboratories of the American Public Health Association, formerly Director Boston Board of Health Bacteriological Laboratory. Second edition (twice as much matter as in first edition). Size 6¾ x 9¾, xiv + 367 pages, 101 illustrations, including 1 colored and 16 full-page plates. Price, $3.25. William R. Jenkins Co., Publishers, 851-853 Sixth Ave., New York.

A complete, plain, practical and authoritative guide to the production, inspection, analysis, handling and distribution of milk for veterinary, agricultural and dairy students, farmers, health officers, milk inspectors, practical dairymen, sanitarians, country gentlemen, physicians and others interested in matters pertaining to dairying and hygiene.

No movement is attracting more attention at present, nor is any more important as regards the health of the country. Dirty milk causes most of the infant mortality in summer.

Health authorities all over the civilized world are enforcing higher requirements for market milk. This behooves all connected with the dairy industry to keep informed of the latest knowledge about the matter. The book gives all practical details about clean milk from the time it leaves the cow until it reaches the consumer. A very practical part of the book for students of dairy bacteriology consists in the laboratory experiments by Professor Conn. These give all the details for determining the common bacteria in milk and for studying their characteristics. They also show how to determine the effects of pasteurization; of contamination of milk with dirt and dirty utensils; the effects of improper cooling and care, etc. Moreover, methods of milk analysis are given and directions for the practical examination of cream, butter and cheese.

While the work is scientific or exact, it is written as well for the intelligent layman. The writer has had perhaps unusual facilities for studying all sides of his subject, being a practising physician, a graduate of a medical, veterinary and agricultural school, and he has had practical experience with animals and with the production and distribution of certified milk, and he has also been an official in charge of a laboratory having supervision over the milk supply of a large city.

The chief feature of this work is its practical and compre-

hensive character. This may be appreciated by a brief summary of the chapters:

Chapter I. (41 pp.)—Germs in their General Relations to Milk.

Chapter II. (12 pp.)—Composition of Milk and Cream and their Products.

Chapter III. (12 pp.)—Milk Products.

Chapter IV. (14 pp.)—Feeding for Milk.

Chapter V. (21 pp.)—Housing and Care of Cows.

Chapter VI. (45 pp.)—Handling of Milk and Cream.

Chapter VII. (16 pp.)—Cost of Producing and Handling Milk.

Chapter VIII. (12 pp.)—Some Hints Concerning Milk Distribution.

Chapter IX. (59 pp.)—Milk Inspection.

Finally, in the chapters on Essentials of Milk Bacteriology, the latest classification of bacteria and methods of bacterial analysis of milk are described by a specialist in this subject.

Appendix.—Here may be found detailed descriptions and plans for barns, milk houses and city dairies; a description of the milking machine and much other useful knowledge concerning dairy matters.

DISEASES OF THE LARYNX. By Harold Barwell, M.B. (Lond.), F.R.C.S. (Edin.); Surgeon for Diseases of the Throat, St. George's Hospital; Laryngologist Mount Vernon Hospital for Diseases of the Chest; Consulting Surgeon for Throat and Ear Diseases, Cripples Home for Girls, N.W. Henry Frowde, Oxford University Press; Hodder and Stoughton, Warwick Square, E.C., London.

This is an admirable manual of diseases of the larynx; and while written expressly for the use of general physicians and surgeons together with students, it will be a valuable addition to the library of the specialist, as it brings the methods of examination, diagnosis and treatment of throat diseases down to the most recent date. The perusal of its pages refreshens the memory concerning things that are valuable and old, while at the same time the attention is arrested by a description of many of the recent advancements that have been made in throat surgery. The cuts, while not elaborate, are to the point, and should be of much value to the student. The formulae in the Appendix also seem to be well chosen.

Miscellaneous.

The Harbor of Convalescence.

While the physician is always on the alert to meet and overcome any of the various complications or serious symptoms that threaten the patient during the acute stages of a severe constitutional illness, it is not infrequently the case that insufficient attention is given to the effort to hasten a return to normal health after the subsidence of the acute symptoms. The rocks and shoals of active disease have been successfully evaded and the medical pilot has brought his more or less damaged human craft into the peaceful harbor of convalescence. At this point both patient and attendant are apt to "rest on their oars" with the idea that the "vis medicatrix naturæ" is all-sufficient to bring back the normal vitality, without the special help of medication. It can scarcely be said that such a "laissez faire" policy is to the best interest of the patient. Unless the reparative and restorative forces of the organism are encouraged and fortified a slow and retarded convalescence is apt to supervene. The essentially devitalizing influence of the morbific agent in Typhoid, Grippe, Pneumonia, etc., is exerted primarily and principally upon the blood itself and a readily tolerable, promptly assimilable and thoroughly efficient hematinic, such as Pepto-Mangan (Gude), is always serviceable and valuable. As Pepto-Mangan (Gude) is palatable and non-irritant, it exercises no disturbing effect upon appetite or digestion—in fact it increases the desire for food and, by its general tonic action, assists in its absorption and assimilation. Its freedom from constipating effect also renders it especially suitable in the restorative treatment of the convalescent invalid.

Denver Chemical Co. vs. Colorado Chemical Co.

Early in the history of the Denver Chemical Mfg. Co. our sole product, Antiphlogistine, was nicknamed Denver Mud and for many years has been known and sold under that name.

The merit of our product, years of indefatigable labor, and the expenditure of vast sums of money have created a world-wide business, which has led many individuals and firms to manufacture imitations of Antiphlogistine, and within recent

years a few firms have been manufacturing and selling a plastic dressing under the name of Denver Mud, frequently misleading purchasers, who, in calling for our product under its nickname, have not received the original preparation.

In view of this, we brought suit against the Colorado Chemical Co. of Chanute, Kansas, which has recently been decided. A great amount of testimony was taken in St. Louis, Kansas City, New York and other parts of the country, defendant's counsel attending and cross-examining complainant's witnesses. After contesting the case to its conclusion no reason was presented by defendant on final hearing why a decree should not be entered in this Company's favor, and, on the testimony, a decree was granted accordingly. By the perusal of this decree which you will find opposite, you will see that we have been granted all that was claimed in our bill.

UNITED STATES CIRCUIT COURT.

"This cause coming on to be heard in the United States Court House at Kansas City, Kansas, on the 26th day of January, A.D. 1910, the parties having agreed that it be there heard instead of in the Third Division, Mr. Wetmore appearing for the complainant and Mr. Jones for the defendant, upon the testimony in the case and due consideration having been had, it appears that the complainant is entitled to have a decree in accordance with the prayer of the complainant and it is hereby ordered, adjudged and decreed that the defendant, its officers, attorneys, servants, agents, workmen and employes and each and every of them be and they hereby are restrained and enjoined from selling, offering for sale or advertising or procuring the sale of, any medicine or preparation under the name of "Denver Mud," whether printed or in any manner inscribed, so that the words "Denver Mud" shall appear upon the wrapper of or advertisement of the defendant's said preparation, or upon the letter head or other papers used by the defendant in its communications with the public or the trade in connection with its said preparation, or printed, written or inscribed in any manner whatever, or from representing, directly or indirectly, or furnishing others with the means of representing, directly or indirectly, that any preparation made or sold by the said defendant, its attorneys, servants, agents, workmen or employees, is the preparation and proprietary medicine made and sold by the complainant as aforesaid and known to the trade and to the public as "Denver Mud" as well as "Antiphlogistine," either by selling the same under any name so closely resembling the

name "Denver Mud" as to be calculated to be mistaken therefor, or from violating the rights of the complainant hereinbefore set forth, in any manner whatsoever.

And it is further ordered, adjudged and decreed that the defendant deliver up any and all labels, advertisements or circulars and any and all cans or packages of the defendant's preparation having labels or wrappers with the said words "Denver Mud" printed upon them, as aforesaid, to be destroyed, and that a writ of injunction issue in accordance with this decree and it is further ordered, adjudged and decreed that the complainant recover from the defendant the profits made by the said defendant from the sale of the plastic dressing mentioned in the complaint under the name of "Denver Mud" and that the complainant recover from the defendant its damages to be assessed as the court may direct and that the defendant pay the complainant the costs of this suit to be taxed.

Dated this 3rd day of February, A.D. 1910.

JOHN C. POLLOCK, Judge.

Dr. L. L. Gray, of St. John, Mo., reporting the outlines of a case of enuresis-nocturna, treated with sanmetto, says the case was that of a maid thirteen years of age, who had suffered with enuresis from infancy. She was old enough to realize her condition, and keenly felt its effects. She acted as though she thought everyone she met knew her troubles, and consequently she was shy, unsociable, ashamed to be seen in company. Strangers would ask if she was entirely sane.

He gave her a bottle of sanmetto, told her mother to give her all assurance that it would cure her, if properly taken. He says a second four-ounce prescription verified the truth of his statement. It did cure her, and she became a perfectly formed young lady, intelligent and sociable, the downcast countenance gone and life again worth living.

Disease Carriers.

Dr. Haywood has observed that flies were numerous about spittoons used by pulmonary tuberculosists. He fed some flies on sputum, and found that they died in two days. The "specks" or feces of these flies were rubbed up with sterile water and injected into guinea pigs, and the pigs developed genuine cases of consumption. The activity of the fly as a carrier of consumption is here clearly shown.—*Ex.*

Palliation vs. Prudence.

Because of its duration, the unusual degree of its intensity and the periodicity of its recurrence, the pain associated with menstruation should always be dealt with in the most guarded manner possible; for an unwarranted use of such habit-inviting drugs as opium and the synthetic analgesics invariably exposes the patient to an addiction to their employment.

In the treatment of dysmenorrhea, whether it be congestive, obstructive or neuralgic in character, the immediate and future welfare of the patient is always best served by the employment of a utero-ovarian anodyne and stimulant to the exclusion of all other pain-allaying agents. Experience has proved that palliation in the case of menstrual disturbance should not be had at the cost of prudence.

The timely administration of Ergoapiol (Smith) in any one of the several varieties of dysmenorrhea always serves to at once relieve distress and promote functional activity of the uterus and its appendages. When used during the menstrual visitation, the anodyne and restorative action of the preparation is notably pronounced.

By reason of its exceptional antispasmodic and tonic influence on the entire reproductive system, Ergoapiol (Smith) is of especial value in instances where a debilitated state of the pelvic viscera is the sole or a contributing cause of the distress attending each catamenial visitation.

In dysmenorrhea among individuals just entering on menstrual life, Ergoapiol (Smith) proves immeasurably more beneficial than such sedative agents as the bromides and viburnums, in that it exerts a marked and prolonged invigorating action on the entire reproductive apparatus.

In instances where the menstrual discharge is membranous or clotty in character, Ergoapiol (Smith) can be relied on to increase its fluidity and thus facilitate its passage from the uterine cavity.

Results are ordinarily most satisfactory when the preparation is administered in doses of one capsule four times a day before and during the menstrual flux.

Dr. Geo. G. Groff states that house flies do not exist in the Island of Porto Rico.

In Paris cremation of the dead is on the increase.