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SUBACROMIAL BURSTITIS AS A CAUSE OF STIFF AND PAINFUL SHOULDERS*

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THE surgeon's advice is frequently sought by patients who complain of pain and stiffness in the shoulder joint, yet it is safe to say that the true nature of the lesion from which most of these patients suffer is usually unrecognized, and such vague diagnostic names as rheumatism, fibrous ankylosis, peri-arthritis, contusion, brachial neuritis and circumflex paralysis are applied to the condition in ignorance of the fact that in the vast majority of instances the symptoms are the result of inflammation of the subacromial bursa.

Under the name of peri-arthritis, Duplay in 1872 and Putnam in 1882 described the clinical condition in certain examples of this class of cases very accurately; Douglas Graham in 1884 gave a summary of the pathology of peri-arthritis of the shoulder joint; and in 1902 Kuster published an important paper on subacromial bursitis; but it is to E. A. Codman, of Boston, who worked out the subject independently in ignorance of the earlier paper by Kuster, that we are indebted for the only really satisfactory contribution to this subject, and his two papers in 1906 and 1908 are most enlightening regarding a frequent but hitherto obscure class of cases. It was the writer's good fortune to be present at a clinical demonstration before the American Orthopedic Association given by Dr. Codman in Boston in 1906, just before he published his first paper, and also in June of the present year at another demonstration be-

*Read at the Annual Meeting of the Canadian Medical Association at Winnipeg, August 25, 1909.

fore the same Society of some of his later observations. Both of these demonstrations were beautifully clear and convincing, and ever since the first of them I have had frequent occasion to remember Dr. Codman with gratitude, as I have from time to time found myself easily able to recognize and treat rationally and successfully a class of cases which before 1906 I always found exceedingly puzzling.

A paper by Painter, of Boston, and another by Baer, of Baltimore, have appeared since Codman's first article was published.

In bringing this subject before the Canadian Medical Association at the present time I have no more pretentious purpose than to attempt to increase interest in this highly important surgical condition by presenting a partial digest of the contributions of Codman and others, and by reciting some typical clinical histories of some of my own cases.

ANATOMY.

The bursa under consideration is sometimes referred to as the subacromial bursa, and sometimes as the subdeltoid. With the arm adducted it is partly subdeltoid, with the arm abducted it is wholly subacromial; the relative size of the two portions is, therefore, dependent upon the position of the arm. While usually single, occasionally there are two distinct bursae, or the subdeltoid may be separated from the subacromial portion by a thin serous septum. Painter and Baer state that the bursa is about the size of a silver half-dollar; Codman says that one of his smallest specimens measures $2\frac{1}{2}$ inches in diameter and that he has seen many that are larger; in some dissections made by the writer it was not found less than 2 inches in diameter.

The bursa lies immediately beneath the acromion and the fibres of the deltoid, and its inferior surface is closely adherent to the capsule of the shoulder joint. Its floor is largely formed by the tuberosity of the humerus and the tendinous expansion of the supraspinatus, its roof by the acromion process and the coraco-acromial ligament and the fibres of origin of the deltoid. Normally the bursa does not communicate with the joint.

ETIOLOGY AND PATHOLOGY.

The causes of subacromial bursitis may be grouped under two heads (a) trauma, (b) infectious processes. Being a serous sac, the bursa is, of course, vulnerable to the same disease-producing influences as other serous spaces, such as the pleura, peritoneum, joints, tendon sheaths, etc.; and the same pathological changes take place in the bursa as in the other serous sacs. By all means the most frequent cause is traumatism, usually a blow on the shoulder or a sudden twist or wrench; but over-use and unaccustomed use must also be ranked as traumatic causes. Among the infectious

processes mention may be made of rheumatism, gonorrhoea, tuberculosis and suppurative infections. The walls of the bursa may be normal, or more or less thickened, and fibrous adhesions may unite the serous surfaces, producing a partial or complete obliteration of the cavity. Painter reports having seen villous enlargements sufficiently dense to give a definite X-ray shadow, although no demonstrable deposit of lime salts was associated with the villi. There may be an excess of thin serous fluid within the sac, or cheesy, fibrinous or calcareous material may be encountered. Codman emphasizes the frequent occurrence of a partial rupture of the tendon of the supraspinatus near its insertion into the tuberosity, or even the detachment of a chip of bone at the point of insertion of the central portion of the tendon.

SIGNS AND SYMPTOMS.

Inasmuch as subacromial bursitis may be met with in the acute, subacute or chronic form, the sign and the symptoms necessarily present considerable variation in different cases, but pain and limitation of motion are common to all types of the affection. The location of the pain varies. It may be felt in the front part of the shoulder or along the outer side of the arm, and may even extend to the hand; sometimes it is felt in the neck, resembling a brachial neuritis; quite frequently the insertion of the deltoid is the chief painful part, and the patient thinks his trouble is located at this point. There is often much discomfort at night; tenderness on the side of the lesion makes it impossible for the patient to lie on the affected side, while an intolerable dragging pain is experienced if he lies upon the well side or the back, so that it is at times almost impossible to assume a position which allows comfortable sleep. Local tenderness at the most prominent point of the shoulder in front is frequently present. This point is just below the acromion process and to the outer side of the bicipital groove. Limitation of motion may be due wholly to muscular spasm, to absolute mechanical restriction of movement brought about by adhesion of the roof and floor of the bursa, or to both of these causes combined. Lateral elevation (abduction) and rotation are the motions which are chiefly restricted; forward and backward motion of the humerus is often almost normally free. The limitation of abduction is well shown by asking the patient to raise both arms above the head. The unaffected arm will be quickly and easily raised to the perpendicular, but the affected arm will be arrested before it has been raised to a horizontal position. The restriction of rotation makes certain necessary movements awkward or impossible. As Codman says: "A characteristic complaint is the inability to put the arm back of the neck or behind the small of the back; if women they cannot do their back hair; if men they cannot button the back of

the suspenders." There is always, however, a certain range of free movement at the joint proper before scapular motion is brought into play. This amounts to about ten degrees and represents the degree of motion which is possible before the function of the bursa is called into play. Absence of this free motion indicates that there is disease of the true joint. "Beyond an arc of about ten degrees the scapula accompanies the humerus in all its motions, whether active or passive." In exceptional cases, by careful palpation, effusion into the bursa or an unnatural puffiness at its site can be demonstrated. In certain of the chronic cases the signs and symptoms are typical. Almost the full arc of motion is possible, but certain motions and positions are painful, or at least uncomfortable. If asked to raise the arm high above the head the patient can do so, but, instead of carrying out the movement freely and with directness he may lurch to one side or give the arm an irregular twist. The peculiarity is due to the fact that at a certain point the movement causes pain, which the patient has learned by experience can be mitigated somewhat by executing the movement in some irregular way; once past the tender place the balance of the movement is free and direct. The discomfort may nearly or wholly disappear for days or weeks at a time and then become troublesome again. In some of these irregular cases the return of discomfort is coincident with vague rheumatic manifestations in other parts of the body. Some patients who do not suffer from actual pain are conscious of a roughness or crepitating sensation in the region of the bursa during certain movements; in one of my own cases this crepitation is felt by the patient during the process of stropping his razor. In many of these cases the trouble is due to some irregularity or roughness in the bursa, such as would be produced by thickened folds or villous fringes; calcareous deposits and small osteophytes will also sometimes be found. Finally, in cases of long standing an appreciable degree of atrophy of the muscles about the shoulder will be noticed, especially the supraspinatus, infraspinatus and deltoid.

DIAGNOSIS.

I shall not attempt to take up the differential diagnosis in detail. The history of the case and a painstaking examination, aided by a careful clinical analysis, should nearly always enable the surgeon to differentiate with certainty between subacromial bursitis and other affections giving rise to somewhat similar symptoms. Practically, the point of greatest importance in diagnosis is to determine whether the trouble is in the bursa alone or whether the shoulder joint is involved. When the bursa alone is affected a small range of painless motion is always possible, even when the scapula is firmly held; when the true joint is involved the fixation is often practically absolute. In disease of the true joint muscular atrophy

sets in earlier and is more pronounced. In bursitis palpation of the joint from the axilla is painless, but if the joint be diseased tenderness may be very evident. Codman has pointed out that the relative position of the humerus and scapula are not the same when the joint is diseased, as in bursitis. When the joint is diseased the angle between the humerus and the axillary border of the scapula is less acute than in bursitis. The X-ray often affords valuable information in doubtful cases, the radiographic appearances in tuberculosis or in osteo-arthritis being too characteristic to admit of doubt. Codman considers at length the differential diagnosis between subacromial bursitis and brachial neuritis, and by a very satisfactory line of reasoning reaches the conclusion that in most cases of so-called brachial neuritis subacromial bursitis is the primary cause of the symptoms.

Formerly many cases of subacromial bursitis were classed as circumflex paralysis, owing to the inability of the patient to abduct the arm. We now know that true circumflex paralysis is very rare, but when present it may be readily recognized by the complete absence of contraction in the fibres of the deltoid when the patient attempts to abduct the arm. In subacromial bursitis the deltoid may be much atrophied, and voluntary abduction to more than a slight degree may be impossible owing to the pain and spasm, but some contractile effort can always be detected by the palpating fingers when the patient makes a determined effort to raise the arm.

PROGNOSIS.

Most cases of subacromial bursitis tend to spontaneous recovery, the length of time required for the subsidence of symptoms varying from a few weeks to several years. The prognosis in recent acute cases is very favorable under good management, but there can be no doubt that unwise treatment frequently delays recovery, the physician insisting on unnecessarily prolonged fixation in the sling position under the impression that a long period to rest is necessary; the result is that firm adhesions form between the surfaces of the bursa and recovery is thereby retarded. Even the chronic adherent cases, however, are prone to gradual improvement, with ultimate more or less complete restoration.

In the irregular type of cases in which pain is excited only by certain motions and positions of the arm, the symptoms are apt to alternately appear and disappear almost indefinitely.

The prognosis is less favorable in cases of infectious origin than in those due to traumatism.

TREATMENT.

Obviously no routine plan of treatment is applicable to an affection which may be acute, subacute or chronic when it first

comes under observation, and the pathological changes in which may vary from simple effusion to dense adhesions. In recent acute cases rest is imperative, but it is highly important to avoid keeping the arm constantly in the sling position; *the arm must be rested in the abducted position.* If kept at rest in a sling or by means of a Velpeau bandage, adhesions quickly form and abduction soon becomes impossible; within a short time the case of acute bursitis has become one of chronic stiff and painful shoulder. While the patient is recumbent on the back the arm should be supported on pillows in a position of right-angled abduction, the elbow flexed and the hand directed towards the head of the bed. When sitting the arm may be supported in abduction on a pillow laid on a table placed at the patient's side; or a splint of plaster of paris, wire or other material suitably shaped may be applied, and the patient allowed to walk about. I have found it very convenient to form a splint from plaster of paris bandages, shaped to fit the side of the trunk and the arm while the patient lies on his back with the arm abducted; after the plaster hardens the splint can be fastened about the trunk with adhesive plaster, or a cotton or flannel binder, and comfortably bandaged to the arm and forearm. Such a splint may be worn comfortably by the patient while in bed, as well as when in the upright position; it may be removed once or twice daily if desired to permit the arm to be gently placed by the side for a brief period. Warm applications afford comfort in this, as in many other acute inflammatory conditions. If necessary anodynes may be employed and aspirin or other suitable remedies may be administered if a rheumatic element be suspected. In cases which have reached the subacute or chronic stage pain is apt to be less acute, although it may still be decidedly distressing. The chief difficulty now is stiffness, which at this stage is due less to muscular spasm than to the mechanical impediment to motion which the adhesions constitute. Several alternatives are open to the patient. If no treatment is received gradual improvement will occur in many cases, the symptoms disappearing largely or entirely in a period varying from a few months to several years. Massage, passive and active exercises, and baking will afford comfort and hasten recovery. In a very large proportion of cases, however, operation is advisable if the patient desires relief as speedily as possible. Forceful manipulation under an anesthetic, followed by fixation of the arm for several days in a position of abduction and external rotation, will produce immediate improvement, but careful after-treatment must usually be continued for some weeks if the final result is to be perfectly satisfactory. This after-treatment consists chiefly in massage and exercises; it is especially necessary that each day the patient shall persist in putting the arm into the position of extreme abduction and external rotation. I have found

it an excellent plan to have the patient lie on his back on the floor and then gradually raise the arm to the desired position, being assisted, if necessary, by a nurse or other attendant. If this be done carefully two or three times a day adhesions will not re-form, and but little pain or irritation need be excited.

On the whole, however, if operation be decided on it is better to cut down upon the bursa and dissect out as much of it as is accessible or else incise it and directly divide or excise all adhesions. In those atypical cases already referred to where the pain is felt only during certain motions or positions of the arm, nothing short of direct exploration will reveal the cause of the trouble, or enable us to remove the thickened folds of membrane, villous fringes, calcareous deposits, etc., which are usually responsible for the irregular symptoms. Open operation, if skilfully performed and sufficiently radical, will afford a permanent cure in a far shorter time than any other method of treatment.

A. M., 72 years. This patient consulted me on May 23rd, 1907. Three months before I saw him he was passing out of the door of his barn when a sudden violent gust of wind arose; fearing the door would be swung open so violently as to break it, he tried to hold on to it, but in doing so was pulled over and fell upon his left side and shoulder. Ever since that time the shoulder has been painful and motion limited. Was treated by having arm placed at rest by keeping it bandaged to the side of the body. There is distinct tenderness in front at the most prominent point of the shoulder; slight independent motion occurs at the shoulder joint proper, but in attempts to abduct or rotate the arm or to carry other motions beyond a very limited range the scapula moves very freely with the humerus, and any attempt to force movement causes severe pain. Characteristic attitude when asked to raise both hands above head. Can get hand to back of head, but it is difficult to get it behind the small of the back. Diagnosis, subacromial bursitis. Treatment: Under anesthesia adhesions were broken down; the arm was then put up in an attitude of extreme abduction and external rotation on plaster splint; after-treatment consisted of massage, active and passive exercises. Patient improved slowly, but after a few weeks wrote that his condition was more satisfactory than he ever expected it to become.

Mrs. R. E. G., age about 40 years. Patient consulted me May 21, 1907. Four months previously she had slipped on the stairs while grasping the hand rail and had fractured the left arm near the wrist. Recovery had not been satisfactory, and she consulted me about the deformity and impaired function. For this I advised a course of treatment by massage, hot-air baking, active and passive movements. The following day the patient mentioned incidentally that the motion of the shoulder on the affected side was greatly

restricted. On examination I found considerable muscular atrophy about the shoulder, and the range of movement at the joint proper, independent of the movement of the scapula on the chest wall, was very limited; abduction to any large degree was impossible, and when the patient attempted to hold both arms high above the head attitude was characteristic. The patient could not put her hand behind her head, and complained that she could not do up her back hair; was also unable to put the hand behind the waist. Diagnosis of subacromial bursitis. Under anesthesia adhesions were broken down. There was so much roughness and crepitation immediately following the rupture of the adhesions as to suggest the possibility of the humerus having been fractured. Arm put in an attitude of abduction and external rotation on a plaster splint and the usual after-treatment was carried out. Patient made a highly satisfactory recovery within a few weeks.

J. A. W., adult male, age not stated in notes. Consulted me on August 8, 1907. Four years ago had an attack of pneumonia, and about a week after the beginning of this illness the right shoulder became very painful and has been stiff and sore ever since. Diagnosis of subacromial bursitis probably of infectious origin. Advised that the bursa be removed. Patient declined treatment, and has passed out of observation.

Mrs. H. A. D., 24 years. States that shoulder has given almost constant trouble during the past ten years; has been stiff and painful. Attributes her trouble to working by an open window for six or seven months at millinery work. The trouble is somewhat better during the hot summer weather. Lately the pain has been going down the arm to the wrist. Shoulder moves to almost normal range, but movement is guarded and occasions more or less pain, and the grating of the surfaces of the bursa upon one another can be plainly felt, and even the patient is conscious of the roughness. Advised excision of the bursa. Patient declined treatment and passed out of observation.

BIBLIOGRAPHY.

1. Duplay: *Archives Generale de Medecin*, November, 1872.
2. Putnam: *Boston Medical and Surgical Journal*, November 30th, 1882.
3. Küster: *Archiv. F. Klin. Chir.*, Vol. 67, p. 1013, 1902.
4. Codman: *Boston Medical and Surgical Journal*, May 31st, 1906, and October 22nd, 1908.
5. Painter: *Boston Medical and Surgical Journal*, March 21st, 1907.
6. Baer: *Johns Hopkins Bulletin*, Nos. 195, 196; June, July, 1907.

DIAGNOSIS AND TREATMENT OF OCCIPITO-POSTERIOR POSITIONS

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Mr. Chairman and Gentlemen,—Much has been written upon the subject of occipito-posterior positions, but it appears to me that our text-books still leave something to be desired in this matter. It is my intention to confine my remarks to two aspects of the case, viz.: diagnosis and treatment, and as briefly as possible.

First let me say that in my experience *unrecognized* occipito-posterior positions have led to more difficulties during labor and more invalidism afterward than all the other dystociae in labor put together. Hence I would say that the early recognition of position and presentation is of more importance than is usually accorded it. It is *best* that this early recognition be accomplished by abdominal palpation, prior to the commencement of labor. The signs may be divided into two classes, viz., suggestive and corroborative.

The latter group are most fully dealt with in the many excellent works on obstetrics, but insufficient attention appears to me to be given to the *suggestive* signs of this condition.

Every third year student can tell you that the finding of the anterior fontanelle in front, or the posterior behind, settles the question beyond a shadow of doubt, but that does not help the practitioner who is unable to reach either fontanelle in the early stages and who finds the presenting part covered by a large caput succedaneum in the later stages, through which he can feel nothing.

Everyone here can probably recall such experiences, when, after all was over, he realized that he had made a mistake, but too late to save the baby's life or the mother's pelvic floor, to say nothing about the twenty-four or more hours of agonizing pain endured by the mother, the greater part of which was wholly unnecessary.

It is not my intention to go into the details of abdominal palpation, nor of the external signs indicating the position under discussion; to those familiar with this method of diagnosis such is unnecessary; to others I would suggest the advisability of becoming familiar with it by reference to some work on the subject.

One point in abdominal signs which should always be remembered is that every *right* occipito case should be suspected of being a posterior, even though the indications are that it is anterior.

The head normally enters the brim in an oblique diameter; the left oblique diameter being shortened by the rectum, the head more

readily enters in the right diameter. This, I believe, is the reason why "First" and "Third" positions are more common than "Second" and "Fourth." If the position is not L. O. A. it is most apt to be R. O. P. Some contend that, owing to the frequent changing of the position of the fœtus in utero, the results of abdominal palpation are uncertain. In this connection I would reply that I cannot recall a single instance in which a clear diagnosis of L. O. A. made two or three weeks before labor was found to have rotated to a posterior, though I have seen R. O. A.'s rotate, or, at any rate, prove to be posteriors, and occasionally a posterior rotate to an anterior. So that, if I have diagnosed L. O. A., I can be assured that such will still be found to be the case at labor, but if such a diagnosis could not be clearly made, then I must suspect that a posterior position may have to be dealt with and govern myself accordingly. Our first "suggestive" sign may therefore be said to be that the case is not evidently an L. O. A. The second in order of sequence is the occurrence of "false" pains during the last week or ten days of pregnancy.

These are not necessarily present, of course, but when they are they are strongly "suggestive" of posterior positions, being more frequently met with in such cases than in anterior.

Early rupture of the membranes is prone to occur in any deviation from the normal presentation and position, and hence must be looked upon as "suggestive" of this as well as other deviations from the normal.

The os uteri at term is, in almost every instance, in a favorable condition for ready dilatation if the normal forces are brought to bear upon it in a normal manner. Where such dilatation is unusually slow and the os not unduly hard, and especially when the partially dilated cervix is directed backward so that the examining finger impinges on the anterior wall of the cervix an inch or so above its lip, which is only reached with difficulty, a posterior position should be at once "suggested" to the examiner's mind.

The backward displacement of the cervix is due to the shape of the head, which naturally elongates toward the occiput in labor.

The posterior fontanelle is carried far back toward the sacrum, or may be delayed at the brim and entirely out of reach, while the anterior fontanelle is above the symphysis, and at this stage could not be readily reached even with a normally placed cervix, while under the existing circumstances it is entirely removed from the examining finger.

Difficulty, therefore, in gaining entrance to a partially dilated cervix and a feeling after digital examination that one has gained little information, should be taken as a "suggestive" sign of posterior position.

An occipito-anterior presentation is usually easily recognized,

so that failure to recognize the landmarks should suggest a posterior position of the occiput.

The text-book *positive* signs of the condition are as familiar to you as to me and need not be repeated here.

If the membranes have ruptured it becomes, to my mind, imperative that we settle the question definitely as soon as possible, and especially is this the case if it be found that the liquor amnii escapes even in small amount *during the pains*.

The escape of "water" during the pains means that the lower uterine segment is not "corked" by the presenting part, so that the "water" is forced past by the uterine contractions. Such escape, even in small amount, oft repeated, soon exhausts the supply and the child's body becomes gripped by the uterine muscle, which gradually moulds itself more or less to the form of the fœtus. The result is that the expulsive efforts are to a large extent neutralized and the uterus quickly exhausts itself in fruitless efforts. This gripping of the fœtus by the uterus in "unrecognized" cases is the main obstacle to the performance of the only scientific line of treatment, viz., rotation.

When this has occurred the use of brute force is the only thing that can be done as a rule; it is then too late to consider the plan which I am about to advocate in the management of these cases. To be successful an early recognition must be made, at least soon after the membranes have ruptured, but, better still before labor has begun.

Where I am still in doubt after the membranes have ruptured I do not hesitate to administer an anesthetic and pass the hand sufficiently far to feel an ear. I must confess that where it becomes important to form a correct diagnosis promptly, I prefer not to trust too much to sutures and fontanelles unless these are readily felt. As I have already stated, in the early stages they are apt to be out of reach, and later on to be obscured by a caput succedaneum.

Management—First Stage of Labor.—The management of the first stage consists in the preservation of the membranes and reasonable control of pain.

The preservation of the membranes is promoted by the recumbent posture, combined with gentleness and infrequency in the making of vaginal examinations.

The control of pain may be accomplished by one of the methods advocated for first stage anesthesia, of which I prefer morphia, with or without hyoscine.

Once the membranes have ruptured, in the presence of active contractions, a definite time limit should be put upon the case. I am in the habit of making this three hours as a rule, but do not necessarily follow this rule blindly. The question to ask ourselves is not, Why should I interfere? but rather, Why should I not

interfere? Unless this last question can be answered by definite indications for non-interference, the main one being that the head is advancing so rapidly that it is evident that I need not do so, I would proceed to make preparations, and put them into effect within the time specified in the majority of cases.

If the cervix is still small, the insertion of a hydrostatic dilator, of which there are several, though Voorhees' appears to me to be the most satisfactory, is the best way of completing dilatation. Dilatation being complete, whether by natural or artificial means, and membranes ruptured or unruptured, I proceed to rotate by the internal method, passing the hand past the head and grasping the shoulders of the child, turning the body a quarter or half circle in the direction indicated and when withdrawing the hand rotating the head similarly. If the membranes are unruptured, they must, of course be ruptured, before passing the hand into the uterus. Having rotated, I am in the habit of applying forceps and delivering *secundem artem*.

Some might leave the case to nature after rotating, and while such a procedure could not be attacked from a scientific standpoint, on humanitarian grounds I think it might be called in question.

The general principles involved in the plan of management I have attempted briefly to outline are, I am glad to say, not limited to my practice, but at the same time I am aware that there are some at least who are opposed to them and who can support their views with not a few instances of successful termination of occipito-posterior cases without aid.

They hold up the dangers of sepsis in intra-uterine manipulations and refer to such treatment as being "meddlesome" mid-wifery. To such I would reply that the serious consequences of even one unrecognized case justifies early interference in many for the sake of the one, and it must be remembered that even these normal terminations are accomplished with more severe and prolonged suffering than pertains in other positions.

He who fears to enter the uterus lest he infect it should stay outside. I would not in any way belittle the dangers of intra-uterine infection, but I would insist that he who proposes to introduce his hand or instruments into that cavity should have developed a technique of such a nature that he has no qualms when he is called to put it to the test.

It has been said that the promiscuous passing of hands into the uterus would probably be followed by disastrous results. If we are to limit ourselves to measures within the capabilities of the most casual or indifferent members of the profession, the progress of obstetrics will indeed be slow.

In other branches of medicine such is not the case. Surgeons

do not refuse to advise procedures because disaster might attend upon the efforts of some insufficiently equipped members of the profession, did they attempt to act upon the advice; rather do they emphasize the dangers and indicate the qualifications required by him who would follow their methods.

If the adoption of the plan outlined in occipito-posterior cases would prove dangerous in the hands of some practitioners, and I do not dispute that it would, must it therefore be abandoned? Caesarean sections, operations for ectopic gestation, version, etc., would, I am sure, be equally dangerous in the same hands; but they are not discredited on that ground.

We should seek to develop obstetricians and not midwives. The advantages to be gained are great; the operation is simple when undertaken at the right time; a case which without prompt assistance might have produced a dead baby and a life-long invalid, may, in a few minutes, without pain or injury to mother or child, have its whole complexion changed. If, on the other hand, one waits till the waters have drained away, the head is jammed into the pelvis with the occiput to the rear, the mother is exhausted, and the child perhaps dead, rotation has no place in the management of the case, at least not this form of *prophylactic* rotation. To attempt it then might end in a rupture of the uterus.

I would recapitulate in a few words, viz.:

1. Make the diagnosis of position and presentation by abdominal palpation, and be on the lookout for the suggestive signs.
2. Corroborate your diagnosis, or otherwise, early in the second stage, if unable to do so before.
3. As soon as the cervix is well dilated, either by natural or artificial means, rotate under a general anesthetic, and do this early, especially if waters escape with the "pains."
4. Be faultless in your aseptic technique.

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**ACADEMY OF MEDICINE, TORONTO, REMARKS AT THE
OPENING MEETING, OCTOBER 5th, 1909**

BY ALEXANDER M'PHEDRAN, M.D., PRESIDENT.

AFTER duly acknowledging the honor done him in being chosen to the chief office of the Academy, the President said:

The success of the year on which we are entering will depend upon our united efforts. The work which the Academy accomplishes will equal the sum total of the work of all the Fellows, nothing more, nothing less. If each endeavored to contribute something of real value, however small, during the year, the whole would form a remarkably creditable showing when the year closed and we are able to "take stock." It is to the younger men whose enthusiasm is not as yet surfeited by success or sobered by arduous labor or by disappointments, that we have to look, for the chief part. But there are many of the seniors whose arteries are still soft and who are, therefore, young and who may be confidently counted on to contribute liberally to the year's proceedings. I would especially urge on the juniors that each make at least one contribution, however small, of genuine value. To do so is of the greatest importance in their own interests, as nothing does so much to increase knowledge as work thoroughly done. This reminds me of an observation, not rarely made, that the discussions at our meetings are not sufficiently keen. This arises from two causes, first, from lack of thorough preparation, and second, a fear of giving offence. The second is the natural result of the first and invariably follows it. If the work is well prepared, courteous criticism, however, searching, should be welcomed as the best means of obtaining fresh light, and the object of presenting any subject is to learn all that is known concerning it.

The objects had in view in the formation of this Academy are important and far-reaching. They are well set forth in Article 2 of the Constitution, as follows:

"2. The purposes of the Academy shall be the advancement of the art and science of medicine with its collateral branches; the promotion and maintenance of an efficient library and museum; professional improvement; the cultivation of harmony and good feeling among its fellows; and the promotion of the corporate influence of the profession in relation to the community."

This article covers everything pertaining to the advancement of the science and practice of medicine, and the promotion of the highest interests of the members individually and collectively and, by implication, of the community at large. It is well that these

aims should be kept constantly in view, as the higher our aims the higher will be our attainments.

Of all the organizations in this country, this Academy, situated as it is in the educational metropolis, should surely lead the way in support of the effort to make the Canadian Medical Association efficient and a credit to this young country, which is everywhere regarded as having a phenomenal future. All over Europe, Canada is synonymous with hope. In the effort of the Association to establish a journal as a means of intercommunication among the Canadian profession, and as a Canadian medium for the publication of the valuable scientific work of the country, this Society should render yeoman service.

The title of this Academy is broad enough to embrace anyone whom it may be desirable to admit. Its domicile is *Toronto*, but it is not the *Toronto Academy*. Would it not be wise, therefore, to extend the privilege to all, irrespective of residence, who can make contributions of genuine value to the science of medicine? Then, with a view to increasing the influence of the Academy in dealing with public questions, would it not be well to extend the privilege of membership to representative physicians from all important centres in the country? A small number have already done us the honor of joining our ranks.

There are many questions of public importance that could profitably engage the attention of the Academy, such as the prescribing of proprietary drugs of unknown composition. I am uncertain as to the extent to which this prevails in *Toronto*. The restrictions on quack remedies need attention. It is useless to fulminate against them, unless vigorous action is taken to lessen the evil. Our Medical Council would be the better of good advice, and I have no doubt that well-considered suggestions would be welcomed by them. The Canadian Patent Medicine Act needs the closest scrutiny of the profession.

Many other questions will occur to the members on which action should be productive of good.

REPAIR OF 3 CM. DEFECT OF THE MEDIAN NERVE, DUE TO AN OLD INJURY—ALMOST COMPLETE RESTORATION OF FUNCTION

INGERSOLL OLMSTED, M.B., HAMILTON, ONT.

THE patient, C. D., age 25, a carpenter, was referred to me in January, 1907, by my friend, Dr. J. A. Bauer, of this city. His history is as follows:

In June, 1906, while working at the ceiling of a verandah, the scaffold which supported him broke. In attempting to save himself in his fall he thrust his right hand through a window. A triangular piece of glass entered his forearm just above the wrist and made a wound about three inches in length, extending obliquely across the lower part of the flexor surface of the forearm. Immediately after the accident the patient found that he could not close his hand, as the thumb, index and middle fingers would not respond. A physician dressed the wound and placed the hand and forearm on a splint. Healing took place readily, but power in the thumb and fingers did not return. He then noticed, apparently for the first time, that sensation in the palmar surface of the thumb and affected fingers was absent. As he could not follow his trade, he came to the city and consulted Dr. Bauer, who kindly sent him to me.

On examination an irregular thick scar was seen, commencing at the outer side of the right wrist, and running obliquely across the flexor tendons upwards and inwards to the inner side of the forearm. The thumb was somewhat adducted and the index and middle fingers were moderately extended. When the patient attempted to close his hand there was a drawing upwards of the scar, but only the ring and little fingers responded. The thumb could not be properly adducted and only slightly flexed. The ball of the thumb was not nearly as prominent as normal, and the first and second lumbrical muscles were atrophied. There was loss of sensation on the palmar surface of the hand corresponding to the thumb, index, middle and outer half of the ring fingers. The dorsal surface of the index and middle fingers corresponding to the distal phalanges were also anesthetic. The skin on the palmar surface corresponding to the anesthesia was thin and scarred, especially on the index finger, and the patient said he had burned his fingers on several occasions without knowing it at the time.

It was evident that the median nerve had been divided, together with palmaris longus, flexor carpi radialis, flexor longus pollicis,

and the superficial and deep flexors of the index and middle fingers. The accident occurred about seven and one-half months previously.

With the assistance of Dr. Bauer, an attempt was made to repair the injury on the 24th of January, 1907. Through a longitudinal incision placed a little to the radial side of the median line, the divided tendons were exposed and sorted. The distal ends were attached to the scar tissue. The median nerve was easily found lying on the profundus digitorum. The proximal end was bulbous and separated from the distal end by three-fourths of an inch. The distal end was degenerated and about half the size of the normal nerve. The tendons were first repaired by swinging down flaps from the proximal parts of the tendons and joining them to the distal ends of the corresponding tendons by means of fine ten-day chromatic catgut.

The median nerve was then dealt with. The distal end was first freshened with a very sharp knife. An attempt was then made to stretch the proximal portion in order to lessen the distance between the two ends. Little, if anything, was accomplished by this procedure. The bulbous end was then cut off and the end pared until healthy nerve tissue was found. There was then a space of three centimeters between the two ends of the nerve and the proximal end was about twice the size of the distal end. In order to bridge in this space the proximal end of the nerve was split up from before backwards into two halves for a distance of three centimeters and then the one half divided transversely at the upper end. This piece was drawn down and placed in a gap, which it filled nicely. It was retained there by very fine silk sutures passed principally through the epineural sheath.

Every care was taken to handle the nerve as gently as possible. A piece of Cargile membrane was wrapped around the repaired nerve, extending from a point above the upper divided fibers downwards to a point about half an inch below the distal junction. The wound was then washed with warm saline and the wound closed. A small catgut drain was placed through a stab wound of the skin to the inner side of the forearm, as there had been considerable traumatism by the various splittings. The arm was dressed with the fingers flexed and placed on a splint.

There was considerable discharge from the wound for the first few days, and it was nearly three weeks before complete healing occurred. Slight passive motion was begun at the end of ten days. The patient left the hospital with instructions to exercise the fingers and massage the hand and forearm. For the first two months little progress was made, but after that he began to gain power in flexing the thumb and fingers, but sensation to touch did not return until about the sixth month.

At the end of a year the patient could distinguish pain and

temperature to a slight extent, the fingers presented a more normal appearance, the skin having quite changed its appearance, and there was a marked improvement in the motion of the fingers. After eighteen months there was almost complete restoration of function. The muscles of the ball of the thumb had increased in volume with the exception of the *opponens pollicis*.

The patient could perform the various motions and manipulations very well indeed. The fingers could be separated and the hand closed. The sensations of touch and pain had returned and were about normal. The perception of heat and cold was not so acute. He seemed to recognize cold better than heat. During the cold winter weather the portion of his hand corresponding to the cutaneous supply of the median nerve would get colder than the corresponding parts of the other hand. He stated that it would also become purplish in color during the cold weather. This would indicate that vaso-motor nerves had not entirely recovered. The skin on the index finger has a tendency to crack, especially at one point where he had previously burnt it.

After section of a peripheral nerve, complete degeneration takes place in the distal segment. Even if the nerve be immediately joined no primary union is secured.

As to the method of regeneration three principal theories are held.

According to Waller and his followers, new axis cylinders grow down from the end of the upper nerve segment. Bethe holds that regeneration takes place from a proliferation of the nerve corpuscles in the sheath of Schwann and complete nerves are then formed. Marguliers (1) after a careful series of experiments came to the following conclusions:

1st. After division of the peripheral nerve there is a degeneration of the distal portion, in which the axone and medullary sheath disappear completely.

2nd. The nerve corpuscles of the sheath of Schwann increase in number and size, and form a new specific nerve fibre.

3rd. In this premature state the nerve, if kept separated from the proximal nerve end, atrophies.

4th. When joined to the proximal end it becomes differentiated into axis cylinder and medullary sheath.

5th. Autogenetic regeneration, *i.e.*, the complete formation of a nerve, does not occur if it remains separated from the proximal end.

6th. Every nerve regeneration is autogenetic at first, inasmuch as the fundamental structure of the nerve is built up from the nerve corpuscle of the sheath of Schwann.

Although we cannot be certain as to the method of regeneration, there are certain points which are proven. If a nerve be sutured

shortly after division and union takes place without infection the function of the nerve is shortly restored, and as a rule in a year or two practically complete return of the function is established. Usually the younger the individual is the earlier the repair, although this is not invariably the case. Bardenheuer (2) mentions three cases in which the hypoglossal nerve had been anastomosed with the paralyzed facial nerve where the function began to return in the fifth, fourteenth and twentieth days respectively.

In these cases the facial paralysis was of long standing, viz., six, fourteen and twenty-two years. In two recent cases, on the other hand, no improvement had appeared at the end of six months. Where one nerve is grafted into another the ends can be brought into immediate coaptation, and the fibres in the proximal end grow in the line of least resistance. After an amputation the central ends of the divided nerves send out new nerves, which curl up in themselves and then form the bulbous end. When a nerve has been injured and the two ends cannot be brought into apposition, various procedures have been tried with more or less success. The closer the two ends are brought together the quicker will the function be restored, provided always that no obstruction be placed between the ends. There appears to be a chaeomotactic substance thrown out which facilitates the growth of nerve fibrils. Some have placed catgut or silk strands between the ends, as has been successfully done in cases of destroyed tendons. Auffenberg (3) reports a case operated on by von Eiselsberg, where, after the incision of a neuroma of the median nerve, the two ends were tacked on a bridge of frayed catgut and silk strands four centimeters long. Nine days later the application of a strong Faradic current was felt in the fingers. A report of this case several years later showed fairly good motor power, but sensation was imperfect. The turning down of a flap from the proximal nerve has also given fairly good results. A very important point is the protection of the injured nerve from the ingrowth of connective tissue. For this purpose tubes of gelatine, magnesium, Cargile membrane, the inside lining of an egg shell have been successfully used.

Hashimoto and Toknoka, in reporting nerve injuries in the Russo-Japanese war, speak highly of tubulization of the nerves with arteries and veins from freshly killed calves (Formitti's method.) The arteries and veins are taken from the calf under aseptic precautions, placed over glass rods, hardened in five to ten per cent. formaline solution for forty-eight hours. They are then washed in running water for twenty-nine hours, boiled for twenty minutes, and preserved in ninety-five per cent. alcohol. During the operation the nerve is prepared, the vessel slit up, placed around the nerve and then the slit stitched up with fine catgut. A free channel is thus left for the new nerve fibrils to grow down into the

distal end. Where possible the nerve was surrounded by muscular tissue.

Resection of bone has also been done by several surgeons in order to approximate the nerve ends, and the results have been good. Various lengths of nerve have been bridged in without nerve suture. Horsley reported a case where one and one-fourth inches had been repaired without graft or suture.

In the case here to-day the defect was repaired by a graft from the proximal end. The graft necessarily degenerated, but it formed a good median for the proximal nerve fibrils to reach the distal end. It seemed preferable to swing down a graft from the upper end, as the ends could be more accurately joined, and hence would form less obstruction to the new nerve fibres. I have been unable to find any reference to a similar procedure in the literature, although heterogenous grafts have been used without success.

OPENING ADDRESS DELIVERED BEFORE THE SECTION ON
MEDICINE OF THE ACADEMY OF MEDICINE, TORONTO,
OCTOBER 12, 1909

BY HARLEY SMITH, M.B., CHAIRMAN.

THE study of the History of Medicine has been sorely neglected in our colleges. The History of Art is systematically studied, likewise the History of Philosophy. But few of our graduates know anything of the progress and development of medicine. This thought was suggested to me on reading in one of the European journals that a publication had been recently issued dealing with the School of Salerno. I was led to get some light on this ancient institution. What follows, is derived largely from one of the volumes in the Academy of Medicine.

The University of Salerno was established by Charlemagne in the ninth century. It attained its greatest importance in the twelfth century. Jurisprudence, philosophy, theology and medicine were taught, as in the Arabian academies. There were women professors on the staff. Of Arabian or Nestorian origin was the title of magister or doctor, introduced at Salerno in the twelfth century and solemnly bestowed at the public graduation ceremonies. Before receiving this degree the candidate was compelled to fulfil the following conditions: seven years' study; twenty-one years of age; of legitimate birth; a satisfactory examination in the Hippocratic, Galenic and Arabian writings; a promise to teach correctly, administer no poisons, and treat the poor gratuitously. He then received a ring, a wreath of laurel, a kiss and the benediction. Thereafter he could teach or practise wherever he would.

The tendency of the University of Salerno was eminently practical. Hence, chief stress was laid on symptomatology, dietetics, materia medica and treatment, though physiology and human anatomy were not overlooked. Frederick II. introduced into his medical code a special provision for the teaching of anatomy, and by his orders a dissection was made every five years.

Some prudent instructions were given to practitioners by the teachers. One of these was that the physician should say to the patient that he will recover; to the friends, that he is very ill. If he die, the doctor will have the credit of foreseeing the result. If he recover, his reputation will likewise be enhanced. Another advice was that, if the physician be invited to a meal in the patient's house, he must be modest and temperate, and look after the patient frequently during the meal, lest he seem to forget him amid the pleasures of the table.

The University attained an international importance; for here studied, taught and exchanged ideas, Arabians and Jews, as well as Christians. It was, like Alexandria, one of the historic bridges, over which ancient medical culture took its way during the middle ages from East to West. It was also the medium by which Arabian pharmacy and therapeutics were introduced into the medicine of the West.

The study of the History of Medicine not only enables us to trace the development of medical culture, and thus to appreciate more fully its present progress and comparative perfection; it also makes us realize the splendid work accomplished by the earlier physicians, whose achievements were little short of miraculous, when one considers the tremendous difficulties they had to overcome. The subject for discussion in our section to-night ("Diseases of the Myocardium") naturally leads us to think of William Harvey and the self-sacrificing labors which he carried on for twenty-six long years, in order to dispel the darkness which enveloped so thickly the action of the heart and circulation. And then, after those weary years of patient endeavor for the enlightenmen of humanity, emerged his immortal "*Exercitatio Anatomica de motu cordis et Sanguinis*,"—a work placed under the ban by the strict censorship of the English Government. The author had to publish it at Frankfort-on-the-Main.

All wisdom is not contained in the clever brains of the modern investigator, brilliant though his results may be. We can learn much from those truly great physicians of centuries ago, who, in spite of incomparable difficulties and opposition, laid firmly and securely the foundations of medical science and art. Let us study them more diligently. Let us appropriate to our own use some of their practical wisdom. Can we do better than take as our own that famous precept of Hippocrates, "Life is short, opportunity fleeting, judgment difficult, treatment easy, thought hard, but treatment after thought is proper and profitable."

THE APPLICATION OF COAL OIL TO THE STREETS OF TORONTO

BY CHARLES SHEARD, M.D., M.H.O., TORONTO.

I DESIRE to state that during the past summer I have been conducting experiments with a view to using oil upon the streets for laying the dust. This method was at first forced upon me by having to combat the dust nuisance upon roadways lying upon the outskirts of the City of Toronto, and being so far removed from water mains and hydrants that the haulage became a matter of great difficulty and expense. Upon some of such roadways I used crude petroleum, and with such satisfactory results that I extended the application of the same substance to the macadam roads throughout the city generally.

To allay dust by the application of oil is no new introduction. This was done many centuries ago by the Egyptians. It has also been resorted to by various railway companies for over twenty-five years. It has been used in California, as you doubtless are aware, for large streets and public highways used for general travel; it has also been extensively used in many cities in connection with park boulevards and approaches to parks, and its use in Toronto only varies from this in that it has been used much more generally and with a view to dispensing with the watering cart.

For this work various forms of oil have been used; most of these have been of the petroleum character, and as various kinds of petroleum derived from various sources differ somewhat in their constituents, the results will be correspondingly modified. Thus, for example, they obtain Texas crude oil, which is comparatively free from smell, and probably has not so many tar products in the crude residue as some other oils; whilst in Oleon and various points in Pennsylvania a petroleum oil is procurable which is almost absolutely free from smell, whilst in other localities petroleum is obtained having more or less odor. The readiness of procuring a suitable supply, and securing an oil free from odor, will have considerable influence in connection with its general employment. We are at present using crude petroleum oil, obtained from the British-American Oil Company and from the Canadian Oil Company; the former claim that their oil has an asphaltic base and is probably the more satisfactory. The work is being done by the city itself, and not under contract. The oil is applied now on ordinary macadam roads wherever they exist, whether in a residential section or in some crowded district of the city, and wherever oil may be suitably applied.

The method of application is to apply the oil in several relays, with a few days between. The number of applications required

will vary somewhat according to the road to be treated. If the road is a reasonably good one, free from ruts, and not subject to very heavy traffic, three applications of oil should last from one to three months, and three applications are regarded as one oiling. If, however, the road is a bad one, and subject to being traversed by heavy drays and waggons, it will probably not last longer than one month. The better the road-bed the lighter the dose required. If the road has a considerable grade, and is much exposed to the sun's rays, the oil will dry out sooner than it would if the road happened to be more or less shaded by the trees. In applying the oil it should be lightly sprinkled from a watering cart, driven at a fairly rapid gait over the road, endeavoring in the application to so deposit the oil that the spots of oil will be more or less separate, care being taken not to leave puddles of oil in the depressions or channels. Should such occur, it is advisable to have them swept away with a broom, so that they will not be splashed by traffic or stain the clothing of pedestrians. The road is then watched for three or four days, when the second dose is given and again allowed to rest for awhile, when, after another week, the final application is made. The road is better for being prepared, channels being cleaned out, depressions levelled, and ruts more or less filled up. This, however, is not always practical and the road may be treated without such preparation. Rain does not affect disadvantageously a road that has been treated with oil; such a road will dry more rapidly after a rainstorm. The surface water will speedily run to the channels of the road, and the road will be found to be improved rather than injured by the rain. The sun coming out brings the oil again to the surface and the dust adheres.

We have found upon ordinary roads 1,500 gallons of oil per mile will be sufficient for the three applications, as above described. Should the road be in bad repair, without a satisfactory road-bed, it may require 2,000 gallons. This at 4 cents a gallon, with from \$10 to \$15 for its application, would cost from \$70 to \$75 per mile for oiling, which in our city we have found about 20 per cent. less than watering. The oil has many advantages over watering. A watered road will dry out speedily, and in three hours be as dusty as ever. Moreover, the damage from tracking mud and the general appearance of the road is much inferior after watering than after oiling. Regarding the odor, it has generally passed off in from three to four hours. It is very little complained of, and, to my mind, is not a serious objection. I may say in the City of Toronto during the past summer we have oiled practically all the macadam roads capable of being oiled within the city, and our citizens generally express themselves as being highly pleased with the innovation, and we have found, after including the cost of the oil and its application to the road, it has been less expensive and more satisfactory than the old-time system of watering.

Proceedings of Societies.

THE AMERICAN HOSPITAL ASSOCIATION

THE 11th Annual Meeting of this Association was held in Washington, D.C., September 21st to 24th, Dr. John M. Peters, Superintendent of Rhode Island Hospital, presiding. The attendance was about the same as at the meeting in Toronto last year. The Association has about 600 members. It meets in St. Louis next September.

The greeting to the capital was presented by Rear Admiral Rixey, Surgeon General, United States Army. Lieut.-Col. W. H. Arthur, of the United States Army Corps was also present and described the United States military hospitals; while Rear Admiral H. Ross, of the United States navy gave a fine description (accompanied by lantern slides) of the new naval hospital at North Chicago, Ill., as well as of the barracks there for the training of the sailors in the navy.

A paper on Mexican hospitals was not presented owing to the demise of the gentleman who was to read it—Bertram E. Taylor, Esq., a Boston hospital architect of high repute, who probably has planned more hospitals than any other American architect.

Mr. Del Sutton, Editor of the *International Hospital Record* of Detroit, was not able to be present, but sent his paper—"The Hospital and the Public," which was read. Mr. Sutton holds that the public should be informed by hospital authorities of the inside working of the hospitals; that if such information is fully and freely given there need be no trouble about hospital deficits.

Dr. Sarasen (who was absent) was down for a paper on "The Terraced Pavilion, a New System for the Construction of Hospitals and Sanitoria." Though it was not presented, Dr. H. B. Howard, of Boston, who made the report on hospital construction, emphasized the importance of this new feature in construction. In that the terrace on the roof of the lower storey forms an airing balcony for the patients in the second storey. This is important as now-a-days patients of all sorts are being ordered out of doors. This being the case it is desirable to have them as convenient to the ward as possible, for obvious reasons. To try out this open air business Dr. Howard took to it himself, and after a year of it finds it very enjoyable and good for his own

health. Dr. Howard, it may be remembered, was one of the experts employed by the authorities of the General Hospital to go over the plans of the new building.

R. W. Coriom, M.A., M.D., LL.D., a prominent western educationist and hospital superintendent, sent a paper on "Suggestions in Connection with Hospital Construction," which was read. It was very pithy, but did not contain much new matter. The one new point he did dwell on was the advisability of using inclines instead of elevators and stairways in hospitals. These latter he would not have in at all. The advantages of the inclines are that convalescing patients, patients with crutches, patients on chairs and stretchers can be taken up and down inclines much more easily and safely than they can up and down elevators and stairways. Then they are much safer and more convenient in case of fire.

Dr. Charles P. Emerson, late of Johns Hopkins, and the author of the splendid book on clinical pathology, now superintendent of Clifton Springs Sanitarium, N.Y., gave a very fine address on the construction of hospitals. Dr. Emerson's view point is that each hospital should represent an idea, that it should be specifically built for a certain sort of work, that it should be architecturally as well as scientifically up-to-date. Many hospitals were architecturally many years behind the times. Dr. Emerson contrasted the English children's hospitals with the German and French to the former's disadvantage. Though infinitely cleaner the occurrence of epidemics was several times as great. Why? The use of stone floors as opposed to wood and the better segregation of the children in the ward, as the result of a closer and more careful study of the family history—the proper placement of the immunes and the non-immunes to render contagion less possible. More attention should be paid to closets and pantries—here are where the glass and tiles should be placed—more important here than lavishly in the operating rooms.

Dr. S. S. Goldwater, ex-president of the Association, and superintendent of the big Jewish hospital in New York, presented an exhaustive paper on "The Appropriation of Public Money for the Partial Support of Voluntary Hospitals in the United States and Canada." Dr. Goldwater's statistics will, when published, rather startle the average layman, when he notes the tremendous amounts of money appropriated for hospitals. Dr. Goldwater quoted from Dr. Bruce Smith's report and commended the method adopted in Ontario. He seems to favor the plan of having the ordinary voluntary hospital look after the sick poor, such hospital to receive municipal government assistance when needed, rather than the plan of a municipality having its own hospital for the care of its poor. Dr. Bruce Smith

ardently supported Dr. Goldwater's contention, while Mr. Homer Folks, Secretary of the State Charities Aid Association strongly supported the other side. The members of the Association are divided on the question, some holding that the poor sick are entitled to municipal or governmental care the same as the insane and paupers, or as children who are educated at the public expense.

"Hospitals from the Patients' Point of View" was, by proxy, ably presented by Dr. Gilman Thompson, of New York City. In this Dr. Thompson pleaded that patients should be put into smaller wards so as to allow for segregation. He harangued against the placing of a delirious patient at the side of a nervous case; or a case of pneumonia next a typhoid, etc., etc. Dr. Thompson holds that the routine and red tape required by the hospital is often detrimental to the patient—that too often the best interest of the patient is lost sight of by the nurse. In a somewhat related paper Dr. Brush, Superintendent of the New York Postgraduate Medical School, took a stand in favor of "the patient with moderate means." In this he advocated the semi-private wards and the moderation of all fees, hospitals, radiographers, anesthetists to suit the purse of the patient.

Dr. Thomas Howell, the recently appointed superintendent of the New York Hospital, described a cost system for hospitals which was inaugurated at Worcester City Hospital. Large sheets were displayed containing per capita per day cost of the different items, such as food, heat, light, training school, internes, etc., etc. This system was very useful to the board who were men who conducted large businesses and kept track of cost in their places in this same way. Dr. Brown, of Toronto, discussed this paper, citing figures to show that this cost accounting is a great comfort to a superintendent, in enabling him to know what articles are being requisitioned for in excess of normal and of checking this, if extravagant.

Dr. R. M. Phelps, assistant superintendent of the State Hospital, Rochester, Minnesota, contributed a paper on "What do Justice and Present Conditions Demand in the Way of Law and of Education of Nurses." The writer of the paper advocated strongly the two year course of training, and opposed the plan of teaching nurses so much that was not really needed in the practising of the art. The Association itself, during the past year, had taken up the question of nurse training, bringing in a report which was unanimously adopted.

Being of so much interest to the medical profession we reproduce it below somewhat fully.

J. N. E. B.

Selected Articles.

STYPTICIN

STYPTICIN is a yellow crystalline powder, readily soluble in water, and owes its great popularity to its well known remarkable *styptic* properties. To disguise its bitter taste it is also put up in sugar-coated tablets, each containing 0.05 gram ($\frac{3}{4}$ grain) of Stypticin. Besides its *hemostatic* properties, Stypticin possesses a *sedative* influence, and to a small extent an *anodyne* action.

The *general styptic action* of Stypticin depends upon central influences, a contraction of the vessels themselves does not take place. Some experimenters even assert that Stypticin causes a dilatation of the pulmonary vessels and a reduction of the blood pressure, and to explain the *local styptic action*, it is generally accepted that Stypticin exerts a distinctly specific action on the vaso-constrictors.

It is tolerated in comparatively high doses without any deleterious results, even its protracted use, extending over several weeks, never gave rise to any unpleasant by-effects, a conclusion which applies to the *intramuscular* injection of the remedy, the employment of sterile solutions being of course understood. In hemorrhage of the womb and its appendages, it displays at least the same marked astringent properties as exhibited by ergotin and hydrastis, but surpasses these by the uniformity and regularity of its action.

Stypticin has proved most efficient in numerous cases of *endometritis* and *metritis chronica*, in persistent bleeding after curettage, and in hemorrhage arising from *uterine gonorrhoea*.

Its use is further recommended in cases of hemorrhage due to *imperfect involution of the womb after birth or miscarriage*, or caused by certain forms of *misplacement of the womb*. In all such cases the remedy renders most excellent services.

The same applies to the use of Stypticin in *embryonic miscarriages*, which often take the form of violent menstruation, and to hemorrhage due to *threatened abortion*; in both cases practice has shown that its administration neither calls forth labor pains nor causes abortion.

The preparation can be prescribed generally with satisfactory results in cases of hemorrhage due to *myoma*; it is however advisable to administer large doses a day or two before the hemorrhage

sets in. Favorable results were also obtained in cases of hemorrhage caused by *misplacement of the womb*, accompanied by inflammatory processes in its vicinity. Stypticin exercises a *locally sedative* action on the genital tract in cases where the womb and its mucous membranes are in a state of irritation owing to disease in the surrounding parts or to a pathological condition of the muscular tissues.

No less favorable is the action of Stypticin in *menorrhagia* caused through pelvic cellulitis or inflammation of the appendages. In all cases of this kind scarcely a single failure has been known to follow the use of Stypticin; the pains disappear and do not recur. *Profuse and protracted menstruations* are always diminished. An equally reliable effect may be expected in *consecutive metrorrhagias*. The administration of Stypticin is further attended with success in the treatment of *uterine bleeding in consequence of sluggish discharges*, following upon operations performed in the appendages, as well as in uterine hemorrhage complicated by inflammatory processes in the appendages.

In the opinion of many prominent authors, as Stypticin far surpasses all the known internal hemostatics and does not cause any contraction of the womb, it is admirably adapted for use in cases of *hemorrhages of oophorogenic origin*, as long as they do not result from hyperplastic changes of the mucosa uteri.

Excellent effects are to be observed in instances of traumatic perimetritis and parametritis, menorrhagias coupled with chronic oophoritis, in *fungous and parenchymatous metritis* as well as in *catarrhal salpingitis and hematosalpinx* so often complicated by *retroflexio uteri*.

Very favorable results are obtained in *true climacteric hemorrhage*, provided that no other, especially malign changes, are the cause. By using comparatively large doses the effect is generally permanent. Stypticin proves to be most effectual in the treatment of *profuse hemorrhage during menstruation*, especially in the case of abundant menorrhagia and metrorrhagia in young girls during the initial periods, further in irregular periods and in hemorrhage in child-bed and in the climacterium.

THE LOCAL APPLICATION OF GUAIACOL.

SOME years ago the local application of guaiacol, which is the chief ingredient of creosote, enjoyed a considerable reputation as an antipyretic and antineuralgic, and as a means of promoting the absorption of inflammatory exudates. Its period of popularity, however, was of short duration, since it was found that its use

was attended not only by considerable irritation, but also by toxic effects, due to its rapid absorption. For this reason the remedy has been to a large extent discarded, even though it was recognized to possess valuable properties. Lately, however, a new derivative of guaiacol has been discovered which embodies, to a great extent, its therapeutic effects, while at the same time free from its objectionable features.

This preparation, known as monotal, is chemically the methyl glycolic acid ester of guaiacol, and pharmacological experiments have shown that it is easily absorbed by the skin, and capable of producing the physiological effects of guaiacol, but with these essential differences: Monotal does not irritate the skin, and its absorption is so gradual that there is no risk of toxic sequelae.

As shown by the clinical evidence, monotal promises to be a very valuable substitute for the irritating and poisonous guaiacol. Its application to the chest in phthisical patients has been found a valuable local auxiliary to the internal treatment. Equally beneficial results have been derived from its use in other forms of tuberculous, such as tuberculous affections of the joints.

Its analgesic properties have been utilized to advantage in the treatment of various painful affections, such as pleurodynia, sciatica, and the obscure pains from which neurasthenic persons so often suffer. Excellent results have also been reported in chronic affections of the joints of gouty character, and in rheumatoid arthritis. It has also been recommended in cases of phlebitis.

Owing to its lack of irritation, monotal may be used in the pure state, either rubbed in or painted on, according to the sensitiveness of the parts, the amount at each application varying from one-half to one dram in adults, and correspondingly less in children.

LEUCOFERMANTIN

(Antiferment Serum according to Dr. E. Müller of Breslau).

RECENT research work on the antitryptic body present in human blood and in the hydrothorax and ascites fluid has been considerably advanced through the discovery by E. Müller and G. Jochmann (in the clinic of Prof. v. Strümpell) of a simple method for the recognition of the albumin-digesting leucocytic ferment occurring in the polymorphonuclear cells. At the same time E. Müller and others were able to prove that this antiferment to the tryptic ferment of pus or leucocytes might advantageously be applied in therapeutics in all inflammatory processes accompanied by suppuration and

fermentation in which a too extensive and therefore dangerous destruction of tissue is to be prevented.

The first experiments were conducted in Küttner's Surgical Clinic (University of Breslau) with a sterile fluid possessing a high antiferment index, withdrawn by paracentesis from patients. However, reliable material of this kind is at the disposal of only a few. Experiments were therefore made in my Serum Department to increase the naturally low antiferment content of animal sera by a preparatory treatment of the animals with tryptic pus ferment obtained from man. These experiments proved successful, and it was further ascertained that the action displayed by the tryptic ferment of pus cells or of leucocytes fully corresponds to that of pancreatic trypsin. This fact enables the employment of the leuciferment of human pus in the preparatory treatment of the animals to be replaced by the use of pancreatic ferment, with the result that a satisfactory preparation of constant therapeutic action is obtained.

Merck's Leucofermantin is a normal animal serum, the antiferment content of which has been so far increased as to at least correspond to the antitryptic index of normal human blood serum.

The antitryptic power of Leucofermantin is determined in the following manner: 0.001 gramme of trypsin (Merck) is added to varying amounts of the serum to be tested, and sufficient normal saline solution to make 1 c. c.; one drop of each solution is sown on a Müller-Jochmann plate. Numerous experiments have established that if the solution containing 0.3 c. c. of serum does not digest the albumin of the plate surface sufficiently to cause a visible depression, its antitryptic efficacy—*i.e.*, of the serum under examination, corresponds to that of normal human serum. This is expressed by the index 0.3.

Before being supplied Leucofermantin is not only tested as regards efficacy, but is controlled with scrupulous care to ensure its being sterile, and its harmlessness is established by animal experiments.

According to Müller and Peiser Leucofermantin treatment is specially indicated in all "hot" suppurative processes leading to abscess formation. In circumscribed suppuration with well-defined borders—*e.g.*, abscess of the lymphatic glands, suppurative mastitis, etc., treatment with Leucofermantin leads to a very rapid and complete inhibition of pus secretion. This is accompanied by deferescence, the necrotic process is arrested and healing granulation sets in. Its application materially shortens and simplifies the treatment of localized pyemic conditions, as it necessitates less change of dressings and consequently spares the patient a considerable amount of pain. A slight cut or even a puncture of the suppura-

tive focus is sufficient, thus ensuring a better cosmetic and functional result than following an incision.

In cases of pyemic infiltration and diffuse inflammation where autolysis of the tissues has not yet taken place, as in recent furuncles and carbuncles, the therapeutic effect of Leucofermantin is far less marked. Favorable results, however, were obtained from its application in suppuration of the tendon sheaths, bones and joints, also in abscess of the eyelid and in acute dacryo-cellulitis, especially when the tissue surrounding the lachrymal sac has undergone degeneration. In gynecological practice Leucofermantin is particularly well suited for the treatment of abscesses of the abdominal wall and pelvis.

The preparation is applied as follows: In open suppurative foci Leucofermantin is simply poured into the cavity, otherwise a small incision is made and Leucofermantin injected, if practicable after draining the abscess by means of an aspirator. Where possible the part is dressed with gauze soaked in Leucofermantin and covered by a moist dressing. It is important that the Leucofermantin be brought into contact with the whole of the suppurating surface. There is a complete absence of harmful secondary effects. Leucofermantin is supplied in bottles of 20 and 50 c. c. It is best stored in an ice safe.

ABSTRACTS

The Sphenoidal Sinus.—J. A. Gibson, Buffalo (*Journal A. M. A.*, December 19), describes the anatomy and variations of the sphenoidal sinus, a cavity of which he thinks the importance has been underestimated and its study neglected. He has investigated eighty-five sphenoidal sinuses in the human skull, with special reference to the position, size and extent of the sinus, the average thickness of its walls, its relationship in size, if any, between it and the frontal and maxillary sinuses, the relationship, if any, between a large posterior naris and a small sphenoidal sinus, or the reverse, the establishment of certain averages between anatomic points, obtainable in the living subject, which might be of assistance to the surgeon, and to the recording of anomalies and their possible influence on surrounding parts. He finds no definite relationship in size between the different bony sinuses of the skull, nor anything definitely characteristic between the sizes of the posterior nares and the sphenoidal sinus. The size of the posterior nares is a very poor guide in estimating the size of the sinus. Any operation approaching the sinus by way of the postnasal space and from below would be unsatisfactory in many cases from the fact that the floor is sometimes quite thick, and that the sinus

is often situated far forward. Any rule for the passage of a catheter into the sphenoidal sinus must necessarily be imperfect if for no other reason than that the nasal turbinates vary greatly. Added to this is the liability of variation of the sinus opening. Adding the minimum distance from the anterior superior nasal spine to shortest antero-posterior sinus, Gibson gets as a result 57 mm. (2 1-2 inches). This will give the least distance from the anterior nasal spine to the posterior wall of the sinus, and furnish a conservative distance to which an instrument may be inserted without fear of entering the cranial cavity.

The Heart in Diphtheria.—J. Howland, New York (*Journal A. M. A.*, December 19), says that the two chief cardiac lesions in diphtheria are the parenchymatous and the interstitial. Fatty degeneration is extremely frequent, varying widely in degree and always accompanying the severer lesions. It may occur at any time in the disease. A much severer degeneration, both focal and general, which affects all parts of the muscle fibre, the contractile elements, the protoplasm and the nucleus, and which leads to the formation of granular detritus and large irregular hyaline masses also occurs. This is only found late in the course of the disease, rarely earlier than the seventh day. The interstitial changes are of two types. In one there are focal collections of lymphoid and plasma cells. In the other there is the invasion of the degenerated and necrotic muscle cells with endothelial cells and polymorphonuclear leucocytes. These are all essentially late changes. Only fatty degeneration is seen before the sixth or seventh day. The early circulatory disturbance is extraordinarily severe, but, thanks to antitoxin, is rarely seen at present. Romberg and Pässler's experiments show that this is due to failure of the vasomotor centre, though undoubtedly the heart itself is affected. The late circulatory disturbances may appear at any time from the second to the fifth week. The first symptoms are usually to be found in the pulse, which drops with the temperature, often to below normal, remaining there or rising and falling again. In a certain percentage of cases it may be persistently high, but either of these means almost certainly myocarditis. At other times the first symptom is irregularity in the force of rhythm, and the former is constantly present and may last for months. The worst prognosis is given in cases with low and constantly falling rate. Heart examination reveals the same abnormalities together with murmurs and evidences of dilatation, and here the personal equation of the examining physician has played a considerable part in their interpretation. We cannot draw accurate deductions at present as to the severity of lesions from the murmur, and it is Howland's personal opinion that dilatation has been diagnosed

too frequently, though it would be wrong to say that it is unusual. A sign of mild cardiac disease of greater value on account of its constancy is the alteration in character of the first sound of the heart, consisting in the more or less complete disappearance of the muscular element of the first sound, making it weak and short and what is usually called "valvular" in quality. Studies in regard to blood pressure are incomplete and unsatisfactory. It is generally somewhat subnormal, and when below 75 mm. always means a serious condition, and below 70 mm. great danger. A progressive fall should excite more concern. General symptoms, such as pallor, apathy or irritability and vomiting, are often much in evidence. Loss of weight is common even in convalescence. The cause of death has not been determined by experiment, but the clinical evidence is conclusive that it is due to myocarditis. Rest and general management are of more importance in the treatment than drugs, from which we can expect little permanent effect, as the myocardial lesions require days and weeks and not hours for their cure. The so-called pneumogastric paralysis is discussed at the close of the paper, and Howland thinks that the postmortem findings almost completely dispose of the nerve as a factor in producing the symptoms referred to, as it seems to be generally degenerated and these symptoms are not common. The symptoms, he thinks, could be better explained by metabolic disturbance from the action of the toxin on the viscera, referring the slow heart and other circulatory symptoms to the concomitant myocarditis.

Alveolitis.—M. H. Fletcher, Cincinnati (*Journal A. M. A.*, December 19), considers alveolitis, commonly called pyorrhea alveolaris, one of the most prevalent and destructive disorders attacking the teeth. Its initial exciting cause is, in his opinion, the formation of tartar about the necks of the teeth. This sets up irritation and invites infection, which destroys the membranes covering the alveoli and dental roots. The infection is most likely to be from the pus-producing germs attacking bone, syphilis and tuberculosis. Fletcher thinks the last-named infection the most frequent, though its microscopic determination is not easy. Syphilitic infection seems to be much less common in these cases than either the pyogenic or tuberculous, though the mouth is a favorite location of other syphilitic lesions. The necrotic process may extend, invading the maxilla and antrum in extreme cases, and sometimes giving rise to severe neuralgic symptoms in regions apparently free from the disease. This Fletcher is inclined to attribute to a periostitis starting from the alveolitis. He goes fully into the treatment, the removal of calcareous deposits and necrosed bone, the description of instruments, etc., and claims that

by proper handling even the advanced cases can often be conservatively treated without the radical operation of extensive removal of maxillary structures as is now so often done by the general surgeon. The necessity of thorough curetting or burring about all teeth where the disease is found, and of more thorough removal if the disease is deep seated, is particularly insisted on. Of course, the general condition and resistance are factors to be considered, and if systemic treatment is required it should be directed toward the restoration of normal health by such means as the elimination from the diet of foods which do not become fully digested or assimilated and the copious drinking of pure water. Any complicating disorders, aside from the local disease, should be properly attended to.

Infantile Digestion.—A. Friedlander, Cincinnati (*Journal A. M. A.*, December 19), has employed Einhorn's bead test in the study of the digestion in very young children, even newly-born infants. While he gives his results in detailed, tabulated form, the principal object of his paper is to describe the method which he found practicable and to point out its value. Einhorn's method, briefly, is as follows: Small pieces of various foodstuffs are fastened to small glass beads by silk thread. The beads are strung together by an additional thread, and the string of beads, with attached foodstuffs, is put into small gelatine capsules. These capsules are swallowed by the patient and the string of beads is later recovered from the stool, the exact time of its passage, between the swallowing and the finding, being noted. If the beads remain in the tract over fifty hours, the results are not considered reliable, because of the possibility of degeneration from the action of the intestinal bacteria. In older children, able to swallow capsules, Friedlander adopted Einhorn's method, except that all of the foodstuffs were enclosed separately in bags of wide-meshed gauze so as to eliminate the possibility of error from their tearing loose from the bead. In young children and infants he used single beads, each with an attached gauze bag, and inserted this, with the contained food, into the end of a previously sterilized piece of rubber catheter. This was then pushed down into the child's stomach and the bead and bag pushed out by an olive-pointed Otis bougie into the stomach. The procedure was found surprisingly easy and harmless. While he can draw no sweeping conclusions from his limited number of experiments, it seems to him that the method is a very promising one for the study of the digestive processes in infancy and early childhood. The results of the experiments with sweetbread, with special reference to nuclear digestion, and the proof thereby afforded of pancreatic activity from birth, are certainly suggestive. A profitable field

of inquiry may thus be opened. The test may also be found clinically useful in infancy by indicating the special form of food that is imperfectly digested, and pointing out a rational alimentary therapy. A number of tables accompany the paper.

Amebic Dysentery.—The necessity of surgical treatment for all cases of chronic amebic dysentery is insisted on by J. M. Holt, Brooklyn, N.Y. (*Journal A. M. A.*, December 19), *i.e.*, in all cases in which, after a fair trial of other treatment, the *Ameba coli* could still be found in the stools. All observers, he says, are agreed as to the tendency of the disease to resist treatment and to run on indefinitely, and we should not permit this when a simple surgical operation will clear up matters at once. There are altogether too many patients in the country going about uncured for years, and he asks: Has appendicostomy ever been proposed to them? While there may be a debatable ground for the adherents of the medical treatment of appendicitis, there is none in this case. A case, he holds, may be considered no longer acute and amenable to medical treatment after it has lasted nine months or a year. In his opinion, moreover, there is no known drug which, given by the mouth, can be tolerated in the upper digestive tract in sufficient strength to destroy the ameba in the colon. In conclusion, he suggests the possibility that the *Ameba coli* may not be equally pathogenic to all, as some do not contract the disease after exposure. The so-called *Entameba coli* may be the form of parasite found in the stools of individuals not thus susceptible. The so-called *Entameba dysenteriae* may be the same parasite developing greater activity, coincident with morphologic changes in an individual having a susceptibility to the organism. He asks whether it has ever been found in a case presenting no clinical symptoms.

The Canadian Journal of Medicine and Surgery

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Editorials.

TYPHOID FEVER IN TORONTO TRACED TO INFECTED WELL WATER

DURING the month of September, 1909, seventy cases of typhoid fever were reported to the city medical health office, as against twenty-two cases in September, 1908. This increase is attributed to the use of infected well water in the annexes and newer sections of the city. Probably the dry weather of the past summer and a low level of the ground water may have been contributory factors

to the development of typhoid fever among the users of well water in or near Toronto. Nineteen of the cases were infected with typhoid fever, before coming to Toronto. There is, therefore, no reason to feel anxiety about the purity of the city water supply. It may also be said that, with the extension of this public water supply to the outlying portions of the city, wells will be closed and typhoid fever will, in these instances, become a thing of the past. Physicians, who practised in Toronto thirty and forty years ago, when well water was in very common use, will remember that a home brand of typhoid fever of great severity was then prevalent in sections of the city where it is not reported at the present time. And yet, even in those ancient days, it was possible to raise a family in a Toronto home, so that not even one of its younger members would catch typhoid fever. Apart from natural resistance to the disease, the saving sanitary precautions on the premises were: A well with a good-head of water, protected by a sheathing of blue clay to the depth of four feet from the surface, and the removal of night soil from the privy vault on the premises, at frequent intervals.

Owners of dwellings not supplied from a public water supply should be obliged by health enactment to look to the purity of the well water on their premises. If a case of typhoid fever occurs in a dwelling supplied with well water, the owner should be obliged, in order to escape liability, to show that the well water on his premises is pure; if it is proven to be infected, the owner of the premises should be held liable for the expenses caused by the outbreak of typhoid fever. Legislation of this type would reduce the scandalous prevalence of typhoid fever in Ontario to rather slim dimensions.

J. J. O.

RAMPANT ANTI-ALCOHOLISM

WE learn from the pages of the *British Medical Journal* (September 11, 1909) that the Hungarian Ministry of Agriculture provided each member of the International Congress of Medicine (Budapest, August 29th to September 4th) with a case containing two small bottles of Tokay wine, together with a booklet describing the manner in which this wine is produced, its origin, and the value as a therapeutic remedy, which it is supposed to possess. The

present was intended as a mark of hospitality, and even though the distribution of it and the pamphlet were intrusted to the National Association of Hungarian Wine Growers, the fact that the matter was supported by the Hungarian Ministry diminished the force of any suggestion of trade advertisement. Mark the sequel. A letter written in the name of the Anti-Alcohol Association, and signed by the President (Sir Victor Horsley) and the Secretary, (Dr. Holitscher, of Pirtenhammer, near Karlsbad) was sent to the local press, calling on the members of the International Medical Congress to refuse to accept the present, and pointing out that the article dealing with the therapeutic value of the wine was written by the brother of the Director of the Wine Growers' Association. The letter stated in plain, blunt language, that, since alcohol can no longer claim a place in therapeutics, and since this present bore the impress of trade advertisement, it must be beneath the dignity of the medical profession to support this iniquitous traffic by accepting the bottles of wine. The *Pester Lloyd* published the letter in full, but expressed the opinion that the suggestion of the "English Abstainers" was unfortunate and discourteous. Other papers referred to the letter, but refrained from publishing it. The fact that the President of the Anti-Alcohol Association is an Englishman seems to have led many to visit their disapproval on the English members of the Congress, though this feeling was not shared by the majority of the Hungarian and other medical men at Budapest, nearly all of whom, it is said, accepted the offering. And so Sir Victor Horsley and Dr. Holitscher, received a rebuke from the members of the medical profession at Budapest, because, in an inopportune time, and in a blatant fashion, they undertook to fill the ears of their confreres with the strident notes of an anti-alcohol pronunciamento and interfere with their enjoyment of a glass of good Tokay. Besides, the bad taste of exploding such a bomb in Budapest. For centuries the Hungarians have prided themselves on the quality of Tokay wine, which in the opinions of connoisseurs is one of the most perfect wines in the world. All wines contain a percentage of alcohol, some more, some less. Hence the antagonism of the President and Secretary of the Anti-Alcohol Association to Tokay. Surely a couple of bottles of sound Tokay per man could not upset the gravity of the International Congress of Medicine. J. J. C.

**SHALL OSTEOPATHS PRACTICE MEDICINE IN ONTARIO
WITHOUT A LICENSE FROM THE COLLEGE OF
PHYSICIANS AND SURGEONS OF ONTARIO ?**

A TEST case will be sent to the Court of Appeal to decide whether the practice of osteopathy is a breach of the Medical Act. Col. Denison decided to take this action after hearing the evidence against Dr. Robt. B. Henderson, charged with "prescribing, attending and operating" without being a duly qualified practitioner.

The case for the Crown was based on the evidence of two private detectives, who went to the defendant at his office, 44 Canada Life Building, to secure his advice. Dr. Henderson would not give medicine and advise drugs, but he gave the osteopathic treatment. The prosecution, represented by Mr. J. W. Curry, argued that a man could practice medicine without giving applications of drugs or other substances, and the magistrate seemed inclined to accept this view.

"It is a very important question," said his Worship, "and should be finally decided. It is a good opportunity to send the case to the High Courts and have the rights of the men who practice osteopathy settled."

An adjournment was accordingly given, and a stated case will be made out. The defence claims that the Medical Act does not touch the practice of osteopathy.

The view which obtains among physicians in Ontario as to the practice of osteopathy is simple. Examination of a patient, made in order to learn the cause of illness, or infirmity, must precede treatment, and such examination cannot be made legally in Ontario, for hire or hope of reward, unless by a licensed practitioner. The treatment which may be ordered for the patient, after a diagnosis has been made, is in accordance with the medical creed of the practitioner consulted, be he allopath, homeopath or osteopath. In the public interest and to prevent fraud, all persons who practise the art of healing disease in Ontario should be licensed under the Ontario Medical Act.

J. J. C.

THE ACTION OF SULPHATE OF MAGNESIUM IN DISEASE

For depletion through the bowel, the best drug in the pharmacopœia is the sulphate of magnesium. It may be given in teaspoonful doses at intervals of an hour until several liquid stools have been produced. The valuable results in the cure of disease obtained at German spas are largely due to the continuous use of small doses of sulphate of magnesium and other salines in the waters. Equally good results may be obtained in the home of the patient, at much less expense, by a proper use of this salt. The last remark applied more particularly to the treatment of lumbago, myalgia and chronic rheumatism, which often yield to the administration of small doses of sulphate of magnesium, given at short intervals.

Sulphate of magnesium increases the amount of fluid in the alimentary canal. Butler, in his *Text-Book of Materia Medica, Therapeutics and Pharmacology*, says: "This increase of fluid is not a secretion, but a result of the high osmotic equivalent of this salt, which tends to draw the body fluids into the intestines, while hindering, to a certain extent, absorption of fluid from the intestines." Whether the drawing of the body fluids into the intestines is a result of osmosis or of a stimulated secretion, derived from intestinal glands, is yet a disputed question. Most observers are, however, agreed that sulphate of magnesium is an efficient purgative because it retards absorption, thus keeping the intestinal contents fluid and facilitating their passage along the alimentary canal. Wallace and Cushing (Ann Arbor) contend that it is the acid ion, the sulphate in the salt, which is the purgative agent. Thus, sulphate of magnesium which is cathartic is less readily absorbed from the intestines than chloride of magnesium, which is only feebly cathartic. Besides, the acid ions, which form insoluble salts, such as the combination of a sulphate with calcium, are absorbed with difficulty, and when combined with magnesium make a most effective cathartic. The suggestion is, therefore, obvious that when sulphate of magnesium is administered the ions which are concerned in purgation bring it about by preventing absorption from the bowel, and that this in turn results from the formation of insoluble salts, which cannot be absorbed.

The magnesium element itself would also appear to be involved in the production of catharsis by sulphate of magnesium. Sulphate of magnesium and citrate of magnesium are believed to be more effective cathartics than the corresponding salts of potassium and sodium. Besides, magnesium oxide, magnesium chloride and magnesium carbonate possess cathartic properties. The presumption is, therefore, strong that the magnesium ion is not indifferent in the cathartic process, as are the potassium and sodium ions.

Headaches and neuralgias, caused by acute colds, are relieved by free purgation with sulphate of magnesium. Such pains are caused by pressure on the nerves along the upper respiratory tract, especially in the nose. Removal of this pressure brings prompt relief from pain. Depletion of the circulation, with an elimination of the toxins which produce hyperemia, brings relief from the pressure. Pains occurring at the onset of acute diseases, such as la grippe, can be relieved in the same way. In such cases the pain is supposed to be due to the poisoning of the nerve ends by the toxins of the disease, and not to be due to pressure from hyperemia. Elimination of the toxins and depletion of the circulation give relief.

In inflammations of serous membranes depletion by this salt is valuable. The pain of pleurisy is relieved by strapping the patient's chest with adhesive plaster and depleting his blood with sulphate of magnesium. When pain occurs in a joint, relief can be obtained by adopting similar tactics. Even in peritonitis it is possible to produce good results with small doses of sulphate of magnesium, given at short intervals. Nothing will give quicker relief, for instance, in the pain of appendicitis, than small doses of sulphate of magnesium, given every half hour, day and night, until pain is relieved.

In conditions of sluggish secretory activity, when the kidneys are unable to do their complete eliminative work, sulphate of magnesium is indicated. If it is desirable to cause the disappearance of dropsical fluids from the tissues, its administration is effective. The increased secretion, poured into the intestines, accounts for the efficacy of sulphate of magnesium in edematous conditions.

J. J. C.

MEDICAL JOURNALISM IN CANADA

“AMONG the many problems engaging the medical profession in Canada at present, one of the most urgent is that relating to the medical press. The present state of affairs is as follows: There are nine medical journals published in the country—one in the Maritime Provinces, three in the Province of Quebec (two of which are in French), four in Ontario, and one in British Columbia. Of these the best known are the *Montreal Medical Journal*, the *Canada Lancet*, the *Canadian Medical and Surgical Journal*, the *Dominion Medical Monthly*, and the *Canadian Practitioner and Review*. It cannot be said that, apart from the first named, any of these journals has any serious scientific standing. In fact, they are subscribed to partly on account of the local professional news they contain and partly for more personal reasons. As a consequence the *clientele* of each journal is a very confined one, and no single one appeals to a very large circle of readers. Indeed, it is probable that each of the three London weekly medical journals reaches an audience considerably more extensive than any Canadian journal. There is, it will be noticed, no Canadian weekly medical journal in existence. This lack has been keenly felt of late years, and an active body of physicians, prominent among whom is Dr. McPhedran, of Toronto, have made many attempts to remedy it. The most obvious course would seem to establish a journal under the auspices of the Canadian Medical Association, and this body has actually agreed to the proposal.”

The above article appeared on June 2nd last in *The Medical Press and Circular*, England.

The Medical Press and Circular has, we are sorry to say, started on the lofty career of Busybody and Gossip. What a pity! It always seemed to us, in this lovely land where things are doing, and minds broadening, that in sleepy old England, the land where things are done, the pose of the medical journalist was one of dignity, not “messing” around (to use an English expression) in other people’s business. We are sorry that the gentleman representing the *Medical Press* has not been quite correctly informed. *The Montreal Medical Journal* is valued for what it is. The four journals mentioned, published in Toronto, cover a wide field and command the respect scientifically and the support financially of almost the entire medical profession of Canada, and have a comparatively large circulation in the United States.

As for Britishers, we always thought they only became deeply

interested in colonial affairs and magazines when they wanted something—a Dreadnought—our Boys to place them in front in battle, or perchance to send us a Governor-General. Fancy our importance as medical journalists. when we get a “mention” even by a doorkeeper in the great English house of medical journalism! We sincerely hope that *The Medical Press and Circular* has a wider field of circulation than we thought it had, namely, its own town, because it might publish our name abroad to the children of men now sitting in darkness. We wonder if that publication ever heard the story of the cook who was a witness at an inquest and demanded an increase in her wages from her mistress next day, saying: “M’am, me name is in the papers; it’s the proud woman I am this mornin’.”

Toronto comrades Three, dip your quills in joy ink and let us raise our subscription price. We have waked up this morning to find ourselves famous.

Thanks, *Press and Circular*. A health to you!

W. A. Y.

“THE UNSATISFACTORY CANADIAN PATENT MEDICINE ACT”

UNDER the above caption the editor of *The Journal of the American Medical Association* has taken upon himself, in his issue of Sept. 25th (page 1034), quite uninvited, to criticize the new Canadian Patent Medicine Act, which came into force last April. He claims that “the law has been framed with a view rather to appeasing public clamor than to furnishing public protection,” and refers to different clauses in the Act as “Joker Number One,” “Joker Number Two.” Just why the editor of the *Journal of the A. M. A.* takes upon himself the office of Major Domo of the Canadian drug laws is a query. Especially so, in view of the quite unnecessary and ‘resultless’ fuss he has tried to stir up in his own country.

We are at a serious loss to learn the ingredients of the self-esteem nerve tonic this gentleman takes. It really should be writ large on the label and filed away in the archives of drugdom.

All physicians in Canada are a unit on the subject of pure drugs and proper public protection, and the drug houses of reputable name comply with, not only the letter, but the spirit of the

law, both in Canada and the United States. Then why this wish on the part of the writer of the article referred to to question the wisdom of the lawmakers and degrade by suspicion the law-observing drug manufacturers? We wish respectfully to state that Canada is capable of being "mistress in her own house." Also, sir, the "legislative gold-bricks" of which you speak are not handed out. Canada is wise; her gold-bricks are kept out of sight for a nice little present for the Yankee son-in-law.

W. A. Y.

THE OPENING MEETINGS OF THE ACADEMY OF MEDICINE

THE opening meeting of the Academy of Medicine, Toronto, took place in the Biological Building of the University of Toronto, Queen's Park, on the evening of Tuesday, October 5th. Dr. Alexander McPhedran, the newly-elected President, was in the chair, and was accompanied to the platform by Dr. C. J. Hoover, of Cleveland, Ohio. The meeting was well attended, over one hundred Fellows being present. Dr. McPhedran delivered his Presidential Address, which we reproduce in this issue. The Address is practical and contains many valuable suggestions as to the Academy and its future deliberations, the carrying out of which augurs well for the success of a most worthy institution. The subject of the evening under discussion was "Gastro Duodenal Ulcer," and was treated under three heads: (a) Diagnosis, by Dr. W. P. Caven; (b) Medical Treatment, by Dr. C. J. Hoover, of Cleveland, O., and (c) Surgical Treatment and Indications Therefor, by Dr. Ingersoll Olmsted, of Hamilton. The different papers were most interesting, instructive, and, combined with the discussions which followed, made a splendid evening's programme.

The first meeting of the Section of Medicine took place on Tuesday, October 12th. Chairman Dr. Harley Smith presided, with Dr. N. K. Wilson as Secretary. Papers were presented by Dr. J. T. Fotheringham, Dr. H. B. Anderson and Dr. V. E. Henderson, their subjects being, "Diseases of the Myocardium," "Ruptured Compensation and Its Treatment," and "The Effects of Some Ordinary Heart Remedies in Myocardial Diseases." The Chairman delivered a short address dealing with the history of medicine, and, without the aid of notes, interested his audience,

which was exceedingly good, in his subject with his choice of language and clearness of diction. We give those of our readers who were not present the benefit of reproducing on another page of this issue Dr. Harley Smith's address.

We trust that the winter's work at the Academy will be entered into with zest on the part of every Fellow, and that, as suggested by the President, as much, if not more, time be devoted to discussions than formerly.

W. A. Y.

THE ONTARIO MEDICAL COUNCIL

THE profession at large in the Province of Ontario will be glad to know that Doctor Spankie, ex-President of the Council, represented that body at the meeting of the four Western Provinces at Banff. It was, of course, unfortunate that the Council had not wakened up a little earlier, so that the Councils of the Western Provinces could have had representatives from Ontario meeting with them, on the understanding that there was to be a federation of five Provinces instead of four. The presence of Doctor Spankie at the conference, however, will have a very good effect, we are certain, in convincing the Councils of the Western Provinces that Ontario is prepared to join with them, and that as soon as that conference has reported to the respective Councils represented, there will be another meeting called, at which, we trust, Ontario will have full representation, and will be able to get into the federation. But we would like to point out to the Ontario Medical Council that it must be constantly on the watch for any move that may take place, and it might be well for it to consider, as we suggested last month, the re-opening of the discussion of federation among the Provinces, or of the Roddick Bill itself. The latter, we feel, is above all the thing to be desired.

s.

EDITORIAL NOTES.

Treatment of Uremic Coma.—The late stage of uremic coma is, at the best, a desperate condition, for which little can be done. While, however, it may not be possible to rescue a deeply-poisoned patient from this perilous state, useless drugs and obsolete methods of treatment should be withheld. Such a therapeutic attitude may redound more to the science of the doctor than to the curing of the patient, but, looked at even by a lay bystander, it is more seemly that good sense and scientific knowledge should illuminate the therapeutic scene rather than hysteria or quackery. Two drops of croton oil, diluted with two teaspoonfuls of milk, or one-sixth of a grain of elaterium, should be given at once. Half a grain of sulphate of morphia, with one-hundredth of a grain of sulphate of atropine, should be injected subcutaneously. If the fits recur, another quarter of a grain of morphine, with atropine 1-200, is given in three hours' time. These doses of morphine and atropine are repeated, if necessary, every two hours, up to two grains of morphine and one-twenty-fifth grain of atropine in the twenty-four hours. Writing in "Index of Treatment by Various Writers," Samuel West says: "It (morphine) is probably safer in granular kidney than in acute nephritis, but it can be given without much risk even in the latter." Even in modern times venesection is advised in uremic coma. Why draw the patient's blood, when the uremic convulsions can be controlled by morphine? Thorough and complete catharsis, by pill, draught and enema, are of the first importance in the treatment of uremic coma. If the patient should recover consciousness, a carefully regulated diet, a quiet life under medical supervision, are to be enjoined till life's fitful fever is over.

Tetanus and Vaccination.—In addition to keeping a first-class vaccine farm, with all that such a qualification implies—clean, sound cattle, clean attendants, clean methods of removing and storing vaccine, etc.—care should be taken that the output of a vaccine farm is not contaminated with tetanus. On this point we read in "Practice of Medicine," Osler, 6th edition, p. 127: "Tetanus.—McFarland has collected ninety-five cases, practically all American. Sixty-three occurred in 1901, a majority

of which could be traced to one source of supply, in which R. W. Wilson demonstrated the tetanus bacillus. Most of the cases occurred in Philadelphia. Since that date McFarland tells me that very few cases have been reported. The occurrence of this terrible complication emphasizes the necessity of the most scrupulous care in the preparation of animal virus, as the tetanus bacillus is almost constantly present in the intestines of cattle." In other words, the danger of producing tetanus through vaccination proceeds from the vaccine used. Hence, it is the duty of the vaccine manufacturer to supply a vaccine, which has been tested against tetanus before it is placed on the market. We would go further and say, that no bovine vaccine should be allowed on the market which does not show proof, on the authority of Government experts, that it has been tested against tetanus and found refractory. If the public are to be compelled by law to resort to vaccination, they must have every legitimate guarantee of the soundness of the vaccine employed—its freedom from death-dealing bacteria. Remarks on cleanly methods of vaccination are uncalled for in a medical journal. Some physicians are more careful in their technic than others; but all agree that this little operation should be done in a cleanly fashion. When done, it would be well to see that the spot made in vaccinating is protected with lint or a bandage, in order to prevent the handling of the wound.

Large Hospitals Essential to Medical Progress.—The advantages to the medical profession of a large, well equipped hospital are very great indeed. In addition to the treatment of the patient in the hospital, its influence is educational and benefits the surrounding community. The house staff and the nurses will, sooner or later, minister to the sick in town and country, a large majority of whom will not enter an hospital. The well-classified services of a large hospital give the student, nurse and physician greater experience and a more thorough training. The best work in diagnosis and treatment is produced through co-operation of the visiting staff together with a complete clinical laboratory, where bacterial cultures, blood examinations, etc., can be made, where germicidal sera and antitoxins can be prepared, and where pathological examinations are regularly carried on. Needless to say, a large and competent staff is required to carry out the details of

such varied functions, and it is far easier to have such an extensive staff in a great hospital than in a number of smaller ones. Besides, original experiments can be suitably made in a large hospital, where observation of any particular disease is not limited to a few cases of it, but extends to a large number of cases.

Some Facts About Tea.—According to the late Professor Kenrick, of Winnipeg, the domestic method of making tea extracts theine with greater relative completeness than tannin, a matter of some importance to the household. Besides, green tea contains more tannin than black tea, without reference to the method of making the infusion. These data are brought out in the following figures, which appear in Bulletin 183, Laboratory of the Inland Revenue, Ottawa:

	Laboratory Method of Extraction.				Domestic Method of Extraction.—Kenrick.			
	Number of Samples.	Total Ex- traction.	Theine.	Tannin.	Number of Samples.	Total Ex- traction.	Theine.	Tannin.
Black Teas (averages)	44	31.89	2.47	13.33	23	23.56	2.73	5.20
Green Teas (averages)	19	39.92	2.14	19.47	7	31.38	2.46	9.45

By the domestic method of preparing tea, one understands the pouring of a certain quantity of boiling water on a measured amount of tea, allowing the tea to infuse for a few minutes before it is drunk. By the laboratory method of extracting tea, we are to understand the following: To five grammes of the sample of tea ground to a tolerable degree of fineness, 200 c.c. of water are added and boiled on a sand bath, in a glass flask, for two hours. It is then thrown on a filter, and the residue washed three times with warm water. The filtrate and washings are made up to a definite volume and an aliquot portion is evaporated to dryness at 100 deg. C. The so-called domestic method of preparing tea is not universally adhered to; to put it correctly, there is a right domestic method and a wrong domestic method, the first being the method already described, the second bearing a certain resemblance to the laboratory method of obtaining an extract from tea.

The right domestic method of making tea produces the largest extraction of theine and the lowest extraction of tannin. Working inversely, the wrong domestic method produces a relatively smaller extraction of theine and a very large extraction of tannin. Taken in moderation, theine stimulates the heart, contracts the arterioles, acts as a cerebral stimulant and promotes cheerfulness. Tannin diminishes peristalsis, thus causing constipation, and promotes ill-humor, probably by causing retention of toxins. All women and some men should learn the right domestic way of making tea.

Oiling the Macadamized Roads.—During the past summer, and at present, some of the Toronto streets are treated with coal oil, distributed by means of watering carts. Through the courtesy of Dr. Sheard, M.H.O., Toronto, we are enabled to place before our readers an account of this process. It appears on page 299 of this issue. *Prima facie*, one would say that the watering of street dust, as has been done heretofore, is an effective way of promoting the life of such bacteria as are present in it, water being a powerful solvent of organic matter and a promoter of change in living organisms. The beneficial effect of water applied to the macadamized roads is that it prevents the whirling dust from lodging bacteria in our respiratory passages. Coal oil, sprinkled on the city streets, prevents the dust from assailing our nostrils. It is said to be a disinfectant and parasiticide. The bacteriologists ought to take the question up and give us data, pro or con, as to the inhibiting effects of coal oil sprinkled on city streets on bacillus coli.

J. J. C.

PERSONALS.

Dr. G. Sterling Ryerson has returned from Europe.

Dr. Charles Trow, of Carlton Street, was married on September 23rd.

Dr. J. N. E. Brown spent a few days with Mrs. Brown at Atlantic City the last week of September.

Dr. Arthur W. Mayburry, 569 Spadina Avenue, desires to announce to the profession that he has returned from Europe, and resumed work.

Dr. C. A. Langmaid, '06 graduate of Toronto, has returned from the Old Country, after spending three years abroad, attending the hospitals in London, Edinburgh, Glasgow, Dublin and Paris. He has settled at 23 Brunswick Avenue, and will practise general medicine.

We tender congratulations to Dr. J. N. E. Brown, the capable and courteous Medical Superintendent of Toronto General Hospital, upon his election as 1st Vice-President of the American Hospital Association, at its meeting at Washington, D.C., in September. Next year's meeting takes place at St. Louis, Mo.

Any young Canadian physician desiring lucrative occupation who cares to address "Detailer," care this journal, will be promptly placed in communication with one of the largest American manufacturing chemical houses, with Canadian connection, who desires to secure the services of a suitable man and is willing to pay a liberal salary, the position to be permanent. This must appeal to a young, active doctor who does not wish, as yet, to settle down in practice. We would recommend prompt action.

News of the Month.

UNVEILING OF PORTRAIT OF DR. WILLIAM CANNIFF, M.D., M.R.C.S.L.

At the recent convocation of Victoria College an excellent portrait of Dr. William Canniff, of Belleville, was unveiled by his son, H. T. Canniff, Esq., of Toronto.

In introducing Mr. Canniff Dr. Burwash gave a brief outline of the work of Dr. Canniff as an author, a physician and surgeon and a professor in the faculty of Medicine.

Dr. Canniff was a son of that noble stock of U. E. Loyalists who settled the Bay of Quinte County at the close of the eighteenth century. Educated in Victoria College, he was prepared for the profession of medicine in the Toronto School of Medicine then recently founded by the famous Dr. Rolph. He completed his course and received his degree of M.D. in the University of New York in 1854. The next year was spent in the study of surgery in London where he graduated as a member of the Royal College of Surgeons in 1855. He next joined the medical staff of the British army in the Crimea, where he served to the close of the war. Returning to Canada he commenced the practice of his profession in Belleville. In 1859 he was appointed professor of Pathology in his Alma Mater, Victoria College, and shortly after removed to Toronto where the Medical Faculty conducted its work. In a very short time he was transferred to the important Chair of Surgery for which he was eminently qualified by both training and experience. His abilities as a professor were so marked that in 1871, on the retirement of Dr. Rolph through extreme age, he was appointed Dean of the Faculty.

Dr. Canniff was distinguished not only as a skilful surgeon and able teacher of students preparing for the medical profession, but also as an author and historian. His "Settlement of Upper Canada" has become a classic and a standard authority on our early history. His history of "The Medical Profession in Upper Canada" occupies a similar position in another line, while his "Principles of Surgery based on Pathology" and various monographs published in medical journals give evidence of his learning in his chosen profession. During all the years Dr. Canniff maintained his interest in his Alma Mater where, in his youthful days, he had laid the foundations of his successful career; and the

graduates of Victoria showed their appreciation of the man and his work by electing him president of the Alumni Association. Similar honors have fallen to him from other learned bodies in whose foundation and work he took an active part and when he stands on the verge of four score and the active labors of life are nearly ended, it is fitting that this memorial of the man should be placed upon the walls of the College which he served with distinction.

NOTIFICATION OF TUBERCULOSIS

THE September number of *Sláinte*, the organ of the Women's National Health Association of Ireland, publishes the following:

We think our readers will like to have reprinted here a letter sent to us by the eminent medical authority, Dr. W. Osler, Regius Professor of Medicine at Oxford, on the subject of notification of tuberculosis:—

“I am sorry that you are having opposition to the adoption of the compulsory notification of tuberculosis.

“As is so often the case, difficulties vanish when squarely faced, and this has been the history of the question in debate. The experience of New York City is overwhelmingly in favor; at first there was opposition on the part of many medical men, partly on the ground that it would cause hardship to the poor, partly lest the well-to-do should be put to any inconvenience. It is universally acknowledged that the Act works smoothly, and with practically no inconvenience. I am assured by the members of the New York Board of Health that no single measure has been so important in the fight against tuberculosis.

“That notification will cause loss of employment to a large number of persons is in the highest degree improbable. Certainly it has not done so elsewhere.

“Slight increase in the rates may follow notification, just as it naturally follows any great public improvement. No doubt typhus and smallpox correspond with low rates.

“Truth is often unpleasant, and in Ireland you are at present suffering from the shock of the realization of what has been known to the health authorities for many years.

“That working people will hesitate to send for the doctor because of the risks involved in notification applies as little to tuberculosis as it does to typhoid fever or measles, and appears to one to be entirely fanciful.

“That there is to be a cruel crushing of the poor workingman in notification is a myth; there is no class legislation, as the Act applies to rich and poor alike.

"I do wish Dr. McWalter would go to New York and study the work of his brethren—mostly Irish brethren—in this battle against tuberculosis. The conditions are in some ways quite as bad as in Dublin. He would return a wiser and a graver man, and I should not be surprised at the next meeting of the British Medical Association to see him down for a paper 'On the Advantages of Compulsory Notification of Tuberculosis in Dublin.'

"W^M. OSLER.

"Oxford, 2nd September, 1909."

ST. MICHAEL'S NEW STAFF

THE new staff which has just been appointed at St. Michael's Hospital now are:

Surgery.—Dr. I. H. Cameron, first service; Dr. J. F. Uren, sen. asst.; Dr. G. Silverthorn, clin. assist.; Dr. W. McKeown, second service; Dr. W. Scott, sen. assist.; Dr. M. H. V. Cameron, Dr. G. E. Wilson, clin. assist.

Medicine.—Dr. R. J. Dwyer, first service; Dr. W. McCollum, sen. assist.; Dr. B. O'Reilly, Dr. A. Adams, Dr. J. H. McPhedran, clin. assist.; Dr. H. B. Anderson, second service; Dr. J. H. Elliott, sen. assist.; Dr. H. S. Hutchison, Dr. R. W. Mann, Dr. Geo. Smith, Dr. W. H. Pepler, clin. assist.

Gynecology.—Dr. F. Fenton, chief in charge.

Obstetrics.—Dr. A. H. Garratt, assist. in gynecology; Dr. C. H. Page, registrar in gynecology; Dr. M. M. Crawford, assist. in obstetrics; Dr. S. J. Magwood, registrar in obstetrics.

Eye.—Dr. C. H. Burnham, chief; Dr. Newbold Jones, Dr. H. A. McCullough, assist.

Ear, Nose and Throat.—Dr. J. McKenna, Dr. W. Gilday.

Consulting Staff.—Dr. W. Oldright, surgery; Dr. Adam Wright, obstetrics; Dr. J. F. W. Ross, gynecology; Dr. C. Meyers, neurology; Dr. W. Aikens, surgery; Dr. J. Amyot, pathology.

Attendant Physicians.—Dr. J. Guinane, Dr. C. McKenna, Dr. T. J. McMahon, Dr. N. Allen.

Assistant Physicians.—Dr. J. McCormack, Dr. P. W. O'Brien, Dr. F. S. Riches.

Attendant Surgeons.—Dr. E. E. King, Dr. R. B. Nevitt.

Clinical Laboratory.—Dr. D. H. Boddington.

Anesthetist.—Dr. J. F. L. Killoran.

Pathologist.—Dr. George Smith.

Electrician.—Dr. D. Frawley.

House Surgeons.—Dr. T. L. Towers, Dr. F. G. Harrison, Dr. P. B. McFarlane, Dr. C. B. Parker, Dr. H. W. Baker, Dr. G. W. Anderson.

THE CANADIAN MEDICAL ASSOCIATION

The Canadian Medical Association.—The forty-third annual meeting of the Canadian Medical Association convenes in Toronto, under the presidency of Dr. Adam Wright, on June 1st, 2nd, 3rd and 4th, 1910. February 1st, 1910 has been set as the time limit for submitting papers for the annual meeting. Abstracts of all papers are to be in the hands of the General Secretary by April 1st, so as to provide for printing and posting same. The following compose the different committees: Committee of Arrangements, D. J. Gibb Wishart (Chairman), Allen Baines, J. F. W. Ross, R. W. Bruce Smith, Chas. J. Hastings; Transportation and Entertainment, Bruce L. Riordan (Chairman), J. F. W. Ross, George A. Bingham, W. P. Caven, J. M. Cotton, H. A. Bruce, T. B. Richardson, H. A. Beatty, Jas. Spence; Reception and Publicity, R. W. Bruce Smith (Chairman), A. A. Macdonald, Chas. J. Hastings, T. F. MacMahon, John A. Amyot, W. H. B. Aikins, W. A. Young, Fletcher McPhedran; Local Finance and Exhibits, Samuel Johnston (Chairman), J. O. Orr, H. J. Hamilton, J. A. Roberts, O. A. McNichol, W. B. Hendry; Programme, E. E. King (Chairman), A. H. Wright, D. J. Gibb Wishart, George Elliott, Helen MacMurchy; Credentials, A. Primrose (Chairman), R. J. Dwyer, C. P. Lusk, H. T. Machell, Price Brown; Surgery, F. N. G. Starr (Chairman), I. H. Cameron, Walter McKeown, C. L. Starr, A. H. Perfect, A. B. Wright; Medicine, H. B. Anderson (Chairman), A. McPhedran, John Ferguson, J. S. Hart, A. R. Gordon, B. O'Reilly; Obstetrics and Gynecology, S. M. Hay (Chairman), K. C. McIlwraith, Fred. Fenton, F. W. Marlow, H. E. Clutterbuck; Eye, Ear, Nose and Throat, G. R. McDonagh (Chairman), R. A. Reeve, J. M. MacCallum, Gilbert Royce; Pathology, J. J. Mackenzie (Chairman), O. R. Mabee; Pediatrics, Allen Baines (Chairman), Wm. Goldie, Jos. Graham.

ALCOHOL AND TUBERCULOSIS

At the meeting of the British Medical Association, in Belfast, considerable time was given to the subject of the scientific study of alcohol and alcoholism. In an exceedingly interesting and instructive address given by Dr. T. N. Kelynack, of London, and reported in the *Belfast Advocate*, we notice the following sentences bearing upon the question of tuberculosis and alcoholism. The testimony is certainly striking and convincing: "In the case of

certain diseases, alcoholism and its associated conditions, especially such as non-hygienic habits of life, domestic neglect, and poverty, with its manifold consequences, induce a special proclivity or predisposition to disease. This is particularly the case in regard to such a socio-medical malady as tuberculosis, the great white plague, which you here in Ireland, under the leadership of her Excellency the Countess of Aberdeen, are fighting so bravely and wisely. In the discussion on the relation of alcoholism to tuberculosis it was shown that, instead of alcoholism being antagonistic to this disease, as was formerly believed, alcohol acts as a fertilizer of the human soil for the upspringing of the death-dealing tuberculosis seed. The opinion of Knopf was quoted that 'it is not only well-known that alcoholism predisposes to tuberculosis, but it has also been statistically demonstrated that the children of alcoholic parents contract tuberculosis more readily than children of temperate parents.'—*Exchange*.

The Canadian Medical Exchange, conducted by Dr. Hamill, Medical Broker, King and Yonge Sts., wishes us to announce that at the present time he has a very desirable list of registered buyers who are seeking locations to practise medicine, and that he is in a position to dispose of any medical practices and property which are inviting. All prospective buyers are bound legally and morally against publicity, piracy, or offering opposition if they do not buy.

The doctor would be glad to give details of his plan of negotiations to any intending vendors.

For fifteen years the Medical Exchange has been buying and selling medical practices along lines which have been entirely satisfactory to the profession.

The Physician's Library.

BOOK REVIEWS

American Pocket Medical Dictionary. Edited by W. A. NEWMAN DORLAND, A.M., M.D., Assistant Obstetrician to the Hospital of the University of Pennsylvania; Fellow of the American Academy of Medicine, etc. Containing the pronunciation and definition of all the principal terms used in medicine and the kindred sciences, along with over sixty extensive tables. Sixth edition, revised and enlarged. Philadelphia and London: W. B. Saunders Co. 1909.

The writer of this dictionary has succeeded in adding to one of the most useful books to be found on the present-day doctor's table. This addition consists in making his little book still more perfect.

A. J. J.

The latest books from The Blakiston Press.

The firm of P. Blakiston's Son & Co., of Philadelphia, have always been known as publishers of most important medical works; in fact, a large number of the latest contributions to medical literature will be found in the Blakiston catalogue. The following is a partial list of the volumes recently gotten out by this firm:

Gatewood. *Naval Hygiene.* By James Duncan Gatewood, M.D., Instructor in Naval Hygiene, United States Naval Medical School, Washington. With eight Colored Plates and 105 other illustration. Octavo. xiv + 779 pages. Cloth, \$6.00; half morocco, \$7.50.

Gould. *Biographic Clinics.* By George M. Gould, A.M., M.D. Complete in six handsome volumes. Price of each volume, cloth, \$1.00. Vol. VI.—*Essays Concerning the Influence of Visual Function, Pathologic and Physiologic, upon the Health of Patients.* 12mo. viii + 492 pages.

Knight and Bryant. *Disease of the Nose, Throat and Ear.* By Charles H. Knight, M.D., Professor of Laryngology, Cornell University Medical School; and W. Sohler Bryant, M.D., Adjunct Professor, Department of Diseases of the Ear, New York Post-Graduate Medical School and Hospital. Second Edition Revised and Enlarged. Octavo. xix + 631 pages; 239 illustrations. Cloth, \$4.50.

Tyson. *The Practice of Medicine*. Fifth Edition, Revised. By James Tyson, M.D., Professor of Medicine in the University of Pennsylvania. Fifth Edition, Revised and Enlarged. 5 Plates and 245 other illustrations; 13 in colors. Octavo. xxv + 1438 pages. Cloth, \$5.50; half morocco, \$7.00.

Potter. *Therapeutics, Materia Medica, and Pharmacy*. Eleventh edition, enlarged. Including the Physiological Action of Drugs, Special Therapeutics of Diseases and Symptoms. By Samuel O. L. Potter, M.A., M.D., M.R.C.P. (Lon.), formerly Professor of the Principles and Practice of Medicine, Cooper Medical College, San Francisco. Eleventh Edition, Revised and Enlarged in accordance with the latest reprint U. S. Pharmacopeia. 8vo; vii + 937 pages. With Thumb Index in each copy. Cloth, \$5.00; half morocco, \$6.50.

Rockwood. *Chemical Analysis*. Introduction to Chemical Analysis for Students of Medicine, Pharmacy and Dentistry. By Elbert W. Rockwood, M.D., Ph.D., Professor of Chemistry, Toxicology and Metallurgy in the College of Medicine, University of Iowa, Iowa City. Third Revised Edition. Illustrated. 12mo; ix + 242 pages. Cloth, \$1.50.

Webster. *Diagnostic Methods, Chemical, Bacteriological and Microscopical*. By Ralph W. Webster, M.D., Ph.G., Asst. Professor of Pharmacologic Therapeutics, and Instructor in Medicine, Rush Medical College (Medical Department, University of Chicago); xxxiv + 641 pages, with 37 Colored Plates and 164 other Illustrations. Cloth, \$6.00; Half Morocco, \$7.50.

Beard. *Treatise on Ophthalmic Surgery*. By Charles H. Beard, M.D., Surgeon to the Illinois Charitable Eye and Ear Infirmary (Eye Department), Octavo. With over 250 Illustrations. In Press for early publication.

Binnie. *Operative Surgery*. A Manual for Practitioners and Students. By John Fairbairn Binnie, A.M., C.M. (Aberdeen); Professor of Surgery, Kansas State University. Fourth Edition, Revised and Enlarged. The Leather-Bound Series of Manuals in two volumes. Vol. II.—Vascular System, Bones and Joints, Amputations. 550 Illustrations. Full Limp Leather, Gilt Edges, Round Corners, \$3.50.

A Theory Regarding the Origin of Cancer. By C. E. GREEN. Second edition. Edinburgh and London: William Green & Sons. 1909. Pp. 46.

In this short essay, in which the author upholds the theory of the parasitic origin of cancer, an attempt is made to account for this method of the production of the disease in individuals who are employed in various trades. Reference is made to the fact that in different trades the death rate from cancer varies.

The author of the monograph, after studying the variations in question, has concluded that there must be some definite cause for the results which are thus noted. He has come to the conclusion that, in all probability, cancer is engendered as the result of the influence exerted by the action of sulphates and sulphuric acid which stimulate the activity of the organisms. His argument will be found somewhat ingenious in establishing the claim that these substances play an important role as etiological factors in the production of cancerous growth.

A. P.

Clinical Treatises on the Symptomatology and Diagnosis of Disorders of Respiration and Circulation. By PROF. EDMUND VON NEUSSER, M.D., Professor of the Second Medical Clinic, Vienna; Associate Editor, Nothnagel's "Practice of Medicine." Authorized English translation, by Andrew McFarlane, M.D., Professor of Medical Jurisprudence and Physical Diagnosis, Albany Medical College; Attending Physician to St. Peter's and Child's Hospital and Albany Hospital for Incurables. Part III., Angina Pectoris. New York; E. B. Treat & Co. 1909.

This is a treatise on the subject of angina pectoris. It deals with the diagnosis, etiology, functional forms of, differential diagnosis, theories and therapy of the disease. The first chapter, dealing with the symptomatology, is especially good, the paragraphs on the pain and its radiations and variations, and the consideration of the arterial pressure being of special interest.

The translation of the work is such as to render its perusal a pleasure. As an up-to-date consideration of the subject this is the best monograph we have seen.

W. J. W.

Hand-Book of Diseases of the Rectum. By LOUIS J. HIRSCHMAN, M.D., Detroit, Mich., U.S.A.; Fellow American Proctologic Society; Lecturer of Rectal Surgery and Clinical Professor of Proctology, Detroit College of Medicine; Attending Proctologist, Harper Hospital; Consulting Gynecologist, Detroit German Polyclinic; Collaborator on Proctology, "Physician and Surgeon"; Editor, *Harper Hospital Bulletin*; Chairman, Section on Surgery, Michigan State Medical Society; ex-President, Alumni Association, Detroit College of Medicine, etc. With 147 illustrations, mostly original, including two colored plates. St. Louis: C. V. Mosby Medical Book and Publishing Co. 1909.

This work contains 363 pages of reading matter and is well illustrated. The author has written a very complete monograph on diseases of the rectum, and has included in his treatise not only

the operative means of dealing with such conditions, but also treatment by internal medication. It is not necessary to review in detail special features of the book, excepting to state that it is very complete and exhaustive in the treatment of the subject. The various statements of fact regarding diagnosis are set forth in a lucid style, and the treatment suggested appeals to one as being very thorough and sane. The book is to be recommended as a useful guide to practitioners in the management of such conditions.

A. P.

Dictionary of Ophthalmic Terms, with Supplement. By EDWARD MAGEMUS, M.D., D.P.H., Ophthalmic Surgeon to St. Michael's Hospital, Kingstown. Bristol: John Wright & Sons, Ltd. 2s. 6d. net.

In some sixty-seven pages is given a dictionary of ophthalmic terms, many of which are not found in the ordinary medical dictionary. In addition there are short sections on mydriatics, table of approximate equivalents, directions for testing the vision, the ordering of glasses, formulæ for some of the commoner diseases of the eye. The hints in these sections should be valuable to the general practitioner.

J. M.

Children in Health and Disease. A Study of Child-life. By DAVID FORSYTH, M.D., D.Sc., Physician to the Evelina Hospital for Sick Children; Assistant Physician (late Physician in Charge of the Children's Department) and Joint Pathologist, Charing Cross Hospital. With frontispiece. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut St. 1909. (Printed in Great Britain.)

The public of recent years has taken up the subject of child-life with considerable interest. This movement has specially concerned itself with the health of the young, which has been recognized as the essential factor in their lives. For the future, therefore, medical men will require a broader experience of children than is obtainable in the sick-room alone, and modern opinion also demands that the educationalist should regard the health of their scholars an important part of their province.

For these reasons this book, dealing as it does with child-life in health as well as in disease, has been written. It treats of the child physiologically, anti natal, natal and post-natal; psychologically from birth on; educationally, as the hygiene of schools, medical aspects of school-life, medical inspection and supervision of school children, the training of children, feeble-minded and otherwise. The greater portion of the work deals with the child in health.

The author has consistently borne in mind the great impor-

tance of contrasting juvenile and adult qualities, rather than pointing out their resemblances.

We would recommend our educationalists and publicists, as well as the members of our own profession, to peruse this volume, as the doctrines found therein are substantial and based on science.

W. H. P.

A Manual of Volumetric Analysis. Treating on the subjects of indicators, test-papers, alkalimetry, including assays of drugs by titration, acidimetry, analysis by oxidation and reduction, iodometry, determinations by precipitation and by color comparison. By VIRGIL COBLENTZ, Ph.D., Phar.M., F.C.S., Professor of Chemistry in the New York College of Pharmacy. Second edition, revised, completely reconstructed and enlarged, by Anton Vorisek, Phar.D., Professor of Analytical Chemistry in the College of Pharmacy, Columbia University, N.Y., With thirty-seven illustrations. Philadelphia: P. Blakiston's Son & Co. 1909. \$1.75 net.

The author states that this manual is intended to provide a systematic introduction to the principles and methods of volumetric analysis based on modern theories. In it especial attention has been given to the theory of ionization and its application to indicators, also the necessary precautions as to dilution, temperature and the influence of disturbing elements.

The preparation of the second volume was undertaken with the view of enlarging its scope and adapting it still more to the needs of the laboratory and the class-room.

A. E.

American Practice of Surgery. A complete system of the science and art of surgery, by representative Surgeons of the United States and Canada. Editors: Joseph D. Bryant, M.D., LL.D.; Albert H. Buck, M.D., of New York City. Complete in eight volumes. Profusely illustrated. Volume VI. New York: William Wood & Co. 1909.

Volume VI. of "American Practice of Surgery" is perhaps one of the best so far issued. We are pleased to notice amongst its contributors the names of our Canadian confreres, Drs. Geo. E. Armstrong, John M. Elder, and F. J. Shepherd, of Montreal. The fact of these gentlemen having contributed three of the most important chapters in this volume will alone add interest to the work as a whole, especially to Canadians. Dr. Geo. E. Armstrong contributes the chapter devoted to "Surgical Diseases and Wounds of the Mouth, Tongue and Salivary Glands." To Dr. Elder falls the section on "Surgical Diseases and Wounds of the Neck," and that devoted to "Surgical Diseases and Wounds of the Thyroid and Thymus" comes from the pen of Dr. Shepherd. These three chapters are masterpieces. The volume also contains very valu-

able material from such men as Dr. F. J. Balch, of Harvard Medical School; Dr. J. C. Bloodgood, of Johns Hopkins University; Dr. Hugh Cabot, of Massachusetts General Hospital; Dr. W. P. Graves, of Boston; Dr. H. P. Mosher, of Harvard Medical School; Dr. H. G. Mudd, of Washington University; Dr. C. R. Turner, of Philadelphia, and Dr. N. B. Carson, of the Medical Department, Washington University. We have taken the opportunity in previous reviews of complimenting both the authors and publishers of "American Practice of Surgery," and Volume VI. is but a continuation of their previous record.

W. A. Y.

Atlas and Epitome of Ophthalmoscopy and Ophthalmoscopic Diagnosis. By PROFESSOR DR. O. HAAB, of Zurich. Edited, with additions, by George E. deSchweinitz, M.D., Professor of Ophthalmology, University of Pennsylvania. Second revised edition, with 152 colored lithographic illustrations and 94 pages of text. Philadelphia and London: W. B. Saunders Co. 1909. \$3.00 net. Canadian agents: The J. F. Hartz Co.

Many of the external diseases of the eye, especially corneal conditions, are practically impossible of illustration. These Prof. Haab has wisely left alone. Those illustrated are singularly well done for so small a book. The book is by no means a mere atlas, rather is it an illustrated clinic on the external diseases of the eye. One is surprised to find the introductory chapter devoted to methods of examination of the eye in disease. The various external diseases are then illustrated and a concise clinical account given of each, together with its pathology and treatment.

The companion volume on ophthalmoscopy and ophthalmoscopic diagnosis is essentially an ophthalmoscopic atlas. There is no similar compact English atlas, they being much more elaborate and expensive, and yet not any more authoritative. J. M. M.

The Blood in Health and Disease. By R. J. M. BUCHANAN, M.D., F.R.C.P. University of Liverpool, Oxford Medical Publications, 318 pages, illustrated. Canadian representatives: D. T. McAinsh & Co., Toronto.

This book is written in an attractive style which suggests the clinician rather than the laboratory worker as its author. The discussions are full and include most interesting and convincing studies on the genesis of the various cell constituents of the blood. The functions of the platelets are considered at some length, and due attention is given to the estimation of calcium content in the blood and the problems of coagulation. Wherever these discussions are at all controversial a full bibliography is given on each page, and the citations are in some cases as recent as January, 1909. The anemias are thoroughly dealt with, and a table of dif-

ferential diagnosis from the laboratory standpoint is given as a summary at the end of the chapter. The sections on the various anemias and leukemias are closed by concise statements regarding treatment. The latter part of the work is given to a description of the blood in many special diseases. The index is full, and the illustrations cannot be too highly praised. There are twenty colored plates, and every one is made from original drawings by the author. The book should be a useful acquisition to the practitioner. The matter is well arranged and the methods taught are thoroughly up-to-date.

M. H. V. C.

Refraction and How to Refract. Including sections on optics, retinoscopy, the fitting of spectacles and eyeglasses, etc. By JAMES THORINGTON, A.M., M.D., Professor of Diseases of the Eye in the Philadelphia Polyclinic and College for Graduates in Medicine. Fourth edition, \$1.50 net. Philadelphia. P. Blakiston's Son & Co. 1909.

The fourth edition of this well and favorably known little hand-book differs from former editions chiefly by the addition of a new method of judging from the visual acuity for the letters of the test card what spherical lens will give the patient normal vision. As the method requires that the patient shall be under a reliable cycloplegic the method is not so attractive as appeared at first sight.

J. M.

Gonorrhoea in Women. By PALMER FINDLEY, M.D., Professor of Gynecology in the College of Medicine of the University of Nebraska, Omaha; Gynecologist to the Clarkson Memorial Hospital and Wise Memorial Hospital; Fellow of the American Gynecological Society. Published by C. V. Mosby Medical Book and Pub. Co., St. Louis, Mo.

Gonorrhoea in women. No more important subject to physicians and surgeons could be written upon. According to recent statistical reports nearly 50,000 prostitutes die annually, and about one-third of this mortality is due to the direct effects of gonorrhoea. Besides, the number of innocent women who suffer from the direful ravages of gonorrhoea is too dreadful to contemplate. The work opens with an interesting historical sketch, and then the etiology and pathology of the disease are fully elaborated upon. One of the most important chapters of the book is that "On the Course of Gonorrhoea Infection," more particularly that relating to "Latent Gonorrhoeal Pelvic Infections" and "Gonorrhoeal Puerperal Infection," all of which is treated both expertly and scientifically. The short but impressive chapter on the sociological aspects of gonorrhoea is most interesting.

The diagnosis and treatment of the disease are very complete

and thoroughly up-to-date. The author has handled the whole subject skilfully, learnedly and artistically. The book should be in the hands of every medical practitioner as well as the specialist.

G. T. M'K.

Clinical Treatises on the Pathology and Therapy of Disorders of Metabolism and Nutrition. Part VIII., Gout. By Prof. Dr. H. STRAUSS, Professor of the Third Clinic, Royal Charity Hospital, Berlin. Authorized American edition. Translated under the direction of Nellis Barnes Foster, M.D., Associate Physician to the New York Hospital; Associate in Biological Chemistry, College of Physicians and Surgeons, Columbia University. New York: E. B. Treat & Co. Price, \$1.00. 1909.

This is a brief resume of a contribution on the pathogenesis and therapeutics of gout, published seven years ago by Prof. Strauss, with the object of giving a concise picture of the modern conceptions of the nature and treatment of that disease.

A large amount of new material has been added, with the result that one may rapidly review the subject as it is understood to-day. The author traces the origin of uric acid to (1) the disintegration of the nuclein-containing substances of the body, and (2) from the nucleins in the food. He accounts for the localization of the deposits to the poor blood and lymphatic supply of these parts. The retention of the uric acid he believes mostly due to defective elimination by the kidneys.

This is a work of seventy pages, and is well worth a careful reading.

W. J. W.

An Introduction to Chemical Analysis. For Students of Medicine, Pharmacy and Dentistry. By ELBERT W. ROCKWOOD, M.D., Ph.D., Professor of Chemistry and Toxicology in the University of Iowa. Third revised edition, with twenty illustrations. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1910.

The object of this work is to furnish an introduction to the study of quantitative and volumetric analysis. Instruction is given in the simpler methods of examining metals, acids and organic compounds.

Probably the most interesting chapter to the beginner in the study of medicine is the part relating to applied analysis, in which instruction is given in the sanitary examination of water and the detection of poisons.

This book, with its 240 odd pages, furnishes easy lessons in chemical analysis for students in medicine, pharmacy and dentistry.

A. E.

5,000 Facts About Canada. Arranged alphabetically under subjects. Compiled by FRANK YEIGH, Toronto. Publishers: The Canadian Facts Publishing Co., 667 Spadina Avenue, Toronto.

This little pamphlet contains a fund of information in reference to Canada, which will be found of very considerable interest. It is divided into sections dealing with agriculture, dairying, the area of Canada, banks and bonds, canals, education, finance, life insurance, fisheries, immigration and such like. The pamphlet sells for twenty-five (25) cents, and is indeed a *multum in parvo*.

W. A. Y.

The G. & C. Merriam Company, of Springfield, Mass., have just issued Webster's New International Dictionary, based on the International of 1890 and 1900. The revision has been so radical and complete as to constitute a new book. The work has been in active preparation for many years, by a large staff of experts, assisted by the contributions of eminent specialists, under the general supervision of Dr. W. T. Harris, recent U. S. Commissioner of Education. The number of words and phrases defined has been greatly increased, mainly from the fresh coinage of recent years, both in popular speech and in the various arts and sciences. The revival of early English studies is recognized by such an inclusion of obsolete words as to give a key to English literature from its earliest period. The title-words in the vocabulary are more than doubled in comparison with the old International, now exceeding 400,000. The number of illustrations is increased to over 6,000. The book contains more than 2,700 pages. But the publishers desire to emphasize the quality rather than the quantity of the work, calling attention especially to the thorough scholarship in all departments and the fulness of information under important titles. By ingenious methods of typography and arrangement, the increased amount of matter is contained within a single volume, not perceptibly larger than its predecessor, and no less convenient for the hand and eye.

The Practical Medicine Series. Volume VII.—Pediatrics. By ISAAC A. ABR, M.D., with the collaboration of May Michael, M.D. Orthopedic Surgery. By JOHN RIDLON, A.M., M.D., with the collaboration of A. Steindler, M.D. Published by the Year Book Publishers, 40 Dearborn Street, Chicago.

This volume is one of a year book series on practical medicine. There are ten volumes in all, setting forth the year's progress in medicine and surgery. The extent of the entire series permits a wide reference to the new work done, and in justice it must be said that the material collected is not only extensive but well pre-

sented and indexed. The busy practitioner can here find the best results of the year's advancement gathered into a compact volume covering pediatrics and orthopedic surgery. B. E. M.

International Clinics. A quarterly of illustrated and especially prepared original articles on treatment, medicine, surgery, neurology, pediatrics, obstetrics, gynecology, orthopedics, pathology, dermatology, ophthalmology, otology, rhinology, laryngology, and other topics of interest, by leading members of the medical profession throughout the world. Edited by W. T. LONGCORE, M.D., Philadelphia, U.S.A. Volumes II. and III., XIX. Series. Philadelphia and Montreal: J. B. Lippincott Co.

The present volumes of this well-known publication contain much that is of interest in the various departments of medicine. Each volume deals with a great variety of conditions.

The first article in Volume II. is a contribution by Harlan Shaemaker on "Immunization in Typhoid Fever." The author's conclusions are: (1). There is undoubted evidence of the value of inoculation; (2) that two or more inoculations are necessary; (3) more investigation is necessary regarding the strength and duration of protective substances; (4) at present the method of determining the strength of a vaccine is liable to considerable error.

"Pneumonia in Children: Diagnosis and Treatment" is the title of an article by Louis Fisher, M.D., of New York. The author draws attention to the peculiarities of this disease in childhood. Treatment is dealt with under four headings: elimination, nutrition, rest, guarding against complications. He also points out that the New York Board of Health recognizes pneumonia as a communicable disease, and requires isolation of the patient.

"Psychasthenia," a peculiar phase of the neurasthenic condition in which the patient is troubled by obsession doubts, fears, mental anguish, etc., in addition to the physical signs of neurasthenia. The author makes this a subdivision of neurasthenia.

"Congenital Familial Splenomegaly with Chronic Acholuric Jaundice," by F. Parker Weber, M.D., F.R.C.P., London, draws attention to this rare condition. Brief sketches of several cases are incorporated in the article.

"The Pathogenesis of Spontaneous Cerebral Hemorrhage" is the subject of an excellent paper by A. G. Ellis, M.D., Associate in Pathology, Jefferson Medical School. The illustrations in this article are most instructive and are taken from the author's preparations from brains studied.

On the surgical side there is a valuable paper by Schwatt, of Philadelphia, on the "Treatment of Abscess on Hip Joint Disease."

Other articles in this volume are: "Tuberculous Sero-Fibrinous Pleurisy and Its Treatment," by Allyn, of Philadelphia; "Congenital Dilatation of the Colon" (illustrated), by Peter Daniel, London; "Diabetes," by Wells, of the University of Illinois; "Krausosis Vulvæ," a peculiar skin affection, with report of two cases, by R. F. Woods, Philadelphia; "Intraocular Tumor," by Leslie Buchanan; "Refrigatory Paralysis of the Facial Nerve," by Peck, of Johns Hopkins University.

Noteworthy articles in Volume III. are: "A Clinical Lecture on Grave's Disease, Raynaud's Disease, and Allied Disorders," by Soles Cohen, of Philadelphia; "Gonococcic Septicemia," by Daculafoy, of Paris; "Surgery of Exophthalmic Goitre," by Ochsner, of Chicago; "The Present Position of Antitetanic Serotherapy," by Lagane, Paris.

"Women in Medicine" is the subject of an historical sketch by James J. Walsh, M.D., of New York. The part played by women during the middle ages and in connection with the great university schools of Southern Europe was especially dwelt upon by the author.

Leo Buerger, of Mt. Sinai Hospital, New York, has a paper on "Thrombophlebitis," with histories of a large number of cases. The disease is becoming exceedingly common among the Polish and Russian Hebrews. The author has collected fifty cases occurring during the last three years.

The section on gynecology contains an extensive report by Laphorn Smith of cases operated upon by him at the Samaritan Hospital, Montreal. Many of the cases are interesting and the results obtained satisfactory. While this is true in the main, we believe that the great mass of medical opinion throughout the world would strongly discountenance the practise of the author in the removal of the ovaries for quite inadequate causes. It is astonishing at this time to find a surgeon advising in the case of a girl of twenty-five who suffered from dysmenorrhœa, "either marriage or removal of ovaries." Fortunately the author's advice was not acted upon. Case 1568, described by the author with, we think, questionable taste, as one of "old maid's ovaries," "retroversion and chronic appendicitis," impresses us as a shocking example of wanton mutilation under the guise of surgery. The patient was only thirty-six, complaining of chronic pain over the lower abdomen and tenderness over McBurney's point. Chronic appendicitis was diagnosed, and rightly, for at the operation the author removed a tender, adherent and bound-down appendix. The ovaries, as he says, were, however, discovered to be "cirrhotic," and forthwith removed. Surely sufficient cause for the pain had been discovered without attacking the unoffending ovaries. We believe that the author would have very great difficulty in justifying his procedure in this case.

Other papers in this volume are: "The Intracranial Complications of Acute and Chronic Suppurative Otitis Media," by Dencă, of New York; "Gastro-intestinal Radiography," by Pancoast, of Philadelphia; "Exotic Dysenteries," by Woolley, of Omaha; "Chronic Constitutional Headaches," by Theodore Diller, of Pittsburg.

W. B. T.

An Atlas of Dental Extractions. By C. EDWARD WILLIS, M.R.C.S., L.R.C.P., L.D.S., Assistant Dental Surgeon, King's College Hospital. Published by J. & A. Churchill, 7 Great Marlborough Street, London.

The book is written for medical students, and it is designed to assist them in emergency cases. As a general rule physicians and surgeons have not the opportunity for sufficient practice to make themselves expert in extracting teeth. Even a large number of dentists in the larger centres of population perform no operations in extraction, sending their patients to specialists in extraction. As a result of this many physicians and dentists are better fitted to extract strong, stout teeth that could readily be saved, than to remove broken-down teeth and roots that are beyond preservation.

However, emergencies occur, and one must do the best that offers. This work by Dr. Willis will be of value to medical students who find themselves in such a position that it is necessary to attempt a case of extraction. "A minimum number of dental appliances has been recommended and various means of improvising a dental chair have been shown."

A very interesting portion of the book is that relating to the causes of dental pain, where two different sources of pain are mentioned; one, that in which the pulp is primarily affected, and second, that in which the periosteum of the tooth is primarily affected. Successful treatment will depend upon a correct diagnosis.

The section on the treatment of alveolar abscess deserves serious attention. The abscess is to be incised in the mouth, but not on the outside of the mouth. If an abscess be incised on the cheek or neck, a permanent scar is left for life. If the abscess is threatening to point on the cheek, the author recommends the application of a piece of gauze with flexible collodion on the thin area of the skin, and thus to lessen the danger of an external opening.

For the physician who finds it necessary at times to perform extraction, the hints given in the book will be valuable. Facts are given in a concise form. The value of the work is enhanced by the number of cuts explanatory of the text.

R. T. R.