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INFANTILE SPINAL PARALYSIS

BY B. E. M'KENZIE, B.A., M.D.

THE occurrence of several epidemics of this disease in recent years makes this time opportune for reviewing its literature, and for re-stating the salient features which mark its pathology, symptoms, signs and treatment. There was an epidemic in Europe in 1906, another in New York and New Jersey in 1907, one in the valley of the Ottawa in 1906, and in previous years several other epidemics of less extent of which I have been able to obtain reasonably accurate and detailed accounts.

Though the clinical picture of the affection had long been recognized, yet the spinal lesion on which it depends was not known till it was demonstrated by Prevost in 1865. Soon afterward further light was offered by observations made by Clark, Charcot and Joffroy. The disease is commonly seen in children, and when described by Rilliet and Barthez it was called the "essential paralysis of children." In 1858 and 1864 Vogt and Duchenne noted the occurrence of similar symptoms in adults.

Undoubtedly, it is a disease chiefly of childhood, though its occurrence even in young infants is not rare; and it is quite certain that it may occur at any age. The writer has known of two well-marked cases occurring at eighteen years.

Boys are more commonly affected than girls. It occurs more frequently in summer than in winter. It may occur in a child who in other respects has seemed up to the time of the illness to be in good health. It certainly occurs occasionally as secondary to acute febrile diseases, scarlet fever, measles, bronchitis and pneumonia.

Most important in regard to its etiology is the comparatively recent demonstration of its infectious nature. Gowers, writing in 1886, does not appear to even suspect the fact. Strümpel in Germany, and Pierre Marie in France, suggest the possibility of its infectious origin. Swedish observers, Medin, Rissler and Wickham must receive credit more than others in establishing its infectivity. Caverly also of America has done much to compel general acceptance of the infectious nature of the disease. It is true that the micro-organism to which the disease is due has not yet been isolated, although several European observers have made lumbar puncture in the course of the disease, and have claimed to have demonstrated a special meningococcus as an infective agent. Their findings, however, have been unfavorably criticised, and do not receive general acceptance.

The ground upon which rests the acceptance of its infectivity may be briefly stated:

1. Its long recognized seasonal occurrence. It was observed that in the great New York epidemic of 1907 by far the greater number of cases were seen in July, August and September. In October there was a marked subsidence of the disease. In this epidemic it was said that more cases of anterior poliomyelitis were admitted to some of the New York hospitals in three months than had been admitted in fifteen years previously.

2. Its marked occurrence in epidemics in recent years, notably the valley of the Ottawa about three years ago, in Norway in 1906, and in New York and New Jersey in 1907. The writer also has been informed of less extensive epidemics which occurred in Nova Scotia and in Alberta.

3. The occurrence of several cases in the same household. In the Ottawa valley epidemic there were several instances of three children in the same house being affected. Like facts were noted in the other epidemics.

4. Wickham in Sweden traced the disease clearly from one hamlet to another, and showed that persons who themselves escaped were the intermediaries through whom the infection was conveyed. There seems little doubt that the disease is mildly infectious. No steps, however, have been taken to isolate the patients, nor has the epidemic spread in any of the larger schools or other institutions.

Pathology.

The disease is commonly described as an acute anterior poliomyelitis. It is certain, however, that the inflammatory process is by no means confined to the cells of the anterior gray matter of the cord. Its clinical variations and the extent of the morbid process show that it may involve the whole of the gray

matter of the cord, and invade the gray matter of the medulla oblongata, and even the gray matter of the cortex.

The peripheral nerves in some instances are involved. The clinical picture presented to those who have seen many cases must lend strong probability to this statement as to the wide extent of nerve tissue involved.

Symptoms.

The opportunities for close observation afforded by the several epidemics of recent years show that the early symptoms are very similar to those of other acute infectious diseases—general malaise, fever, convulsions and headaches. These symptoms may last for several days before paralysis appears; and it is quite certain that these prodromal symptoms may be present as shown in recent epidemics, and yet no permanent paralysis follow. There are manifestly abortive forms in which the affection does not produce paralysis, or results in a paralysis quite transitory in character.

On the other hand, there is observed a small proportion of cases quite fulminant in character, proving fatal in forty-eight to seventy-two hours after the appearance of the typical prodromal symptoms. In such cases there is high fever, extensive paralysis and involvement of the lower cranial nerves. The bulbar symptoms manifested in these severe cases point distinctly to the involvement of the centres in the medulla oblongata, while ataxic symptoms point to invasion of the cerebellum, or of tracts associated with it.

Results of post-mortem examinations made in some of these cases will be set forth by the New York Committee appointed to study and collate the scientific findings adducible in the epidemic of 1907.

In a considerable proportion of cases there is a meningeal involvement, so that the initial diagnosis may well be in doubt owing to mental stupor, thickness of speech, rigidity of the neck and opisthotonos. In the Ottawa Valley epidemic it was currently stated in the lay press that the affection was cerebro-spinal meningitis. The resulting paralysis, loss of reflexes and electrical symptoms place the matter beyond doubt that the infection was that found in infantile spinal paralysis.

While it must be admitted that the manifestations of the disease go far afield, showing involvement of nerve tissues far removed from the cells of the anterior cornu of the cord, yet the results following go to show that the older conception of the disease was correct in essentials.

The fact that the early symptoms have been observed to pass away in a considerable proportion of cases or at most to cause but

a transitory paralysis, has led some recently to give a more favorable prognosis than was usually given in former times. The orthopedic surgeon is not of that number. The great majority of these patients when they seek his aid present much disability: (1) Because of paralysis; (2) because of its uneven distribution resulting (3) in numerous deformities, adding still further to the disabilities.

Treatment.

While it is true that the first accurate account of the disease was given by an orthopedic surgeon, Heine, 1840, yet it is more especially in the treatment of the after-results that the orthopedist finds his chief place in relation to this affection.

From the standpoint of the neurologist, B. Sachs in a recent article sums up the treatment as follows:

"Except as a matter of exercise, electricity is practically useless. Drugs have no effect upon the subacute or chronic stage, and surely not after the permanent paralysis has been established. Massage will no doubt improve the circulation of an affected limb, and should be encouraged as far as possible. Methodical exercises I consider of the utmost importance, but these should be conducted under the supervision of a competent person, of one who knows what can and what cannot be expected of a paralyzed limb or of a paralyzed group of muscles, and of someone who is able to note the slightest return of power in a muscle or group of muscles, is able to avail himself of that slight improvement, and when the improvement is once noticed, intelligently to encourage such movements so as to get satisfactory results. . . . I am a thorough believer in tenotomies and in transplantation of tendons, and nothing that I have seen of orthopedic work has impressed me more than the operations undertaken by the lamented Hoffa for the shortening or lengthening of tendons and muscles . . . The present conception of poliomyelitis has not only thrown new light upon the theory of the disease, and upon its pathogenesis, but has also put the duties of the orthopedic surgeon in an entirely different light. We look to him for the correction of deformities after the acute infectious disorder has run its course and has done its worst."

The peculiar asymmetry and irregularity of the distribution of the paralysis results in disabilities and deformities quite characteristic of this disease. Lack of balance in the joints of the limbs involved is peculiarly characteristic. Sometimes all the muscles controlling a joint are completely paralyzed, resulting in a flail joint; but more commonly some groups only are paralyzed or disabled by partial paralysis, while their colleagues escape or are not greatly disabled. At the ankle frequently the anterior

leg muscles are more affected than those of the calf, and there is a consequent lack of balance. The anterior muscles cannot dorsiflex the foot because overstretched by the counter-action of the calf muscles, and a condition of equinus results. Very generally the peronei muscles at the outer part of the foot are more disabled than those situated at the inner aspect, resulting in the foot being drawn unduly inward, causing varus and supination. If the inner group, whose tendons pass behind the inner malleolus, be more disabled than the peronei then we have the foot everted and a condition of pronation or valgus. Marked disablement of the calf muscles causes calcaneus. Various elemental deformities may thus combine, causing every possible variety of deformity.

Similarly the other joints may be so affected by an unequal distribution of the paralysis as to present every anomaly of position.

Emphasis should be laid upon one result which ensues when disabled muscles are permitted to be overstretched. Following the acute stage of the disease a muscle or a group of muscles, for example, the flexors, will be kept stretched, and as a consequence will be placed in a condition unfavorable for recovery. If, however, the arm be flexed acutely at the elbow, and this position maintained for some months by a fixation dressing, the flexor muscles are much more likely to regain power. Even after the lapse of some years muscles which have shown but very little tendency toward improvement will regain power rapidly when kept relaxed. This fact is capable of extensive application, and consistent attention to its import would restore to comparative efficiency, groups of muscles otherwise wholly incapable of their normal function.

It does not follow that all muscles will regain power when kept relaxed. If the large motor cells in the cord controlling a group of muscles be entirely destroyed by the inflammatory process, nothing can restore power to the muscles unless operative measures be adopted to supply them with motor nerve energy from a new source. If all the muscles governing motion at a joint be thus completely disabled, then we have a genuine flail joint.

Fortunately the upper extremity is much less frequently affected than the lower. Seeing that the functions of the upper extremity call for dexterity and actions that are precise, it is found impracticable by surgical measures to bring about restoration so satisfactorily as may be done in the lower extremity, whose functions are coarser and are fairly well performed if body weight be borne comfortably and locomotion be fairly satisfactory.

When deformities have occurred, or when the degree of paralysis is so great as to leave a flail joint, the means of surgical treatment to be adopted are:

1. Massage and physical education, that is, systematic, well-directed efforts on the part of the patient to remedy the disability.

2. Mechanical aids.

3. Direct operative measures:

(a) Tendon transposition, tendon lengthening, shortening and grafting.

(*b*) Arthrodesis.

(*c*) Nerve transposition and nerve grafting.

(*d*) Removal of skin flaps to aid in flexion.

1. As soon as the acute symptoms have passed, massage intelligently directed accompanied by manipulations designed to stretch the muscle groups tending to become unduly shortened, is helpful, and may be carried out by the mother or nurse. These efforts should be long continued and assiduously employed, and are helpful in bringing more blood to the needy muscles, thus lessening harmful contractures.

2. Mechanical aids are very varied and must be designed and used to meet the direct needs of each individual patient. Such braces employed while the patient is in bed at night are often most efficacious. The relaxed condition during sleep, the weight of the bed-clothes carrying the foot into a wrong position, continuing for so many hours, are responsible in a large degree for many of the deformities. A brace may be adapted to the needs of the patient, and correctly designed boots may accomplish the same in the day-time. The mechanical aids may have in view supplementing a short limb, maintaining the foot or leg directly under the body weight, fixing securely a disabled joint, holding the spine erect, or other purpose as indicated by the exact nature of the disability. In extreme cases crutches may have to be employed, but the resources of modern surgical art are such that probably no individual, however crippled by this disease, may not be rendered capable of voluntary motion.

3. Operative measures:

(*a*) Operations upon tendons. Nicoladoni in Italy proposed and carried out the plan of grafting energized tendons into others whose muscle had been rendered inert through paralysis. The principle of treatment thus advocated was sound, and its application has been greatly extended in the intervening years. Very briefly the object to be gained may be stated thus: In the unbalanced state of a joint the muscles not paralyzed do harm by causing deformity, hence if their action can be transferred so as to make their pull at another part where muscular traction is needed, such a transfer will help to restore balance, and consequently joint efficiency. The practice is now being employed very extensively and with such beneficial results as to entitle it to be considered a truly epoch-making advance. Its applicability is so

various, and the details are so numerous that an extensive literature has grown up in its advocacy.

(*b*) Arthrodesis: By this term is meant the fixation by operative means of a flail joint. A wobbling, disabled joint through loss of muscular control may often be rendered functionally efficient by denuding the joint surfaces till red bleeding bone is exposed, bringing these into apposition, and maintaining them in this relation until a synostosis is secured. This operation is applicable more especially to the joints of the lower extremity, though it may be usefully employed also at the shoulder. It is employed very generally in the treatment of paralytic disabilities of the foot, and meets a large demand on the part of the orthopedic surgeon.

Supplementary to the operative work done, the careful surgeon will employ suitable physical training and mechanical aids. Without such careful after-treatment relapses will often follow, and generally results will fall short of those which can be obtained if the case were followed up and kept under constant observation.

The literature of the surgical means to be employed is so extensive that no effort is made here to do other than intimate the general principles to be followed. The attached bibliography indicates but a very small proportion of the recent articles dealing with this subject.

Townsend—*American Journal of Orthopedic Surgery*, August, 1908.

Sachs, Bradford, Hunkin, Taylor—*American Journal of Orthopedic Surgery*, November, 1908.

Haynes, Zabriskie, Romeiser, Sayre, Townsend, in *Archives of Pediatrics*, December, 1908.

Jones—*British Medical Journal*, March 28, 1908.

CARIES OF THE SPINE*

BY W. E. GALLIE, M.B.,
Associate Surgeon, Hospital for Sick Children, Toronto.

THE specimen to be presented is from a case of Pott's disease of the dorsal spine which had been under treatment at the Children's Hospital. The patient presented the clinical picture of the disease for nearly three years, and was making fair progress towards recovery, but about two months ago she developed tuberculous meningitis and rapidly succumbed.

The specimen is of particular interest because it is the only one of its kind in the possession of the University Museum, and because it demonstrates so beautifully many of the interesting points in the gross pathology of the condition.

When one first examines the specimen in sagittal section, he is at once struck with the remarkable size of the kyphosis resulting from the collapse of a single vertebra. Further observation will show, however, that instead of a single vertebra being involved, three have practically disappeared. This is demonstrated by counting the number of intact bodies and subtracting from the number of spines. Ten from thirteen leaves three spines without bodies.

The mass of material representing the crushed vertebrae is very largely composed of fibrous tissue without any attempt at ossification. The destructive process has evidently ceased to advance in an upward direction, for the half body remaining above is quite hard and when fresh showed no hyperæmia. Inferiorly, however, there is still evidence of activity of the disease, as is shown by the partial absorption of the fibro-cartilaginous disc next below, and by the presence on its upper side of granulation tissue which is still to be seen in the specimen. On the whole, however, the process has reached a stage of comparative quiescence, and it is probable that no further bone destruction would have taken place.

The fact that there is no sign of calcification of the fibrous tissue which has taken the place of the destroyed vertebrae is interesting from the standpoint of treatment. After two years of comparatively efficient treatment there is no evidence of attempt at bony union, and the spine is freely movable at the area of disease. From the appearance of the specimen it seems probable that bony union would never take place even after total disappearance of the tuberculous condition. Of course, there are plenty of examples in which bony union has occurred,

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but in every museum there are specimens which illustrate the fibrous method of union. This means that unless proper measures be undertaken the kyphosis of Pott's disease may keep on increasing long after the tuberculosis is cured, owing to the bowing of the spine at its point of greatest weakness. The obvious prophylaxis of this condition is to have the patient wear a spinal support of some sort for many years after the disease has subsided, and in cases in which there is a marked kyphosis it is well to have him look forward to always wearing this support. A view of the cut surface of the

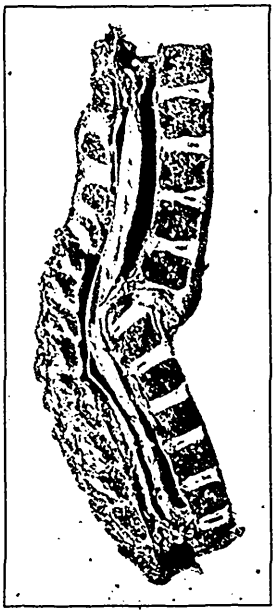

FIG. 1. SAGITTAL SECTION.

specimen illustrates this point perfectly. If this patient had been allowed about in an upright attitude without a spinal support, there is nothing in the world would have prevented the deformity from increasing to a right angle or more, and this catastrophe would be as likely to occur ten years in the future, if no bony union had taken place. A conclusion which I wish to draw from this discussion is that increase in the deformity after assuming the upright attitude may not mean the renewal of the tuberculous process at all, and before returning such a patient to the rigorous treatment of the acute disease some other symptoms should be present.

The method of advance of the tuberculous process is very

nicely illustrated. The disease starts in the vertebrae as in the end of the long bones, in the region of the epiphyseal line, which in the case of a vertebra is a fine cartilaginous strip separating off a thin plate of bone at the top and bottom of the body. From here it spreads into the cancellous bone of the centre of the vertebra and towards the fibro-cartilaginous disc. The fibro-cartilage is more resistant than the bone, but if the inflammation is sufficiently severe it finally succumbs to the action of the new granulation tissue, and the disease goes on to the next vertebra. The absorption of fibro-cartilage has been pointed out as going on in the first disc below the focus, and already half the disc has disappeared, its place being taken by granulation tissue.

Besides this direct route of progression, an indirect one is sometimes taken by the process. The disease gradually works out to the edges of the body, and lifts up the fibres of the anterior and posterior common ligaments. The infection then spreads up and down, and skipping the fibro-cartilaginous discs, attacks the cancellous bone of the vertebra above and below. The specimen shows this method of advance also, under the anterior common ligament of the vertebra above, and the slight hyperæmia originally to be seen in the anterior part of the bone is still slightly preserved by the Kaiserling.

An interesting point in mechanics is presented by the fact that in this specimen the profile of the posterior border of the bodies shows a sharp angulation while the profile of the spines shows only a gentle curve. This is accounted for by the fact that several bodies have been destroyed. If a single body had collapsed there would be a sharp knuckling of the spine, but when three bodies have gone, the knuckling is divided up over three spines and therefore takes the nature of a curve. It has always seemed to me likely that the late rounding off of originally sharp curves can be accounted for by this explanation, rather than by the theory that sharp angles tend to be rounded off by a readjustment of the articulations of the healthy vertebra above and below, or by changes in the form of the vertebra resulting from growth.

Of the various accompaniments of tuberculosis of bone, abscess formation is the commonest. In this case there is a small abscess on the left side of the diseased focus, on the anterior aspect of the necks of two or three ribs. It was dry and hard, and had evidently been there a long time, and it is quite evident that it owed its origin to the focus of disease in the bone. During all the time that this case was under treatment we never had any evidence of the presence of this abscess, either in the form of complaint from patient, or in the form of physical signs in chest examination. Sometimes these thoracic abscesses work their way through between the transverse processes of the verte

brae, and through the muscles of the back to a point close beside the spines, but these cases are rare. Abscess accompanying dorsal Pott's disease is a comparatively rare condition to find diagnosed, and the explanation is probably the same as in this case, namely, that it appears insidiously, slowly enlarges, but because of its gradual development and deep position, causes no symptoms or physical signs, is gradually absorbed and, finally, ends up as a small nodule of caseous debris which ultimately becomes calcified.

Although this patient showed no signs of paralysis, three of the principal causes of paraplegia are demonstrated. Examination of the cut surface shows the antero-posterior diameter of the vertebral canal to be seriously encroached upon at two distinct

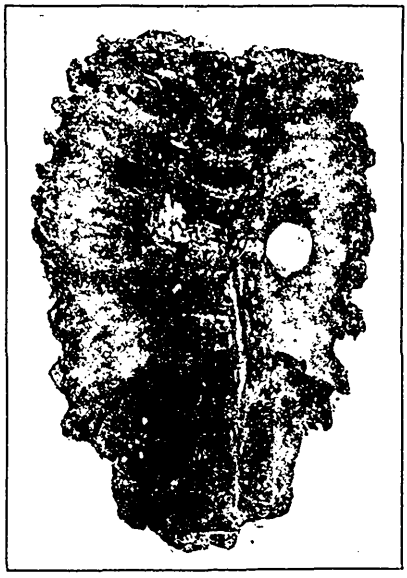

FIG. 2. FRONT VIEW SHOWING ABSCESS.

places, namely, opposite the kyphosis and about an inch and a half higher up. Below the kyphosis the diameter is about half an inch while at the two constricted points it is just a quarter of an inch, or barely wide enough to let the cord pass by without constriction. The narrowing of the lumen at the kyphosis is due to the displacement backwards of the segment of the spine above the diseased focus. The mechanics are beautifully demonstrated by bending the spine forward, when it will be seen that the cord is distinctly pinched between the back of the lowest healthy vertebra and the front of the lamina of the first diseased one. When the spine is hyperextended the lumen is at once increased so that the cord lies loosely in the canal. Upon this observation depends

the treatment of Pott's paraplegia. The patients are at once placed in a hyperextended attitude in a horizontal position on a frame or in a plaster jacket or a spine brace. This procedure produces the same effect as hyperextending the specimen, enlarging the narrowed lumen, and if the paraplegia is due to this cause it is rapidly relieved. It actually occurs that cases of paraplegia are sometimes cured in a couple of weeks by this plan of treatment.

The other constriction of the vertebral canal is due to an abscess outside the dura. This consists of a caseous mass, about an inch and a quarter long and three-sixteenths of an inch thick, situated directly behind the cord, between the dura and the laminæ. It is probably in communication with the abscess on the front of the ribs which is just opposite the lower end of the internal abscess. From the shape of the mass, one would judge that the abscess found it easier to spread up and down the vertebral canal than to make a localized bulging against the cord, and yet there are cases on record where the appearance of an abscess externally has been attended by relief of the paraplegia, evidently owing to the relief of pressure, and Joachimsthal has published photographs of an autopsy specimen showing an abscess producing a distinct cutting off of the cord.

The third cause of paraplegia is seen in the sharp angulation of the anterior wall of the vertebral canal at the kyphosis. Here the cord is stretched over a sharp ledge, and unless the deformity is accompanied by a marked shortening of the total length of the spine by the complete destruction of several vertebræ as in this case, there is sure to be sufficient pressure backwards on the front of the cord to result in paraplegia. The remarkable character of some of these cases, in which there is a considerable paralysis of the legs with but slight interference with sensation, is thus explained.

The observation of these pathological conditions naturally brings up the question of the treatment of paraplegia. It would seem an almost hopeless task to try to diagnose which of these conditions is producing the symptoms or whether it is a fourth cause, not demonstrated in this specimen, namely, a transverse tuberculous myelitis, and yet there are certain points which will assist in arriving at a decision in the matter. If the paralysis has arisen in company with a rapid increase in the deformity, we are justified in supposing that the cord has been pinched by the bones, or is being stretched over a sharp ledge. In that case the obvious treatment would be to place the patient on his back in a hyperextended attitude, and thus try to relieve the compression. If, after several months have elapsed, no improvement has taken place, other measures must be adopted. Sometimes paraplegia occurs when there is practically no deformity, or it

occurs while the patient is under treatment and without increase in the deformity. Under these circumstances it is likely that an abscess has developed, and is pressing on the cord, or that the tuberculous process has extended to the meninges, and has produced sufficient thickening to cause a transverse compression myelitis. The rational treatment in these cases is to wait a while to see if any improvement occurs from the conservative plan outlined, and if this fails, to proceed with open incision. When a laminectomy is performed, spicules of bone can be removed, the lumen widened, abscesses evacuated and thickened meninges divided.

The treatment of the deformity has given rise to much discussion. When you look at the specimen you are struck with the comparative ease with which the kyphosis could be straightened out by forcible pressure applied to the spines. When you remember, however, that even in the collapsed state of the spine, bony union may fail to occur, it would be useless to hope for the wide gap produced by a forcible correction to be filled in with bone. The operation which was formerly advocated by Calot, never resulted in permanent cure of the deformity, and was very apt to start up tuberculous meningitis or the miliary form of the disease.

The study of this specimen has led me into a discussion of various aspects of the disease, and into a review of many well-known points in its symptomatology and treatment, but the gross pathology of the condition is so rarely demonstrable that I trust I may be pardoned for the tediousness of detail.

169 College Street, Toronto.

ONTARIO MEDICAL ASSOCIATION

BY JOHN HUNTER, M.B., TORONTO.

SOME four thousand delegates from all parts of the Dominion met here in Toronto to attend the "Laymen's Missionary Congress." Judging from press reports the "Congress" was not only a great success, but was also characterized by intense enthusiasm. The chief factors that contributed to the success were practically two, viz.: Every delegate seemed to be inspired by a definite purpose, and the speeches were all stamped with intense earnestness.

In the first week in June the medical men of Ontario hold their annual medical congress. Last year's meeting in Hamilton was a record one in regard to its scientific character, attendance, enthusiasm, and freedom of speech. From all accounts this year's meeting promises to excel all its predecessors.

There are many factors essential in the making of a successful meeting. Every officer should be an enthusiast. While dignity and decorum always enhance the character of a scientific gathering, yet sterile, stereotyped formality is especially depressive. There is a happy combination of dignity and of geniality which, when possessed by the officers, lends a peculiar subtle charm to the meeting. But, as in an army, good officers are powerless without competency in the rank and file, so in this fact comes the imperative appeal to every medical man in the Province. Each licensed physician in Ontario is an heir to the whole estate of medicine. What other men think, he may think, and is therefore free to exercise his powers of criticism and of judgment on any of the papers read, or on the discussions that follow.

It is an imperious law of nature that there can be no growth without death. The grain of wheat gives up its life in that form in order to become the blade, and the acorn to become the oak. The science of medicine can grow only by the acquisition of new truths, and by the destruction of all that is false and effete. It is the duty of the reader of a paper, and of every one who discusses it, to present as clearly as he can the knowledge of to-day, but it is just as imperative that he exercise his criticism and his judgment in eradicating all that modern research and experience has shown to be false. If, as in the case of the delegates to the "Missionary Congress," all the members of the Ontario Medical Association come with the definite purpose of contributing something to the general fund of medical knowledge and experience, a record meeting will be assured.

Now that cynical, indolent, or that ubiquitous, "too busy,"

"haven't time" freak may say: "What is the use of going to these meetings? I get along just as well as the fellows who go." There is nothing more deceptive than a man's opinion of himself. No other creature on earth, or perhaps in hades either, can deceive us more frequently or more effectively than we can, and do, deceive ourselves. We walk or ride along, as we think, at a fair gait. A man with a definite purpose in view, *e. g.*, to catch his train, passes us. If in the country, we soon see his form on a hill far ahead, or, if in the city, blocks away. We say, "He is in a hurry." Would it not be equally true to say, we are too slow? A few centuries ago eminent physicians were quite satisfied to go on with their vague theories about the circulation of the blood. Harvey, inspired by a mission, passed by and revealed the true facts in regard to the vascular system. Harvey was not going too fast, but his contemporaries were moving too slowly. They were self-deceived. Many readers of this Journal can vividly recall the scenes of forty or fifty years ago when, as students, they accompanied the eminent surgeons of those days on their morning work through the hospital wards. The surgeon would pass from case to case, raise the dressing, and expose a surface bathed in pus. He would stoop down and smell, then stir the fluid with his finger, wipe off the pus on the sheet, and with the most complacent look say to the students, "This is laudable pus." Lister, inspired by a mission, passed by the notables of his early day, and demonstrated the etiological factors in regard to suppuration. He taught that there was no such thing as "laudable pus," but that all suppurative processes are due to either u. avoidable accidents, ignorance, or culpable negligence. To-day if the surgeon sees pus about the wound his conscience thumps him so hard that, even though he be an average Christian, he can scarcely restrain the "cuss words." Lister displayed no undue haste, but his co-workers were too slow. They were deceived by false theories.

History is for ever repeating itself. The "stay-at-home" from medical meetings, and the self-satisfied physicians of to-day, are passed by their confrères who are in medicine with a mission. A distinguished scientist has recently made the somewhat startling statement, that few men learn much after twenty-five. Whatever of truth this statement may contain as applied to men "en masse" it is the individual man's own fault if it ever can be truly said of him. The experience of every aged physician can give to his youthful confrère who is on the threshold of his career, the most positive assurance of at least two things. The young doctor in common with humanity at large, will meet in greater or lesser degrees of intensity, troubles, sorrows, difficulties, disappointments. In honor to his calling he must meet these with

calm, resolute determination. The other thing the young practitioner can fully assure himself of from the example of many o the old veterans in the medical corps is, that neither defeat no despair can ever claim him as a victim until he is willing to surrender. Outside of his innate will-power few things can help young men to ward off defeat and despair more effectively than the society and co-operation of their fellows. Isolation from co workers is a most stupid and detrimental policy for any young man to pursue.

The delightful season of the year, excellent travelling facilities at reduced rates, the pleasure of renewing old acquaintances, and of making new ones, and the valuable knowledge to be received and disseminated, all these should form sufficient attraction to assure a very large attendance for the coming meeting. The officers are highly favored by having an abundant supply of good papers from which to select a programme, and also the promise of the attendance of a number of distinguished guests from outside our Province. These factors should make a strong appeal to the young men, to those in mid-life, and to the aged, to be present at this annual meeting. But is there not yet even a stronger incentive than any that has been mentioned? Since the time of Hippocrates—and most probably for centuries before his day—medicine has made an effective appeal to men of the very highest intellectual and moral attainments to enter its ranks. If the science and art of medicine is to continue in the future, as it has done in its past history, to attract men of the highest type, it can only do so by the unfaltering devotion of its membership to the preservation of a high standard. If the day dawn when the rank and file become indifferent to the welfare of their calling, or become tainted with selfish or mercenary motive, that day will see the turning away from medicine of men of the highest moral and intellectual type. Our annual meetings, in the character of the work, the interest displayed, and the attendance registered, are the mileposts marking the progress or decadence of medicine in this Province. Medicine in Ontario will never be menaced if all our young men become inspired by the advice so tersely given by one of the poets:

"Greatly begin: though thou have time
But for a line, be that sublime;
Not failure, but low aim is crime."

DISEASES OF THE SKIN COMMUNICABLE TO MAN FROM ANIMALS

BY D. KING SMITH, M.D., TORONTO.
Demonstrator in Dermatology, Medical Faculty University of Toronto.

Most of the books on Dermatology mention the fact that quite a number of diseases of the skin of the lower animals are communicable to man, but fail to give any description of the diseases in animals so that they can be recognized or suspected by the medical man. Hence, I may be pardoned for giving a brief outline of some of the commoner diseases as they affect animals.

Ring-Worm.

In Horse.—The patches are chiefly located on the upper part of the body, on the shoulders, back, loins, croup, sides and flanks, where, in fact, the grooming instruments most readily carry the spores. These patches may, however, be met with on any part of the body, though they are rare in the lower parts. What is first noticed are circular patches, about the size of a quarter; they are distinguished by the dulness and erectness of the hairs covering them. The hairs fall off in a few days, and this is often the first symptom that attracts attention. Shortly the surface becomes covered with epidermic scales of varying thickness, which form flat crusts and are shed and renewed incessantly. Usually ringworm of horses is not accompanied by much pruritus.

In Dog.—Ring-worm of the dog is most frequently situated on the head and legs, usually commences around the lips and eyes, but patches may be found on any part of the body when the condition has been present for some time. At the commencement the patches are circular and well defined: by increasing in number and extent, they may unite and form irregular patches. They are soon covered with crusts, which are at first thin and of a dirty-gray hue. The pruritis may vary greatly, being very slight in some cases and intense in others.

In Sheep.—The condition is characterized by scaly or scabbed patches on the neck, shoulders and back; the wool may become entangled and fall out. It is accompanied by considerable itching.

In Calf.—Lesions very similar to those of dog.

In Birds.—Doctors J. M. H. MacLeod and J. Bunch have described ring-worm in a canary from which it was transmitted to children.

Favus.

In Cat.—The cat is the most exposed to this disease; the achorion attacks the extremity of the toes or base of the claws, but it may commence in other regions, as the sides of the chest. It gradually extends over the head, nose and thighs. The condition is marked by crusts, sulphur-yellow in color when recent, but becoming gray with time.

The Dog.—The lesions are very similar to those in cat.

Fowls.—The favus of poultry generally commences on the comb or chest. It manifests itself in the form of small, white or light gray, round or irregular spots that extend and become confluent, constituting an almost continuous thin covering or coating. The affected fowls exhale a mouldy odor somewhat similar to that noticed from people who suffer from favus.

Scabies.

All the sarcoptes of domesticated animals, according to Friedberger and Fröhner, are transmissible to man; some only produce a slight irritation and soon perish in the skin of man.

It has been demonstrated that the sarcoptes of man may be transmitted to the horse. Scabies is a much more serious disease in animals than in man, and if not treated, produces quite a degree of emaciation.

In lower animals usually the first sign of the disease is pruritus; the animal tries to rub itself everywhere, it bites itself wherever it can reach. On close examination papules will be noticed. In time the skin becomes considerably thickened. The only pathognomonic sign is the presence of the sarcoptes; these are found among the crusts on the parts attacked.

Tuberculosis.

This disease cannot be classed as a skin disease, and when it does affect the skin of man and animals it usually causes a benign lesion. The class of persons who are especially liable to contract tuberculosis of skin by handling tuberculous animals are butchers, knockers, etc.

Glanders.

The usual source of infection of this disease by man is from horses which have lesions of the mucous membrane of nose, etc. The common symptom of the horse is a chronic discharge from the nose; on examination of the nasal mucous membrance ulcers are usually present.

Anthrax.

Anthrax of man is usually contracted from sheep, goats, cattle or horses, but probably the commonest method is through skin, hair and wool of infected animals.

Anthrax of animals is an acute infectious disease often running a very rapid course, many animals dying in a very short time.

Actinomycosis.

There are no authentic cases reported of man having acquired actinomycosis from animals, and no doubt the source of infection of man and animals is from eating cereals.

HEADACHE

BY W. C. ABBOTT, M.D., CHICAGO, ILL.
Editor American Journal of Clinical Medicine.

A LADY comes with a history of persistently recurring headache. The first thought naturally is fecal autotoxemia, but inquiry shows that this may be eliminated, because any failure at completely emptying the bowels has been so certain to aggravate the attacks that her attention to this matter has been compulsory. The eyes, ears, nose and throat have been under expert care, and these are to be left out of consideration. The other sources of reflex irritation are each passed in review, but still the cause of suffering is hidden. The blood is examined and shows the full hemoglobin, red and white cell count. Examination of the feces gives no clue.

We come at last to the urine, and here we find what we have been looking for—there is a trace of indican, a slight excess total of acidity, and only twenty grams of total solids where there should be fifty-five grams. The deficiency is in urea, uric acid, phosphates and chlorides. Two-thirds of the toxins that should be excreted through the kidneys are retained in the patient's blood, to traverse the circulation and exert their deleterious influence upon every functionating cell in the body, with local disorder manifested at the *locus resistentiæ minoris.*

This is no casual condition, since many similar examinations, made under varying conditions, demonstrate a like deficiency in the renal eliminative function.

The urine is to the body as the index to a book. Those who become learned and skilled in reading the indications supplied by this secretion have an insight into many obscure cases, that nothing else could give. The time has passed when a urine examination means taking the reaction and specific gravity, applying a few tests for albumin, sugar and perhaps bile, and squinting through a microscope at the casts and epithelia collected at the bottom of a conical beaker. We have learned that the most important revelation to be made is as to the functional capacity of the kidneys, and that the relative deficiency of the various normal ingredients has its meaning—is of primary importance.

We have one highly specialized remedy here, whose function is to increase the formation and excretion of urea—viz., boldine. We find that this patient's vascular supply is small, her blood-vessels have little capacity, and yet the tension is below normal. Here is one more opportunity for utilizing that marvelous con-

bination of Burggraeve, the wise old Belgian Emeritus Professor, the Dosimetric Triad—aconitine, digitalin and strychnine arsenate. Under the influence of this masterly combination the circulation is stimulated, capillary tension relaxed, vitality enhanced and every function activated. One of each every two hours (one of boldine and one of "trinity") is the treatment. The trace of indican warns us to restrict the supply of nitrogenous foods, and milk acidulated by the bacillus Bulgaricus is made the basis of her diet. Abundance of fresh *living* fruit juice is directed. All the resources of hygiene are utilized, and a life in the open air, plenty of exercise, and residence in high altitudes are all enjoined.

Altogether there is somewhat more in the study of a "headache" than the prescription of a few doses of phenacetin, fitting glasses, or administering a cathartic.

TETANUS, ITS TREATMENT WITH INTRA-SPINAL INJECTION OF MAGNESIUM SULPHATE: A CASE

BY ALEXANDER M'PHEDRAN, M.D.
Professor of Medicine and Clinical Medicine, University of Toronto.

In 1905 Meltzer found, as the results of experiments, that magnesium sulphate had the power of paralyzing the muscular system and producing anesthesia (Medical Record, lxvii., 965); later he suggested its intra-spinal injection for the relief of tetanus (*Journal of Experimental Medicine*, 1906, 708). Since then the suggestion has been put into practice with satisfactory results in a few cases, some of which were very severe.

The following case is of interest; I saw him, by the courtesy of Dr. F. J. Farley, of Trenton, who kindly furnished this brief history:

J. H., aged 13 years, weight 87 lbs., was carried into Dr. Farley's office on July 2nd, 1908. He was very rigid and unable to walk. On examination all the muscles were found rigid. His face was drawn and jaws tightly closed, but they could be opened a little. About every ten or fifteen minutes a spasm occurred during which he became perfectly rigid, the head being drawn backwards, arms fixed and muscles of back and abdomen very tense. He suffered considerable pain at the time. His illness had begun a day or two before with pain in the back. A week before that he had cut his foot while in the barnyard, where some years previously a horse, suffering from tetanus, had been killed by bleeding. On July 3rd he was much worse, suffering great pain and spasms of more or less intensity. Chloral, bromide and morphine were given freely, but he continued about the same until July 12th, when he was given two injections of antitetanus serum, after which he was not so well.

I saw him with Dr. Farley two days later, July 14th. The spasms had grown less frequent, but he was losing strength and looked ill and prostrate. In view of his general condition it was deemed important to arrest the spasms as soon as possible. For this purpose a 25 per cent. sterilized solution of magnesium sulphate in distilled water was injected into the spinal canal between the laminæ of the 3rd and 4th lumbar vertebræ. Only two ccs. were given, none of the spinal fluid being removed before the injection. No spasm occurred for ten hours, then there was a moderately severe one, and another the following morning. Dr. Farley then gave three ccs.; first allowing some cerebro-spinal fluid to escape. He had no further spasms after the second in-

jection. His condition improved steadily, and he quite recovered within a month.

After each injection there was relaxation of the muscles, but there was neither paralysis nor loss of sensation. The quantity of the solution injected was less than usually given, as the spasms were not of extreme severity. The quantity usually injected is 1 cc. to each 25 lbs. of weight of the patient, but this may be increased considerably. Yet with increasing doses there is increasing danger of depression of the respiratory centre. Elevation of the head has been found apparently to lessen this danger, probably by preventing the solution reaching the respiratory centre in the medulla. Meltzer has suggested that the removal of some of the cerebro-spinal fluid before giving the injection may permit its more rapid diffusion in the spinal canal, and, therefore, its more rapid effect, so that a less quantity may be required. If the toxic effects are too pronounced he suggests that they may probably be relieved by washing out the canal several times with sterilized distilled water or normal saline solution. This does not appear to have been tried in any of the cases reported.

Thus far eleven cases treated by intra-spinal injection have been reported, with five recoveries, adding the one here reported makes six cases, or 54 per cent. of recoveries. Three cases are reported in which the solution was given subcutaneously, two or three drams of the sulphate being given at each injection, and all recovered, but they were all mild and rather protracted cases.

The severest case treated with intra-spinal injection with recovery is reported by Miller, who gave eleven injections in fourteen days (*Amer. Jour. of the Med. Sci.*, 1908, cxxxvi., 781). He gives an abstract of all the cases reported up to that time. In some of the cases marked bronchorrhea occurred, and apparently contributed to the death of one or two of them.

All that can be claimed for the treatment is that it allays spasms and restlessness, makes the patient more comfortable, and permits food to be taken, and to this extent counteracts the exhausting effects of the tetanus toxin. By thus delaying the fatal termination antitoxin treatment may possibly be more effective; at all events more time is afforded for the generation of the patient's own antitoxin.

Selected Articles.

MUIRACITHIN IN THE TREATMENT OF SEXUAL IMPOTENCE OF MEN

BY DR. J. WAITZ, PARIS.
Faculty of Medicine.

THE question of sexual impotence, which is closely connected with that of diseases of the nervous system, becomes every day more complicated. The reports of research have been very numerous during the past twenty or thirty years, however, giving exhaustive enlightenment on neurasthenia in general, and on sexual neurasthenia in particular.

It is far from my intention to attempt to discuss or dissolve all these pending questions, I simply desire to show what satisfactory results I obtained in at least one case, by means of a special medicament employed in conjunction with other therapeutic treatment.

The preparation in question is Muiracithin, a combination of an extract from a Brazilian drug, Muira-Puama or Moyrapuama, and Lecithin.

After dealing with the different causes and forms of impotence, the author continues:—

As regards treatment, it will be seen from the description of the cases that I prescribed the orthodox remedies, that I also had to deal with patients upon whom all hygienic and physical remedies had been tried, and I must state that in such cases Muiracithin appeared to me to be the most efficacious. I refrain, therefore, from discussing any other remedies, dealing solely with the effect obtained by Muiracithin.

The results are very encouraging, and I shall always prescribe this valuable medicament. I attribute its efficacy to its peculiar composition, which is of double value, namely, on the one hand, Muiracithin strengthens the system and increases its elasticity, and, on the other, it restores the normal activity of the sexual central nervous system.

Dr. Aufrecht, analytical chemist to the Berlin Chamber of Commerce, has analyzed the pills, and reports as follows:—

"I bought some Muiracithin pills in the open market, and

* *Journal de Médecine*, Paris, No. 44, 29th October, 1905.

submitted them to a careful examination, which showed the following constituents: Organically bound phosphorus (lecithin), licorice powder, extractive matter, gummy and mineral substances (the latter chiefly containing phosphate of lime and alkaline carbonate), also small quantities of chloride, sulphate, iron oxide, and traces of magnesia. No other substance was found, and Muiracithin pills contain, therefore, lecithin, vegetable extractive substances, and licorice powder."

The literature bearing upon the subject becomes more and more complete. I have read recently reports upon the preparation in German, Italian, and Austrian medical papers.

Muiracithin is, as already stated, a combination of extractive substances of Muira-Puama and ovolecithin; the residue *in vacuo* of 100 grms. fluid extract of Muira-Puama and 5 grms. lecithin, with an addition of licorice powder, are made into 100 pills.

CASE I.—R. I., forty-two years old, military man, healthy, tall, complained of a decrease in his sexual capability, and stated that his erections had become weaker and weaker during the last ten months, and were of much shorter duration. The patient once had gonorrhœa severely, lasting about six weeks. When about sixteen years old the patient had, during four months, two bad attacks of articular rheumatism, the second time the localization being in the right knee. He married at the age of twenty-six. *His conjugal relations were always normal, without any weakness* in the sexual functions being observed. He is father of three children, the youngest being two-and-one-half years old. Eighteen months ago he fell from his horse, which left pains in the back and loins for six months.

At first the patient attributed his sexual weakness to the fall from the horse, but on the advice of a friend he underwent hydrotherapeutics (Irish douches and cold sitz bath), he was also massaged for three months. An examination of the patient showed nothing of an abnormal nature. The sexual organ was well developed, the foreskin showing a slight eruption; no dilatation of the prostata. Urine contained no albumen or sugar.

I prescribed electrotherapeutics and massage of the sexual organ, stimulating and strengthening diet, a bath twice a week, and three Muiracithin pills pro die. A fortnight after the patient came to see me, and informed me that marital intercourse was satisfactory. A further examination of the urine showed no special pathological signs. I advised the patient to continue the treatent with Muiracithin (two pills pro die in the evening). When I saw the patient again later, he told me that he had completely regained his sexual capacity; he desired, however, to continue the pills for safety's sake, and I prescribed two or three

pills pro die during fourteen to twenty days every month. Six months after I saw the patient again; the action of Muiracithin had remained the same, although the pills had been discontinued three months ago, and the other treatment had been dispensed with, excepting two baths per week.

MRS. O'MALLY'S ADVICE TO HER SON UPON RECEIVING HIS DIPLOMA

So now you're a Doctor, with papers to show;
Of your great deeds in medicine the world will soon know.
All our pains and our aches now like magic will go
From the top of our head to the tip of our toe.
Now, don't be like Dinny, your brother, who's taken to law,
All the big words he uses would break a man's jaw.
He argues to-day that black must be white,
And to-morrow he swears it's as black as the night.
Sure the divil himself couldn't argue with Dinny;
Only last night he told me the Judge was a ninny
And the jurors themselves hadn't brains for to see
That all his great talking was only for fee.

Now the ladies will call on you morning and night
Whenever they get the least little fright.
Saying, "If the Doctor is in, I would see him, if you please,
For I'm after contracting a painful disease."
Then you'll run to the cupboard, and take out your pills
And say, "My dear madam, they're good for all ills,
Take one in the morning and one in the night,
And in forty-eight hours you'll be feeling all right."

With a smile on her face and your fee in her hand,
You'll take it by saying, "I'm at your command."
And be at her command if she has only a smile,
For healing the sick is always worth while.
Don't bother too much about getting your fee,
For to-morrow the Lord only knows where you'll be.
For if health was a thing that money could buy,
Sure the rich would all live and the poor would all die.

—*John S. Collins.*

Proceedings of Societies.

CONFERENCE OF CANADIAN HOSPITAL ASSOCIATION

THE third annual meeting of this body was held in the Parliament Buildings on the 12th and 13th of April.

Dr. W. J. Dobbie, superintendent of the Weston Hospital for Consumptives, delivered the opening address. Dr. Dobbie referred to some of the questions the association would have to consider. One was the amalgamation of the Conference of Charities; another was the change in the place of meeting. He also called attention to the importance of a study of the relation of the various departments of a hospital staff with a view to obtaining the most effective work.

Miss Kate Mathieson, superintendent of the Hospital for Contagious Diseases, Toronto, presented a paper on that work.

Miss Mathieson said that the chief danger in spreading infection was in premature release from quarantine, and the contact of nurses and others having charge of patients, with the outside world. The question of "germ-carrier" was one with which it was found hard to contend.

Miss Mathieson said that every city should have its steam disinfecting station, where carpets, curtains, clothing, etc., could be attended to and returned to the home without a germ in them.

Continuing, the paper said there were four types of "germ-carriers" in disseminating infection, and, although of a comparatively recent discovery, were well worthy of consideration:

1. Mild or unrecognized cases.
2. Convalescents released prematurely from quarantine.
3. Nurses, physicians, attendants, members of the family, and articles which have been in contact with the patient.
4. Those persons who have never shown signs of illness, and who have not been in contact with a germ-carrier, and who, nevertheless, harbor a specific germ.

FRIENDS PERSISTENT.

Miss Mathieson said a great difficulty which Isolation Hospitals had to contend with was the visitation of friends.

"It makes no difference whether the friends come from the home of the poor or the palace of the rich," said Miss Mathieson. "They should be all treated alike—with a rigid application of the rules governing the control of infectious diseases."

Afterwards, in discussing this paper, Dr. Brown recalled the fact that several cases of infectious diseases developed at the General Hospital last year among the nurses and orderlies. On examination and culture of germ-carrying matter it was found that persons who had had infectious diseases showed indications of it months after the patient was supposed to be quite well.

CHATHAM'S PRIDE.

Dr. Charteris, of Chatham, said that his city had enjoyed remarkable immunity from typhoid fever during the last three years. They had less than ten cases a year on an average; last year they didn't have one. And this was in spite of the fact that they got their water from the Thames River, down which flowed the sewage of London.

"And the reason of our immunity," said Dr. Charteris, "is that we have a filtration system."

Miss Louise A. Brent, of the Hospital for Sick Children, said that while the outbreak of contagious disease in that institution was viewed with something like terror, it was not without its advantages, as it gave the nurses training in a branch they should know something about.

IDEAL SMALL HOSPITAL.

"The Ideal Small Hospital" was the subject of an address by Dr. R. W. Bruce Smith, Inspector of Hospitals for Ontario.

Dr. Smith referred especially to the hospitals in small towns and cities—hospitals with an accommodation of thirty beds or so. In every case, he said, it should be a hospital that provided for the future. Plans should be made on the "extending" scale. That is, the first building should be constructed so that additions could be made readily as required. Spacious verandahs should be provided, and resting rooms that will be free from dust.

Dr. Campbell Meyers presented a paper on "Neurapathic Wards in the Toronto General Hospital." He pointed out that these wards were not for the insane, but for the treatment of cases of functional nervous diseases, which if untreated would probably end in insanity. Broadly speaking, there were two types of patients which apply for admission—one in which there was bad heredity and a sub-normal amount of brain quantity normally, such as the dementia precox cases. Little, of course could be done for such cases as these. On the other hand, the other sort of patients who applied were those of good heredity and of good brain capacity, but by reason of overwork, worry and strain of various sorts, break-down had ensued. If such cases as the latter are not treated the depression goes on and the result is acute insanity. This was the type of case from which good

would result from treatment. Dr. Meyers then presented a patient and read the history of the case. The patient had a history of six months' illness, and complained on admission of dull aching pain across the top of head, palpitation of the heart, a disordered stomach and general nervousness. The man was a printer by trade, who worked very long hours every day, and frequently twenty-four hours at a stretch. His first difficulty was a difficulty in coping with his work. This was followed by irritability both at home and in his office. Then suddenly he was seized at the end of a heavy day's work with the peculiar sensation of weight in his head. This was followed by fear of impending death and a loss of confidence in himself. He would wake up with a start in the night and find himself on the floor shivering. He suffered from dizziness and indigestion.

The patient was given the usual treatment of diet, full nourishment (commencing with milk), hydrotherapy, massage, and electricity. In addition to this every encouragement was given the patient in regard to the certainty of his recovery. The immediate relatives were rigidly excluded.

The patient was admitted on the 14th of December and discharged on the 20th of March. On admission he weighed 108 pounds. On his discharge he weighed 131¾ pounds. The week following his discharge he gained eight pounds. Dr. Meyers holds that the gain in weight is a very good indication of the gain in the nervous condition.

In discussing this paper Dr. Brown said that he had observed with very great interest the patience shown by Dr. Meyers, his assistant, and the nurses in caring for these patients, all of whom seemed to take a very deep interest in this department of the hospital work. He contrasted the treatment these cases get now with that which was meted out to them formerly in the general wards of the hospital. The importance of the care of these nervous patients was given more prominence every year. He called attention to the care that was given these cases in the General Hospital at Albany and the Johns Hopkins Hospital, Baltimore, by Dr. Barker.

Miss A. I. Robinson, Superintendent of the Galt Hospital, read a paper on "What a Woman's Aid Society Can Do." In connection with the work of the Galt Hospital, the Women's Aid had been in existence since the commencement of the hospital. It had raised money to furnish the building, had assisted to equip the laundry, built a nurses' residence, painted the wards, supplied all the linen required, and done the necessary sewing; they had also replaced broken articles of china, etc.

The money for these objects had been raised by attractive entertainments and house-to-house collections. This society had

established auxiliary societies in neighboring towns, which latter had rendered valuable asistance. In 1905 this society, with the assistance of the Daughters of the Empire had conducted a Made-in-Canada Exhibition, the money from which was spent in enlarging the Nurses' Residence Building, also decorating it and putting on a large verandah.

Mr. Edward F. Stevens, A.A.I.A., read a paper on "Some Points in the Architecture of Small Hospitals." He holds that the site of the hospital should be in an accessible location, but removed from noise. The building should be placed on a slope facing the south with extensive views, and sheltering woods to the north and east, if possible. The lot should be large enough for an extension. Mr. Stevens then considered several sites for the 30-50 bed hospitals, accompanying his description by blackboard illustrations.

In this small ideal hospital the administration should be placed centrally and contain the offices of the superintendent, the housekeeper and pharmacist; also the kitchen and the dining-room. The entrance should be attractive and inviting. The nurses' dining-room should be made attractive and the superintendent and assistant should have a separate dining-room. The kitchen should be well ventilated and lighted, and the range placed in the centre of the floor. The main elevator should be placed near the kitchen. It should be an automatic one. The ward buildings might be two storeys in height, running north and south. The windows should be large and near enough to the floor to allow patients to see out. The china cupboards should have a top sloping forward and shelves out from the wall so as not to hold dust. The bath-tub should be placed so that attendants may be able to stand at either side. All plumbing should be out from the wall. He advises a small crematory in every ward so that soiled dressings, faded flowers, etc., may be burned up immediately. He likes the idea of a nurses' duty room separate from the wards.

The whole south end of the wards should be glass, which does away with the need of a solarium. There should be plenty of airing balconies easily accessible.

The operating department should be in a separate building if possible, with a good north light and ceiling light. It should be artificially lighted with electric lamps from the ceiling or on a swinging crane. The sterilizing room should not be too small. The nurses' room should have cases for dressings and for warming blankets. In the surgeons' wash-up rooms elbow valves seem to be in most favor. The floors may be of glass, vitreous tiling, etc.

The maternity building should be separate, wards to contain

three or four beds with isolated rooms for infectious cases. The baby room should be sunny and have an airing balcony.

A contagious disease building is necessary, the wards of which may be around each side of a small corridor. The walls of the corridor may be glass so that the nurse can see the patients. Gowns may be worn when they visit the various wards, each ward containing patients suffering from the same infectious diseases. Balconies running along the outside of the wards serve as waiting-rooms for the patients' friends, who may look in through the windows or glass doors and even converse with their friends.

Following the annual dinner, Dr. John Amyot delivered an address on "Milk." He pointed out how important milk was as a food, and showed how liable it was to contamination, and what a suitable medium it was for bacterial infection. Dr. Amyot outlined the method of procuring certified milk, and also described the method of Pasteurizing milk. Until such times as we are able to secure the certified milk, Dr. Amyot is in favor of pasteurizing it. He did not approve of sterilization, but holds that the best solution of the milk problem at present is Pasteurization of all milk which is not "certified." He called attention to the outbreaks of typhoid and scarlet fever and diarrheal diseases which frequently occur from an infected milk supply.

Miss Louise A. Brent, of the Sick Children's Hospital, described the work which that hospital is undertaking in looking after convalescent patients. The nurse in charge does not live in the hospital, but has her luncheon there. She follows the patients to their homes and ascertains something of the condition, and if their illness is of a surgical nature, does the dressing. She visits the out-patient department, interviews the doctor there to learn if there is any case that she might visit. They find that by this method they can let patients go out sooner than they otherwise would. After a certain time children cease to thrive in a hospital, and do better outside. She teaches the mothers how to prepare the food and how to administer it. The nurse paid 165 visits last month. It is expected she will be especially aluable during the heated time of summer. The families show a great deal of gratitude for the work of this nurse. It is a good advertisement for the hospital. Miss Brent thinks that a district nurse should be added to every hospital.

Dr. H. A. Boyce, Superintendent of the Kingston General Hospital, read a paper on the "Evolution of Surgical Technique During the Last Half-century." Dr. Bryce took for his text the three discoveries in surgery, which he considered of prime importance; the use of the ligature by Parry, the introduction of anesthesia by Morton, and the application of antiseptics by Lister, founded upon the researches of Pasteur.

Dr. Boyce, in his exposition of his subject, described the scientific efforts which led up to these three great discoveries, and the incalculable good that had resulted from these advances.

Miss Miller, of Lindsay, read a paper on the "Inadvisability of Training a Nurse in a Small Hospital, with the Idea of Having Her Complete Her Training in a Large Hospital." This paper was a protest against the plans formulated by Dr. Hurd in a paper he read at last year's meeting of the American Hospital Association, in which he had concluded, among other things: First, that pupil nurses should be passed on after one year from the small hospital to the large, where there are more patients and larger opportunities for training; second, that in the educational system the grammar school precedes the college.

Miss Miller held that Dr. Hurd's comparison is not correct, that the relation of the small hospital to the large hospital is not similar to that between commencement and the higher schools. A case of pneumonia or typhoid is of as vital importance in the town as in the city, and necessitates just as efficient care. An obstetrical case needs the same attention in a hospital of thirty beds as in one of two hundred. If nurses are to be taken from the small hospital at the end of the year of service to continue their training elsewhere, what is to become of the sick people in the small hospitals?

In the small hospital there is not enough money to place graduates in charge of every department. Even if there was, Miss Miller holds that it would not be desirable to use them, as it would deprive the under-graduates of valuable experience. The work of administering a department can be done as efficiently by a nurse of the third year. The reports show that the graduates of the smaller hospitals, where all the principles of general nursing are taught, take their place side by side with their sisters from the larger hospitals.

Miss Miller then outlined her method of dealing with a class of 15 nurses in a 35-bed hospital.

The Nominating Committee then presented the following report, which was adopted:

President—Mr. H. E. Webster, Montreal.
1st Vice-President—Dr. D. Robertson, Ottawa.
2nd Vice-President—Dr. W. J. Dobbie, Toronto.
3rd Vice-President—Miss Green.
4th Vice-President—Mr. W. W. Kenney, Halifax.
5th Vice-President—Dr. Ryan, Kingston.
Secretary—Dr. J. N. E. Brown.
Treasurer—Mrs. C. Currie.
The next meeting will be held in Montreal.

SIXTEENTH INTERNATIONAL MEDICAL CONGRESS

Dr. W. H. B. Aikins has received the following communication, which will interest all those who intend being present at Budapest in August next:

CENTRAL BOOKING OFFICE OF THE ROYAL HUNGARIAN STATE RAILWAYS.

Budapest, April 1, 1909.

Dear Sir,—Your favor of the 18th of February, 1909, duly to hand. We beg to inform you that we are gladly willing to comply with your wishes; however you would very much oblige us by kindly taking notice of the following information and by answering the undermentioned questions:

In conformity with the arrangement made with the presidency of the Sixteenth International Medical Congress we have been entrusted to find accommodation for the partakers of the above-mentioned Congress, and this we perform in advance for the whole duration of the Congress by issuing "accommodation orders."

The period of validity for such accommodation orders is seven days with hotels and eight days with private dwelling houses, and it is to be understood that the day of arrival with the hotels is the 28th of August, but with private dwelling houses the 27th of August.

Should the arrival in Budapest take place after the 27th of August (with hotels after the 28th of August), and the departure from Budapest before the 4th of September, no reimbursement will be made for the time the lodgings were not used.

At the same time we have the pleasure to inform you that we are able to dispose of chambers at the following prices:

IN HOTELS.

Arrival on the 28th of August—Departure on the 4th of September.

Rent for a stay of 7 days.

Prices in Kronen.

Ser. A.—Single-bedded, K. 70-140; double-bedded, K. 84-210; three-bedded, K. 105-245.

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IN PRIVATE DWELLING-HOUSES.

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Ser. E.—Single-bedded, K. 31-50; double-bedded, K. 46-75; three-bedded, K, 61-90.

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Such chambers may be engaged in the following way: The person who orders lodgings indicates himself in which series and at what price he desires a single-bedded, a double-bedded chamber, or one with three beds, and whether in an hotel or in a private house. It is left to the choice of him who engages the room to fix the price between the maximum and the minimum rent of the respective category. The amount corresponding with the price chosen, is to be transmitted to us in advance. In return for it and in conformity with the order received we remit the sender an accommodation order for an appropriate lodging.

To recompense our trouble and expense taken in the accommodation the presidency of the Congress has stipulated a commission of kronen 8.50 per person; this commission is to be remitted to us at the same time with the rent, and receipt of it will be acknowledged separately, because the accommodation order acknowledges receipt only of the rent we have to pay for the respective lodgings, without any deductions.

In case the renter should be prevented from coming and taking possession of the lodgings—notice of which, however, has to reach us before the 20th of August—the rent paid in advance will be refunded against reception of the "accommodation order," however, with a deduction of kronen 10 a head; should such notice reach us after the 20th of August, kronen 20 will be deducted per person.

You will oblige us very much if—by taking into account the tables above—you would kindly fix upon the room suitable to your purpose, and kindly remit us the corresponding rent in addition with the commission, whereupon we shall immediately deliver you the necessary "accommodation order."

Respectfully yours,

CENTRAL TICKET OFFICE OF THE HUNGARIAN STATE RAILWAYS

The Canadian Journal of Medicine and Surgery

J. J. CASSIDY, M.D., EDITOR, 43 BLOOR STREET EAST, TORONTO.

W. A. YOUNG, M.D., L.R.C.P.LOND., MANAGING EDITOR, 145 COLLEGE STREET, TORONTO.

Surgery—F. N. G. STARR, M.B., Toronto, Associate Professor of Clinical Surgery, Toronto University; Senior Surgical Assistant Toronto General Hospital; N. A. POWELL, M.D., C.M., Prof. of Medical Jurisprudence, Toronto University; Consulting Surgeon Toronto General Hospital, etc.

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Physiology—A. B. EADIE, M.D., Toronto.

Pathology—W. H. PEPLER, M.D., C.M., Trinity University, Pathologist Hospital for Sick Children, Toronto, Associate Demonstrator of Pathology Toronto University; Surgeon Canadian Pacific R.R., Toronto, and J. J. MACKENZIE, B.A., M.B., Professor of Pathology and Bacteriology, Toronto University Medical Faculty.

Ophthalmology—J. M. MACCALLUM, M.D., Toronto Senior Assistant Eye Department Toronto General Hospital, Oculist and Aurist Victoria Hospital for Sick Children, Toronto.

Nose, Throat and Ear—[illegible] C. GOLDSMITH, M.D., 84 Carlton St., Toronto, Laryngologist and Aurist, Provincial Institution for the Deaf and Dumb, Assistant Ear, Nose and Throat Department Toronto General Hospital.

Dermatology—D. KING SMITH M.B. Toronto.

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Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., *must be* in our hands by the first of the month previous to publication.

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Editorials.

UNHEALTHY DWELLINGS CAUSE TUBERCULOSIS.

PROMINENT among the causes which produce tuberculosis in man is residence in unhealthy dwellings. The unlighted, unaired hovel is a hotbed of tuberculosis; but an expensive dwelling, with defective orientation, closed yard, dark rooms, and damp walls makes a close second. That a residence in un-

healthy dwellings provokes tuberculosis in the inhabitants is proved by the sanitary docket of houses in Paris. The statistic of that city show that, in eleven years, 101,496 Parisians living in 39,477 houses died of tuberculosis; that 820 unhealthy houses, containing 106,308 inhabitants, produced 11,500 of these deaths from tuberculosis, and that, consequently, the death-rate in these 820 houses reached 10.81 per 1,000, while the death-rate from tuberculosis for the whole population of Paris is 4.95 per 1,000. Dr. Roux, an authority on tuberculosis, says that the higher death-rate from tuberculosis in these 820 houses was evidently due to their unhealthiness, for their inhabitants belonged to the same social class as those who lived in the neighboring houses, where the death-rate was lower.

A competent architect can plan the orientation of a dwelling built in the country, so that sunlight will enter all the rooms at certain hours of the day, each room having a window opening towards the east, the south or the west. In a city, the orientation of a building is limited by adjoining houses and the direction of the street; but, even if it is erected in a block, a house may be oriented towards the east and west, or towards the south, but little sunlight coming from the north. In a narrow buiding a rear extension, like the letter L, should be placed so as to allow sunlight to enter the yard, and thereby gain access to the rooms, which open from it on the yard.

A closed yard interferes with the passage of air and prevents the renewal of air in the rear portion of a dwelling. The air cannot be renewed, to the level of the ground, in a yard surrounded on all sides by buildings over fifteen feet in height. The upper stories benefit by the partial aeration of the yard; but the aeration of rooms on the lower stories is defective. In some of the new apartment houses, the windows of rooms open on entirely closed yards. This is an architectural defect, for Rey shows that the closed yard of a large apartment house can be replaced by two yards, both of which open in different directions, towards the streets, thus establishing a connection between the air in the yards and the air of the streets, which is in constant motion. Dark rooms are common in some apartment houses. In looking over the plans of an apartment house for 12 families, 4 dwellings per storey, we notice that one-third

of each of the six dwellings, situated in the front part of the building, is composed of rooms the windows of which open on a hall lighted by a skylight. These rooms cannot be properly lighted, and are not aired at all, for the windows opening into a hall only produce an exchange of air between these different dwellings.

Dark rooms having no windows opening into the outer air should not be occupied, and a medical health officer should label them with a notice, informing people who do not attend lectures on hygiene, or who do not visit anti-tuberculosis exhibitions, that such dark rooms should not be occupied by human beings, either by day or by night. A damp house favors the advent of tuberculosis. A damp house is a cold house. It wastes fuel, because damp walls are good conductors of heat. By the same physical law, damp walls abstract heat from the bodies of the inhabitants. Animal heat thus conducted is a direct loss to the owners, because it interferes with the normal oxidation processes of their bodies, disorders physiological nutrition, and lowers the power of resistance, so that they are more prone to attacks of rheumatism or tuberculosis. Moreover, residence in a damp dwelling causes a chilling of the surface of the body, which forces the blood inwards towards the cavities, thus bringing on catarrhs, and thereby favoring the development of a tuberculosis, which may have been latent. Besides, damp walls favor the growth and preservation of pathogenic bacteria. The walls of a building become damp by the ascent of moisture into them from the damp earth about the foundations. This ascent of moisture is caused by capillary attraction. Dampness in the walls of a building can be prevented if the masons put in "damp courses" when laying the foundation walls. From half to three-quarters of an inch of asphalt, covering the whole width of the foundation walls, when they are being laid, adds little to the total cost, but when once the building is finished, it is difficult to make up for its omission. The floor of the basement should be covered with concrete, over which a thin layer of asphalt should be laid.

J. J. C.

INSURANCE AGAINST ACCIDENT OR INSURANCE AGAINST INVALIDISM.

Owing to the necessities of their profession, lawyers defend people against charges which they know to be true. They are advocates. The judge on the bench holds the scales between contending parties, and the verdict is rendered by the jury. In the eyes of an indiscriminating public advocacy of what is not true somewhat lowers the esteem of the legal profession. Be that as it may be, legal advocacy is a most useful method of assisting in the discovery of truth in disputed cases. A comparison is sometimes instituted between the attitude of the legal advocate and that of the medical expert witness. A lawyer may, at the request of the court, defend a prisoner accused of burglary, and may do his best to prove the innocence of his client. In doing so, he does not become morally soiled by his advocacy. For the time being, he is part of the machinery of a court of justice, which works methodically to reach the solution of a problem, and in doing his part the legal advocate helps to maintain the recognized tradition and practice of a learned profession.

The medical expert witness is not, or should not be, an advocate, in the sense that he will accommodate his opinions of a case for the purpose of sale. There may be black sheep who will do so; but they are the exceptions. The medical expert witness is an advocate in the sense that he maintains an opinion in a disputed case before a court, but he goes farther—he maintains the correctness of his opinion with an oath. Strikingly different opinions are held by honorable physicians: one man giving evidence on one side; another man giving directly opposite evidence on the other side. Such exhibitions of apparent inconsistency puzzle lawyers and disedify the public. Lawyers are accustomed to legal decisions, which are made upon authority, and not to medical decisions which are often necessarily indefinite. Striking differences of opinion between medical witnesses may be inherent in the very nature of the case in which they give evidence. For instance: A hunting man had influenza. He was recovering from it, and his wife entreated him "not to hunt to-day." He did hunt that day, and when so doing was thrown, soon scrambled up again, went on, and finished the run. Next day

he was not so well. The day after he had a rigor, and in three days he was dead of acute pneumonia. The huntsman had been insured against accident. The insurance company disputed the claim made by his heirs, and, when the case was brought to trial, medical expert witnesses differed as to the liability of the insurance company. Was the hunter's acute pneumonia the result of accident? Was it fair that the insurance company, restricting its policy to the direct result of accidents, should have to pay? We have no record of the outcome of the result of this trial. As preventives to this and similar intricate questions, which call for different opinions between medical witnesses in courts. Lauriston E. Shaw, M.D., F.R.C.P., in a lecture delivered to the students of Guy's Hospital, London (B.M.J., April 10th, 1909, p. 885), offers two suggestions. He would do away with medical advocacy and substitute a special tribunal to deal with these questions, in which independent medical men, with special experience, should act in a judicial capacity as arbitrators, or assessors to a legal arbitrator. Before such a tribunal medical evidence should be restricted to questions of fact, observed by medical men actually in charge of the patient. We think that such a board of arbitration would certainly be less expensive to the community than court fees, but, as the decision of the arbitrators in a case would not be necessarily final, a trial in court might be resorted to anyway.

Dr. Shaw's second suggestion seems a useful one. He would do away with accident insurance, and, instead of it, would have insurance against invalidism of all sorts, or what is known in Canada as health insurance, leaving out of consideration the traumatic element. The problem in most cases of accident insurance now is, how far has the traumatic element anything to do with the condition?

If, as he says, "The hunting man is insured against death from accident, it does not require extraordinary skill on the part of a medical man to certify that he is dead—a duty, by the way, which, under existing circumstances, is imposed upon us by the State, without remuneration."

It would certainly be a good thing for the bread-winners, if they were insured against invalidism of all sorts, traumatic or non-traumatic, and as the medical profession are always work-

ing hard to add the whole profession to the ranks of the unemployed, Dr. Shaw's second suggestion should receive their best consideration. J. J. C.

THE ONTARIO MEDICAL ASSOCIATION

As most of our readers know, the 1909 meeting of the Ontario Medical Association takes place in Toronto on Tuesday, Wednesday and Thursday next, June 1st, 2nd and 3rd. The meeting will be held in the Medical Building of the University of Toronto, a building that is not only central, but well suited for a meeting of this kind from the standpoint of acoustics.

The Committee on Papers and Business have been very busy for several months past, in getting together a programme that is highly scientific and well worth the attendance of members of the profession from all over the Province.

It is a great source of satisfaction to us to know that our esteemed confrére and the honored Regius Professor of Medicine at Oxford, Professor William Osler, is to be present, and will deliver the address in Medicine. The address in Surgery will be delivered by Dr. J. B. Deaver, the celebrated surgeon from the City of Brotherly Love. The subject of his address is "Acute Septic Peritonitis," and we feel that, owing to the differences of opinion held regarding the treatment of this grave condition, the discussion will be, to say the least of it, interesting. Dr. Emmett Holt, the well-known authority from New York City, will deliver an address, "The Results of the Serum Treatment in Cerebro-Spinal Meningitis." Dr. J. Alder, also from New York, has kindly promised to be present. Dr. H. E. Hayd, of Buffalo, has also promised to read a paper on "Umbilical Hernia and Its Operative Treatment with Special Attention to the Mayo Treatment." We understand that another well-known man from New York, Dr. F. W. Chappell, will be present and take an active part in the Section devoted to the diseases of the Eye, Ear, Nose and Throat. Dr. A. R. Robinson, a Canadian, who has made a reputation for himself in New York, and practices dermatology, will deliver an address, "The Tubercular Lesions of the Skin." Among others whose presence is also looked forward to are such men as Dr. W. P. Manton, of Detroit; Dr. E. W. Cushing, of

Cleveland; Dr. Ellice MacDonald, of New York; and in all probability a few of our Montreal brethren, including Drs. J. M. Elder, F. A. Lockhart, and H. M. Little.

It would be difficult to go into as full details as we would like regarding the rest of the programme, suffice it to say that the profession from all over the Dominion is well represented and the papers well worthy of a careful hearing.

President Dr. H. J. Hamilton and the other officers of the Ontario Medical Association have one and all worked very hard to make the 1909 meeting a banner one, and we would strongly urge upon our readers to take a few days' holiday next week and be present at this meeting. We feel that they will not only enjoy the few days' vacation, but return home benefited scientifically.

W. A. Y.

SHOULD INQUESTS BE MELODRAMATIC?

PROFESSIONAL men are awaiting with interest the report of the two alienists in the recent *cause célèbre*, concluded a few weeks ago at Hamilton.

In this case, the Coroner did wisely perhaps, if not well, by not adhering to the rules of evidence in allowing so much that was not evidence to come out, yet, why an inquest room should be turned into a scene of melodrama and every word published in the newspapers for other ill-balanced minds to gloat over, is more than we can quite understand. The lay public is getting too much of this sort of thing, with the Thaw and Hains cases on the other side of the line, and the Hamilton case on this side, the "thought waves" of pistol shots must be flying in all directions and doing more harm than the dreaded "yellow back" containing Jesse James exploits did to the young hopeful in the old barn-loft a few years ago. The professional men engaged on such cases study and analyse, and to them the story is nothing compared to the type of the participants and the motive underlying the action of certain human atoms that conform to a certain type. Perhaps no novelist has carried out this idea so well as George Eliot. Somehow one seems to see in her characters the underlying motive that prompted the action and feel that that type could not have fulfilled their destiny in any other way. But,

for the growing youth of this country to whom a glamor lies in such words as "shooting," "murder," "blood," etc., it is horrible to even think of the harm that may be done to their immature minds and natures by reading the lurid accounts of such recurring events.

Perhaps it would be well if we physicians were to advocate a little more mental training in the homes and schools and those in charge of colleges make their Golden Rule, "Whatsoever things are of good report, think ye of those things." W. A. Y.

THE MILK PROBLEM

One of the most important questions before us to-day is that of the supply of pure milk to cities.

The Canadian Medical Association has appointed a Milk Commission, which has done, and is doing, admirable work. The Academy of Medicine of Toronto has also appointed a Commission, which has also done effective work. And, lastly, the Provincial Legislature, by a resolution introduced by Mr. McNaught, one of the members for Toronto, has decided to appoint a Commission to go into this most important question of milk supply.

The Hon. Mr. Hanna, at the request of both of the above-named medical commissions, placed the laboratory of the Provincial Board of Health at the disposal of the commissions for the purpose of testing any samples which may be submitted for examination. In Dr. Amyot, the provincial bacteriologist, the champions of pure milk supply have an ardent supporter and assistant.

It is to be hoped that the members of the Government Commission will be speedily named, and that the men appointed will make a prompt and thorough inquiry into milk production, transportation and distribution.

We can predict what they will discover:

That the milk supply of most of our large cities is dirty, unfit for consumption, and infected with disease germs.

That this condition of the milk may be traced to one or more of the following causes:

Many cows have tuberculosis, whose milk you, gentle reader,

may have been drinking, may now be drinking, or may drink. Many people are drinking it.

Beyond the possibility of doubt, bovine tuberculosis is transmissible to human beings, particularly to children.

Beyond a doubt, a good many cases of typhoid fever in our cities have been directly traced to the milk supply.

Beyond a doubt, scarlet fever has been carried by the dirty milk bottle.

Beyond a doubt many (perhaps most) of the epidemics of diarrhea and other intestinal diseases among children in the summer months is traceable directly to dirty milk.

Beyond a doubt, milk from cows suffering from diseases, such as abscess of the udder, is now being sold in all our large cities.

You and your children, or your neighbor and his children, are consuming it.

The Pure Milk League of Toronto are saving the lives of many children by supplying them with a pure milk.

The Commission will find on nine farms out of ten the following conditions:

1. Cows being milked, whose flanks are plastered more or less with manure, small pieces of which at milking time drop into the milk. These pieces (though only the size of a pin point) are loaded with the colon bacillus, which in a few hours increase by the billion, and "colonize" (excuse the pun) the milk, giving it the "cowey" taste so frequently observable.

2. Long hair on the udders and tails, which also infects the milk by often dropping into the pail.

3. Ceiling of stables covered with cobwebs, which may drop dirt into the warm, rich liquid food in the wide-mouthed pail.

4. Manure in the trench behind the cows while the milking is going on.

5. Milk pails in nine cases out of ten that are infected—clean, perhaps, to the eye, but full of all manner of filth to the microscope.

6. Stables insufficiently lighted and ventilated.

7. Ten per cent. at least of the cows suffering from tuberculosis.

8. The evening's milk held over until the following morning, mixed with the morning milk, and carried in unclean cans through the heat to the train and on to the city, twenty-five to one

hundred miles away; sent to the retailer, sold to the customer next day.

Is it any wonder appendicitis is so common? Is it any wonder city children die by the hundreds each year? Is it any wonder that over fifty per cent. of our dead bodies show signs of tuberculosis? Is it any wonder that ninety per cent. of children suffer from surgical tuberculosis?

Within the last month two cases of typhoid fever have been discovered on farms supplying milk to one of our large Canadian cities. Thanks to the dealer he refused to collect the milk from these farms.

To be fit for consumption milk should be taken from healthy, clean cows—cows which have a pure water and food supply; cows housed in clean, airy and properly ventilated stables; cows milked by healthy milkers with clean hands into clean pails; the milk transferred into clean bottles (or other vessels) and kept cool until consumed.

By clean pails and clean bottles we mean pails and bottles that have boiled for at least twenty minutes.

This means a milk supply as perfect as we can hope to have within the next ten years.

As soon as possible all milk should be inspected, and as pure a supply as possible secured.

Any of it not up to the above standard should be heated to 140 deg. F. for half an hour, cooled at once, and in this cooled state delivered to the consumer, who should be taught how to keep it cooled until it is entirely used. B.

THE ACADEMY OF MEDICINE, 1909-1910

THE Officers, Chairmen of Sections, and Elective of the Academy of Medicine, Toronto, for the ensuing year were duly elected at the meeting called for Tuesday, May 4th. The report of the Committee on Nominations was accepted with the following results.

MEMBERS OF THE COUNCIL.

Officers: President, Dr. Alexander McPhedran; Past-President, Dr. James F. W. Ross; Vice-President, Dr. A. A. Macdonald; Hon.-Secretary, Dr. H. J. Macdonald; Hon.-Treasurer, Dr. D. J. Gibb Wishart.

Chairmen of Sections: Medicine, Dr. Harley Smith; Surgery, Dr. A. Primrose; Pathology, Dr. G. Silverthorn; Ophthalmology and Oto-Laryngology, Dr. R. A. Reeve; State Medicine, Dr. J. F. Goodchild; Pediatrics, Dr. H. T. Machell.

Elective: Dr. N. A. Powell, Dr. E. E. King, Dr. A. H. Perfect, Dr. John Ferguson, Dr. F. N. G. Starr, Dr. J. M. Cotton, Dr. Walter McKeown, Dr. W. H. B. Aikins.

The Fellows of the Academy thus elected to office are all gentlemen of high professional standing, and, as a whole, popular and worthy to carry out the duties to which they have been called. One comment, however, we feel is incumbent upon us to make. There is already a feeling among not only the Fellows of the Academy, but the city profession as well, that the University of Toronto is figuring too strongly in the *personnel* at No. 9 Queen's Park. The Academy of Medicine is, or should be, an institution *for the profession*. It is a pity that the Committee on Nominations did not consider this point and avoid criticism. Let the Academy be in every sense representative, *not Institutional*.

The retiring President, Dr. J. F. W. Ross, deserves not only congratulations, but unstinted praise. He honored the Presidency by his presence. It means much to the Academy of Medicine, especially in its inception, to be represented by a man of innate refinement, whose personality has a charm, whose enunciation is unaffected, voice clear and diction convincing and yet unstilted. He should impress, not only the little inner circle of Fellows, but many distinguished men of science who from time to time tarry in our city and whom the Academy have as their guests. Consequently, how necessary that the President should be a man able to greet them.

> "Great thoughts in crude, unshapely verse set forth,
> Lose half their preciousness and ever must,
> Unless the diamond with its own rich dust
> Be cut and polished, it seems little worth."

The reports of the various Committees, as presented on May 4th, are eminently satisfactory, each Committee being able to "report progress."

For the present, the recommendation of the Publication Committee, as to the publication of transactions, has been laid upon the table. We think that the profession appreciate the combined assistance offered by the four Toronto Medical Journals, which

would have enabled the Academy to publish this year's transactions at very trifling cost. In view, however, of the possibility of the University of Toronto acquiring the premises now occupied by purchasing the leasehold, we think that the funds now to the credit of the Academy should be carefully conserved with a view to erecting a new building in fee simple in the course of perhaps the next couple of years.

The Committee on Finance have evidently been most conservative and careful as to all expenditures and are able to show a balance on the right side of the ledger.

It is gratifying that during the past year so many gifts have reached the Academy from Fellows, not only in Toronto and vicinity, but from as distant a point as Oxford, England. From that university town, there are constantly coming books, prints and other suitable tokens from one who has always taken a deep interest in our library and who to-day fills the honored position of Regius Professor of Medicine at Oxford, and whose name is too well known to require mention.

The Academy of Medicine is urgently in need of various improvements, especially of the building of a stack room; but it would be well for the new Council to be content, for the balance of the current year anyway, until they can rest assured that the present site is not in danger of expropriation. A more beautiful site could not be found than the present one; but of course a new building could be arranged more suitably and be larger in dimensions. If the Academy looks upon itself as a permanent institution, it must "drop anchor to posterity."

W. A. Y.

THE NEW GENERAL HOSPITAL PLANS

In the article appearing on pages 311 and 312 of the May issue of our JOURNAL, we regret that we did not go more fully into the matter. One of the Hospital experts who was requested by the Trustees of the new General Hospital to go over the plans of the new building was Christian Holmes, of Cincinnati, Ohio. This gentleman is, as most of our readers are aware, Dr. C. R. Holmes, the noted specialist. Dr. Holmes is for the present year the President of the American Laryngological, Otological and

Rhinological Association, which meets in Atlantic City upon the 3rd, 4th and 5th of this month.

Upon learning that he was to visit Toronto, the Ophthalmic and Oto-Laryngological Section of the Academy of Medicine secured a postponement of their regular meeting to the 18th of April and invited him to join them at dinner at the National Club, and thereafter to attend the meeting, which Dr. Holmes was good enough to do. About twenty-one sat down to dinner, all members of the Section, and a most pleasant and profitable evening was spent, Dr. Holmes taking part freely in all the discussions.

Dr. Holmes is a very extensive traveller, and has published a most interesting book upon his three months' trip to Spitzbergen in 1907. W. A. Y.

EDITORIAL NOTES.

Spes Phthisica.—Evidence accumulates to show that consumptives find their way to Canada in search of health, and, shortly after arriving in this country become public charges. Some of them have been so weak that they should not have left home; but the spes phthisica forms a curious characteristic of the consumptive's mental outfit. A fond, delusive hope, or the opinion of some illogical friend sends the consumptive on a wild goose chase after health to Canada. Dr. R. W. Bruce Smith, Inspector of Hospitals for Ontario, states in his report for 1908, that last August he saw a poor consumptive being helped on board a steamship at Glasgow, bound for Canada. The patient was so frail he could scarcely walk. He was not permitted to land in Canada, and died at sea when returning to Scotland.

Therapeutic Indications in Gout.—In *Fortschr. der Mediz,* 1909, No. 3, Dr. Umber makes a good summary of the main therapeutic indications in gout. Dishes rich in nucleo-proteids (thymus, liver, brain), are forbidden. Roast meats are more injurious than boiled ones. Fish is just as injurious as flesh meat. There is no difference between the effects of red and white meats in gout. During periods of depression, the food eaten by patients should be quite free from purins. Albumin-

ous foods, which do not contain purins, such as eggs, milk and cheese, should be used sparingly, because they increase the endogenous production of uric acid. Fats and carbohydrates lower the production of purins. Alcohol causes the retention of purins. Caffein may be changed into uric acid. The elimination of uric acid is favored by the drinking of large quantities of water. Alkalies cause the precipitation of the mono-urates, and are not serviceable in gout. Muscular exertion favors the destruction of uric acid. Dr. Umber's treatment for an acute attack of gout is: Rest, heat applied to the affected joint, and the administration of colchicum.

Scandinavia a Healthy Land.—Statistics just published by Dr. Jules Courmont, a French physician, show that the death-rate in Sweden has fallen to 14.3 per 1.000, and in Norway to 13.5 per 1,000. Dr. Courmont attributes this happy state of affairs in Scandinavia to the hygienic customs of the people—a fine system of public baths, and a perfect hospital organization, which, in cases of infectious disease, deals in the same way with the rich and the poor. Perfect discipline is noticeable in both countries in the fight against preventable diseases. The greatest respect is paid to scientific and medical discoveries, both public officials and ordinary citizens being animated with a sense of duty. Individual liberty is always made subservient to the public good.

The Militia Must Go Dry.—It is pleasing to learn, that the cultivation of the goose step by the Canadian militia will not be interfered with by the sale of intoxicants in canteens and camps in Canada. Following the conference between the Dominion Alliance and the Militia Council at Ottawa, imperative instructions have been issued by the Adjutant-General that the sale of all intoxicants is strictly prohibited in all canteens and camps of instruction, as being contrary to the King's regulations. A good many people will approve of a regulation which removes a formidable objection to the training of men in military camps.

Urotropin and Urodonal.—Urotropin *ουρον*, urine; *τρεπειν*, to transform), obtained by combining formaldehyd with ammonia, was so designated by Arthur Nicolaier, a Ger-

man scientist, who experimented with it in 1894. About the same time G. Bardet, a French physician, studied the therapeutic applications of this drug. When taken internally, urotropin favors the elimination of uric acid, which forms soluble urates with it. Nicolaier thinks that urotropin is an excellent remedy, in the treatment of calculous disorders. He observes that the micro-organisms of ammoniacal fermentation and *B.* coli, which are frequent causes of bacteriuria do not develop in urine after the internal use of urotropin. It is used nowadays in the treatment of microbic diseases of the bladder and urethra in calculous pyelitis and pyelonephritis, in alkaline lithiasis (phosphatic gravel) diseased conditions, often complicated with catarrh of the urinary passages, and also to destroy the B. typhosus in the urine of patients after typhoid fever. It is probable that when it passes through the body formol is disengaged, because urotropin does not produce an antiseptic effect on the urinary organs, when it is injected into the bladder. Urotropin is an excellent diuretic, and the diuresis produced by it may exercise an influence in facilitating the solution of urinary sediments. As much as 6 grams a day may be taken. Speaking generally, from 1 gram to 1.5 gram, divided into three or four doses, and dissolved in water, may be taken during the day. Recently a very effective solvent of uric acid, called urodonal, made by mixing together urotropin, sidonal and lysidin has been placed on the market. This new product appears in the shape of an effervescing granule, which may be taken in doses of a teaspoonful, three times a day, by patients in whom it is desirable to assist the excretion of uric acid.

Ground Coffee in Canada.—In Bulletin No. 172, Mr. A. McGill, chief analyst of the laboratory of the Inland Revenue Department, Ottawa, gives a very interesting report showing the present status of ground coffee in Canada as to purity. In all 449 samples were examined. Improvement is noted, because in 1904, when the last previous inspection of ground coffee was made, the genuine samples formed 60 per cent. of the whole collection, as contrasted with 87.1 per cent. genuine samples in the present collection. Of the 45 cases (10 per cent.) registered as adulterated in the present report, 21 cases are technically adulterated by containing chicory, without acknowledgment of

the fact, while 24 cases contain roasted grains without chicory, no additions of foreign grains being acknowledged. In reference to the adulteration of 21 samples of coffee with chicory, Mr. McGill remarks: "Many coffee consumers are accustomed to using coffee containing small percentages of chicory, and would be likely to complain did their grocer fail to add the chicory. Hence the retail grocer becomes accustomed to such an addition, and one can well understand how a subordinate may consider himself as doing no more than habit and duty require, in adding an ounce or so of chicory to the pound of coffee. No such explanation can be given for the addition of roasted rain to coffee; this is simply fraud, unless the addition be acknowledged."

Australian Cadets.—In the March, 1909, number of this magazine, editorial reference was made to "The Necessity of Physical Education in Public Schools, Collegiate Institutes and High Schools." Mention was made of the cadet corps of the Toronto schools and colleges, which show the beneficial effects of drill given to school boys. At a meeting held at the Normal School, Toronto, May 5th, 1909, presided over by His Honor Lieutenant-Governor Gibson, an address was given by Mr. Frank Fox, a member of the Australian National Defence League, on the measures taken to defend Britain in Australia, etc. Mr. P. Board, director of education in Australia, who accompanied Mr. Fox, also spoke on the Australian system of organizing cadets in the schools. He said: "In New South Wales, before the federation, this system was pursued, and now the whole of Australia has installed it, and the question of defence has become a national one. The teachers of the classes were the officers, and every boy over a certain age was equipped with a rifle. Dummy rifles were not supplied. The weapon, although a light one, was a real one, which the schoolboy could take to the butts, and practice shooting with. In this manner the schoolboys were taught to become familiar with arms, and at the close of their school days an effort was made to enter them regularly in the national defence service. Physical training went along with school training, and was as much of an essential as arithmetic or grammar. The girls took part in this, too, and had as much exercise, although of a different kind, as the boys did. The lads practised with their rifles, using them as wands." Ontario requires just a

little shaking up in the matter of drill and physical training for school children, so that the example of Australia in this regard may prove stimulating and instructive. J. J. C.

PERSONAL.

Mr. Roy Thomas, assistant to Dr. N. A. Powell, and Mr. Harold Clark, son of the Dean of the Medical Faculty of the University of Toronto, have, after a severe competition, been appointed to the house staff of the City Hospital situated on Blackwell's Island, New York, one of the best appointed hospitals, from a medical standpoint, in the United States, with a capacity of nearly 800 beds. This appointment is looked upon as one of the very best in the United States. Two gentlemen were chosen also from Harvard, two from Johns-Hopkins, two from Columbia, and one from McGill. The building in which the resident staff are housed cost $70,000. The appointment lasts for eighteen months. We congratulate our friends, Messrs. Thomas and Clark, who graduate this summer.

News of the Month

MILK COMMISSION—ACADEMY OF MEDICINE

The Chairman, Dr. C. J. C. O. Hastings, Toronto, called the meeting to order at 4.30 p.m.

The following members were present: Dr. Hastings, Dr. George Elliott, (Secretary), Dr. J. A. Amyot, Dr. A. McPhedran, Dr. J. H. Elliott, Dr. W. B. Thistle, Dr. J. N. E. Brown and Dr. Helen MacMurchy.

Mr. John Ross Robertson was present by invitation.

The subject under discussion was that of Pasteurization.

Dr. Hastings presented a memorandum on the subject presenting evidence and authorities in favor of Pasteurization (official) for all milk not officially certified.

Mr. John Ross Robertson then addressed the Commission, referring to his investigation of Pasteurization in New York hospitals, the mortality at the Children's Hospital, Toronto, the necessity of pure and clean milk in that institution. It was his determination to at once proceed to the installation of a Pasteurization plant in the Children's Hospital.

Dr. John A. Amyot advocated official Pasteurization, as well as other members of the Commission.

The following resolution was then presented and adopted unanimously:

It must be apparent that it will require time and education to comply with even reasonable safeguards, and it is equally evident that the number of dairy farms now in a position to live up to sanitary requirements will supply but a small proportion of the population of the city. Until this can be accomplished the Commission strongly recommends that all milk not officially certified be Pasteurized.

A vote of thanks was tendered Mr. Ross Robertson for his address as well as for his offer to send two or three members of the Commission to New York, at his expense, to investigate the subject of Pasteurization.

American Medical Editors' Association.—The coming meeting of this Association, to be held at the Marlborough-Blenheim Hotel, Atlantic City, June 5th and 7th, celebrates its 40th anniversary, and an unusual programme has been prepared for the occasion. It is expected that delegates from the foreign medical press will be present, and every medical editor should make an effort to meet with this Society.

The Physician's Library.

BOOK REVIEWS

Causes of Disability. As applied under Accident and Health Insurance Policies with special chapters on Policy Forms, Advantages of Examining for Accident Insurance Companies, Necessary Qualifications for Successful Examiners, Method of Making Examinations, Adjusting Claims and Manner of Securing Appointments as Examiner for Insurance Companies. Designed for the use of Insurance and Fraternal Examiners, General Practitioners and Students of Medicine, Attorneys and Corporations. By CHARLES HAMILTON HARBAUGH, M.D., Expert Examiner and Adjuster, Medical Director American Assurance Company, ex-President American Association of Medical Examiners and Philadelphia Medical Examiners' Association, formerly Demonstrator of Syndesmology in the Jefferson Medical College of Philadelphia, Member of the American Medical Association, Philadelphia County Medical Society, etc. Illustrated with one hundred and twenty-three half-tones and fifteen full page plates, eleven in colors. The Spectator Company, selling agents, New York.

Dr. Harbaugh's work consists of, in all, twenty-three chapters, the book being one of six hundred and fifty pages. It would be no easy matter to give in detail all the subjects included in his work, "Causes of Disability," Suffice it to say that he takes up in detail and at some length such subjects as "The Advantages of making Accident, Health and Liability Insurance Examinations," "The Necessary Qualifications for a Successful Insurance Examiner," "Examination for Accident Insurance Companies," "Policy Forms," "Injuries and Diseases of the Neck and Head, caused by Accidents and Resulting in Disability," "Injuries and Dislocations involving the Joints and the Bones of the Face," "Injuries to the Neck, including the Larynx and Trachea," "Accidents and Injuries involving the Chest, Abdomen and Back which result in Disability," "Accidents and Diseases of the Upper Extremities," "Accidents and Diseases of the Lower Extremities," "Illness causing Disability," "Diseases of the Brain and Nervous System," "Diseases of the Circulatory System," "Diseases of the Lungs and Respiratory System," "Diseases of the Digestive System," "Diseases of the

Liver," "Diseases of the Kidneys," "Fevers," "Miscellaneous Diseases," "Disability due to Poisons and Gases," "Adjusting Claims for Disability resulting from Accident and Disease," "Methods of Securing Appointments as Examiner for Insurance Companies, and when appointed how to command Examination in competition with other Physicians."

We have glanced carefully through Dr. Harbaugh's work and feel, after doing so, that the author is to be congratulated upon the result of his labors. We do not know of any other book published up to date which is quite as full of practical information, especially suitable for those physicians who make a specialty of Accident, Health and Liability Insurance. It seems to us that any of our readers who take an interest in this line of professional work will be consulting their own interests and those of the Company or Companies they represent by purchasing without delay a copy of this work. W. A. Y.

Differential Diagnosis of Bacteria and Practical Bacteriology. By E. P. Minett, M.D., M.R.C.S., L.R.C.P., F.C.S., Assistant Bacteriologist and Demonstrator in Bacteriology and Microscopical Pathology to Guy's Hospital. London: Baillière, Tindall & Cox, 8 Henrietta Street, Covent Garden. 1909. (All rights reserved.)

This small book is intended to serve as a useful pocket laboratory companion, especially suitable to students and members of the profession who desire a working knowledge of the subject.

First, it treats in a condensed form of a general procedure for the identification of bacteria. After that there is a brief and compact summary of the principal staining methods; and lastly, an appendix giving an outline of several of the more important bacteriological processes at present in use for diagnostic and other purposes.

It will enable the student to refer quickly to the technique whilst actually doing the process. We predict for this pocket volume a ready sale. W. H. C.

Studies on Immunization and Their Application to the Diagnosis and Treatment of Bacterial Infections. By Sir A. E. Wright, M.D., F.R.S., Director of the Department for Therapeutic Immunization, St. Mary's Hospital, London, W.; late Professor of Pathology, Army Medical School, Netley. London: Archibald, Constable & Co., Limited. 1909.

Ever since Sir A. E. Wright delivered the opening lecture to the medical faculty of the University of Toronto some two or three years ago, Canadians have taken more than ordinary interest in the study of opsonins. Dr. Wright is undoubtedly a leader in

therapeutic immunization, and we bespeak for his work, now before us, a very hearty reception throughout Canada.

The work is divided into two parts. Part one is devoted to "The Anti-Bacterial Elements of the Blood Fluids," and part two to "Therapeutic Immunization." Dr. Wright's book covers in all nearly five hundred pages, and is devoted to the most recent views on this subject. In part one the author has placed those papers which deal primarily with the protective elements of the blood. They are arranged in three sub-sections entitled, Agglutinins, Bactericidins and Opsonins. In part two we find those of Dr. Wright's papers dealing with the real subject matter of his book, namely, the problem of "fighting the bacterial infection by those defensive agencies which the organism itself employs when it contends with microbic invasion." Part two covers in all nearly three hundred pages, the different chapters having already appeared in such publications as *The Lancet, The British Medical Journal, Clinical Journal, the Transactions of the Medico-Chirurgical Society,* and *The Practitioner.*

It would be a difficult matter to attempt to review this book in detail; suffice it to say that perhaps no more important work has appeared from any medical press in years.

A Text-Book of Materia Medica, Pharmacology and Therapeutics. By GEORGE F. BUTLER, M.D., Professor and Head of the Department of Therapeutics, and Professor of Preventive and Clinical Medicine, Chicago College of Medicine and Surgery, Medical Department Valparaiso University. Sixth edition, revised and enlarged. Octavo of 708 pages. Philadelphia and London: W. B. Saunders Company. 1908. Cloth, $4.00 net. Half Morocco, $5.50 net. Canadian agents: J. A. Carveth & Co., Limited, Toronto.

We have found great satisfaction in reading Dr. Butler's work. It is written in an agreeable style, and contains a great deal of therapeutic comment, which commends itself to the mind of a practitioner.

The study of the official remedies has been placed in accordance with the eighth decennial revision of the U. S. Pharmacopeia. A few non-official remedies have also been described.

Under the head of untoward action the effects of medicines due to idiosyncrasy of the patient are recorded; under poisoning, effects due to toxic doses, which exert a definite influence irrespective of idiosyncrasy.

In a chapter on organo-therapy, thyroids, anti-diphtheritic serum, typhoid serum, cholera serum, anti-syphilitic serum, anti-tuberculosis serum, anti-rabic serum, etc., are described.

Opsonins, the opsonic index, and the vaccines are also described.

A good chapter on the art of prescribing ends the volume. Dr. Butler is at home in this work, drawing on his own experience as teacher and practitioner. J. J. C.

Diathesis and Ocular Diseases. By A. MAITLAND RAMSAY, M.D., Ophthalmic Surgeon, Glasgow Royal Infirmary; Lecturer on Eye Diseases, University of Glasgow; Author of "Atlas of External Diseases of the Eye," "Eye Injuries and Their Treatment." London: Baillière, Tindall & Cox, 8 Henrietta Street, Covent Garden. 1909. Pp. 184; 17 plates. Three shillings and sixpence net.

A diathesis, according to the author, is a permanent condition of the body (hereditary or acquired) which renders it liable to certain special diseases,—a bodily condition predisposing to a particular disease.

Some of us may think that the so-called diathesis is not a predisposition to a disease, but rather that the patient really has the disease. That aside, we have attention here called to the neurotic diathesis; the scrofulous diathesis; the arthritic diathesis, rheumatic or gouty. Upon this groundwork is built up a very readable account of the constitutional causal factors in inflammations of the conjunctiva, sclerotic, iris, choroid, retina, glaucoma and toxic amblyopia.

The general practitioner, for whom this most valuable little book is specially intended, is too apt to regard these conditions as mere local manifestations, and hands them over holus-bolus to the oculist, who, seeing but little of general medicine, very easily falls into the same idea.

A perusal of these chapters may well lead to a saner outlook on the part of both oculist and general practitioner. J. M.

The Fluids of the Body. By ERNEST H. STARLING, M.D., F.R.C.P., F.R.S., Professor of Physiology in University College, London. London: Archibald Constable & Co., Limited. 1909. Price, 6s., net.

The first seven chapters of this volume are based on two courses of lectures which were given at University College, London. They deal with problems of pure physiology. The subjects discussed are: "The Physical Properties of Protoplasm," "The Osmic Relationship of Cells," "The Intake of Fluid," "The Exchange of Fluids in the Body—the Production of Lymph," "The Absorption of the Intestinal Fluids," "The Output of Fluid," and "The Fluid Balance of the Body."

The eighth and last chapter deals with a matter of practical

interest in the treatment of disease, "The Causation of Dropsy." After reading the first chapters it is more easy to understand how the fluids give rise to the condition known as dropsy. The author states that in all cases the primary cause of edema is an increased transudation, but there is also a derangement of some part of the absorbing mechanism.

This small work is very attractive to those who are interested in the explanation of the physiological processes which govern the distribution of the body fluids. A. E.

Manual of Operative Surgery. By JOHN FAIRBAIRN BINNIE, A.M., C.M. (Aberdeen), Professor of Surgery, Kansas State University; Kansas City Fellow of the American Surgical Association; Membre de la Société Internationale de Chirurgie. Volume I—Operations on the Head, Neck, Nerves, Trunk, Genito-Urinary System. Fourth edition, revised and enlarged, with 713 illustrations, a number of which are printed in colors. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1909.

There is one feature about this book that at once strikes one, viz., that a large mass of *repeated* rubbish about amputations and ligations has been omitted. Most authors seem to think that page after page must be taken up with descriptions of amputatations—most of which are never done in these days of antiseptic surgery—and with ligations of vessels that properly belong to a text-book.

There are a few more things that might well be left out, for example, the flap operations of exstrophy of the bladder, for which the operation of extra-peritoneal transplantation might well be substituted.

On the whole the book is useful, compact, yet comprehensive, and should lend itself to the needs of the already overworked student. F. N. G. S.

High Frequency Currents. By FREDERICK FINCH STRONG, M.D., Instructor in Electro-Therapeutics at Tuft's College, Boston. With 163 illustrations in the text. New York: Rebman Company, 1123 Broadway. Cloth, $3.00.

The author devotes a good deal of attention to the historical side of his subject with copious descriptions of apparatus, past and present. The question of physics is treated in a scientific manner, and very graphically. A very pronounced prejudice in favor of the Tesla currents is exhibited, and the autnor is still quite optimistic concerning them, *e.g.*, "High-frequency Currents, more especially those of the Tesla type, possess therapeutic powers which are not exhibited by any of the remedial agents

known to the profession." As for the future, "Vegetables obtain their energy direct from the sun in the form of radiant heat and light, and it should, therefore, be quite possible for man to obtain his energy directly, provided a vibratory force could be obtained which would be capable of ready diffusion through the tissues and absorption by the nerve centres. To a certain extent, the Tesla High-frequency Current possesses the above-mentioned requirement, and the next decade will probably witness the satisfactory demonstration of the ability of properly attuned electrical vibrations to take the place of the entire food supply with the exception of a small amount of proteid material for tissue repair." Oh, joy! But besides being a dreamer and theorizer, the author has been a very prolific discoverer and inventor along the lines of High-frequency Currents, a fact which he takes infinite pains to keep constantly—and rather tiringly—before the minds of his readers. The space alloted to real therapeutics might with advantage have been of more generous proportions, however, the author hopes to remedy this short-coming by compiling a "Clinical Manual" as a sequel to the present volume within a couple of years, and asks the co-operation of all his readers who are practitioners in electro-therapeutics. The book is excellently gotten up and has really much to commend it.

C. R. D.

Golden Rules of Anesthesia. By R. J. Probyn Williams, M.D., Senior Anesthetist and Instructor in Anesthetics at the London Hospital, Lecturer on Anesthetics in the London Hospital Medical College, Anesthetist to the Royal Dental Hospital of London, late President of the Society of Anesthetists.

This little book embodies in a wonderfully compact form the principal points of Anesthesia, and should be in the hands of every student and busy general practitioner. It can be read through at a sitting, and for one who only gives an occasional anesthetic, it is worth its weight in gold.

Cosmetic Surgery. The correction of featural imperfections. By Charles C. Miller, M.D. Second edition enlarged. Including the description of numerous operations for improving the appearance of the face; 160 pages; 96 illustrations. Prepaid $1.50. Published by the author, 70 State Street, Chicago.

Miller's little book comes to us in a thoroughly revised form. By a careful perusal of the text, together with a close study of the diagrams, one may derive much useful information.

F. N. G. S.

HOWARDS & SONS, LIMITED*

Owing to the fact that the name of "Howards" has been before the public in connection with chemicals for considerably more than a century, a few sentences about the early history of the firm will probably be of interest to our Canadian friends.

In 1797 Luke Howard and William Allen went into partnership as Chemical Manufacturers, and carried on a business at Plough Court, Lombard Street, with a factory at Plaistow. The business grew rapidly, and in 1807 the partnership was dissolved, William Allen continuing the druggist business at Plough Court, which developed gradually into the well-known firm of Allen & Hanburys, and Luke Howard continuing the Chemical Department in larger premises at Stratford.

The firm of Howards in these early days obtained considerable fame for their mercurial preparations (especially calomel), refined borax, sublimed camphor, soda bicarb, ether and magnesia. Calomel is still manufactured in the identical spot in the Stratford factory, and by the same process as that patented in 1807 by Joseph Jewell, the first "foreman" and afterwards a partner in the firm.

It is impossible to deal with the gradual increase in the number of articles manufactured and the growth of the business, but it was between 1825 and 1830 that quinine was first taken up and worked on a large scale, mainly through the researches of John Eliot Howard, F.R.S., with whose name this article has been so closely associated.

The business has rapidly increased, and in 1898 it was found necessary to acquire more room for extension than was available in the already crowded Stratford factory. A site was obtained at Ilford, and a large new factory has rapidly sprung up there as fast as the growing business demanded increased accommodation. The concern was in 1903 converted into a limited company, all the existing partners joining the new board as managing directors. All six of these are "Howards," and they are all direct descendants of

LUKE HOWARD, THE FOUNDER OF THE FIRM

The list of awards obtained by the firm in the past is a long one, beginning with the chief prize at the great Exhibition of 1851. Among our more recent successes are the Grand Prix, Paris, 1900, Grand Prix, St. Louis, 1904, Gold Medal, Buenos Aires, 1904, and Grand Prix, Franco-British Exhibition, Lon-

*Publisher's Department.

don, 1908, showing the high reputation of the firm has been more than maintained of late years.

The high standard of purity of our articles entails, of course, an enormous and ever increasing amount of qualitative and quantitative chemical analysis. Our analytical department consists of a large staff of highly qualified chemists, and is under the direct personal control of the directors; in fact certain portions of the analytical work are invariably performed by directors themselves.

Every pharmicist knows the quality of our quinine, sodii bicarb Epsom and Glauber's Salts, and calomel (the original fawn-colored variety), places them in a class by themselves of unrivalled superiority, but it does not seem to be so generally known that we make a large number of other preparations, and we would remind our friends that in the case of every article mentioned our name implies that the article supplied is manufactured by us at our Stratford or Ilford factories with the same personal care and supervision that have, during the past century, gained and kept for our goods the reputation of "The Best."

We believe that almost all pharmacists and doctors would be glad to have the benefit of the guarantee which is implied by our name, and would like to ensure accuracy in dispensing by using our articles.

We would remind you that very nearly all our preparations are sold at lowest market prices. There are a few of special purity for which we ask a little more than is charged for the ordinary articles in the market.

Should you find any difficulty in obtaining our articles at reasonable prices, we shall be glad if you will let us know, and we will inform you where you can readily obtain them.

Having now arranged to have depots in Montreal and Toronto for all our most important preparations, the druggists from whom you obtain your supplies will be in a position to let you have our articles with promptitude.