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Vol. LV.

STOUFFVILLE, CANADA, JULY 1921

No. 11



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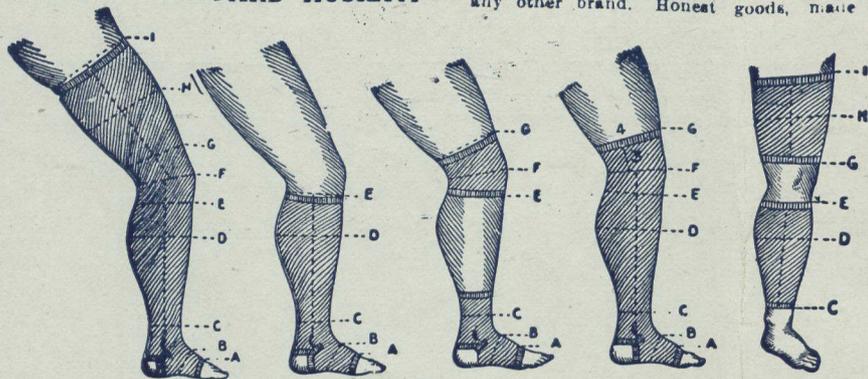
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Vol. LV.

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No. 11

INDEX TO CONTENTS

TO THE BRANTFORD GENERAL HOSPITAL—by R. J. Teeter, M. D.	433
A TONSILLECTOME—By W. C. Toll, M. B.	434
PIN WORMS IN THE APPENDIX—Ernest A. Hall M. D.	437
REVIEW OF CARBOHYDRATE METABOLISM AS RELATED TO DIABETES—By Frank P. Knowlton, M. D.	438
THE SURGICAL TREATMENT OF NEURALGIA	443
ANAESTHESIA SINGULARLY HONOURED	449
FEARS FOR FUTURE OF GREAT BRITAIN	451
VITAMINES FOR THE SICK	452
BOOK REVIEWS	453
MEDICAL ELECTRICITY, ROENTGEN RAYS AND RADIUM	455
REVIEW OF HAPPENINGS IN THE MEDICAL WORLD	456
Dr. Martyn Dies—Madoc Doctor Dies of Burns—Dominion Medical Council Elects Officers—Hundreds Visit Winnipeg Hospital—Dr. C. L. Starr to Teach at University—Sunlight Treatment for Sunburn—Bombard Cancer with X-Rays—Owen Sound Graduation—Reorganized Medical Alumni Association— Doctor Gets Infection—New Appointments to Ponoka Asylum— Ether Explosions—Saskatoon Hospital to Standardize Regula- tions—Physicians' Council Punishes Members—Dr. H.S. Griffin Dead—Physicians May Meet Twice in Each Year—Doctors Meet for 52nd Year—To Cure Cancer, Use knife early,—Bust of Mor- ton—Dr. Cotton Tells About his Anaesthetic—What Doctors Die From—Bullet Extracted from Living without aid of Lancet	

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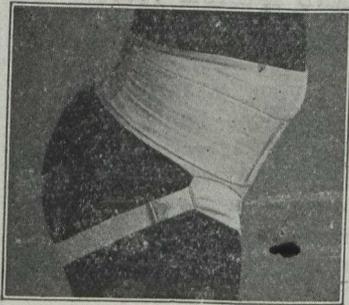
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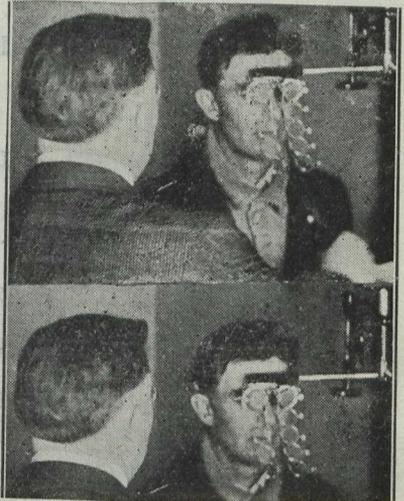
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Vol. LV.

STOUFFVILLE, CANADA, JULY 1921

No. 11

TO THE BRANTFORD GENERAL HOSPITAL

Seldom have we the privilege of recording appreciation of the great work done by hospitals—Results are taken for granted.

But it is a pleasure to have from the pen of one who has gone down to the Gates and returned thankful in appreciation to all who minis-

tered to him in his illness.

The clever pen of Dr. Teeter now rivals the curative powers of his profession. We are pleased indeed to publish these verses knowing his hosts of friends will enjoy them and be glad he has recovered.

—Editor.

I could not leave thy kindly walls
Old friendly pile,
I could not go into the world
Again to smile
And breathe God's gracious air
With health restored
And not feel grateful thanks to thee
In thought and word.
I could not leave and go
Beyond thy Ken
To live in health and mix again with men
Without the tender thought that
But for God and thee
No sun had ever shone again for me
To leave the comfort of thy healing arms,
To go renewed to daily toil and gain
Without a heart-beat quickened
By the thought
Of how you mothered me through
Weeks of pain.
Ah, No! Old friend I do not leave
Thee to forget,
As long as memory lives and can forget,
Thy picture in those beauteous
Well kept grounds.
The soft-voiced nurse whose care
Thy life surrounds,
The kind faced matron who directs
Thy ways,
And showed compassion through
The weary days;
All these will live, a cherished memory
Through life so dear..... Thou helped
Give back to me.

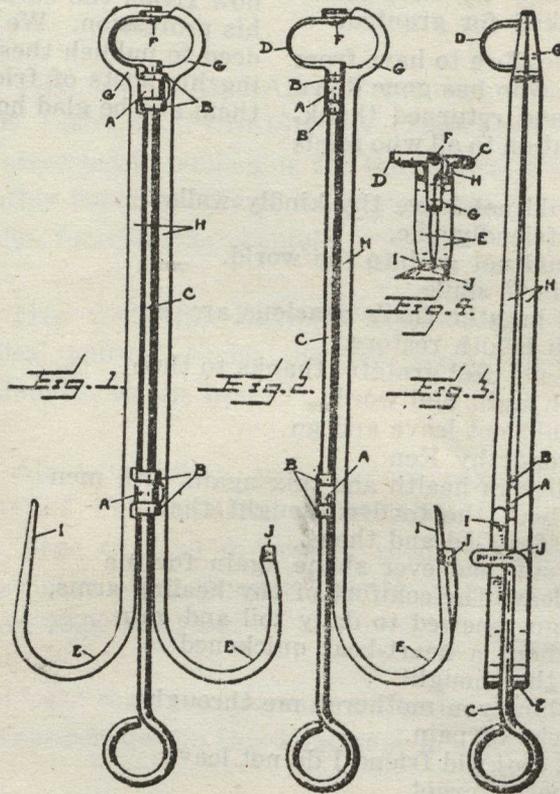
R. J. Teeter, M. D.
May 24th, 1921.

A TONSILLECTOME

W.C. Toll, M.B., M.R.C.S., L.R.C.P.

In this tonsillectome, the homostat comprises two half rings, G, which are formed on or connected

jaws are preferably halved together, as shown, and provided with a pivot, F, in alinement with the



to the ends of bars H. These bars are provided with hinge knuckles, A, B, by means of which they are hinged together. The hinge pin is preferably formed by the handle, C, of the knife, D. This knife is of semiannular form, as shown, and when rotated moves in shear fashion past the inner faces of the rings, G, G. The outer ends of the

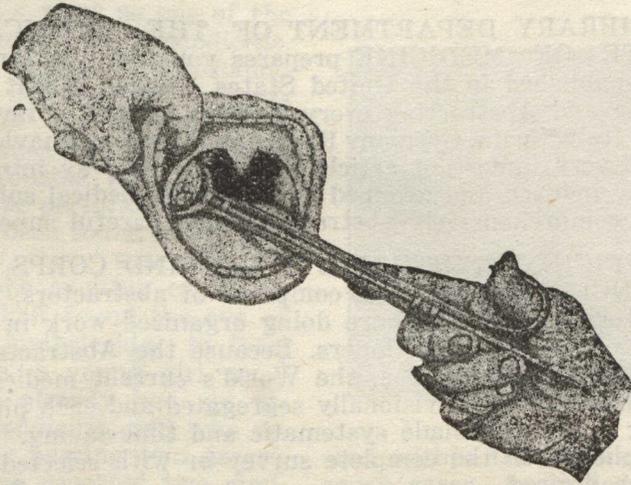
handle, C. The knife also preferably engages this pivot, F, and is thus supported at its outer end. The other ends of the bars, H, are preferably bent up to form handles, E. The end, I, of one handle is extended to form a resilient tongue adapted to be snapped into a keeper, J, formed on the end of the other handle. The bars, H,

may thus be locked to retain the half rings, G, in the position shown in Figures 2, 3 and 4. It will be noted that when the half rings are opened out, as shown in Figure 1, that a completely unobstructed fenestrum is formed through which the tonsil to be removed may protrude when the device is positioned for use.

The device is used in the following manner: In the first place the instrument is opened, as shown in Figure 1, and by suitable

superior constrictor pharyngeal muscle and crushes the connecting tissues, thereby securing hemostasis. The knife is then rotated by means of its handle to remove the tonsil from the crushed stump.

This method is the most nearly bloodless of any I have seen and is very rapid, my ordinary time for removal of tonsils and adenoids in a child being less than a minute. So brief an anesthesia is required that there is the mini-



manipulation the tonsil to be removed is forced into or through the half rings, which are then folded together and locked (Fig 4). This procedure separates the tonsil from both the anterior and posterior faucial pillars and the

maximum of anesthetic used and consequently the least toxic effect. The method is so easy in ordinary cases that any family physician could do the complete enucleation, relieving him or the family of the necessity of employing a specialist.

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PIN WORMS IN THE APPENDIX

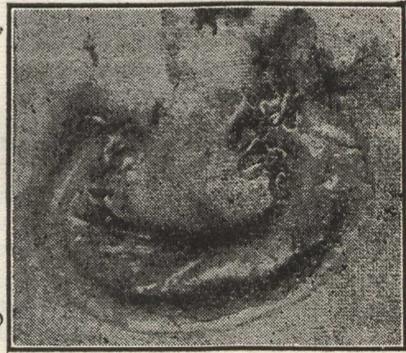
Grant A. Hall, M.D., Victoria, B.C.

THE extent to which this parasite may be a causative agent in the production of appendicitis is yet to be determined, but when one finds these worms present as the apparent sole exciting factor of that syndrome of symptoms which we consider indicative of chronic appendicitis, and note the return to the normal condition after the removal of this breeding ground, we may be justified in giving the oxyuris vermicularis a place as one of the causative factors of appendicitis. As to acute suppurative inflammation, clinical evidence is yet insufficient for us to assume the connection of cause and effect, but it is highly probable that in those cases of acute perforation where worms have been found in the peritoneal cavity, they were the factor, if not the exciting cause.

Metchnikoff found the ova of the ascaris lumbricoides in fecal matter from a young girl aged nineteen who already had six attacks of appendicitis, and who recovered after passing two ascariides. Lemoine reported two similar cases one a child of twelve, the other a man of twenty-three. It was impossible in these cases to state the exact condition of the appendix, since these four cases recovered without an operation, but the clinical symptoms were typical of appendicitis.

The writer has found pin worms present as the only observed factor of irritation in seven cases that have come to the operating table, six of these being children. The seventh was a sturdy farm

laborer aged twenty-four. He had complained of intermittent pains in the stomach and bowels for two years, a slight tenderness was detected over McBurney's point, the appendix was engorged the mucosa very much thickened. A flourishing colony of pin worms was found near the distal extremity of the appendix. The microscope showed innumerable ova upon the surface of the mucus membrane. No other abnormality was discov-



ered within the abdomen. These seven cases presented the usual somewhat vague symptoms of chronic appendicitis, indigestion, flattulence, pain radiating towards the epigastrium and slight tenderness in the right fossa, with disorder of motor and secretory functions, no doubt caused by the irritation of the sympathetic ganglia within the bowel wall by the parasites snugly domiciled in the most dependent part of the appendix. The frequency of the appendix as a breeding place for parasites may explain the great diffi-

culty in our efforts to dislodge these disturbers of the peace, as it is impossible to keep the intestine clear with a continuous stream of ova pouring from the appendix into the cecum.

From the forgoing we may not be justified in operating in every case of pin worms that resists treatment, but when we consider the risks of operation are now

practically nil, and upon the other hand consider what the efforts of the local irritation may be, the digestive disorders, neuroses, and the possibility of perforation, we must admit that the removal of the appendix in resisted cases of oxyuris vermicularis is within the domain of legitimate surgery.

Ernest A. Hall,
Victoria, B. C.

A REVIEW OF CARBOHYDRATE METABOLISM AS RELATED TO DIABETES*

By Frank P. Knowlton, M.D.
Syracuse, N.Y.

CARBOHYDRATE foods constitute the bulk of our ordinary diet. They furnish two-thirds of the energy which the body requires. It is an interesting fact that these foodstuffs which thus play such a preponderating role in our nutrition are stored in the body in much the smallest amounts. Carbohydrate is present in the body chiefly as dextrose in the blood and as glycogen in the liver and muscles. There may average three hundred grams of glycogen, about equally distributed between the liver and the muscles, and perhaps three hundred grams of dextrose in the blood. Even including the glucose in combination as glycoprotein, the total amount of carbohydrate in the body is relatively insignificant in comparison with the total weight. The reason for this surprising difference in proportions between intake and storage is twofold. In the first place, carbohydrates are most easily and rapidly oxidized, and secondly any surplus is readily changed to the more stable form of fat. According

to the now generally accepted glyco-genic theory of Claude Bernard, the glucose of the blood is kept within its narrow limits of .08 per cent. to .1 per cent. through the ability of the liver and muscles to take up any excess as it is absorbed from the alimentary canal, dehydrate and condense it, and store it as glycogen. This glycogen may be again broken down to glucose whenever the percentage of blood sugar is lowered. The first process is glycogenesis, the second glycogenolysis. An enzyme, glycogenase, has been identified as responsible for the latter process.

The sources of glycogen are primarily and mainly the carbohydrates of the food. At least in cases where these are deficient in amount, certain of the organic acid radicles, resulting from the deaminization of protein may be changed to glucose and contribute to glycogen formation. Upwards of fifty per cent. of the energy of the protein molecule may thus be changed to glucose. Concerning the formation of glycogen from fat there is not complete agreement. Lusk and others maintain that at least in diabetes

there is no evidence that fats increase the sugar output. In these ways the small but remarkably constant carbohydrate of the blood is carefully guarded. Its significance lies in the fact that it is the supply of potential energy ready in easily oxidizable form for the immediate needs of the tissues.

Our incomplete understanding of the normal functioning of the kidney makes it impossible to formulate a satisfactory statement of the part that organ plays in conserving the organism's supply of dextrose. Some have argued for a colloid sugar compound which because of its large molecular size does not pass through the kidney. If such a compound exists it must be a loose one as the glucose can be readily separated from blood by dialysis. Others point to the fact that normal urine contains a small amount of glucose, a per cent. not much below that of blood. In either case the kidney may be entirely passive in its normal relation to glucose, acting normally to filter the water and constituents of low molecular size without expenditure of energy on its part. According to the conception of others, the kidney acts like a dam to hold back sugar up to a certain per cent. When this is exceeded, to carry the simile farther, the sugar runs over the spillway. At any rate, whichever explanation we may tentatively adopt, we must recognize that when blood sugar rises abnormally, that is, when we have hyperglycemia, then the normal kidney actively excretes glucose and may concentrate it in the urine to a per cent. many times greater than that in the blood. A persistent hyperglycemia without glycosuria can only be explained on the basis of impaired kidney function.

The ability of the organism, then, to utilize completely the carbohydrate of the food depends partly on the rate of absorption, partly on the rate at

absorbed glucose from the blood. When the rate of intake at any time exceeds the ability of the body to oxidize or store it, hyperglycemia results, usually with glycosuria. The maximum amount which the body can dispose of within a given time without glycosuria is called the assimilation limit or tolerance of the individual for carbohydrates. This assimilation limit varies for different carbohydrates, depending chiefly on the rate at which they are absorbed. With normal individuals there is no assimilation limit for starches and often none for saccharose except the ability of the individual to eat, digest, and absorb. The necessity for digestion so slows absorption that its rate does not rise above the glycogen storing powers of the tissues. Even for dextrose which requires no preliminary digestion there is no limit for many healthy adult males. Taylor and Hulton report the giving of five hundred grams, the physical limit of ingestion, in five instances and found glucose in the urine of only one. In cases where the sugar-handling mechanisms are below normal, however, these large amounts cause glycosuria. Clinically, when the ingestion of 100 grams of glucose on an empty stomach causes hyperglycemia and glycosuria the individual is considered as at least potentially a diabetic. It should always be remembered that if absorption is delayed even such a lowered tolerance may not be evident. Such delayed absorption may even be at the basis of certain types of so-called increased tolerance. To avoid this uncertainty, Woodyatt perfected an interesting method by which glucose is given intravenously by apparatus which injects at a constant rate. His finding in animals and man is that amount up to 0.8 grams to 0.9 grams to the kilo, an hour can be assimilated over considerable periods.

From the data thus obtained he calculates that a man weighing seventy kilo, resting in bed, can receive and utilize sixty-three grams of glucose an hour without glycosuria. This represents an energy intake of 252 calories an hour or 6,048 calories a day. When the injection rate is increased and hyperglycemia maintained there are evidences that when present in excess in the blood, sugar may exert toxic effects. At least in those with restricted tolerance a continued forcing of the sugar handling machinery is found to result in its breakdown, with further lowering of tolerance. Whether a persistent forcing of the glycogenic powers may lead to a breakdown in a healthy person is not known. It is stated that the increase in the use of sweets which has followed the passage of the Volstead act is accomplished by an increased number of cases of diabetes. If this is true, it may be due to the tendency of those with lowered tolerance to become actual diabetics under such conditions.

Experimental glycosuria is of interest because of the light it throws on diabetes. We may produce glycosuria in the following way:

1. *Alimentary glycosuria.*—This form of glycosuria is produced by exceeding the assimilation limit as described above. Its interest to clinicians lies only in the testing of tolerance, and in the possibility that its frequent appearance may lead to fatigue and the establishment of tolerance at still lower levels.

2. *Phloridzin glycosuria.*—This follows the administration of phloridzin. At least primarily, its action is limited to the kidney which is stimulated to excrete the blood sugar. This results in a lowering of the blood sugar, a hypoglycemia. The liver glycogen supply is then drawn on, and by repeated doses of phloridzin the animal

can be made to excrete both the carbohydrate of the food and that which is stored in the form of glycogen. The sugar from protein sources is also involved and a completely diabetic dextrose nitrogen ratio obtains. Acidosis secondarily results and further complicates the picture. Although this type of glycosuria has been of much experimental value it is doubtful if it has any relation to diabetes except to the rather uncertain type of renal diabetes.

3. *Glycogenolytic glycosuria.*—Glycosuria may result from such procedures as cause a sudden mobilization of liver glycogen. Claude Bernard's diabetic puncture of the floor of the fourth ventricle, the injection of epinephrine, asphyxia, anesthesia, fright, and acidosis all produce glycosuria by causing the liver to suddenly discharge its glycogen as dextrose. Many consider that there is a definite center in the medulla which controls the process of glycogenolysis. It has been pointed out that as normally operative it constitutes or governs an adaptive mechanism through which in time of stress or sudden demand for energy, the liver mobilizes its reserves for the use of the tissues. The above procedures result in glycosuria if the liver contains glycogen but are ineffective in its absence. The glycosuria which follows such procedures is transient. It apparently finds its parallel in such cases of diabetes as are associated with some involvement of the nervous system.

4. *Pancreatic glycosuria.*—The removal of the whole or the major part of the pancreas causes a condition which most closely parallels diabetes mellitus. We do not seem to be much nearer a solution of the question of how the pancreas functions in this respect than we were when Minkowski discovered the relation. It is general-

ly taught that the tissues lose their power to burn sugar and as a consequence hyperglycemia and glycosuria result. The glycogen of the liver disappears indicating a disturbance of its glycogenic powers. This view that the tissues cannot burn glucose arises chiefly from a study of the respiratory quotient which is generally lowered in pancreatic diabetes indicating a failure of the carbohydrates burning powers. This results in a stimulation of sugar producing metabolism and sugar is derived from protein. As the diabetes is more severe the amount of protein thus contributing to the glycosuria is increased. On this account Lusk proposed the dextrose nitrogen ratio in the urine as an index of the severity of the condition. On a carbohydrate free diet a dextrose nitrogen ratio of 3.6, or in some cases 2.8, indicates a complete loss of ability to use glucose and was designated the fatal ratio. Whether isolated tissues completely lose their power to use sugar is uncertain. At least they seem to store glycogen, and this makes the problem difficult.

The pancreas may be considered as playing its role in carbohydrate metabolism either by taking something from the blood or giving off some enzyme or hormone to it. Although there are many indications that an internal secretion is formed by the pancreas, it cannot be said that conclusive proof has yet been furnished. If a hormone is formed by the pancreas, it is not stored by the gland in any great amount but is given continuously to the blood and is rapidly taken from the blood or destroyed. At present, on the basis of the experi-

mental work being done, there seems to be no hope from glandular therapy. It may be noted in this connection that no drugs, enzymes, or years have been found to restore the lost function or replace it. The only treatment on a scientific basis is the dietetic.

Acidosis is so frequently associated with diabetes that it requires at least a word of explanation. It arises mainly from the incomplete combustion of the fats. Apparently fats may be completely oxidized only when carbohydrate is being simultaneously burned. As one writer has expressed it: "Fat only burns completely in a fire of carbohydrate. If the carbohydrate fire lags or goes out as it does in diabetes then the fat fire smokes. The smoke is oxybutyric acid."

It is not possible at present to state the relations of the endocrine system to carbohydrate metabolism. Removal or hyperfunction of several of these glands has been found to affect carbohydrate tolerance. Injection of extracts of some of them causes glycosuria. How far this is a primary and specific action on carbohydrate metabolism or how far it is secondary or related to a general depression or augmentation of body functions or to impaired absorption, it is impossible to decide. In this connection, Lusk says: "The subject of the correlation between the various glands of internal secretion is evidently one as replete with opportunities for the play of the imagination as it is for enlightening experimental research." It is toward such enlightening research that we must look for the solution of these perplexing but important problems.



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THE SURGICAL TREATMENT OF NEURALGIA

*Based on a clinical lecture.

THE term "neuralgia," as I am in its widest sense. It connotes using it in this paper, is taken no pathology and no ætiology, but merely indicates pain in the distribution of one or more nerves, not due to any obvious gross lesion; in fact, I am using it in the sense in which it is commonly employed in general practice, and even by the laity. This being so, it is necessary in the first place to realize that such pain may be due to very varying conditions, by no means all of which call for surgical treatment; and the first essential in connection with treatment of any kind is an accurate diagnosis, if such can be made, of the real cause of the neuralgic pain.

In order, then, to arrive at some conception of the varying types of neuralgia with which we have to deal, it will perhaps be convenient to divide these into certain groups, which, if they do not rest on a purely logical basis, are at least convenient and practical.

I. We have, in the first place, neuralgias due to certain *general conditions*, probably toxic in their nature, such as anæmia, malaria, gout, rheumatism, and syphilis. Neuralgias of this type often affect more than one nerve-trunk, and their distribution may be varying and somewhat erratic. None of them call for surgical treatment, and I shall not occupy more time in discussing them.

II. There are a large number of cases which are due to *pressure* upon nerves, and in the great majority of these surgery will, at any rate, call for consideration. It is neither necessary nor practicable for me to endeavour to cover the whole field of such cases, but I think it may be useful if I point out certain of the pitfalls

which lie in the way of an accurate diagnosis. Sciatica, although not uncommonly falling within the first or toxic group of cases, is by no means rarely due to pressure, either within the limb or more deeply within the pelvis, at the roots of the lumbosacral plexus or even within the vertebral canal. Very persistent cases ought to be most thoroughly investigated to eliminate the possibility of such a source of pressure. I have, for example, seen a gentleman who had long been medicinally treated for sciatica by some of the most distinguished members of the profession, without obtaining any relief until after the removal of a lipoma pressing upon the nerve in the upper end of the popliteal space. Double sciatica, in particular, should always arouse the gravest suspicion of pressure, which may not improbably be situated in the vertebral canal.

Again, I would refer to the danger of mistaking affections of the dorsal nerve-roots for abdominal diseases. In several cases I have known patients submitted to abdominal operations for growths of the vertebræ or growths within the vertebral canal, and it is notorious that gastro-enterostomy has, in the past, been resorted to in patients suffering from the gastric crises of *tabes dorsalis*. Intra-theal spinal growths are especially liable to be overlooked, for pain is often long precedent to the development of any other decided symptoms, and, in fact, a history of continued pain, followed by symptoms of a transverse lesion of the cord, is one of the most definite indications that we have to deal with an intra-theal tumour. This is the more to be regretted, for such tumours are particularly amenable to surgical treatment. They are commonly situated in the most accessible region of the spine—that of the dorsal

vertebræ; they are generally well encapsuled; they present so little tendency to malignancy that I can recall no instance of recurrence after excision; and the results, if they are dealt with at any early date, are extraordinarily satisfactory. I am able to mention two cases which have been operated upon within the last twelve months, both of whom were completely paraplegic at the time of operation, and both of whom are now well able to go about and carry on their original occupation. Moreover, I have not yet met with a case in which the operation has been followed by death or any other untoward result.

As a further illustration of the possibility that neuralgia may be due to some obscure source of pressure I may refer to the very numerous cases in which pain in the upper limbs arises from the presence of cervical ribs. The importance of these ribs in producing nervous symptoms has only been generally recognized since 1904, but since that date very large numbers of cases have been diagnosed and thereafter cured by operation. Surely it is reasonable to suppose that there may remain for future recognition other hitherto unrecognized affections of equal frequency.

It would obviously be impossible for me to cover the whole ground of surgical treatment of pressure-lesions of nerve roots. I wish only to emphasize the necessity of making an accurate diagnosis, after which the question of treatment will follow almost as a matter of course.

Closely associated with neuralgia due to pressure upon nerves from without is that due to *cicatrices*; but I wish particularly to call attention to cicatrices of the scalp, which are liable to be associated not only with pain but with other severe disturbances of the nervous system, and in

some cases perhaps with true epilepsy. In two such cases, which have come under my care, cicatrices of the scalp were associated with quite definite epileptic attacks, and in both of these the attacks ceased entirely after the scars had been dealt with. Why cicatrices of the scalp should be liable to produce severe neuralgia, which may arise long after their infliction, is perhaps not quite obvious, but we may look for the cause either in their association with branches of the fifth cranial nerve, or in connection with the fact that they involve adhesion of the scalp to the epicranium, on which it ought to be most freely movable. However this may be, I have seen many severe cases of neuralgia of the scalp in which the cicatrix has been entirely freed from the bone by raising it as a flap, sometimes by the interpolation of a non-permeable material, and then replacing the flap; and I have found in all such cases that the results as regards cure of the neuralgia have been extremely good.

III. I am placing under a separate group certain neuralgias generally associated with *locomotor ataxia*, but sometimes with other parasymphilitic diseases of the nervous system, because in these the pain is often severe, very long-standing, and calls for a somewhat special line of treatment. We are not now concerned with their pathological nature.

The lightning pains of locomotor ataxia probably rarely, if ever, demand operation; nor do I know of any method which can with confidence be recommended for their relief. Some may remember how 20 or 30 years ago the "bloodless operation" of "suspension" was adopted; the patient being suspended by the neck on several occasions, after which his pains were supposed to be cured; and I remember cases in which relief was said

to have been obtained by this method. We are, however, here treading on somewhat doubtful ground, to which I think it necessary to refer. The influence of suggestion in improving even such definite organic affections as locomotor ataxia and epilepsy is now well recognized, and it is most unsafe to record any results in the surgery of the nervous system unless such results can be verified by objective signs or checked by observation for a long period of time. In all surgery, as in all therapeutics, the recording or results is liable to be influenced, by two subjective factors—the optimism of the operator, and the hopefulness of the patient; and both of these factors apply with especial force to the treatment of affections of the nervous system. Not only operations of almost any kind, but even accidents, if severe enough, may cause epilepsy to remain in abeyance for a considerable period of time, and it appears to me highly probable that any benefit alleged to have been derived from the “suspension” of locomotor ataxias was merely temporary and was produced in this way.*

The gastric crises of locomotor ataxia stand on a different footing from the lightning pains. They are far more serious, and if allowed to continue are associated with the gravest deterioration of general health. Again I do not propose to discuss in any way the pathology of these conditions, but I would like to draw attention to a very valuable method of treatment introduced by Foerster, *i.e.*, division of the dorsal roots supplying the lower thorax and upper abdomen on both sides, and to report a case of this nature in which, the operation having been performed so far back as 1914, I think we can sufficiently eliminate the possibility that we have a merely temporary im-

provement.

October, 1914, I reported the case of G. W. M., at that time 47 years of age, who had suffered from locomotor ataxia with gastric crises for at least ten years, the attacks becoming steadily more frequent and of longer duration, until eventually they were almost continuous. The pain was described as commencing between the left shoulder-blade and the spine, passing round the left side below the ribs and thence on to the region of the stomach. On account of its intensity, morphia was being given freely, and the patient was almost a morphino-maniac. In March, 1914, I divided the fourth, fifth, sixth, seventh and eighth posterior dorsal roots on the side, thus producing a well-defined anaesthesia in the area of pain. The patient, within the first two years after the operation, had three slight attacks, and since then (seven years ago) he has had no attacks at all; though he is still suffering from locomotor ataxia with certain disabilities, he is free from pain and quite able to attend to his ordinary business. The area of anaesthesia produced at the original operation is still present.

*The influence of operations *per se* in the relief of epilepsy was many years ago called attention to by Shaw McLaren. Probably most house-surgeons have noticed that epileptics admitted to hospital for injuries such as burns present a decided remission in the frequency and severity of their convulsions while convalescing from these injuries. Many years ago I operated in succession on both sides of an epileptic with double inguinal hernia. His fits, which had been frequent and violent before the operation, were entirely in abeyance so long as he remained in hospital in connection with proceedings, which were not designed in any way to influence the condition of the nervous system.

At the conclusion of the lecture upon which this paper is based, one of the audience informed the lecturer of a remarkable instance in the case of a lady suffering from trigeminal neuralgia, who during an exacerbation of pain had an accidental fall, in which she received a severe blow upon the forehead. The pain ceased immediately, and the neuralgia remained in abeyance for a period of six or eight months, after which it returned with its original intensity. It is possible to suggest that in the last instance there may have been some actual effect produced upon the Gasserian ganglion or on some of its branches; but there is, I am told, no evidence of such.

In this instance, as in one recently in hospital, I operated on the left side only, although Foerster advises that the operation should be bilateral—a course which has generally been adopted by his successors. I have also done the bilateral operation in certain cases, but I have still an open mind whether it is necessary, the division of the posterior roots on the left side appearing to be quite sufficient to produce a cure in those cases in which it was restricted to that side; but it must be added that I have only thus restricted it when pain was absolutely unilateral. Foerster collected 67 cases of this operation, of which 6 died, 25 presented no return of the crises, 18 were considerably improved, and 9 presented but slight improvement; with respect to these it is to be noted that many must have been performed by surgeons with little experience in laminectomy, for the death-rate is far below that here given, and is in my personal cases of all laminectomies, other than those for injury, tubercle or malignant disease, nil.

Incidentally, it is not improbable that the opening and drainage of the spinal theca has, at any rate, some beneficial effect upon the evolution of locomotor ataxia, as of other lesions of the spinal cord, and, although I am not now concerned with the general subject of spinal drainage, I should like to call attention to the case of a young man at the present moment in my wards, who was admitted about a month ago with complete paraplegia and other usual symptoms of transverse myelitis of unknown cause, and who, within ten days of an exploratory operation with a four-inch incision into the dura mater, is able to move all the joints of both his lower limbs, and has rapidly returning sensation. In some, but not in all, the cases thus operated

upon, the arachnoid has been thickened and opaque, and we can unhesitatingly regard many of them as syphilitic, but in the young man whose case I have just described repeated Wassermann tests were negative, and there was no indication of syphilitic infection.

IV. There are a large number of cases of neuralgia which, I think, we can most conveniently describe as being due to *intra-neural* lesions. Cases will present themselves from time to time which appear to be due to hæmorrhage into the substance of nerves.

A few weeks ago I saw a gentleman of middle age who, after unaccustomed exercise in the form of a long afternoon at tennis, felt a severe pain in the region of the left foot, and who has since been entirely confined to bed with intense burning pain, relieved only by the continuous exposure of the foot to the open air. The foot had become deeply cyanotic, and the super-vention of gangrene in the toes was feared. I found no indication of vascular occlusion, but the foot presented very much the appearance with which we became only too familiar in the "trench-feet" of Flanders and Salonika. There were congestion, a little œdema, intense burning pain, and tenderness along the anterior tibial nerve.

Cases of this kind, accompanied by somewhat complicated symptoms, are possibly due to hæmorrhage into a peripheral nerve, although I have no definite pathological data on this subject.

More obvious in their nature, but clearly due also to affections of the nerve-trunk, are the cases of causalgia with which we have become familiar during the war. Probably, also, a certain number of cases of sciatica are due to neuritis of extreme chronicity, the cause of which is often quite obscure.

Various methods have been adopted for dealing with pain arising from unknown causes, but apparently located within the nerve. In the case of the sciatic, which is most com-

monly affected, acu-puncture, stretching, and the injection of salt solution all have their advocates, and there can be no doubt that many cases are benefited and even cured by such methods. Personally, however, I am not much in favour of any of them. It appears to me that such an operation, trifling though it may be, as acu-puncture of the sciatic nerve has no clear logical basis upon which to rest. The stretching of the nerve by the "bloodless method" of overflexion of the hip and extension of the knee, is said to cure a certain number of cases, but I have not personally found it of any great value. The injection of salt solution into the sheath of the nerve I have not adopted.

My own strong feeling is that in all cases of persistent neuralgia in which we are reasonably confident that the lesion lies within the nerve trunk, the proper course to pursue is to expose the trunk as far as possible from end to end. I have met with a considerable number of cases in which such exposure has revealed a definite lesion with which it was possible to deal. In the first place, a certain proportion will show macroscopic sources of pressure, such as small tumours and the like, and the indication for treatment is then obvious. In others I have found adhesions of the nerve within its bed—I do not mean definite cicatrices, but a mere fixation of the nerve, often due to very light adhesions. Separation and isolation of such a nerve, with replacement in its bed, is often followed by a good result. No doubt a certain amount of stretching is involved in the operation, and may be highly beneficial, but nerve stretching of this type is much more decidedly under the control of the surgeon than it is in the more crude bloodless method. The operation of nerve exposure and

neurolysis is entirely free from risk or danger, and affords a far greater prospect of discovering and relieving the lesion than do any of the more empirical and apparently simpler methods.

There are, however, a certain number of cases in which we are called upon to adopt more severe measures, especially the cases of causalgia with which we have become familiar during the war. In such cases, which are by no means very common in civil practice, injection of alcohol into the nerve (Sicard's method) can be relied upon in the majority of instances. The nerve is exposed as far as possible above the site of injury, and by means of a fine needle and syringe one or two cubic cm. of alcohol (60 per cent.) are injected into its sheath, so as to produce a slight œdema. This method is entirely similar to Schlösser's method of treatment of trigeminal neuralgia, but it has the disadvantage that in the case of motor nerves it will probably produce paralysis, although this is stated gradually to recover. In the case of sensory nerves, the objection does not apply, and I should have no hesitation in adopting it under such circumstances, although, apart from the trigeminal nerve, the available cases will always be few.

There remain cases of intense pain due to affections of nerve trunks in which alcohol injection is not practicable, generally because the lesion is so near to the spinal cord as not to allow a sufficient amount of healthy or apparently healthy nerve upon which to act. In such cases we naturally consider the possibility of curing the pain by means of rhizotomy, or division of the posterior roots supplying the area concerned. This operation has generally been employed in connection with injuries of the brachial plexus, and I have elsewhere (*British*

Journal of Surgery, loc. cit.) reported a case of this nature. For unexplained reasons, rhizotomy in such cases has, however, proved by no means very satisfactory, the probability being that the pathological lesion has spread beyond the posterior root ganglia, and has involved some higher level of the nervous system. In the *Journal of Surgery* to which I have already referred, a number of cases are recorded by various surgeons, the common experience being somewhat similar to my own. It is, however, a little remarkable that in cases in which a more widely-spread pain has been associated with a more extensive—and *primâ facie* more radical—operation.

V. The remaining group of cases to which I wish to refer I will again call provisionally "*ganglionic. neuralgia*," on the assumption that the essential lesion lies not within the nerve trunk, but in the ganglion with which such nerve trunk is associated, the two outstanding instances being trigeminal neuralgia and post-herpetic neuralgia. To deal with the last first, there is a reasonable presumption that persistent neuralgia after herpes is due to a lesion of the posterior root ganglion of the nerve concerned, and that division of the posterior roots involved, with or without removal of the ganglia, ought to cure the condition. Such cases are, however, extremely rare, and I have no personal experience of them. I have only operated in one case of post-herpetic neuralgia involving the supraorbital division of the fifth cranial, and I then adopted the method of alcohol injection, but, unfortunately, the patient was lost sight of. When I saw her a few weeks after

the operation the pair did not appear to have been relieved, and I was at that time contemplating either avulsion of the supraorbital division or removal of the entire Gasserian ganglion.

Of trigeminal neuralgia we have very many complete and certainly permanent cures by removal of the Gasserian ganglion. To attempt to cover the whole treatment of trigeminal neuralgia would itself require more than one lecture, and the historical evolution of our methods is a topic of interest too great for the end of this discourse. The method of treatment which I have adopted in recent years consists in the use of alcohol injections by Schlösser's method, and there can be no doubt that this proceeding gives relief which endures for a period of eleven months, after which it has to be repeated. It cannot, however, be repeated indefinitely; each injection produces a certain amount of sclerosis, which renders subsequent ones more difficult and more uncertain. I have seen most extensive fibrosis in the subsequently removed Gasserian ganglion of a man on whom I performed Schlösser's operation two or three times. Of Härtel's method I have no personal experience; my friend, Mr. Rayner, has recorded a number of cases, and in his hands the operation is no doubt safe and reliable, although I have seen cases in which the results have been disastrous, and in several keratitis has supervened. It is probable that in this respect, as in certain others, the surgeon will do wisely not to endeavour to acquire too many alternative techniques, but rather to perfect himself in the use of a limited number,

Anaesthesia Singularly Honoured

The greatest honour and distinction recently paid the specialty of anaesthesia and the specialists in anaesthesia has been the visit of Dr. H. Edmund G. Boyle, O. B. E., M. R. C. S., of London, England, as Official Representative of the Royal Society of Medicine to the Joint Meeting of the Canadian, Interstate and New York Anaesthetists with the Ontario Medical Association at Niagara Falls, and to the Joint Meeting of the American Anaesthetists with the American Medical Association at Boston.

Dr. Boyle is Anaesthetist to and Lecturer on Anaesthesia at St. Bartholomews Hospital, London. He proved to be not only a very splendid and delightful type of the English gentleman but also a very worthy descendant in that long line of pre-eminent anaesthetists founded by John Snow.

The most important message which Dr. Boyle brought to the several meetings was that about the new anaesthetic ethanesal, recently developed by one of his associates at St. Bartholomews,—Dr. R. L. Mackenzie Wallis, a noted chemist of London. During the War Dr. Wallis was in service in India and his efforts to provide the medical service with a purified and improved ether resulted in the development of ethanesal.

According to Dr. Boyle, ethanesal is a compound of ketones in which carbon dioxide, ethylene and other gases are united. This ketone complex is dissolved in pure ether to the extent of from

2 to 5 per cent. The purification is a necessary preliminary and this is carried out in two stages, (1) Oxidation of aldehydes and mercaptans by finely divided permanganate. (2) Removal of acids, peroxides and water by means of anhydrous copper sulphate.

By distillation in a special reflux condenser a remarkably pure ether is obtained. This purified product with a constant boiling point possesses peculiar properties: (1) It is not anaesthetic except in very large quantities. (2) It is a cerebral excitant and persons working with it get hilariously drunk.

To this pure ether the ketone is added and at once its properties are changed: (1) It becomes a safe and reliable anaesthetic. (2) Its action on the circulatory system lies between that of chloroform and ether. (3) All the irritating effects usually observed with ordinary anaesthetic ethers are now lost. (4) Analgesia can be maintained for a prolonged period. (5) Ethanesal is practically non-toxic. Large doses given to animals do not kill them. Rabbits, after having been anaesthetized for several hours, have to be pithed in order to kill them. Children have been given repeated anaesthesias with ethanesal with no harmful effects. (6) It does not produce either glycosuria or ketosis and does not aggravate these conditions when present. (7) In animals it is without effect on blood pressure or respiration.

The ketone complex is the agent responsible for all the anaesthetic action and is non-toxic in the amount used in the anaesthetic ethanesal. This pure compound ke-

tone has been isolated and belongs to the middle of the series of ketones. Many hypnotics and analgesics owe their specific action to the ketones they contain.

In finding this ketone complex in good ordinary anaesthetic ether, removing the impurities in the later, which cause all the irritating effects, and putting back the anaesthetic compound it would appear that a new paragraph in anaesthesia had been opened up. Ketones are not easily oxidized and so remain even in very bad samples of ordinary anaesthetic ether and still exert an anaesthetic action, although this is accompanied by all the usual irritating effects.

Some of the higher grades of anaesthetic ether have very little anaesthetic action because of the deficiency of the ketone complex. The possibilities of the new compound seem unlimited. If the ketone complex is used in a proportion above 5 per cent. anaesthesia is very deep and consciousness is only slowly regained.

No unpleasant taste or smell follows its administration and the material itself is practically odorless, tasteless and nontoxic. Hence its value for children and old people and also in acute cases.

Further experiments are to be conducted to eliminate entirely the necessity of using ether as a vehicle and to substitute an entirely innocuous volatile vehicle instead.

Dr. Boyle is also known in London as one of the pioneers in introducing and popularizing nitrous oxide-oxygen anaesthesia. He used this with great success and infinite satisfaction to patients at the First London War Hospital

and at Queen Alexandra's Hospital for Officers at Highgate. On the service of Sir H. B. Patterson, Dr. Boyle was able to practically eliminate post-operative pneumonias by this method of anaesthesia and they were among the most serious complications of war surgery.

Dr. Boyle presented his views on and his experiences with nitrous oxide-oxygen anaesthesia and its combinations to the Canadian, New York, and Interstate Anaesthetists as well as to the Nose and Throat Section of the Ontario Association and also before an overflow meeting of the Anaesthesia Session of the Section of Miscellaneous Topics of the American Medical Association.

During the Annual Dinner of the American Anaesthetists as well as during the banquet of the Ontario Medical Association, Dr. Boyle took occasion to express his surprise that non-medical persons were still used to give anaesthetics and he denounced the exploitation of nurses giving anaesthetics as "Sweated labour". The use of nursing anaesthesia had come up for consideration in England after the war, but all concerned with public welfare had decided that no person should administer and anaesthetic not qualified to practice medicine and surgery.

Dr. Boyle was also a guest at the dinner of the American Medical Editors Association in Boston and in his after-dinner talk he made a stirring plea to the editors present for support in the medical and dental press in behalf of the advancement of the science, practice and organization of anaesthesia as a specialty. He also urged the dental and medical schools

to give far more attention than heretofore to their courses in anaesthesia. He alluded to the fact that the Royal Society of Medicine whose Official Representative he was, had recognized anaesthesia as a section and he expressed the hope that the American Medical Association would presently take similar steps.

Dr. Boyle was accompanied by his charming wife and during their visit they were house guests of friends and anaesthetists in New York City, Long Island, Rochester, Toronto and Montreal.

Fears For Future of Great Britain

"It has been said that it is at the heart that empires rot, and while I hate to admit it, it seems to me that some of the things which I have seen in England are very like the phenomenon of rot. So I hope to God you will sympathize with us, for it is in Canada that there lies the hope of the British Empire." This was the startling declaration made by Dr. C. W. Saleeby, of London, Eng., before the general meeting of all association of the Public Health Convention during an address on eugenics and public health, and while he went on to point out that there are racial poisons which have gained a grip and which he feared are eating away the virility of the English race, he had great hopes that many of them would be overcome in Canada, and that, though the worst might happen to the Mother Country in the way of physical decadence, the people of Canada would more than make up

for that falling off. Dr. Saleeby recognized that his declaration was a surprising one. He termed it momentous, and he made a strong appeal that the citizens of the Dominion should give greater attention to the health of future generations than is being done in England.

Dr. Saleeby hesitated to attribute these evidences of racial poison to any definite features, though he believed alcohol, venereal disease and chronic militarism might be the outward evidences.

"History has shown us," he went on, "that new nations, with strong hearts and clean morals, rise up and do great things, even to the defeat of their enemies, and then, when they become surfeited with power, they drift into evil living, and in the end they go down into dust. The story of Asia and Europe is full of that. History, with all its volumes, has but one page. It is the story of the ascent and collapse of nations, with them all going down into the night of time.

France, I think, is going that way. Britain is headed in the same way, and the explanation of these collapses seems to be that something in the quality of the people declines. For we are all convinced that the Romans, who lost the Roman Empire were not the class of Romans who made it. So when we have the knowledge that these racial poisons exist, we have at the same time the warning that they must be fought if this age is not to drift into ruin, which is so easy to achieve. There are so many causes for racial ruin. It may be the life of leisure

which comes with prosperity. It may be that the country after feeding for a time the life of the cities, grows worn out; it may be that militarism eats up the best of the manhood and the men who should be the fathers of the future; or it may be disease. Rome went down, Spain went down, France is going, England is headed that way but it may be that you, in Canada can create cities which will be clean for the youth of the land; it may be that you can solve the problems of the past ages, and that you can set up a nation which will endure. Pray God that you can, for Canada is the hope of the Empire."

One of the cankers which Dr. Saleeby found eating at the heart of the Empire is venereal disease; he was strong in his declaration that the scourge cannot be stamped out as long as the free use of alcohol is permitted, and he was equally strong in his condemnation of those who think they can combat the disease while they feed it on the food of alcohol. The campaign in England against these venereal diseases, he declared, is a demonstrated and admitted failure, and it will always be such "as long as its leading accomplice, alcohol, is used in its free way." The speaker went on to point out how there are five outstanding reasons why the use of alcohol makes it impossible to combat the disease, the chief of which were the lowering of resistance to disease, lowering of resistance to temptation, aggravation of symptoms, and interference with treatments.

"The situation in England would be ridiculous, were it not tragic,"

he declared. "They are trying to save what is left of the race, but disease is increasing. Their idea is to attempt to save the youth of the land without discipline, but it cannot be done. Prohibition, from my observations, has been the greatest single health measure in history, and when you have had time to show results in your battle against disease, I hope you will send them to us, for goodness knows, we need our lesson badly enough."

Following his statement that prohibition is of assistance in fighting venereal diseases, Dr. Saleeby quoted figures from Boston's Public Health Department, showing that during the year preceding prohibition the cases of new infection from such disease increased 11 per cent., while during the first year after prohibition the new infections were reduced by 27 per cent. Similar figures had been obtained from New York, Philadelphia and Chicago.

Vitamines for the Sick

Why prescribe vitamines? an inquirer said the other day. The vegetable kingdom affords us an abundant supply. Why cannot we direct our patients to eat vegetables, butter or milk containing these all-important essential principles? To completely reply to those inquiries would involve the writing of a lengthy thesis. A few words will suffice to make a practical statement of the situation,

The majority of our population live in towns and cities, in institutions, on ship-board, and some in remote regions away from civilization. The dietary of these people during a great part of the year consists largely of canned and dried vegetables, bread, artificial butter, sterilized milk, etc. All of these products have been subjected to heating or other processes that impair or destroy the vitamins they may have contained originally.

Even in regions where fresh vegetables and fruits are obtainable it would not be practical to feed sick people on them. As the editor of a well known medical periodical recently said: "It is frequently undesirable to give the kind and quality of food which would be necessary to yield a sufficient amount of a desired vitamin. One rarely prescribes a mess of spinach for a patient acutely ill or for a convalescent with impaired digestion, just because the vitamin that is present in spinach is desirable."

To meet the evident need, Parke, Davis & Co. have developed and perfected Metagen, a product containing the three known vitamins. These are fat-soluble A, water-soluble B, and water-soluble C. Apart from its unquestioned utility in the treatment of the so-called "deficiency" diseases, Metagen should prove of immense value in the treatment of poorly nourished infants and children, in all cases of subnutrition and reduced bodily tone, and in convalescence from febrile, infectious and wasting diseases, wherein failure to improve may

not be due so much to a lack of a properly balanced diet as to failure of assimilation. Here the vitamins play an important part in stimulating anabolism in adults and healthy growth in children. As a supplement to a highly concentrated diet in tuberculosis, Metagen should be tried for its immediate effect on nutrition. The same might be said of anemia and chlorosis.

In view of the radical change that has come over the accepted methods of preparing and supplying the food of the nation, it seems that the discovery of the vitamins and the elaboration of Metagen, the most available preparation of vitamins for the use of the physician, are not only timely but of the greatest importance in their bearing upon the health and well-being of the population.

BOOK REVIEWS

Traumatic Surgery—Moorehead—Published by W. B. Saunders Company, Canadian Sales Agents, the J. F. Hartz Company Ltd., Toronto.

A larger proportion of the general practitioners daily round is taken up with injuries resulting from accidents to-day than at any other time in our history—outside of those encountered in an actual theatre of war. The profession at large is thoroughly awakened to the problems of surgery connected with accidents and it is but natural the general practitioner will devote a higher grade of care consistent with the added responsibility that devolves on him.

This work aims to define the

methods found most usefully by one whose experience has been more varied than not of the average. The author was a Lt.-Col. with the A.E.F. and had excellent opportunity of learning first hand the most useful and at the same time the quickest methods of handling a large of difficult cases. Due to his army training, Profesosr Moorehead has an excellent tendency to standardize his treatments so that it will be an easy matter to put into practice much of his experience in daily work.

Twenty four chapters cover twenty four departments from "Wounds and their Complications" to such departments as chest, spine, head, abdomen etc.

To some the position established by the author will come as a shock. Stress is placed on the use of few antiseptics, the thorough drainage of all wounds, the immediate and complete reduction of all fractures and non-reliance on complicated splints. He is firm in his belief that open air and sunshine are far superior to pus-soaked or wound adhering dressings. Many of the military surgery measures proved on active service are dealt with in a way that will lead to their adoption in civil surgery.

A splendid volume, ably written and refreshing in its lack of theory it is a work based on proved practice and systematized method.

A Text Book of Pathology— 7th Edition.

Among the excellent publications of the W. B. Saunders Company none has been more popular

than the subject of this review. Indeed it is unnecessary to review a volume so replete with information of value to the physician. It is indispensable to the busy practitioner and as a student text book it has filled a genuine service for many years.

Over a thousand pages bristle with information. One hundred new illustrations, many new sections—several important headings have been re-written, such as those dealing with nephritis, influenza and lymphomata. The rapid increase of pathological knowledge during recent years has made advisable a complete revision which the authors have undertaken in the interest of science.

Not that this excellent work has required change—the original work was far too complete and valuable to admit of any change other than of additional new matter and detail.

The aim of the Text Book of Pathology is to provide for the student and practitioner a conservative and sound opinion of the present day understanding of the subject. Without speculation or controversy the present edition is a valuable contribution to the working tools of the profession.

It is unnecessary to mention the Text Book of Pathology is by Professors Stengel and Fox, both of whom hold professorial chairs in the University of Pennsylvania. The Canadian agents of W. B. Saunders Company are the J. F. Hartz Company Ltd., of Toronto.

Medical Electricity, Roentgen Rays and Radium—

In the field of science and invention no department has been so thoroughly alive to possibilities for development as that of the uses of electricity; and it is peculiarly characteristic of the modern years that the best thought of science should be turned to the use of electricity in the great work of relieving pain distress and suffering.

Naturally developments follow fast and thick, making the author's problem a difficult one, but the manner of Doctor Tousey's handling of this problem is distinctive. He has made a systematic presentation of what has been done and is being accomplished in this wide field of the application of electricity to medicine and surgery.

Experiments and results—methods and tables showing the correct exposure for radiographs of every portion of both sexes are features of the present edition. Most important advances, recently made in dental and gyrostomography as well as in the standardization of apparatus and technic are fully dealt with.

The war has changed many things, and this is true of surgery and medicine as well, for things hitherto deemed impossible have been realized, discovery hastened by the spur of necessity. In this field which has, perhaps, more than any other profited by the opportunity for development, we find a full quota of advancement.

Dr. Tousey deals with the rehabilitation of those suffering from the results of war injuries in a manner that will commend it-

self to those whose work has come within this sphere—as well as those who follow through on every advancement in the science of this profession.

BOOK REVIEWS

Principles of Hygiene—By D. H. Bergey, A. M., M.D., University of Pennsylvania

It would be impossible in the short space of under six hundred pages to attempt anything like an exhaustive treatise on a subject so wide. Equally so is it inadequate in the space devoted to reviews to do justice to a work at once so able and so thorough.

Students of Hygiene will find the general principles upon which the health officers and the physician are required to work in their respective duties. First things have been placed first and the less important items have been excluded so that important phases may be more fully dealt with.

Students of architecture too, will find in "The Principles of Hygiene" all the data and information required in estimating ventilation, heating, watersupply and sewage disposal. And to the student of medicine it is necessary in keeping up-to-date due to the more recent discoveries in this important branch.

The present edition (the seventh) is revised and brought fully up to date. Much revision has been rendered necessary by the progress due to the War and no effort has been spared to keep pace.

"The Principles of Hygiene" has been an authority for many years; the seventh edition is equally authoritative.

Published by W. B. Sanders; J. F. Hartz Co., Canadian Agents.

REVIEW OF HAPPENINGS IN THE MEDICAL WORLD.

**Dr. Martyn Dies; E. Lambton,
Ex-M.P.P.**

Alvinston—After a few days' illness from pneumonia, the death occurred on June 3 of Dr. John Burton Martyn, at the age of 53 years.

Dr. Martyn was gold medalist of Trinity Medical College class of 1891. He took an active part in political matters, and was representative for East Lambton in the Legislature from 1914 to 1919. He was a prominent Mason a Past D. D. G. M. of St. Clair District No. 2, also an active member of Mocha Temple, London.

Madoc Doctor Dies of Burns

Belleville, — Terribly burned about the body at his home in Madoc village, Dr. Henry H. Sutton, one of the oldest medical practitioners in the Province, died during the night in the General Hospital here, to which he was rushed in the hope of saving his life.

Dr. Sutton had been an invalid for years, and being accustomed to smoking either in bed or in a chair, he is thought to have dropped a match, setting fire to the bedding.

Dr. Sutton served in the American Civil War, 1861-1865, as an army surgeon. For many years he was a successful practitioner at Madoc, where he was a very popular figure. He was born in St. Thomas 84 years ago.

Dominion Medical Council Elects Officers for Year

At the first meeting of the third Dominion Medical Council held, June 2, 1921, the election of officers resulted as follows: Honorary president, Dr. Sir. Thomas Roderick; president, Hon. Dr. R. C. Brett, Lieut.-Governor of Alberta; vice-president, Dr. L. P. Normand, Three Rivers; secretary, Dr. R. W. Powell; solicitor, Mr. Chrysler, K. C.; auditor, Mr. G. L. Blach.

Hundreds Visit Winnipeg Hospitals To Inspect Work Being Done

Winnipeg Tribune—Many Winnipeggers observed Hospital Day by visiting the various institutions for the sick in the city. At Winnipeg General hospital about 500 persons attended the graduation exercises and inspected the institution.

Every hospital in the city threw open its doors for public inspection and throngs of interested visitors were in evidence.

Graduation exercises held at Winnipeg General hospital proved an interesting ceremony but attention of the visitors centred on the work and equipment of the hospital itself. Every ward was open for inspection and hospital attendants were present to conduct guests through the building.

All the hospitals of the city were centres of interest throughout the day.

Dr. Clarence L. Starr To Teach At University

Dr. Clarence L. Starr, Chief Surgeon at the Hospital for Sick Children has resigned his post to accept the position of Professor of Surgery at the University of Toronto. The post of Professor of Surgery at the university was held for many years by Mr. Irving Howard Cameron, M. B., and is one of the most important positions within the gift of the provincial institution. Dr. Starr went overseas in 1916 and served as Lieutenant-Colonel in the C. A. M. C., being attached to the Ontario Military Hospital at Orpington. He held posts in various other Canadian hospitals returning to Canada in 1918.

Give "Sunlight" Treatment To Cure Sunburn.

NEW YORK,—On the theory that like cures like, physicians at the Broad Street Hospital, treating the more serious cases of week end sunburn, are securing excellent results through the use of equivalent sunlight.

According to the Superintendent, Dr. J. A. B. Savage, the properties of sunlight, turned by science from injury to therapy, are reproduced in the rays of the Alpin lamp, which throws off ultra-violet rays that destroy bacteria and heal the injured tissue.

Patients at the hospital are given a brief exposure to this lamp, being blindfolded in cases of burns in the face. The procedure

is based on a new conception of burns, which regards them as infected wounds caused by heat. Burns of all kinds are said to be yielding to the sunlight treatment

Bombard Cancer With X-Rays

The war on cancer has been advanced a step further by recent experiments conducted at London Hospital. Dr. S. Gilbert Scott, head of the radiological department, now hopes that by bombarding the patient's body with X-rays it will be possible to prevent cancer cells from wandering over the body until they find root and set up a new growth.

"Already we have successfully treated primary, or surface, cancer with x-rays, but the dispersed cells have afterwards lodged in deep-seated parts of the body. Now, by drenching the whole body with the rays we are getting better results, and there is good reason to hope that we may be able to prevent the formation of deep tumors which hitherto in most cases have proved fatal."

The apparatus used at London Hospital consists of two powerful Coolidge tubes. The patient sits between them and for ten minutes is bombarded with the rays on the back and front of his body. Then for another ten minutes he sits so that the rays go through each side of the body, both tubes being in action together.

The rays come through an aluminum plate, which filters them and prevents any damage to the patient's skin. No pain is felt.

New Matron at North Bay Hospital

Miss A. Skinner of Orillia, the newly appointed Matron of the Queen Victoria Memorial Hospital has assumed her duties. Globe

Owen Sound Graduation

The exercises in connection with the graduation of the 1921 class of nurses at the Owen Sound General and Marine Hospital are always eagerly looked forward to by Owen Sound District. There were eight nurses in the graduating class this year, a fine type of young womanhood who will be a credit to their profession and to themselves.

The presentation of diplomas was made by Miss McArthur, the capable superintendent. Mrs. Barrett presented Miss K. Kesselring with the General Proficiency medal; Mrs. Corbet presented the Dr. Hershey Medal to Miss McClocklin, for obstetrics, and also the J. A. McLinden medal to Miss Hutchinson. The graduating class consisted of eight nurses of whom seven were present. Miss Guy, through illness was unable to attend. The following is the list:

Veta McClockin, Toronto
Alma Wallace, Chippewa Hill.
Margaret Guy, Meaford
Mildred Rowe, Markdale
Henrietta Kesselring, Owen Sound
Mabel Langstaff, Allenford
Florence Hutchinson, Presque
Isle
Eileen Woodford, Owen Sound

Reorganized Medical Alumni Association

A well attended meeting at which several out of town doctors were present was held in the medical college on May 16th, for the purpose of re-organizing the Medical College Alumni association. Officers were elected as follows President, Dr. N. J. Mclean; vice-President, Dr. W. W. Musgrove, secretary-treasurer, Dr. Ross Mitchell, 811 Boyd building.

Dr. Prowse, the dean of the college, addressed the meeting and stated that the provincial government had made a grant of 216,000, which with 184,000 already spent on Building "A", on the Medical college site, would meet the requirements of the Rockefeller foundation and secure the \$500,000 offered to the university for medical education. He further stated that it would be necessary to erect another building on the college grounds, but that the proposed building would cost some \$15,000 more than was at present available.

The meeting heartily endorsed the proposal to raise \$15,000 for the completion of the new building and a committee with Dr. Harry J. Watson, convenor, with power to add to their numbers, was appointed to raise this amount from the Alumni and their friends. It was stated that the Medical college had graduated over eight hundred students.

Dr. Prowse was elected the first honorary member of the Alumni association.

Doctor Gets Infection Patient is Recovering

Philadelphia, —This is the last of me," said Dr. Pierre N. Bergeron when, in the midst of an operation on a patient who had pleural pneumonia he pricked his own finger with a needle. He continued successfully with the operation.

Two weeks later Dr. Bergeron died at St. Joseph's Hospital as the result of the ensuing infection.

His patient was able to sit up on the previous Friday.

Dr. Bergeron, who was 51 years old, was born near Quebec and passed his early life there.

Ontario Health Association

The officers of the Ontario Health Officers' Association for this year, as elected are:

President, Dr. J. W. Shaw, Clinton; 1st Vice pres., Dr. J. L. Charlebois, Fournier; 2nd vice-pres., Dr. V. E. Currey, St. Catherines; and secretary Dr. J. J. Middleton, Toronto.

New Hospital For Toronto

The Sacred Heart Orphanage at Sunnyside is to be converted into a west end hospital by the sisters of St. Joseph. At present there is no public hospital in that section of the city, and the Western Hospital on Bathurst street is overcrowded.

The land is about 9 acres in extent, and is assessed for \$114,000, the buildings for \$53,000.

Two New Appointments To Medical Staff Ponoka Asylum

Two new appointments are being made to the medical staff of the hospital for the insane at Ponoka. Dr. D. L. McCullough and his wife, Dr. Mary McCullough of Belfast, Ireland have just arrived in the city and will go on to Ponoka this week.

Dr. McCullough is a graduate of Trinity College, Dublin, and is a specialist in T. B. work. He will be assistant to Dr. Cook at Ponoka and will have special charge of the T. B. work of which there is considerable at the hospital for the insane. Preparatory to taking over this position Dr. McCullough has been taking special post-graduate courses at the University of London, England.

Dr. Mary McCullough is a graduate of Queen's College, Belfast, and will have charge of the new Pathological Laboratory at Ponoka. This is a new departure and the laboratory is just being completed now. It will be properly equipped so that all the pathological experiments can be taken care of right on the spot. Dr. Mary McCullough has training to specially equip her for this department.

Six new nurses are being brought over from England this year for the Ponoka staff. It is difficult to get nurses in this country who are trained for work among the insane, and last year twelve nurses were brought out from England for this purpose.

The six that are to come this year expect to sail from England next month.

Bang in the Mouth; Explosions of Ether

London—An explosion of ether vapor in a man's mouth, with reports like pistol shots, was described to the Royal Society of Medicine by Dr. W. J. McCardie.

While giving ether to a patient through the nose Dr. McCardie introduced an electric laryngoscope to illuminate the throat. Immediately two or three reports like small pistol shots were heard and flames 5 or 6 inches long issued from the mouth.

There was no obvious burning of the mouth, and the operation was completed with chloroform, which is not inflammable.

Saskatoon Hospital to Standardize Regulations

Evidence that the standardisation of hospitals in Saskatoon is creating a higher standard in both the medical and nursing professions was made plain when Dr. H. A. Stewart's motion to re-define the medical staff at the City Hospital was passed by the Hospital Board.

The new clause will prevent the splitting of fees between two doctors and will have the direct effect of disclosing any bad practice, or better still, of preventing it.

This procedure has been in effect at many up to date hospitals for some time. In short it means that after the medical men are notified of the rules as adopted by the Hospital Board, those that sign them will become members-of the medical staff and will be allowed to practice in the institution. Those who do not sign will not be allowed to practice in the hospital.

Physicians' Council Punishes Members for Abusing Liquor Privileges

Ten of the doctors who were suspended recently by the council of the college of physicians, of Winnipeg for alleged abuse of their privileges of writing liquor prescriptions have been reinstated, a member of the council announced. Five were re-entered on the lists of the association and several more also will obtain recognition within the next week or two, the official declared.

Altogether, 26 doctors were suspended by the council during the investigation which it conducted in February. The terms of suspension ranged from a few weeks to six months, according to the frequency of the accused's offence. it was stated.

During the investigation, it was shown some doctors issued thousands of prescriptions for liquor in a month. One doctor, it was stated, wrote 10,000 in one month. His record for a longer period could not be traced by officials.

Dr. H. S. Griffin Hamilton Physician

Hamilton, Ont., Dr. Herbert S. Griffin, Grand Z of the Grand Chapter of Canada, Royal Arch Masons, and one of the most widely-known and highly esteemed physicians in Hamilton, died rather suddenly at his residence, 157 Main Street. The deceased gentleman had not been in the best of health for some time, but was able to attend to his professional and Masonic duties.

He was born at Mount Pleasant near Brantford, Ont., and was the son of the late Rev. Dr. W. S. Griffin, for many years an official of the Methodist Church of Canada, and several times president of the Conference. Deceased graduated in Arts at Toronto University at the age of 19, winning the silver medal in Natural Sciences. Afterwards he graduated in Medicine at the university and was the gold medalist of his year. He took a post-graduate course at Columbia University, New York, following this with a prolonged course of study in London, Edinburgh, Paris and Vienna. Returning to Canada he settled in Hamilton and commenced practice.

Physicians May Meet Twice In Each Year

The forty-first annual meeting of the Ontario Medical Association at the Clifton House marked the closing of the most satisfactory and successful gatherings in the history of the society.

It was estimated that nearly 1,000 delegates registered. In fact, so great has been the growth of the association, particularly in the past three years, that it is being considered that a general meeting will have to be held in December, as well as the regular annual meeting during the early summer.

At any rate, a meeting of the association will take place in Toronto next December, when several matters of great importance will come before it, as well as general business. One will be the final and complete report on the summariz-

ing of the answers to the questionnaires sent out to the medical men on the O.T.A. as it affects the profession.

The other item will be to consider what medical legislation the association thinks should be put on the statute books. Probably recommendations to the Government will follow the December meeting.

Doctors of Canada Meet For 52nd Year.

..More than four hundred of the leading exponents of the medical profession in Canada, together with distinguished representatives from the United States and Scotland, gathered in Halifax July 5, 6, 7 and 8 for the fifty-second annual convention of the Canadian Medical Association. All except two special sessions of the convention were held in the new Dalhousie University buildings on Studley campus, which were not in existence when Halifax was last honored by a visit from the Canadian medical men in 1905. Last year the convention being held on the other side of the continent in Vancouver.

The attention of the delegates was chiefly occupied with papers on various branches of medicine and surgery. Of special interest was the presidential address by Dr. Murdoch Chisholm, of Halifax, a full report of which will be given in the August Lancet; an address on medicine by Dr. D. L. Richardson, Rhode Island Hospital, Providence, R. I.; an address on surgery

by Dr. Hugh Cabot, Michigan University, Ann Arbor; and an address by Dr. W.S. Syme, Western Infirmary, Glasgow, Scotland, on "Malignant Diseases of the Throat and Some Points in Diagnosis and Treatment." Other addresses were delivered by some fifty-five eminent physicians resident in Canada and the United States.

The delegates were welcomed to the province and city at a public meeting in the hall of the school for the blind on the opening evening of the convention when they were addressed by His Honor Lieut. Governor Grant, of Nova Scotia; Mayor John S. Parker, of Halifax; Mayor W. W. Vidito, of Dartmouth, and Dr. H. K. McDonald, president of the Halifax and Nova Scotia Medical Association. Dr. R. E. McKechnie, of Vancouver, the out-going president of the association, was among the speakers on this occasion.

Elaborate preparations were made for the social entertainment of the medical men and their wives while in Halifax. The program included a garden party at the Government House, band concerts and special moonlight excursions on the northwest arm and harbor. The ladies were guests at innumerable bridge parties, dances and motor drives.

To Cure Cancer Use Knife Early, —Dr. A. H. Wright

The early use of the knife is still the only reasonable remedy against "man's most defiant foe," cancer. To the national public

health convention. Dr. Adam H. Wright minimized the result of radium in diagnosed cases of cancer. Only immediate surgical treatment, with the emphasis heavy on "immediate" offered a reasonable chance of recovery, he declared.

"The public should be informed" said Dr. Wright, "that after more than 70 years of careful study by men of great ability, they have agreed that all caustic substances, whether mineral or vegetable, are dangerous in the treatment of cancer.

"The public should be taught that any growth such as a wart or mole is dangerous as soon as it becomes sore from any sort of irritation. No reference is now being made to warts on the fingers of children and young people which come and go in some mysterious way, apparently without cause or reason. More or less frequently people with slight lumps on excrescences which are growing consult their doctor, and are generally informed that they should be removed, but the patients shrink from the knife, and show a desire to postpone the operation and try a paste or some other abomination. If the patient can be made to understand that complete removal during what is frequently, if not mostly, the pre-cancerous stage, will effect a cure, he will generally consent. Then a simple little operation, done under a local anaesthesia, will wipe out a thing which, at best, is neither useful nor beautiful, and it may save a life. This is really preventive medicine of most satisfactory kind."

A Bust Of Morton For the Hall Of Fame.

In the election of Dr. Wm. T. G. Morton to the Hall of Fame the allied professions of medicine and dentistry have been singularly honoured. By their overwhelming vote the electors have also evidenced the appreciation of the public at large for the beneficence of anaesthesia.

Recently, at the annual dinner of the American Anaesthetists in Boston during A. M. A. Week, Dr. S. Adolphus Knopf the elector most responsible for the honouring of Morton, said it would be a proud privilege for the Associated Anaesthetists to place a bronze bust of Morton in the niche assigned to him by the electors. This is to be done in celebration of the Diamond Jubilee Anniversary of Morton's Demonstration of Ether Anaesthesia.

The Association Anaesthetists, as well as other prominent leaders of the allied professions, are, therefore, urging all those interested to make a substantial contribution for this purpose.

Send your cheque or money order at once to,—

F. H. McMechan, M. D., Secretary-Treasurer, Association Anaesthetists, Lake Shore Road, Avon Lake, Ohio.

Dr. James Cotton Tells Dentists About His Anesthetic

The annual convention of the Ontario Dental Association was instructed by Dr. James Cotton of Toronto, on the new ether treatment perfected by himself to produce analgesia. A large audience of dentists listened intently to the graphic outline.

“When the pupil has dilated and just commences to contract it is a definite sign of analgesia he declared. “At one stage of analgesia present memories are lost, thought and judgment supplanted and only past memories remain. This phenomena has been repeated and utilized on more than one occasion to cause the patient to be in such a state as to tell the plain and complete truth.

The originator of the method told his audience how by the addition of ethylene in standardized quantities to ether, nausea could be absolutely prevented. By so doing it eliminates the primary struggling stages as well as post operative nausea conditions. “Its addition also causes a loss of sensation prior to sleep taking place.”

Dr. Cotton declared that a patient could be kept under analgesia—in a semi-conscious condition for an hour if necessary without injurious effects. He added that major operations were now being performed every day under analgesia.

What Doctors Die From

Even those enemies of death, the doctors, must die. How well do they resist the adversary? The Journal of the American Medical Association gives an interesting set of figures for the year past. Of 2,272 physicians dying in the United States and Canada during 1920, whose age was stated, 38 were 30, 174 between 31 and 40, 351 between 41 and 50, 463 between 51 and 60, 541 between 61 and 70, 436 between 71 and 80, 208 between 81 and 90 and 19 between 91 and 100. The greatest number of deaths for a given age occurred at 63 and 64 years, at each of which ages 65 deaths were noted.

Causes of death—General diseases accounted for 257 deaths; diseases of the nervous system, 271; diseases of the circulatory system 404; diseases of the respiratory system, 266; diseases of the digestive system, 70; diseases of the genito-urinary system, 154; senility, 77; suicide, 32; accidents, 102; homicide, 14, and sequels of surgical operations, 74. The principal assigned causes of death from disease and their frequency were: Organic heart disease, 236; cerebral hemorrhage, 214; pneumonia, 186; nephritis and uraemia 142; malignant tumors, 91; tuberculosis, 59; angina pectoris, 50; pneumonia influenza, 37; arteriosclerosis 33; myocarditis, 34; septicaemia, 31; influenza, 29; diabetes, 28; meningitis, 17; cirrhosis of the liver and acute dilation of the heart, each 16; endocarditis and anaemia each 15; peritonitis, 12, and appendicitis and gastritis each 11.

Bullet Extracted From Lung Without Aid of a Lancet

Extraction of a bullet from a lung where it had become imbedded, through the breathing tubes and the throat, has been accomplished at Jefferson Hospital, Philadelphia. Not only that, the feat is said to be the first occasion when a bullet fired into a lung has been removed without the aid of a lancet. Chronologically, the story started in Nanticoke, Luzerne county, when and where Stanley Butt, a 17-year-old mine worker, was accidentally shot in the back. Application of an X-ray showed the bullet imbedded in the lung, where the Manticoke and Wilkesbarre surgeons declared it would be almost certain death to apply a knife or lancet.

One of the surgeons mentioned the apparatus called the bronchoscope, which long has been in use at the Jefferson College and hospital for removing foreign objects from human interiors. He suggested that Butt take a chance on getting the bullet out through his throat rather than have it abscess and cause hemorrhage. The bronchoscope was applied to Butt. With its aid the bullet was eliminated through the boy's throat and mouth.

In the case of Butt the bronchoscope was inserted through the larynx and through the windpipe into the right lung. Butt left the hospital two days after the operation.

The Canadian Medical Association

Honorary President—Sir Thomas Roddick, Montreal.
 President—Murdoch Chisholm, Halifax. Annual Meeting 1921, Halifax, N. S.
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 Secretary-Treasurer—J. W. Scane, 836 University St., Montreal.
 Associate Secretary—T. C. Routley, 127 Oakwood Ave., Toronto.

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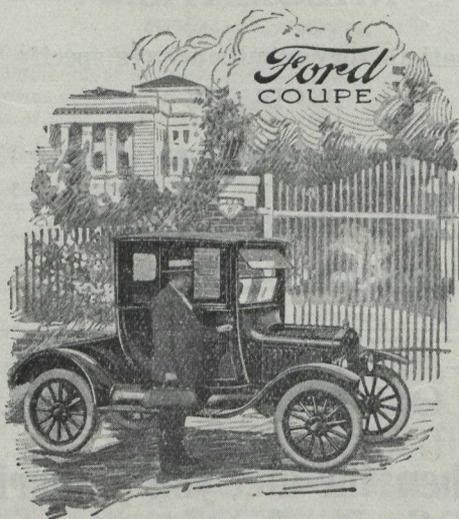
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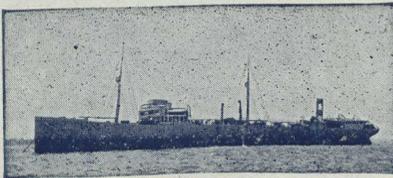


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