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The Canadian Journal of Medicine and Surgery

Vol. I. TORONTO, CAN., APRIL, 1897. No. 4.

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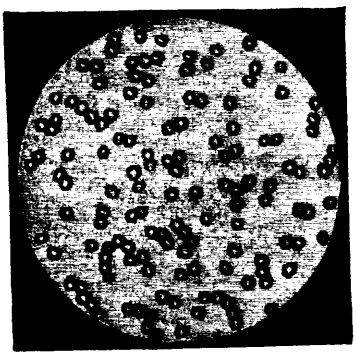

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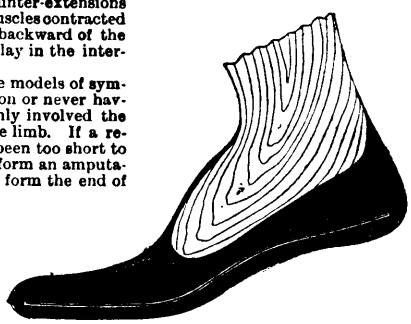

You will recollect that the leg and foot were models of symmetry and beauty, never having been stepped upon or never having worn a shoe. The disease had so thoroughly involved the joint that an extension alone could not save the limb. If a resection had been performed, the leg would have been too short to walk upon, and on that account I decided to perform an amputation upon the knee-joint, leaving the patella to form the end of the stump. Mr. A. A. Marks, the artificial-limb maker, made this little girl an artificial leg. **He makes, as I think, altogether the best artificial leg** I have ever seen, simply because of its durability and simplicity. The foot has no joint at the ankle, and this is where the great advantage comes in.

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Brom. Potass..... ʒ ij
Elix. Simplex..... ʒ ij
M. Sig.—One or two teaspoonfuls every hour in water.—*N. Y. Med. Journal.*

Contents.

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The Canadian Journal of Medicine and Surgery

A JOURNAL PUBLISHED MONTHLY IN THE INTEREST OF MEDICINE AND SURGERY

VOL. I. TORONTO, APRIL, 1897. NO. 4.

Original Contributions.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than anything else.—RUSKIN.

MORBID ANATOMY AND GENERAL PATHOLOGY.

BY T. H. MANLEY, M.D., NEW YORK.

THE scientific groundwork of all modern advances in the art of healing, in the repair or reconstruction of tissues or organs, is first a knowledge of the composition of parts, their frame-work and their relations; in other words a knowledge of structure of the human architecture, of *anatomy*, besides a large acquaintance with that vastly more complex subject which deals with the machinery in motion and vital processes, *physiology*.

Of late years, the student and practitioner have been greatly perplexed by the indifferent and indefinite sense in which the term pathology is employed, as pathological changes, pathological specimens or pathological elements, terms often leading to mistaken impressions or erroneous conclusions. This leads us to enquire, right here at the outset, what are we to understand by this term "pathological," now so loosely employed? As Mr. Victor Horseley has lately pointed out, pathology, properly speaking,

applies only to various deviations from health, or from normal function, of a structure or organ in the *living* body. It therefore follows that when we study any fluid, tissue structure or organ removed from the body, whether living or deceased, it is a dead substance; it has undergone organic changes, and hence belongs to the category of *morbid anatomy.*

Use and custom, however, have sanctioned the indiscriminate use and mis-use of scientific terms; hence our leading recognized authorities have been compelled to accede to our present nosology, and therefore, although it may be of vital importance to bear in mind the distinction between vital phenomena and conditions influenced by changes of decomposition, it has been decided to classify as pathologic all those deviations of tissue from the normal state which come under our observation in conditions of disease, whether removed from the individual in life, or from the body after death.

We have then, as it were, for want of a more descriptive term, "living and dead pathology," one made evident by disordered function or entire cessation of it, the deviation or cessation of vital processes; another, which can be studied only after decomposition has begun.

It will be well to constantly bear in mind that while pathology and its handmaid bacteriology have vastly broadened our knowledge of the nature of diseased conditions, so far, except very indirectly, it has contributed but little to their more successful management. As a matter of fact, outside of the domain of surgery, it has rather led to a state of medical anarchy and therapeutic nihilism. This has been unfortunate and has been one of the consequences of crowding pathologic studies on the student at the expense of the more important: clinical medicine, the actions of drugs, etc. Science has opened vast vistas, but when many vital problems are forced on us, it becomes impotent when empiricism must be resorted to. It is, therefore, evident that a just balance between these various branches must be preserved, for to press one forward to the neglect of the other evolves the fanatic and enthusiast, always an unsafe and dangerous pilot to the unseasoned, credulous beginner.

The subject of morbid anatomy, or morbid changes in tissues subsequent to somatic death, will be considered with the general subject of general pathology.

Orthopedic Surgery.

THE DIAGNOSIS OF FLAT-FOOT.*

BY H. P. H. GALLOWAY, M.D.
Orthopedic Surgeon, Toronto Western Hospital.

THE justification for a paper on the above subject lies in the unquestionable fact that this common affection very often passes unrecognized.

Bradford and Lovett[1] say: "There is scarcely any affection more frequently overlooked and mistaken for other affections than flat-foot." Tubby[2] says: "Probably there is no deformity so easily and so often overlooked as slight acquired valgus. . . . I have known cases to be treated for rheumatism, gout and ostitis of the bones of the tarsus." The experience of these authors is amply confirmed by all orthopedic surgeons.

The different conditions of the feet to which the name "flat-foot" is applied, are extremely common, and are capable of giving rise to great inconvenience and suffering; and inasmuch as the severer cases occur most frequently in those who cannot properly earn their living unless their feet be sound and strong, and as properly conducted treatment will nearly always afford complete relief, the importance of correct diagnosis will not be disputed.

The deformity of typical flat-foot is compound, being made up of three distinct elements, namely, pronation, valgus and flattening of the arch. The terms "pronation" and "valgus," as met with in orthopedic literature, have such varying shades of meaning that some explanation of what the writer believes to be the proper significance of these terms is necessary to a clear understanding of the subject under consideration.

1. Pronation. By this is meant a rolling over of the foot toward the inner side, as a result of which its inner border is carried inward and depressed, and its outer border correspondingly elevated. If any justification of this use of the term pronation were needed, it could readily be furnished by a comparison of the foot and leg with the hand and arm. If the palm of the hand be

*Read before the Toronto Medical Society.

placed upon a table, the arm being perpendicular, the anatomical likeness of the two extremities is at once appreciated. In this position the back of the hand corresponds to the dorsum of the foot, the palm to the plantar surface; the extensor muscles are anterior, the flexors posterior, in both; the thumb, corresponding to the great toe, is on the inner side, the little finger and the little toe on the outer side. While in this position if the hand is still further pronated its inner border will be carried inward and depressed, its outer border raised, and a similar movement of the

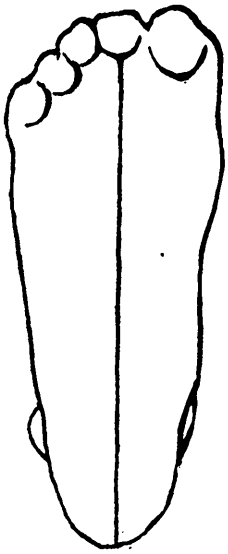

FIG. 1.
From photograph of the sole of an approximately normal foot. The straight line represents its long axis.

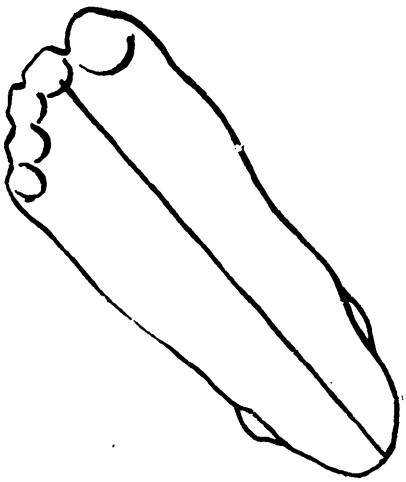

FIG. 2.
The same foot everted; the axis is still a straight line.

foot will have precisely the same effect. It does not weaken the comparison to say that in anatomical descriptions of the hand the thumb is said to be on the outside. The movement of pronation is not accomplished by exactly the same mechanism in the two extremities, owing to the variation of their anatomical construction made necessary by their differing functions; nevertheless the rotatory movement by which the inner border of the foot is lowered and the outer border raised, is homologous with the movement of pronation of the hand; and when the foot is held or fixed in this pronated position, as it is in the condition called flat-foot, it is

natural and reasonable to apply the term pronation, or over-pronation, to this element of the deformity. "Evertion of the sole" is a term sometimes used instead of pronation, but it is more cumbersome, less accurately descriptive, and has the disadvantage in actual use of sometimes being abbreviated to simple "evertion," and is then liable to be confounded with evertion of the foot, which is an entirely different thing. "Abduction" is sometimes used in the same sense. In fact the loose and indefinite use of the words evertion, valgus and abduction, as applied to the feet, is responsible for much exasperating fogginess in orthopedic literature.

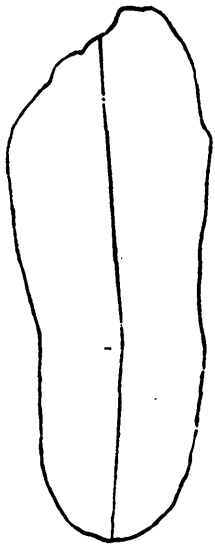

FIG. 3.

Pencil outline of a foot illustrating valgus. It shows a distinct angle at the junction of the axis of the anterior two-thirds of the foot with the axis of the posterior third, resulting from the outward bending of the foot at the medio-tarsal joint.

The mechanics of this pronated position of the foot, as it occurs in flat-foot,[3] is a subject of fascinating interest, but does not come within the scope of this paper. It is sufficient to say that the consequence of pronation is to bring the inner malleolus and the astragalus abnormally near the floor; they also stand out in bold relief, giving rise to a prominence or bulging on the inner side of the foot, which is a striking and characteristic feature of flat-foot, and has doubtless given rise to the term "weak ankles," by which it is sometimes designated. (Fig. 5.) The normal configuration of the outer side of the foot and ankle is somewhat changed, the outer border of the foot below the external malleolus standing out with unnatural prominence, and the skin below the malleolus being sometimes sharply creased or wrinkled. In severe pronation the tip of the outer malleolus is brought into contact with the outer surface of the os calcis, and the pressure and grinding at this point are sufficient explanation of the pain often felt in this situation.

2. Valgus. By this is meant an outward deflection of the anterior part of the foot in relation to the posterior part. This must not be confounded with evertion of the foot. Evertion is properly an outward rotation of the foot on its perpendicular axis; it is that position of the foot which results when, the leg being extended, the thigh is rotated outward, carrying the leg

and foot with it, the movement occurring at the hip-joint. With the knee flexed, some degree of evertion is possible without outward rotation of the thigh. In valgus the foot itself is bent; its anterior two-thirds is abducted in relation to its posterior third, the movement taking place at the medio-tarsal joint. (Figs. 1, 2, 3.)

The custom of some authors of using valgus as a synonym for flat-foot is not commendable in the writer's opinion, inasmuch as valgus is but one element of the deformity of flat-foot. Neither do I think it wise to include the deformity of valgus in the definition of pronation as is done by Lovett[4]; for even though it be granted, as that distinguished writer teaches, that valgus and pronation are necessarily anatomically associated, accuracy and clearness of description are furthered by using separate terms for distinct elements of deformity.

The third element of the deformity of flat-foot is a depression or flattening of the arch of the foot. By this breaking down of the arch the inner malleolus and the astragalus are brought still nearer to the floor than they were carried by the pronation, and when weight is borne on the foot an abnormally large area of the sole comes into contact with the surface upon which it rests. (Fig. 4.) It is this feature of the deformity which has given the affection under consideration its usual name. The term flat-foot, however, is peculiarly ill-chosen. It is very inadequately descriptive of the conditions to which it is applied, directing the attention to a single feature of the deformity, and that by no means the most important one. In many cases this element of the deformity is absent, and it seems absurd to apply the name flat-foot to a foot which is not flat. It must be admitted, however, that it is easier to find fault with this term than to suggest another that is free from objection.

These combined elements of deformity, namely, pronation, valgus and flattened arch, produce such a characteristic appearance in typical cases of flat-foot that the diagnosis is at once made by inspection. (Fig. 5.) Even when the element of flattened arch is wanting, the other features of the deformity, if well marked, produce a picture sufficiently striking to announce the nature of the condition to the eye. Difficulties of diagnosis are most apt to be encountered in incipient cases, where the deformity has not yet appeared, or is but slightly developed, or when flat-foot is associated with some other painful affection of the foot, such as metatarsalgia.

But even in such cases an inquiry into the symptoms, a thorough investigation of the history, and a careful examination will nearly always make a correct diagnosis possible. Such careful investigation is essential in all patients who complain of pain, weakness, or disability affecting the feet, for not being acquainted with other causes, they almost invariably believe their discomfort to be due to rheumatism or sprain; while in the case of children the complaint of the parents is that the child has "weak ankles," or that its feet turn over in standing and walking. Careful inquiry is further necessary in order to discover the cause of the affection, for flat-foot is frequently a secondary effect of other diseases, notably paralysis; or it may be due solely to ignorance of the right way to use the feet in standing or walking, or to the wearing of unsuitable boots; and it is impossible to treat the case intelligently or successfully without understanding the circumstances out of which the deformity has arisen.

Symptoms.

1. Pain. The most constant symptom, and that which is usually first complained of, is pain. It varies in different cases from an ill-defined uneasiness, discomfort, or sense of weariness or weakness in the feet to suffering of disabling severity. The pain is usually located on the inner side of the foot and ankle, but it may be referred to the dorsum of the foot, the centre of the heel, or even the outer side of the ankle, and may radiate up the leg and thigh. The pain is improved by rest and made worse by long standing or walking. It may or may not be increased by damp weather. It is most important, however, to bear in mind that the amount of pain does not necessarily bear a constant relation to the severity of the affection as judged by the deformity. On the one hand, slight degrees of pronation are sometimes attended by severe pain; while on the other hand, in the developed deformity, where pronation has reached an extreme degree, and is attended by marked valgus, and where the arch is broken down, the patient may be more comfortable than at an earlier stage of his complaint. Although at first sight this fact may seem strange and contradictory, it is not really difficult of explanation. It is during the time that the foot is in process of breaking down that the tension and strain upon the ligaments and the gradually changing relation of articular surfaces supply the conditions necessary to produce severe pain. When the deformity is fully developed, the foot may in time accommodate itself more or less perfectly to its new conditions, and pain may somewhat

subside. In this respect a comparison might be made with an unreduced dislocation, in which pain and discomfort become less as the joint surfaces adapt themselves to altered circumstances.

2. Tender points are of very constant occurrence. They may be looked for on the inner side of the foot a little below and in front of the internal malleolus, on the dorsum of the foot just in front of the ankle, in the centre of the heel, at the bases of the first and fifth metatarsal bones, and about the external malleolus. Of these, by far the most constant is that below and in front of the inner malleolus, and is best brought out by pressing in that situation with the thumb, the heel being fixed by the fingers of the same hand, while with the other hand the front part of the foot is twisted inward at the medio-tarsal joint; the patient is apt to wince and sometimes manifests severe discomfort.

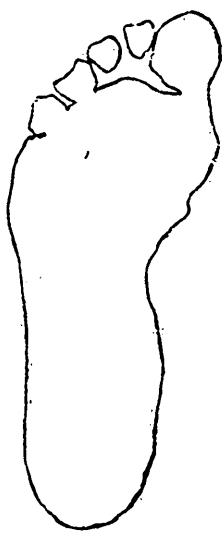

FIG. 4.

Outline of imprint of a foot showing flattening of the arch.

3. Limitation of motion. Assuming the foot to be at a right angle with the leg, it should be capable, normally, of motion in four directions: dorsal flexion, plantar flexion, pronation, supination. The extent to which these movements can be carried normally is, of course, subject to some variation; but for practical purposes it is correct to say that the normal range of voluntary motion will be represented by ten to twenty degrees of dorsal flexion, forty to fifty degrees of plantar flexion, thirty degrees of supination, and twenty or twenty-five degrees of pronation. By passive manipulation it is usually possible to carry the movement somewhat further in all directions than can be accomplished by voluntary effort. In cases of flat-foot some limitation of these movements is the rule, the exceptions applying chiefly to children and to instances where the deformity is secondary to infantile paralysis; in the latter there may be abnormal mobility under passive manipulation. This limitation of motion may be due to reflex muscular spasm, or to adhesions, or to both causes combined, and in extreme cases the rigidity may be so great that the foot is practically fixed immovably in its pronated position. This limitation of motion gives the patient an unconscious dread of walking upon

a rough pavement, because the feet are then subject to slight jars and strains that are painful, and walking is very fatiguing when the feet have lost their power to adapt themselves to inequalities of the surface trodden upon.

4. Loss of elasticity in the gait. The patient feels that his feet have lost their "spring." He walks with his feet everted as well as pronated and in the valgus position, and the impact of the feet with the floor is inelastic, lifeless and ungraceful. If the feet are very painful, it is usual for the patient to walk without fully extending the knees, and with the body inclined forward and the shoulders drooped.

5. The patient may complain that the feet are either hot and flushed or cold and numb, and as a rule they are inclined to sweat profusely, or at least to be unnaturally damp and clammy.

6. Swelling of the feet, and sometimes of the legs, is generally present, and is especially apt to occur after long standing or walking. The feet are congested, the circulation imperfect, and as the swelling usually progressively increases during the day, the result is that by night the patient's feet are painfully compressed by boots that seemed abundantly large when they were put on in the morning.

These, speaking generally, are the symptoms of flat-foot. Of course, it must not be supposed that they are necessarily all present, or if present prominent, in every case. The affection is met with in every shade of development. There may be slight pronation which causes no complaint, and of the existence of which the patient is unaware. Or the discomfort may be moderate, the patient knowing that he has some weakness in the feet, but remaining tolerably comfortable as long as he is not called upon to stand or walk much, or do other work that puts to a test the mechanical efficiency of his feet. And so on through all grades up to the most severe, where the disability of the patient is indeed distressing.

But though it is necessary to study carefully the symptoms of each case, the most important factor in the diagnosis is the existence of one or more of the elements of deformity to which attention has been called, pronation, valgus and flattened arch. For the determination of pronation and of valgus, inspection is usually sufficient. The educated eye can quickly detect even slight departures from the normal conformation of the foot, and from its proper relation to the leg.

An examination of the shoes of the patient is interesting and

instructive. Owing to the weight falling chiefly upon the inner side of the foot, that portion of the sole of the boot is likely to show considerable wear, and the upper above the arch will be prominently bulged inward. A pencil outline of the foot, taken as the patient stands upon a sheet of paper, is useful for showing the existence of valgus; by adding the necessary lines the angle formed by the junction of the axis of the anterior two-thirds of the foot with the axis of the posterior third may be easily shown. (Fig. 3.)

Flattening of the arch can often be determined by the eye, but the best guide is furnished by an examination of the imprint of the foot as weight is borne upon it. There are several means by which this may be accomplished. A ready method is to anoint the sole of the patient's foot with vaseline, and then to have him step upon a sheet of paper. The weight-bearing portion of the foot will leave a greasy imprint upon the paper, which may be preserved by tracing the margin with a pencil. (Figs. 4, 5.) Or, by using the method described by Lovett[4, 5] who says that it was devised by Dr. H. J. Hall, a direct inspection of the sole of the foot as weight is borne upon it can be made.

The patient stands upon a glass-topped table about fifteen inches high. Under the table, and facing the light, is a mirror placed at an angle of forty-five degrees with the floor. In this mirror the reflection of the sole of the foot as the weight is borne upon it is seen very distinctly, the weight-bearing portion of the sole appearing as a dead-white anæmic area. This pressure area may be outlined with a soft pencil on the under surface of the glass, then, after the patient steps down, a permanent record may be obtained by placing a thin sheet of paper upon the upper surface of the glass, when the lines on the under surface will show through and may be traced. By either of these methods of examination abnormal flattening or breaking down of the arch may be easily demonstrated. And this study of the imprint of the foot as weight is borne upon it will further demonstrate that breaking down of the arch is far from being the most important element of the deformity of flat-foot. The imprint may show the arch to be absolutely normal in cases where the patient is practically disabled by reason of pronation and valgus. Indeed, as regards the production of symptoms, it is certain that pronation is of much greater consequence than depression of the arch. The arch may be very flat and the patient free from symptoms if the foot is not pronated.

Differential Diagnosis.

The affections for which flat-foot is most apt to be mistaken are rheumatism, ostitis of the tarsus, sprain of the foot or ankle, contracted foot, and metatarsalgia. Of these the disease with which it is most often confounded is unquestionably rheumatism. There can be no doubt whatever that scores of persons are constantly under treatment for painful conditions of the feet that have been diagnosed as rheumatism, who vainly seek relief by swallowing drugs and applying linaments, whose disability could be effectually and quickly cured by the treatment appropriate for flat-foot. In making the differential diagnosis the history of the case is important, for rheumatism of a chronic character and limited to one or both feet is not common under any circumstances, and is very unlikely to occur in a patient who has not manifested other evidences of the rheumatic diathesis. A careful study of the feet with regard to the presence or absence of pronation, valgus and flattened arch, will nearly always prevent mistake. Of course rheumatism may be associated with flat-foot, a combination that would seriously complicate the diagnosis. In any very doubtful case a trial of the effect of treatment will probably be very helpful: anti-rheumatic remedies are not likely to cure symptoms that result from a derangement of the mechanism of the foot, while the speedy amelioration of obstinate symptoms of "rheumatism" of the feet that may often be secured by suitable orthopedic treatment is a most gratifying experience.

Fig. 5.—Double flat-foot.

Ostitis of the tarsus is a much rarer condition than flat-foot. There is frequently a family history of tuberculosis, or the patient himself may be evidently tuberculous. A thickened condition of the synovial membrane, often causing a false sense of fluctuation, also thickening of the bones of the tarsus, can usually be made out by careful examination; and this enlargement is persistent, not disappearing after a few hours' rest, as does the swelling of flat-

foot. In the early stage of chronic ostitis in this region, an infallible diagnosis may occasionally be impossible, and we may be forced to watch the case and try the effect of treatment before arriving at a positive opinion.

In sprains of the foot or ankle of any severity there will be a distinct history of traumatism; but it is here necessary to utter a warning against relying too implicitly upon such history. Patients whose feet are beginning to experience the effects of over-pronation are often persistent in attributing their symptoms entirely to some trifling mis-step or over-exertion. The explanation is that there is always a number of individuals whose feet are weak and on the point of breaking down, and some insignificant injury or unusual effort is all that is necessary to set in motion a train of symptoms for the advent of which everything is in readiness.

Contracted foot is a comparatively rare condition, the pathology of which has not yet been worked out. Sometimes it is apparently hereditary, or it may affect several members of the same family. Occasionally it is associated with Dupuytren's contraction of the fingers. It may give rise to symptoms similar to those of flat-foot; but, when fully developed, the deformity it produces is so different from that of flat-foot that it need never be mistaken for this affection. Early in its history, however, before much deformity has occurred, there may possibly be some doubt about the diagnosis. The deformity characteristic of contracted foot is an elevation of the arch. In advanced cases this increased height of the arch is at once apparent to the eye. The front end of the os calcis is raised, the toes and heel approximated, and the foot shortened by being thus bent upon itself. The imprint of the sole taken by either of the methods described, will show the weight-bearing area of the heel and of the front part of the foot to be separated by an interval which does not bear any weight. There is a greater disposition to varus than to valgus; there is also a decided disposition to equinus so that the patient may be unable to bring the heel to the floor when standing erect. The first phalanges of the toes are drawn upwards and backwards, sometimes until they are perpendicular, the middle and terminal phalanges being sharply flexed.

Metatarsalgia (Morton's disease) is a painful affection of the plantar digital nerves. The pain is paroxysmal, and often intensely severe. The pain and tenderness are usually located very definitely near the fourth metatarso-phalangeal articulation, but the second or third are in some instances the affected articulations. The

painful spot is best displayed by pinching the articulation between the finger and thumb.[7] The pain may radiate to other parts of the foot, or even up the leg, and is often excited by walking, dancing or wearing narrow boots. Frequently the disease follows some injury of the foot. When occurring independently, metatarsalgia is not likely to be mistaken for anything else; but it is not seldom associated with the deformity of flat-foot, and under these circumstances, if either affection were overlooked, the result of treatment might be very unsatisfactory.

It seems incredible that the effects of flat-foot should ever be confounded with the results of disease located in the nervous system. Yet Whitman[6] says: "The appearance of weakness, awkwardness, and depression of spirits may be so noticeable that the case is sometimes mistaken for one of incurable nervous disease. One can hardly exaggerate the pitiable condition to which the sufferer from painful flat-foot may be reduced. There is something peculiarly exasperating and depressing in an affection which prevents a person otherwise in perfect health from earning his living, and the duration of the symptoms, the mistakes in diagnosis, the ineffectiveness of treatment, and the apparent hopelessness of relief, combined, have a very evident effect upon the mental and moral as well as the physical condition of the patient." Such a mistake as Whitman refers to could result only from ignorance or inexcusable carelessness.

FIG. 6.

Outline of imprint of a foot with normal arch.

Under the name erythromelalgia,[8] Weir-Mitchell has described an affection characterized by burning pain in the soles of the feet, the skin of which shows congested patches of a dull dusky red or purple color. The tenderness is so extreme that walking is impossible. Occasionally it occurs in the hands. It is not likely to require differentiation from flat-foot, but the fact that it might occur in association with the latter should be borne in mind.

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Medicine.

TORONTO GENERAL HOSPITAL.

ANÆSTHETIC REQUIREMENTS.

INSTRUMENTS.	RESTORATIVES.	MISCELLANEOUS.
Tongue Forceps.	Liq. Amm. Fort.	Wax Candle and Matches.
Mouth Gag.	Spts. Amm. Arom't.	Towels for Friction.
Tongue Depressor.	Brandy and Whiskey.	Large Fan.
Sponge and Holder.	Liq. Strychniæ.	Hot Water Bottles, Cold Water.
Tracheotomy Tube.	Ether.	Blocks or Bricks to elevate foot of
Tracheotomy Knife.	Tr. Digitalis.	Ice, for rectum. [Table.
Hypodermic Syringes.	Sol. Green Tea.	Conical Jaw Opener.
Œsophogeal Forceps.	Amyl. Nitrite Pearls.	Forced Expiration Apparatus.
Davidson Syringe.	Oxygen Gas.	Battery.

FORM TO BE FILLED IN BEFORE THE ADMINISTRATION OF AN ANÆSTHETIC.

Name ..... *Disease* .....

Age ..... *Sex* ..... *Birthplace* .....

Occupation ..... *Ward No.* ..... *House Surgeon* .....

Date of Admission ..... *Date of Discharge* .....

Under care of ..... *Report taken by* .....

HABITS?		DISEASES?	
	Alcohol		Epilepsy .....
	Opium		Apoplexy .....
	Cocaine		Bright's Disease .....
	Other Drugs.		Other Diseases .....

PATIENT'S CONDITION.

Pulse before ..... *during* ..... *after* .....

Circulation ..... *Heart* .....

Lungs .....

Nervous System .....

Urinary Analysis—Sp. Gr ..... *Albumin* .....

Reaction ..... *Sugar* .....

Anæsthetic commenced at ..... *Discontinued at* .....

Anæsthetic used ..... *Amount used* .....

State of Stomach during operation .....

Return to consciousness at .....

Date ..... *Administrator* ..... M.D.

GENERAL REMARKS.

C. O'R.

Gynæcology and Obstetrics.

CARE OF THE BREASTS AFTER PARTURITION.

THE care of the breasts after parturition advised by T. Wilkins (*South. Cal. Pract.*) is briefly: Cleanliness, with as little interference as possible before labor; after labor, cleanliness, dryness and sufficient rest. If very sensitive, nipple shields; if erosions or fissures appear, balsam of Peru or silver nitrate. For engorgement or mastitis, massage and cold compression, which alone are effective, combined almost invincible.

The reviewer has found the following of decided benefit in cases of tender or irritable nipples, frequently complained of within twenty-four or forty-eight hours after labor. After each nursing wash the nipple with a saturated boric acid solution, wipe dry and apply freely on squares of lint or gauze the following ointment: Tinct. benzoin co., gtt. xx.; ol. olivæ, ℥ ii.; lanolin, ℥ vj. Anticipate "sore nipples" by making daily routine inquiries as to the condition of the nipples, especially in primiparæ, and on the first hint of tenderness, while they are in the irritable stage—before they are actually inflamed—begin the boric acid solution and the ointment. This method at least protects them from the air and clothing. But it does more than this: it protects the patient against mastitis. If the nipples are looked after, the cases of mastitis will be "few and far between." H. T. M.

POST-PARTUM HÆMORRHAGE—DANGER OF GAUZE.

SCHAEFFER (*Rev. Obstet. Internat.*) agrees with those who distrust gauze as a material for uterine tampons in cases of flooding. If impregnated with iodoform or some other antiseptic, there is no danger of sepsis. If, however, it should happen, as is often the case, that the tampon fails to stimulate uterine contractions, and if when the bleeding is from a lacerated cervix the plug does not cause the torn artery to close by thrombosis, the gauze increases the danger, for it acts as a capillary drain and takes up much blood. All who have attended many labors know that the tolerance of hæmorrhage is very irregular in different subjects, and an apparently trifling loss will kill certain women. Hence the best

rule in flooding is not to allow one drop more to be shed, if possible. Gauze, above all if "absorbent"—which simply means more absorbent than commoner material—takes up many drops of blood at least. Schaeffer now uses non-absorbent gauze, prepared by impregnating it with gutta-percha. It can be mixed with iodoform or airol. By rolling it up into a ball it can be passed into the uterus, which it distends without absorbing any more blood. As a tampon the gutta-percha gauze retains its elasticity. Hence Schaeffer finds it suitable for inducing abortion.—*British Medical Journal.* H. T. M.

IDIOPATHIC UMBILICAL HÆMORRHAGE IN AN INFANT.

AVERILL of Macclesfield, reports in the *British Medical Journal* a case in a full-time healthy infant. The bleeding began with oozing on the fifth day just before the cord separated. There was slight icterus and several large purpuric spots over the body. The treatment tried was pressure by means of pads, astringents, suture, underpinning, all of which for a short time seemed effectual; but in a few hours the flood invariably began again, and ended fatally on the fourth day. The blood showed no tendency to clot.

H. T. M.

IMPORTANCE AND TREATMENT OF ENDOMETRITIS.

W. P. CARR (*Virginia Med. Semi-Monthly*) attempts to explain why it is that some cases of endometritis lead to serious inflammation of the uterine adnexa, while in others the Fallopian tubes are little, if at all, affected. He believes that the danger is regulated by virulence of the germ and the degree of obstruction in the cervical canal. In the non-puerperal uterus the risk of the inflammation spreading to the tubes is little, save when the cervical canal is obstructed, or the infection gonorrhœal in nature; and, even in the latter case, it is probably the marked swelling of the cervical mucosa induced by the gonococcus that leads to the tubal extension. With regard to treatment, Carr would attend first to the general health and then employ local means, among which he regards drainage of the uterus as the most important. Gauze drainage is "worse than useless," and the Outerbridge silver drainage tube is to be preferred. The vagina must be kept aseptic by tampons saturated with glycerine and iodine. H. T. M.

Mental Diseases.

SOME CLINICAL ASPECTS OF MENTAL DISEASE.*

BY EZRA H. STAFFORD, M.B.,
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In coming to a somewhat clearer understanding of the various diseases to which the thoracic and abdominal viscera are subject, it has been found that the only satisfactory method of research was in studying first the viscera themselves.

As the physiology and the minute anatomy of these viscera become more intelligently understood, it is possible, with the appliances at present at the disposal of science, to become more familiar with their pathology. And with even the present understanding of pathological change, as a basis upon which to reason, the physician has been able to proceed with his treatment in a far more intelligent and rational manner than ever before, and not in the vague and hazardous fashion until very recently in vogue. This is admirable.

In turning to the diseases of the mental apparatus, however, the physician has less cause for felicitation. There is at present a popular impression to the effect that the cerebrum is the organ in which those phenomena take place, of which the will, memory and emotions are the manifestations.

Anatomists and physiologists have time and again demonstrated in the laboratory the functions of the liver and the lungs. There is no mistake as to the true functions of the lungs and the liver. But physiologists and anatomists have not demonstrated, except by the rule of exclusion, that the cerebrum performs the physiological functions of the mind. It is certain, however, that the spleen is not the seat of will and memory. It is equally certain also that neither the gall bladder nor the thyroid gland, nor the placenta, are the seat of the emotions.

When all the known organs have thus been brought under similar review, and to the same end, the only logical conclusion is, that as the cerebrum is the only organ left, it must be the cerebrum. Moreover, it has been discovered by acute observers that

* Read before the Toronto Medical Society.

the removal of the cerebrum in man seriously interferes with the harmonious exercise of the will, memory and emotions.

The clinical sign of disease in an organ is the imperfect performance of its functions. The pathological signs are its changes in texture. In mental disease the clinical signs are the imperfect exercise of the will and emotions. The pathological signs are certain textural and chemical changes in the cerebral tissue.

The physiological functions of the mind have been studied for two thousand years by ancient and modern philosophers. For some reason the subject always seemed to present great attractions to philosophers; and often in inverse proportion to their ability to make the subject attractive to the laity. It was only recently, however, that the histology of the cerebrum became more clearly known. To take down almost any dozen works upon metaphysics —Aristotle, Descartes, Locke, Spinoza, Kant, Hamilton, and turn at random from one to another, affords a refreshing amusement to the mind fond of pleasing contrariety. The diversity of opinion held by these writers upon almost every conceivable subject which touches the action of the mind, breeds eventually in the heart of even the reverent and docile reader a feeling of dark distrust. One despairs of ever understanding thoroughly the functions of this mysterious organ, even in health—let alone the surpassingly delicate changes which take place in it during disease.

Histology has added little to the generalities of John Locke, Gent.; experimentation upon dogs and free hospital patients, very little more than histology. In disease our knowledge of the ultimate causes of cerebral disorder still rests in a state of confusion exasperating and helpless.

As the study of psychology has been for the most part empirical, so, until very recently, the study of psychiatry has been, in a similar manner, based almost entirely upon clinical manifestations.

Hippocrates has a section upon what he calls the Sacred Disease, and which appears to have been epilepsy. Saint Luke and other ancient medical writers make reference to demoniacal possessions, which, consisting as they did in the possession of devils, might fitly have been called the profane disease. The sacred disease and the profane disease do not appear to have been very clearly understood. The treatment, furthermore, appears to have been heroic; and consisted in driving the patient out of the town to shift for himself *al fresco*. There is no mention of this fresh air regimen, long continued, having been especially beneficial. In one instance

it seems to have merged into hog cholera, or something of the kind. Coming down to the present day the alienist finds at least one great grievance—I mean the loss of the old simplicity.

The beautiful simplicity in a case of intellectual disorder of declaring that the man is possessed of the devil, or that he has been stricken of the gods, and has the sacred disease; the beautiful simplicity of ejecting such a man out of doors, by way of restorative treatment, and keeping him out by way of moral duty (to the gods) is all lost.

The alienist has more than one disease now to contend with, and many hundreds of names of diseases from which to select one for the patient, and each of these names has itself many synonyms. To illustrate this consummate awkwardness of the present nomenclature, take as an example a sentence from Regis, chosen from the page where the book happens to open:

"General paralysis is a cerebral disorder, sometimes cerebro-spinal (diffuse chronic interstitial meningo-myelo-encephalitis), essentially characterized by progressive symptoms of dementia and paralysis (paralytic dementia), with which are frequently associated various accessory symptoms, and especially an insanity of the maniacal, melancholic or circular type (paralytic insanity)."

Here is the lucidity which comes with erudition. This man knows exactly what he is talking about. He is talking about insanity. That is the traditional way. Nearly all the standard writers upon the subject are equally clear of comprehension and prolific of words. A few are slightly more prolific of words.

But the complexity complained of is only in names. The treatment in Patagonia and the Central American States still remains as simple as in the days of Hippocrates, with the difference that instead of shoving the patient out-of-doors, they shove him indoors—the asylum doors.

Meanwhile the nomenclature goes on growing more and more complex. Among thorough-going alienists it is now considered both a profitable and gentle amusement to make classifications of nervous diseases. So much originality has been invariably shown in this polite accomplishment that the diligent and enthusiastic sciolist finds himself shortly in pressing need of a guide, philosopher and friend. But as often as not the guide, philosopher and friend to whom he goes, confesses in a moment of confidence that he has himself made a classification of nervous diseases which has never as yet been published, and which he at once, in the sacred

capacity of guide, philosopher and friend, proceeds to show to the beginner as a final solution to all his perplexities.

This intolerable evil of many names makes psychiatry the ridicule of the outside profession. Trivial clinical symptoms are given an importance which they do not deserve. The accidental idiosyncrasies of the patient are treated as special forms of disease. For example, one form of mental derangement has been called "Frauenschuhstehlmonomanie," or monomania of that variety which consists in stealing women's shoes.

A student of the most ordinary ability can diagnose renal disorder without serious difficulty. A chemical reagent and the microscope are all that is needed. The physiology of the kidney, its place in the physical economy, and all that concerns it, are one of the first things that a medical student learns.

But only the crudest and most shadowy conception has as yet been arrived at as to the physiology of the cerebrum. Much of the derision and much of the impatience then, with which the profession has looked to the alienist to straighten out his, and some of their, difficulties, is hardly just in the strict sense of the word. The cerebrum is almost unapproachable. It is to the kidney, as far as complexity of function goes, just about as a logical syllogism is to an ounce of urine. The specific gravity of an ounce of urine is not very hard to get at, but the specific gravity of some men's syllogisms is very hard indeed to compute.

After suggesting as I have just done, the helplessness of metaphysicians for more than twenty centuries to come to more than a cursory and superficial comprehension of the workings of the mind and the nature of its obscure functions; and after touching, as I have, upon the stupidity with which those subject to mental alienation have been treated in the past, I come back to my former assertion, and the differentiation which it suggests—the clinical signs of a disease are the imperfect performance of the functions of the organ or organs diseased, while the pathology of a disease is the textural changes in the organ itself, textural and chemical changes which, if properly understood, will, within certain limits, explain the imperfect performance of the functions of the organ.

And though the progress of cerebral pathology may have been very laudable in the last decade, yet as compared to what is still to be desired, the alienist labors under quite the old insufficiency of data. The tendency has been, therefore, to fall back upon the clinical symptoms of the pathological changes, and these are still

the final criterion in diagnosis and in prognosis and in treatment. This is most unfortunate.

I spoke a moment ago of one of the monomanias. I wished to call attention to the ludicrous side of the question. The multiplication of monomanias became itself a monomania among alienists, and it was thought good to turn over a new leaf and start again. In one of the plays of Sophocles the word *paranoia* occurs. The English signification is madness or mental derangement. The word was pirated into psychiatry and the monomanias *en masse* were (as they say west of the Missouri) coralled under it.

The man who steals old women's shoes is now a paranoiac. Pyromania, kleptomania, clausomania and sitomania are gathered now together under this kindly Hellenic shelter, *paranoia*, very shortly, I am almost willing to prophesy, to go out again into the world as separate forms of paranoia.

To turn from the books to the asylum wards, and from the asylum registers of ancient date with their garnered wisdom and unintelligible nomenclature, to the patients of the present day, one sees, it must be confessed, about as much variety as a person who mingles with towards a thousand people outside the asylum walls is likely to see.

I have spoken of bile. I flatter myself that the cleverest analyst in the world could not say that for chemical reasons any preference could be given to that of Herbert Spencer over that of this very humble writer. There might possibly be some expression of preference were the product under consideration that of the cerebrum instead of the liver, in which the humility of the writer, already referred to, might serve him in very good stead. This is not an attempt at grotesque humor, but a pointed reminder —however similar the livers and lungs of a race may be, both normally and pathologically—that the mind of the individual in health and disease bears the ineradicable stamp of personality, of idiosyncrasy. Trifling eccentricities in the sane excite very languid interest. Similar eccentricities in the insane are surely not deserving of the importance of special diseases.

In the wards of an asylum the manifestations of special derangement have a thousand shades and colors. Every patient has a personality of his own. Even the clinical signs which are regarded as most fixed are often lacking or much modified.

The brain tissue is subject to inflammation like all other animal tissues. It is subject to traumatism, both from agents without

and within. It is subject to various phases of degeneration also, and feels very intimately, as an organ, all the morbid changes which affect the blood and the other viscera, however remote. The microscope demonstrates this, and the clinical symptoms when reduced to the greatest possible simplicity are due either to excitation, sedation or to entire obliteration. Each case will fall under one of these heads, and the special clinical manifestations, when all due consideration has been given to idiosyncrasy and personality, are few in number.

The one great desideratum is an intelligent pathological basis for a classification of mental diseases independent of the clinical signs altogether. Then would follow a pathological basis for the method of treatment, and not the awkward empiricism at present in vogue.

But to accomplish this it is hardly fair to leave the entire onus of the undertaking to the professed alienist. The alienist is dependent to a very great degree upon the profession at large. What is more the study of psychiatry is the property of the profession outside as much as of the alienist within the asylum.

There is a great deal more insanity outside the asylum walls than there is inside. It is in the milder forms, perhaps; it is incipient, or it is incomplete, or it is merely amusing, and goes under the name of genius or eccentricity or religion or crime. That within the asylum is of the more pronounced type. A fit of mental depression is not so severe an affection as an attack of melancholia, and the power of self-control or inhibition is strong enough in most persons to prevent them from displaying their morbid delusions, and acting upon all their obsessions.

The materials, however, upon which psychiatry is to build up its more enduring fabric, are to be found in every sick-room. The time may be far distant when ideas will be as transparent and as readily analyzed as bile. The time may be far distant when the cerebrum will be understood as well as the heart or the lungs or the alimentary canal, but if the carnival of clinical phases continues in the future, as it has in the past, to be the sole foundation for the classification and diagnosis of mental derangement, that time will never come.

Ophthalmology and Otology.

A CASE OF HYSTERICAL DEAFNESS.

BY JAMES MACCALLUM, B.A., M.D.

PHŒBE S., aged fifteen years, domestic. Prior to January 5th hearing is said to have been normal. On that day she did the usual weekly washing. Next morning she was slightly deaf, by evening quite deaf; had pain in the left ear and crackling noises in the right. She gave up work, returned home, and presented herself at my clinic one week after the onset of the deafness.

The ear is capable of hearing 16 to 32,500 vibrations per second repeated as musical notes. My armamentarium consists of tuning-forks C_{-3} to C_5, *i.e.*, 16 to 4,096 v.s., and Galton's whistle, which produces about 6,000 to 60,000 v.s.

Functional examination: Right ear, neither by air nor by bone conduction did she hear any tuning-fork, Galton's whistle, the watch, nor the voice. Left ear, meatus C_2 (512 v.s.); mastoid C_2; vertex plus; Galton 11.5; watch on contact; as for the voice, a shout was necessary.

Physical examination: Right M.T. opaque, dull and retracted so that short process of malleus is alone visible. Left M.T. retracted, transparent, incus and stapes visible, posterior fold prominent, attic normal. Granulations and mucus in the naso-pharynx. Nares normal.

Catheter inflation showed moist rales in both Eustachian tubes, and improved hearing so that C_2 was heard at the right meatus. I was at a loss to account for the complete and absolute deafness in the right ear, the more so as there was no history of nausea, vertigo or subjective noises to bear out the seeming nerve defect, but as catheter inflation restored the lower tone limit so much that C_2 (512 v.s.) was heard at the meatus, I was inclined to think that the catarrhal element was added on to some pre-existing and old nerve defect, or that the change in the intra-tympanic pressure had altered the labyrinthine pressure, or else that I had chanced to stumble across an auditory paralysis without vertigo, nausea, or subjective noises,—a condition described by Politzer. The elevation

of the lower tone limit, reduction of the upper, and the diminution of bone conduction in the left ear I accounted for in the same way.

Not confident at all of my diagnosis, and uncertain whether there had not been deafness previous to the attack, I had recourse to catheter inflation and Blaud's pill, because of the marked anæmia. After one week of this treatment there was improvement in both air and bone conduction in both ears. Right ear, meatus C_2 (512); mastoid C_2; watch contact. Left ear, meatus C, C_2, C_5 (128 to 4,096 v.s.); mastoid C, C_2; watch $\frac{0}{60}$; vertex plus. The history was given that the improvement lasted for a few hours after inflation and then passed off. She was then put in charge of the house surgeon for further treatment. As after some weeks she had not improved, I, on March 2nd, examined her and found that in the right ear there was again complete deafness for voice, watch, acoumeter, Galton's whistle and the tuning-fork, while in the left ear, watch $\frac{0}{60}$; Galton 4.3; meatus C_2, C_5; mastoid C, C_2, C_5, and acoumeter, rinne minus, vertex plus. Catheter inflation caused C_5 to be heard at the right meatus but had no effect on the left.

During this examination I noticed that, once or twice when I had chanced to drop my voice, she did what I told her, and it flashed upon me that the young lady had "done" me beautifully. I wound the ear probe with cotton and found that on touching the drum membrane with it there was no flinching, while like pressure on the left M.T. evoked vigorous protest. Further examination showed anæsthesia and analgesia of the right side of the head, auricle, face, neck, mucous membrane of nose and mouth (conjunctiva not tested), of right hand and forearm, and right leg, but not of the thigh, thorax nor abdomen, faucial reflex absent. Taste affected for sugar but not for salt. Smell not tested. No ocular symptoms, visual acuity, field and color sense normal. Temperature sense absent for heat, as tested with test tubes of hot and cold water. No motor paralysis; knee-jerks well marked; no ankle clonus; no tremors; no spinal tenderness. Tenderness on pressure in left infra mammary and ovarian regions. These anæsthetic symptoms varied from day to day, being now present now absent, but never transferred to the other side. Her hearing steadily improved, and her anæsthesia disappeared under the influence of drachm doses of Tr. assafœtida and suggestive assurances that on the next visit she would be able to hear such and such sounds. To-day, March 16th, both ears had practically normal air and bone conduction, and there was no defect in the tone limit.

In this case it was impossible to obtain any history of fright, worry, menstrual disturbance, or any other sufficient exciting cause. She liked her situation and was anxious to return to it. At home she would cry about her deafness, and protest that she would rather die than live in such a condition. I cannot think that she was consciously pretending deafness, but rather that there was what may be called a torpor of the auditory apparatus, which caused the deafness. She betrayed audition in some few small points. When testing her vision, I stood so that she could not see my face, and asked her in a very low tone of voice to read the last line, which she did at once. If I asked her something when she was standing with her back to me so that she could not see me, she would not turn her head to me, but a look of inquiry would come into her face, and she would ask her sister what was said. Sudden loud and unexpected noises made behind her never startled her or even caused her to turn her head.

In consulting the authorities one cannot but be struck with conflict of opinion between the neurologists and the otologists as to the frequency of hysterical deafness. While Politzer says "deafness of undoubtedly hysteric character is very seldom met with, perhaps even more seldom than hysterical amblyopia," such neurologists as Hirt and Gowers describe it as frequent. Gowers says that loss of hearing is common in hysteria as part of hemianæsthesia, and that bone is affected more than air conduction.

One easily understands that there is no good reason why the nerves of special sense should not, just as readily as the nerves of ordinary sensation, be attacked by anæsthesia.

The statement made by Hirt, that the nerves of smell and hearing are more frequently affected than those of sight or taste, conflicts with what I believe to be the prevalent idea as to their relative frequency. If the defect of hearing be, as Gowers says, in bone conduction, it may not be noticed by the patient, and may readily escape detection by the physician, but if it be for the voice, it should at once attract attention. A patient may be quite unaware of the presence of anæsthetic areas, or even of complete hemianæsthesia; but impairment of the sense of hearing would escape notice less easily even than the ocular manifestations, *e.g.*, the limitation of the field, the defective color sense, or impaired visual acuity.

Gowers and Politzer are one in saying that hearing is seldom affected alone, and that there is usually anæsthesia or hyperæsthesia

of the other special senses—in this case, of hearing and taste. One hears of laryngeal hysteria very frequently, and yet only in Grüber do I find recorded simultaneous involvement of voice and hearing.

Hysterical deafness occurring in a patient in whom other hysterical phenomena, contractures, paralysis or convulsions, have been previously observed, is, perhaps, comparatively easy of diagnosis. When it is the first of the protean phases of the disease, when it attacks both ears, is associated with catarrhal deafness, as in this case, and improves under treatment directed to the catarrh, one may easily be led astray. Usually it does not gradually disappear, but suddenly, often being transferred to the other ear.

That the hysterical deafness should be added to the catarrhal is not surprising, as the latter had rendered the ear a point of less resistance.

Pharmacology and Therapeutics.

TREATMENT OF ECLAMPSIA.

HALBERTSMA (*Wien. Med. Woch.*) attributes the differences of opinion in respect of the treatment of eclampsia to comparison of the number instead of the nature of cases. The prognosis varies greatly with the time at which the symptoms come on; remedies which are effectual in post-partum eclampsia are useless when the manifestations appear towards the end of pregnancy. It is with the latter class of cases that the author particularly deals, and of them he analyzes forty-eight—thirty occurring in the latter period of gestation, the other eighteen at the beginning of labor. Of these forty-eight cases the prognosis in twenty-six was extremely grave; ten of them were actively treated, the remaining sixteen not. Of the former recovery resulted in eight instances, of the latter in only one. This corresponds to the results recorded by Zweifel, who, out of twenty-two actively treated severe cases lost but two. Halbertsma hence considers that such cases occurring in the last three or four months of pregnancy or at the beginning of labor indicate more radical treatment than is commonly employed. Active interference is required in all cases where the pregnancy has lasted eight months, and in all others in which two doses of 1-30 gr. of morphine have proved ineffectual. In such circum-

stances the prognosis is much worse if the patient is left alone than if Cæsarean section is performed; by the procedure the author reckons usually to save both mother and child. Döderlein has published nineteen cases so treated; in eleven success was complete, in the other eight the mother died. In two of the fatal cases the eclampsia was complicated by apoplexy and miliary tuberculosis respectively, while three were in extremis when operated upon; the number of instances in which the operation failed to avert a fatal issue is thus reduced to three. Since Döderlein's paper, out of three cases treated by Halbertsma's method, two have recovered. Dührssen prefers to operate by deep incisions into the cervix, but this results, according to Zweifel's statistics, in an infantile mortality of sixty-one per cent., so that the author prefers Cæsarean section whenever the cervix is not dilated. Whatever view may be taken of the pathogeny of eclampsia there is no doubt of the causal relation of pregnancy, and the first indication in a dangerous case is therefore to terminate this condition. A. J. H.

Adipogen—A New Method of Taking Cod Liver Oil.

Adipogen is a preparation of cod livers, the subject of a patent. It is exported from Norway. The specification indicates that the following is the process: "Fresh cod livers are cleaned with sterilized water and boiled in salt solution in vacuo at a low temperature without breaking the cells." A pasty mass results, which, on chemical examination, is found to contain half its weight of cod liver oil. It is of a granular consistence with a pleasant fishy odor suggestive of anchovy paste. It is convenient for administration to children spread on bread and butter. Adults may take it by the spoonful. A. J. H.

On the Restriction of Meat in the Treatment of Psoriasis.

L. Duncan Bulkley, of New York, in a paper read before the third International Congress of Dermatology held in London, August 7th, 1896, reports the most satisfactory results in the treatment of this most obstinate disease by the restriction of the nitrogenous elements of food, especially such as are found in strong meats and their equivalents. Of course the usual local and constitutional remedies are used when indicated.—*Medical Record*, January 9th, 1897. A. J. H.

Public Health and Hygiene.

MONTHLY REPORT OF CONTAGIOUS DISEASE IN ONTARIO FOR FEBRUARY, 1897.

PREPARED BY P. H. BRYCE, M.A., M.D., DEPUTY REGISTRAR-GENERAL.

		Total Reported.	Per cent. of Whole Reported.
Total population of Province.....	2,233,117	1,421,235	64
" Municipalities.....	745	457	61
" Cities.....	13	13	100
" Towns and Villages.....	236	129	55
" Townships.....	496	315	63

VARIOUS DISEASES REPORTED.

Municipality.	Pop. Reported	Typhoid.		Diphtheria.		Scarlatina.		Tub'rcul'sis	
		Cases.	Rate per 1000 per Annum	Cases.	Rate per 1000 per Annum	Cases.	Rate per 1000 per Annum	Cases.	Rate per 1000 per Annum
Cities	429,399	5	.1	46	1.0	13	.3	68	1.9
Towns and Villages	256,814	3	.1	8	0.3	1	.04	21	0.9
Townships	735,022	3	.05	21	0.3	1	.01	48	0.7
Total Pop. Reported	1,421,235	11	.09	75	0.6	15	.1	137	0.9

P. H. B.

Privy Pits.

"It is not asserting too much to declare that our privies are the most dangerous enemies of our lives and happiness. The contents of these abominable receptacles have free access to the soil, and saturate the ground with liquid filth to such a degree that specimens of sub-soil water taken from different depths and in different sections yield a large percentage of organic matters, the products of animal excretion. Many of them overflow, and the liquid contents flow into yards and gutters, emitting most offensive odors, which are a fruitful source of disease, operating indirectly in its production and directly in lowering the vital stamina of the unfortunates compelled to breathe a polluted atmosphere."—From Maryland State Health Report. E. H. A.

The Canadian Journal of Medicine and Surgery

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VOL. I. TORONTO, APRIL, 1897. NO. 4.

Editorials.

DIPHTHERIA AT THE TORONTO ISOLATION HOSPITAL.

THE annual report of the LOCAL BOARD OF HEALTH of Toronto for 1896 contains some interesting information respecting the prevalence of diphtheria in this city during the past year, the number of cases treated at the hospital, and the mortality—ordinary treatment having been used in nearly all the cases. A total of 562 cases were reported to the Health Office, requiring 8,866 inspections, or an average of 15.77 in each case.

It is quite certain that all the cases occurring in the city were not reported, but the exact number in which default was made is not ascertainable. There were 388 admissions to the hospital for diphtheria during the year. This would leave only 174 cases to be treated in private practice or in other hospitals.

It is certain, however, that this incompleteness in reporting diphtheria will not occur in 1897, for as every burial certificate issued in the municipality has to be countersigned by the Medical Health Officer, he necessarily becomes acquainted with the ascribed cause of death in each case, and is thus made aware of any negligence on the part of the attending physician in not reporting a case of contagious disease to the Health Office during the illness which preceded death.

At the Isolation Hospital a bacteriological test is made in every case. Of the 388 cases admitted, thirty-six were thus proved to be non-diphtheritic, and the record confined to 352 cases. These cases are subdivided as follows :

Tonsillar	175	
Tonsillar-pharyngeal	50	
Pharyngeal	3	
Naso-pharyngeal	81	
Laryngeal	32	
Laryngo-naso-pharyngeal	11	
	352	
Total mortality	52	=14.77%
Moribund on admission	14	
Real mortality after treatment	38	=10.79%

There were thirty-two cases of purely laryngeal diphtheria during the year. Of these only nine died, and of the nine, all but one were moribund when admitted. Of the cases which were moribund when admitted, eight were laryngeal, nine naso-pharyngeal and one laryngo-naso-pharyngeal.

It may be concluded, therefore, that a mild type of diphtheria prevails in this city. As further proof of this fact, Professor Shuttleworth, the bacteriologist of the Local Board, states that the city hospital register of 1,506 cases for four years up to December, 1895, shows a mortality of 18.52 per cent. The Metropolitan Asylums Board Statistics, 1888–94, give a death-rate of 30.3 per cent., and in the hospitals of continental Europe the mortality is much higher. The Toronto statistic seems to indicate either that the

bacilli of diphtheria are less virulent in this city than in European countries, or that the resistance of the patients is greater.

Special reference is made to the fact that owing to a more energetic employment of steaming and of calomel sublimation in the treatment of laryngeal diphtheria, a remarkable diminution of the mortality has taken place in that very fatal form of the disease.

Though not referred to in the report, we have learned that antitoxin was used in only twenty-two cases, which were of the laryngeal and laryngo-naso-pharyngeal types. No curative results were obtained. Dr. Sheard states that he will continue to use antitoxin only in severe cases, as the results obtained at the Toronto Isolation Hospital demonstrate, in his opinion, the sufficiency of ordinary treatment in the milder cases of diphtheria.

We herewith submit a statistic, recently compiled at Paris, showing the results of antitoxin treatment by several observers, in different parts of the world :

	Cases.	Deaths.	Mortality Per cent.
Heubner, of Berlin	3,036	625	20.6
Monti, of Vienna	3,888	716	18.4
Crandall, of St. Louis	2,652	442	16.8
Forster, of Washington	2,740	509	18.5
Eulenburg and Schwalbe, of Berlin	5,833	559	9.6
Welch, of Baltimore	7,166	1,239	17.3
Imperial Institute, of Berlin, first six months of 1895	2,228	386	17.3
last six months of 1895	2,130	306	14.3
Hilbert, of Konigsberg	7,663	1,282	16.6
Paltauf, of Vienna	1,207	138	11.3
Loddo, of Japan	10,000	1,800	18
American Society of Pediatrics	5,794	713	12.3
Total	54,317	8,715	16.1

The most favorable percentage of mortality quoted in this statistic, 9.6 per cent., obtained by Eulenberg and Schwalbe, of Berlin, is the only one superior to that obtained last year at the Toronto Isolation Hospital. The percentage of mortality at the Toronto Isolation Hospital for a term of years, 1891–94, namely, 18.52 per cent., is, however, higher than the total mortality quoted above, 16.1, and it seems reasonable to think that if antitoxin could have been used, under suitable conditions, at the Toronto Isolation Hospital during the four years referred to, a more favorable showing would have

been obtained. We understand, however, that one of the most important conditions has rarely been obtained. Cases are not sent to the Isolation Hospital at the first onset of the disease. Often they arrive during the second week, when the patient is poisoned not only by the Klebs-Loeffler bacillus and its membrane toxins, but also by the toxins of the tissues of the body. Now, antitoxin is an antidote to the former, but can have but little influence over the latter.

Recognizing these facts, it would seem that a duty devolves on the private practitioner as well as the medical attendant of the city Isolation Hospital. A physician called to see a suspicious case of tonsillitis, in the first stage, should, after isolation, promptly apply a swab to the patient's throat, and send the swab to the bacteriologist for diagnosis. If his examination confirms the practitioner's suspicion the case should be reported, antitoxin used, and the bacterial fire extinguished as soon as possible. Should the parents object to antitoxin, they take the responsibility of the case from the practitioner's shoulders, and he can then confine himself to treating the symptoms.

If a case, when in the first stage, is removed to the Isolation Hospital, the same method of treatment should be followed. If the patient is not sent to the hospital until grave symptoms have developed, such as laryngitis, stupor, or serious exhaustion with threatened sudden death, it would be unreasonable to expect a miracle to result and that the deeply-poisoned body of the patient can be restored to health by antitoxin.

To use antitoxin as a last resource, or when there is small hope of cure, is really to invite defeat. Should a catastrophe occur, some may ascribe it to antitoxin, instead of a much more probable cause, the presence of tissue toxins in large quantities, which undermine the vital organs, producing serious exhaustion and sudden death. J. J. C.

BLEEDING—TRANSFUSION.

ONE notices, here and there, in current medical literature, a tendency to return to the old doctrines in medicine, which prevailed half a century ago, when every doctor carried a lancet and was nothing loath to use it The apostles of the new movement, however, are willing to give as well as take, only instead of returning blood for blood, they remove from seven to fourteen ounces of

blood and then inject into the veins or subcutaneous tissues an equal quantity of a physiological (75%) solution of common salt.

This treatment is recommended in uræmic convulsions, pneumonia and Asiatic cholera; it might also be tried in cases of blood poisoning arising from the inhalation of illuminating gas.

The theory underlying this treatment is, that a bleeding of from ten to fourteen ounces removes a certain amount of whatever poison may be present in the patient's blood. That a virulent poison is present in the blood of a patient attacked with cholera, has been demonstrated by biological experiments performed on animals. The same observation holds true in pneumonia and uræmia.

Admitting that it is quite correct to remove a poison from the blood, is it wise to remove all the utilizable material contained in the blood, which is taken away at a time when the patient requires all his strength to fight against the disease?

Dr. Bosc, of Montpellier, considers this a mere sophism, and quotes the experience of Annesley and other English surgeons in India to show that, in treating cholera, bleeding, instead of causing syncope, improved the pulse and removed the feeling of weakness and stifling. He quotes an observation of a case, in which the pulse oscillated between 120 and 130 before bleeding, was irregular and intermittent, but fell to 110, 100, and finally 96, becoming also quite regular and free from intermission. The breathing also became more easy and regular.

He also contends that in grave infectious diseases, such as cholera and enteric fever, there is an intense poisoning of the blood, which, in its turn, produces a great dilatation of the capillaries, especially those of the intestines, followed by ecchymoses, hæmorrhages and ulcerations; a fall in blood pressure; a direct degenerative action in the parenchymas, which are indispensable to the regulation of the organic functions, viz., the liver and the kidneys, while at the same time a blow is struck at the activity of the blood-forming and nutritive organs, such as the lymphoid tissues in general. The immediate effects of bleeding are to diminish the quantity of poison in circulation, and consequently, the general symptoms of poisoning, capillary leakage, weakness of the pulse and difficulty of breathing. Dr. Bosc contends that these results are regularly obtained after a free bleeding in attacks of uræmia, eclampsia, some forms of typhoid fever, and certain forms of blood poisoning, no matter what the general condition of the patient may be.

Does bleeding injure phagocytosis? Dr. Bosc says that, on the contrary, instead of diminishing the leucocytes, bleeding produces a real hyperleucocytosis. The next day after a bleeding, the white blood cells are doubled or tripled in number.

In Dr. Bosc's opinion, the use of a saline injection after bleeding removes all objections to the operation. The salt water dilutes the poison which remains in the blood, strengthens the red blood cells, fixes their hæmoglobin, diminishes the globulocide power of the blood serum, and besides exerts a very intense action on the blood-forming organs and nutrition in general. It also raises blood pressure, stimulates diuresis, and may produce a real immunity against coli-bacillar infection.

Dr. Bosc concludes that the fears of diminishing vital reaction by bleeding are groundless, for the consecutive saline injection produces powerful organic reactions, which he considers critical and salutary. These are chill, profuse perspiration, hyperpyrexia, diuresis and modifications of the respiration and circulation, which are always the same, no matter what the disease may be, and are intrinsically valuable as vital phenomena, constituting a process of defence against disease.

It may be well to mention also that the subcutaneous injection of a saline solution is as useful as an intravenous one, has the same effects, and is certainly less risky and less difficult of execution.

J. J. C.

ASSOCIATIONS TO DRIVE DOCTORS OUT OF EXISTENCE.

THE following editorial appeared recently in the *Alkaloidal Clinic*, and which we consider well worthy of reprint. It shows the adverse conditions under which decent members of the profession have to attempt to exist in Chicago:

I am told that in Chicago there has been formed a company that guarantees to subscribers medical treatment in a hospital, free drugs, etc., on payment of a certain sum monthly. This is not a club, but a commercial company, that assumes all the risks and pockets the profits. The company comes out boldly and advertises for customers as openly as any quack in the advertising business. Among other things it offers a "sure cure" for hernia. No pretense at charity is made, no restriction to the poor appears in the advertisements. A millionaire can enter his name and obtain his medical advice, including hospital service, for the sum of $6 a year.

What the effect of such a movement will be upon the medical profession is not difficult to foresee. What with the hospital, the dispensary, the specialist, the practising druggist and the advertiser who persistently thrusts his wares into the patient's hands, the doctor is pretty well surrounded, his business reduced to a minimum, his emoluments shorn and clipped until we are compelled to ask, "How under the shining sun does he make his living?"

The answer is unfortunately an easy one: He don't make it. Aided by outside resources, by farm or interest in mercantile operations, or by other non-professional sources of income, he manages to exist; but many thousands of doctors do not realize from their practice enough to support themselves and their families.

There is just one vantage ground remaining, and that is the confidence which our patients have in us personally. So long as such schemes are presented simply in their commercial aspect by men who, as physicians, are nobodies, the good sense of the patient will prevent his entrusting his health to such hands, in preference to the doctor in whose good faith, honor and skill he has confidence. But when the day shall come in which physicians of note lend their names to such an enterprise, it will be the most disastrous blow as yet struck at the medical profession. If for fifty cents a month a patient can secure the services of men who have an accepted rank and standing among the leaders of medicine and the endorsement of men high in the profession, what chance has the unfortunate family doctor?

Men forget how much of their success they owe to the profession. The heritage from centuries of workers, who have each helped to come at the truths of our science and given the results of their labors to us freely, constitutes a trust fund which we, the present possessors, are in honor bound to transmit to our successors. We are custodians, not owners.

Our surgeons and other specialists owe much of their skill and their income to the family practitioners, who send their patients to them. It would be base ingratitude for such men to stab their benefactors, by endorsing any such scheme to deprive them of their livelihood. Let the first prominent man who lends his name to any such enterprise be made to feel that the amount he realizes from it is the price paid him for his place in the estimation of the medical profession, and that he cannot have cake and penny both. I doubt if there are many men of real worth who would care to defy the united voice of the profession in such a matter.

W. A. Y.

"ANÆSTHETIC REQUIREMENTS."

AT page 154 we reproduce a printed form, recently introduced by Dr. O'Reilly, the Medical Superintendent of Toronto General Hospital. It is intended for the use of the Hospital physicians; but if referred to by a practitioner when about to give an anæsthetic, would serve a useful purpose, by reminding him of the instruments, restoratives and miscellaneous requirements which he should have at his command.

The form, to be filled in before the administration of an anæsthetic, shows that an enquiry is made into the habits of the patient with respect to alcohol, opium, cocaine and other drugs, and also certain diseases, such as epilepsy, apoplexy and Bright's disease.

A report is also made of the patient's condition, the pulse before, during and after the administration of the anæsthetic, the state of the circulation, the heart, the lungs and the nervous system. A urinary analysis is also called for.

A record is kept of the time when the anæsthetic was commenced and when it was discontinued, the kind of anæsthetic used and its amount, the state of the stomach during the operation and the time when consciousness returned. The form is then dated, and signed by the administrator.

As the forms which have been filled up will be preserved and registered at the Hospital, they will prove useful to future medical writers who may wish to study the merits and demerits of a particular anæsthetic with the varying habits and previous diseases of patients who have been subjected to its influence.

From the standpoint of method and improved accuracy of observation, much may be said in its favor. A private practitioner, for many obvious reasons, would do well to keep such a record of each case in which he has administered an anæsthetic.

J. J. C.

THE Seventeenth Annual Meeting of the Ontario Medical Association will be held in the building of the College of Physicians and Surgeons, Toronto, on the 2nd and 3rd of June. Already a large number of papers have been promised, and the meeting promises to be one of the most interesting held for years back.

Index Medicus.

LAST MONTH'S LEADING ARTICLES.

The name of the journal in which the article appears is indicated by a number in parentheses, and will be found in the "Key" on page 181.

Aconite and Aconitine, The Therapeutical Uses of. W. Murrell, M.D. (38)
Antitoxin the Latest. J. D. Peabody, M.D. (38)
A Rare Occurrence. L. V. Lee, M.D. (38)
Anæsthetics, Practical Administration of. H. T. Hotchkiss, M.D. (30)
Ataxia, Friedrich's Two Cases of. J. F. Stephenson, M.D. (22)
Anchylostomum Duodenale, with Report of Cases. F. G. Mohlan, M.D. (22)
Asthenopia, The Rational Treatment of. W. Rider, M.D. (22)
A Few Valuable Diuretics. J. Adolphus, M.D. (15)
Albuminuria in Pregnancy. T. C. Allbut, M.D. (2)
An Unusual Manifestation of Acute Rheumatism. E. Beach, M.D. (21)
Aortic Aneurism, The Signs and Symptoms of. F. A. Packard, M.D. (14)
Advances in the Treatment of Chronic Cardiac Disease. B. Robinson, M.D. (1)
A Portable Vacuum Chamber for House Disinfection by Formaldehyde. W. Johnston, M.D. (3)
Agraphia, and a Special Graphic Centre. W. Elder, M.D. (7)
Antiseptic Dressing of the Genital Tract after Operative Delivery. E. P. Davis, A.M., M.D. (24)
Actinomycosis Treated by Iodide of Potassium. B. M. Smith, M.B. (2)
Abdominal Contusion, with Visceral Lesions. D. T. Gilliam, M.D. (39)
Aseptic Surgery in the Country. L. C. Bickford, M.D. (21)

Bandages. A. D. Cloyd, M.D. (38)
Bubo Plague, Serum Therapy. A. Yersin, M.D. Translater, D. N. Kinsman, M.D. (39)
Bovine Tuberculosis in its Relation to the Human Family. G. H. Bailey, D.V.S. (8)
Bacterial Demonstrations of Diphtheria. W. R. Stokes, M.D. (5)
Bubonic Fever. C. W. Chancellor, M.D. (5)
Bacteriological Examination of Water. W. R. Stokes, M.D. (5)

Clinical Researches. M. E. Charteur, M.D. (38)
Consumption, Contagiousness of. E. Watson, M.D. (38)
Croup, Membranous. A. D. Cloyd, M.D. (38)
Colono-Enteric Irrigation in the Treatment of Intestinal Obstruction. E. Pynchon, M.D. (18)
Clinical Lecture on Obstetrics and Gynæcology. Denslow Lewis, M.D. (40)
Cardiac Dilatation Secondary to Chronic Nephritis. J. M. Patton, M.D. (40)
Congenital Absence of Uterus and Vagina. W. L. Burrage, M.D. (27)
Chloroform Poisoning. J. W. Guest, M.D. (41)
Concussion of the Spinal Cord. D. F. Willard, M.D.; Railway Spine. W. G. Spiller, M.D. (3)
Colorless Alcoholic Potash. D. L. Daroll, jr. (32)
Cæsarean Section in a Cottage, A Successful Case of. S. A. Bouton, M.D. (2)
Chemical Behavior of Eosin and Gentian Violet towards Normal and Diabetic Urines. L. Bremer, M.D. (3)
Clinical Observations on Renal Calculus. J. Duncan, F.R.C.S. (7)
Chylous Ascites. A. M. Stalker, M.D. (7)
Case of Cerebral Diplegia with Idiocy. J. A. Abt, M.D. (6)
Camphoric Acid, The Value of, in the Treatment of Night Sweats. H. A. Hare, M.D. (24)
Conditions Which May Simulate Organic Obstruction of the Large Intestine. T. H. Manley, M.D. (1)
Catarrhal Affections and their Treatment. H. P. Stebbings, M.D. (34)
Chronic Interstitial Nephritis in Childhood. L. G. Guthrie, M.D. (2)

Dysmenorrhœa. T. O. Redden, M.D. (38)
Diphtheria. C. A. Strasbury, M.D. (38)
Diphtheria. W. Thompson, M.D. (38)

Laryngectomy for Laryngeal Carcinoma, with report of a case of complete extirpation of the larynx. A. E. Halstead, M.D. (17)
Laryngeal Tuberculosis. J. H. Coulter, M.D. (36)
Leukoplakia, Preliminary Note on the Treatment of. N. H. Pierce, M.D. (36)
Les Eczemas Seborrheiques ou les Seborrheites. L. Brocq, M.D. (47)
Local Action of Tetanus Toxin, Note on. R. L. Pitfield, M.D. (24)

Malaria, Quinine in. W. T. Strother, M.D. (38)
Medical Legislation, The Curse of; Its Doom Predicted in the Near Future. T. T. Davis, M.D. (15)
Medical Diagnosis Based on Eye Symptoms. H. Gradle, M.D. (17)
Medical Inspection of Schools for the Prevention of Diphtheria. D. Ames, A.B., M.D. (5)
Mortality from Puerperal Fever in England and Wales. C. J. Cullingworth, L.R.C.P. (37)
Morphine Addiction and Its Woes. C. E. Patterson, M.D. (33)
Myxœdeme Infantile, Traitement par l' Ingestion de Glande Thyroide du Mouton. M. Bournerville. (4)
Missouri Pacific Railway Hospital at St. Louis. F. S. C. (9)
Myxœdema. G. W. McGregor, M.D. (21)

Nuclein in Pulmonary Tuberculosis. E. J. Pendell, M.D. (45)
Necrosis of the Temporal Bone, and Its Treatment by Mastoidectomy. K. K. Wheelock, M.D. (13)
Nerve Suturing and Nerve Implantation. G. C. Huber, M.D. (13)
Nasal Reflex, Some Amusing Instances of. A. G. Hobbs, M.D. (20)

Opium Addiction; Is It a Disease? Wm. Huntley, M.A., M.D. (49)
On So-Called Idiopathic Dilatation of the Large Intestine. C. F. Martin, B.A., M.D. (11)
On the Difference Between Serum and Blood Solutions, etc. W. Johnston, M.D.; D. D. MacTaggart, M.D. (11)
Old Truths Vindicated; Animal Magnetism Od, and Hertzian Long Waves. Leon L. (46)
Otology, Diseases of the Auditory Canal. P. E. Howes, M.D. (15)
Œsophagotomy, A Successful Case of External, for Tooth Plate Twenty-two Months Impacted in the Œsophagus. W. T. Bull, M.D.; J. B. Walker, M.D. (1)
Otitis Media Serosa, or Sero-Mucous Catarrh. S. C. Ayres, M.D. (20).

On the Replacement of a Depressed Fracture of the Malar Bone. R. F. Weir, M.D. (1)
Ocular Conditions in the Relation to Constitutional States. Gertrude Walker, M.D. (14)
Operative Surgery at the City Hospital; Study of Wound Infection. P. H. Hiss, M.D. (1)
Ovarian and Uterine Neoplasms, History and Treatment of. A. G. Dale, M.S., M.D. (24)
Occupation Neurosis, An Uncommon Case of. J. W. McConnell, M.D. (12)
Operation for Excision of the Knee. C. B. Lockwood, F.R.C.S. (2)

Progressive Muscular Atrophy in the Young. W. S. Stowell, M.D. (3)
Physiological Points in Therapeutics. J. Adolphus, M.D. (38)
Pneumonia. Wm. Thompson, M.D. (38)
Pneumonia, Treatment of. S. H. Britton, M.D. (38)
Pneumonia. J. M. McClanahan, M.D. (38)
Progress of the Healing Art. H. L. Bartlett, M.D. (30)
Physicians, Proposed Hospital for, Affected with Tuberculosis. P. Gibier, M.D. (18)
Plague, The; Its Germ and Transmission E. F. Willoughby, M.D.; A. H. Doty, M.D.; W. Wyman, M.D. (27)
Posture in the Diagnosis of Disease. 12 illustrations. R. H. Sayre, M.D. (31)
Primary Carcinoma of the Gall-Bladder. G. Fulterer, M.D. (17)
Personal and Domestic Prophylaxis. J. D. Blake, M.D. (5)
Public Health, Legal Medicine, Medical and Vital Statistics. F. W. Searle, M.D.; E. L. Dyer, M.D. (8)
Principles that Govern Exercise. A. J. Sanderson, M.D. (42)
Prolapsus Uteri, A Consideration of; Its Radical Treatment in Aged Women. A. F. Currier, M.D. (13)
Pneumonia. F. J. Bowen, M.D. (21)
"Parasites" in Cancer. H. J. Stiles, M.D. (7)
Puerperal Eclampsia, Its Etymology and Treatment. W. W. Potter, M.D. (50)
Pathology of the Lymphadenoid Structures. W. G. Spencer, F.R.C.S. (37)
Pathology and Surgery of Intussusception. D. A. Power, F.R.C.S. (37)
Porro's Operation, A Successful Case of. Dr. Keeling. (37)
Perichondritis of the Nose. G. Kicer. (20)
Prophylaxis in Tuberculosis. N. S. Davis, jun., M.D. (36)

Relaxation. L. J. Newcomb, M.D. (43)

Recent Advances in Obstetrics; The Walcher Posture in Labor. T. G. Comstock, M.D. (38)
Retro-Deviations of the Uterus. L. Frank, M.D. (46)
Regeneration of Bone from Periosteum. H. F. Thompson, M.D. (17)
Remarks on the Technique of Analysis of Small Quantities of Urine as Obtained by the Ureter Catheter. F. E. Sondern, M.D. (3)
Results of a Bacteriologic Investigation of the Nasal Mucus in One Hundred Cases of Chronic Nasal Discharge; Reference to the presence of the Klebs-Loeffler bacillus. E. L. Vansant, M.D. (12)
Renal Tuberculosis. F. T. Brown, M.D. (3)

Successful Skin Grafting on an Exposed Pleura Costalis. J. M. Duncan, M.D. (38)
Surgery of the War, 1861 to 1865. J. G. Thompson, M.D. (22)
Skiagraphy, The Present and Future of. O. L. Schmidt, M.D. (17)
"Schott Method" of Gymnastics in the Treatment of Chronic Disease of the Heart. S. Solis-Cohen, M.D.; C. M. West, M.D. (12)
Surgical and Medical Uses of the Peritoneum. B. Robinson, B.S., M.D. (45)
Sun Stroke, A Report on Case of, During Summer of 1396. N. R. Norton, M.D. (3)
Should Physicians be Paid for Returns of Births, Deaths and Diseases? G. H. Rohé, M.D. (5)
Some Practical Thoughts on the Development of the Human Race and Obstetric Nursing. R. R. Kime, M.D. (4)
Some Interesting Cases of Skin and Venereal Disease. B. Wolff, M.D. (4)
Small-Pox Statistics. S. Coupland, M.D. (2)
Syrups for Soda Fountain. W. K. Webber. (32)
Sketches by Dan, Van, Den. (32)
Some Irregular Medical Practices. C. C. Mapes. (21)
Serum Test, The Application of, to the Differential Diagnosis of Typhoid and Malta Fever, etc. A. E. Wright, M.D. (2)
Suggestions for the Symptomatic Treatment of Skin Diseases. C. W. Cutler, M.D. (3)
Study of Cough Due to Irritation in the Upper Air Passages. C. N. Cox, M.D. (20)
Sarcoma of the Breast. P. Findlay, M.D. (36)
Symptoms, a Study. S. Close, M.D. (51)
Simulated Amblyopia; Malingering Blindness. W. L. Bullard, M.D. (33)
Scientific Psychology. E. B. Titchener, M.D. (1)
Syphilis, Ocular Manifestations of. K. H. Wheelock, M.D. (39)
Subcutaneous Injection of Salt Solution. G. S. Brown, M.D. (3)
Some Fallacies in Regard to the Singing Voice Exposed. F. S. Muckey, M.D. (26)
Synthetic Metabolism in the Healing of Granulating Wounds. W. B. Outten, M.D. (9)
Senility, Senile Dementia, etc. G. H. Hill, M.D. (21)

The Abdominal Brain and Automatic Visceral Ganglia, Physiologia and Anatomic Considerations. B. Robinson, M.D. (38)
The Quick and the Dead. J. D. Todee, M.D. (38)
The Therapeutic Action of Orphol Beta Naphthol-Bismuth. G. Oliner, M.D. (18)
Typhoid Fever, Experiences in the Antiseptic Treatment of. C. H. Richmond, M.D. (22)
Typhoid Fever, The Serum Test for the Diagnosis of. H. M. Briggs, M.D.; W. H. Park, M.D. (27)
Transposition of the Heart and Liver. T. E. Walton, M.D. (31)
Tatooing in a Child, A Case of Accidental. G. Bieser, M.D. (31)
Tuberculosis and Cardiac Alcoholism. A. E. Tussey, M.D. (49)
"Tic Convulsif," A Peculiar Form of Family. F. G. Finley, M.D. (11)
The Treatment of Rheumatic Affections by the Tallerman Sheffield Air Apparatus. J. Stewart, M.D.; W. J. Reilly, M.D. (11)
The Cause and Treatment of the So-Called Sexual Neuroses of the Male. B. G. Carleton, M.D. (46)
The Essentials of Modern Materia Medica and Eclectic Therapeutics. (15)
The Semi-Centennial of the New York Academy of Medicine. Oration delivered by A. Jacobi, M.D. (1)
The Dispensaries of New York City, their Use and Abuse. W. B. Bronner, A.M., M.D. (1)
Traumatic Perforation of the Membrana Tympani. L. S. Somers, M.D. (12)
Two Cases of Mammoth Sarcoma. E. R. Axtell, M.D. (3)
The Treatment of Diphtheria. J. B. Stair, M.D. (3)
Typhoid Fever, Pathology and Bacteriology of. T. E. Livingood, M.D. (5)
Transfusion, A Simple Method of. H. P. Cooper, M.D. (4)

The Ethical Relations of the Railway Surgeon. H. B. Hemenway, M.D. (9)
The Development of the Child as Modified by the Condition of his Eyes. W. F. Southard, M.D. (26)
The Hospital, the Doctor, and the Community. E. Jackson, M.D. (14)
The Technique of Blood Study, Experiments in the Physiological Chemistry of Leucocytes; Study in Cell Tissues, their Significance in Tuberculosis. A. M. Holmes, A.M., M.D. (1)
Traumatic Intrathoracic Rupture of the Trachea without Fracture of the Chest Wall. C. A. Lane, M.D. (2)
Typhoid Fever, Outbreak of Traced to Specific Pollution of a Water Supply. J. C. Thresh, M.D. (2)
Typhoid Fever, The Treatment of. G. C. VanWart, M.D. (28)
Twin Pregnancies, Management of Labor in. Prof. Stephenson. (7)
Trained Nurse, The Relations of the. J. Bell, M.D. (7)
Trade-like Movements in Head Injuries. A. Miles, M.D. (7)
The Range of Medical Gymnastics. W. F. Somerville, M.D. (7)
Turbinotomy and the Spokeshave. F. C. Ewing, M.D. (20)
Tuberculosis, Methods of Diagnosis in. W. A. Evans, M.D. (36)
Tuberculosis in the Lower Animals. W. G. Houck, M.D. (36)
Typhoid Fever, Remarks on. E. Lee, M.D. (33)
The Specialist and the General Practitioner. J. E. Sawyer, M.D. (33)
The Technique of Prof. Koen's Surgical Clinic in the Jefferson Medical College Hospital. T. L. Rhoads, M.D. (24)
The Newspaper, the Profession, and the Quacks. S. S. Towler, M.D. (14)
The New Artillery and the Change of Management Introduced by it into War Surgery. E. Andrews, M.A., LL.D. (34)

Uterine Displacements, Some Clinical Observations on. O. B. Will, M.D. (40)
Uncommon Affections of the Eyelids. J. H. Egbert, A.M., M.D. (12)
Unnas' Dressing. C. E. Fee, M.D. (12)

Vertebra, Fracture and Dislocation of the Third Lumbar. J. W. Chisholm, M.D. (38)
Varicose Ulcers. J. J. Smith, M.D. (38)
Vital Statistics. C. L. Mattfeldt, M.D. (5)
Virtual or Relative Mitral Stenosis. H. D. Rolleston, M.D. (2)
Vaccination in the Light of the Royal British Commission. R. R. Leverson, M.D. (51)

Warts, Retained Placenta. C. A. Hillweg, M.D. (38)
Water, Chemical Examination of Drinking. W. B. D. Penniman, A.M., Ph.D. (5)

Xeroform (Tribromphenol Bismuth) in Minor Surgery. T. Beyer, M.D. (41)

W. A. Y.

Key to Medical Publications.

1. Medical Record, N.Y.
2. The Lancet, London, Eng.
3. New York Medical Journal.
4. Atlanta Medical and Surgical Journal.
5. Maryland Medical Journal.
6. Medical Summary, Philadelphia.
7. Scottish Medical and Surgical Journal, Edin.
8. Journal of Medicine and Science, Portl., Me.
9. The Railway Surgeon, Chicago.
10. Archives of Pediatrics, N.Y.
11. Montreal Medical Journal.
12. Philadelphia Polyclinic.
13. International Journal of Surgery, N.Y.
14. Medical and Surgical Reporter, Philadelphia.
15. American Medical Journal, St. Louis, Mo.
16. Medical Bulletin, Philadelphia.
17. Medicine, Detroit.
18. New England Medical Monthly, Danbury, Conn.
19. Canadian Medical Review, Toronto.
20. The Laryngoscope, St. Louis.
21. The Medical Age, Detroit.
22. Buffalo Medical Journal.
23. Cleveland Medical Journal.
24. The Therapeutic Gazette, Detroit.
25. Langsdale's Lancet, Kansas City.
26. Pacific Medical Journal, San Francisco, Cal.
27. American Journal of Medical Science, Phila.
28. The Maritime Medical News, Halifax.
29. The State Hospitals' Bulletin, Utica, N.Y.
30. Brooklyn Medical Journal, N.Y.
31. Pediatrics, N.Y.
32. Bulletin of Pharmacy, Detroit.
33. Magazine of Medicine, Atlanta, Ga.
34. North American Practitioner, Chicago.
35. St. Louis Medical and Surgical Journal.
36. Chicago Medical Recorder.
37. Medical Press and Circular, London, Eng.
38. Medical Brief, St. Louis.
39. Columbus Medical Journal, Columbus, O.
40. Chicago Clinical Review, Chicago.
41. The American Therapist, New York.
42. The Pacific Health Journal, Oakland, Cal.
43. The Diabetic and Hygienic Gazette, N.Y.
44. La France Medicale, Paris.
45. Medical Standard, Chicago.
46. The Medical Times, New York.
47. La Presse Medicale, Paris.
48. Le Progres Medical, Paris.
49. Quarterly Journal of Inebriety, Hartford, Conn.
50. American Journal of Surgery and Gynæcology, St. Louis.
51. The Homœopathic Physician, Philadelphia.

The Physician's Library.

An Account of the Life and Works of Dr. Robert Watt, author of "The Bibliotheca Britannica." By JAMES FINLAYSON, M.D., Physician to the Glasgow Western Infirmary and the Royal Hospital for Sick Children; Hon. Librarian to the Faculty of Physicians and Surgeons, Glasgow, etc. With a portrait. London: Smith, Elder & Co., 15 Waterloo Place. 1897.

In speaking of Watts' "Bibliotheca Britannica," very few know that the author was a physician. This volume gives an interesting account of Dr. Watts' life and work in small readable space, and the publishers will doubtless find a considerable sale for it amongst members of the profession.

The Medical Annual and Practitioners' Index, a work of reference for medical practitioners. Forty contributors from some of the best known medical men in England. Fifteenth year. Bristol: John Wright & Co.; London: Simpkin, Marshall, Hamilton, Kent & Co., Ltd.; New York: E. B. Treat; Toronto: J. A. Carveth & Co. 1897.

During the past year, a vast amount of work has been done in threshing out the details of practical treatment both medical and surgical, and the contributors to "The Medical Annual" of 1897, the publication of which is always looked forward to with pleasure, have again furnished us with a volume of steadily increasing size, as well as interest. A doctor's desk is not complete without this *vade-mecum*.

The Diseases of Infancy and Childhood. By L. EMMETT HOLT, A.M., M.D., Professor of Diseases of Children in the New York Polyclinic; Attending Physician to the Babies' Hospital, and to the Nursery and Child's Hospital, New York; Consulting Physician to the New York Infant Asylum, and to the Hospital for Ruptured and Crippled. Illustrated with nineteen full-page colored photogravure plates, and one hundred and eighty-five cuts inserted with the text. Sold only by subscription. Prices: $7.00, cloth; $8.00, sheep; $8.50, half morocco. D. Appleton and Company, Publishers, 72 Fifth Avenue, New York. Geo. N. Morang, Manager for Canada, 63 Yonge Street, Toronto, and 185 St. James Street, Montreal.

There have been published in past years a large number of works upon the subject known as "Diseases of Children," but the fault to be found with the majority has been that they have dealt too much with children's diseases, and not laid sufficient strength upon diseases peculiar to earlier life. In this work on the subject, the author has paid particular attention to this point, and has very happily named his book, "Diseases of INFANCY and Childhood." Dr. Holt has avoided entering into a discussion of many questions belonging to general medicine, and which are taken up in works on that subject. What will make this book most acceptable is the fact that it is original, and represents the author's actual hospital experience. The chapters which command especial attention are: (1) The Care and Diseases of the Newly Born Child; (2) Nutrition, its Derangements and Diseases; (3) The Acute Diseases of the Lungs and Intestinal Tract; (4) The Specific Infectious Diseases. One of the most interesting discussions in the entire work is that on Diphtheria, which is up to

date in every respect, and especially so on treatment. The points in Chapter III., in Section 2, are most valuable, giving the details as to infant feeding. The work has 204 illustrations, nineteen being full-page plates. What we most like in the book is the fact that the subject of treatment is considered almost wholly from the standpoint of the practising physician. The book as a whole is eminently practical, and we consider that every physician, whether he makes a specialty of the department of pediatrics or not, should be in possession of it.

Obituary.

DR. LYNCH.

It is with regret we chronicle the sudden death of a young and promising physician of Lindsay, Dr. William Valentine Lynch. He was stricken with apoplexy on February 25th, and died in about six hours. Dr. Lynch was born at Belleville, Ont., in 1853, and showed at an early age an aptitude for, and love of, the study which characterized his whole life. His classical studies were made in St. Michael's College, Toronto, where at the close of a successful course he won the gold medal for general proficiency in literature and science. Mr. Lynch at this time of his career seemed unsettled as to his future, and proceeded to Quebec to prosecute the study of French, and decide what line of life he should follow. At the close of the year he determined to study medicine, and returned to Ontario to teach, preparatory to carrying out his intention. He entered Trinity College Medical School, where he graduated in 1885. After practising at Lindsay for a time, he settled in New York State for a couple of years, but returned to Lindsay, where he remained until prematurely cut off by death. In 1889 he married Miss Agnes McGuirk, of Barrie, who with one son, a child of three years, survives him. During his brief career Dr. Lynch had won the esteem of all classes. A member of the Lindsay Board of Health and of the High School Board, and President of the Library Board, he proved himself a man of influence and public spirit. A speaker of force and refinement, there was every promise of higher honors being open to him. His literary taste, which he continued to cultivate, found expression in his writings—upon one of which he was engaged at the time of his death, the history of the Catholic Church in Victoria County. Lindsay loses in Dr. Lynch a man of sterling character and intellectual talent, and the medical profession mourns the untimely death of an enthusiastic student and successful practitioner.

J. J. C.

Personals, Etc.

DR. AND MRS. DOOLITTLE sailed last month for England. They intend residing in Kenilworth.

WE regret to announce the death, on March 11th, of Dr. W. W. Bremner at Pasadena, Cal. The doctor practised orthopedic surgery for a year or two on Bloor Street East in this city.

DR. FRANK P. COWAN leaves Toronto very soon to take a position as Surgeon to one of the Beaver Line steamers, sailing between Halifax and Montreal. We wish the doctor *bon voyage.*

MR. W. A. SHERWOOD, of this city, has painted a portrait of Dr. J. A. Sangster, Port Perry. It is one of a series of our prominent educationists he is doing to hang on the walls of the Normal School.

DR. R. M. STEPHEN, who graduated from Toronto University in 1877, and who has been in practice in Manitoulin Island for fifteen years, died very suddenly at Manitowaning of hæmorrhage of the lungs on March 9th.

DR. J. W. ROSEBRUGH, one of Hamilton's best known and most highly respected physicians, and brother to Dr. Rosebrugh of this city, died on March 25th of influenza. The doctor was sixty-nine years of age, and leaves a widow and two children.

THE many friends of Dr. R. R. Bucke, Medical Superintendent of the Asylum for the Insane at London, Ont., will be interested to know that he has been elected President of the Psychological Branch of the British Medical Association which meets at Montreal, August 31st to September 2nd.

MR. S. T. CHURCH, who for some years now has been giving special instruction in the "treatment of stammering" in Toronto, leaves Canada this month for London, England. There are very few physicians in this country who have not heard of Mr. Church's work in this distressing malady, and of the almost phenomenal success he has met with in what seemed at first to be incurable cases. Mr. Church's business methods, and the public recognition he has met with, will, we are sure, guarantee him a warm reception in the Mother Land.

ITEMS OF INTEREST.

WANTED, at once, a graduate of the Ontario College of Physicians and Surgeons, to take a "locum tenens" in a large and rapidly growing town near Toronto. Apply to Box 43, CANADIAN JOURNAL OF MEDICINE AND SURGERY, Toronto.

THE International Medical Congress will meet at Moscow from August 19th to 26th.

THE National Association of Railway Surgeons will convene in Chicago, May 4th, 5th and 6th.

IT is seldom a physician attains to three score and ten years, but we record the recent death at Leeds, Eng., of Dr. James Frobisher in his ninety-first year.

THE widow of Baron Hirsch has presented the Pasteur Institute in Paris with 2,000,000 francs, and also £80,000 for the establishment of a seashore hospital for the treatment of children afflicted with tubercular disease.

STILL another free dispensary is to be added to the list of charitable institutions in Toronto. It is to be for old and indigent women. The Woman's Medical College are responsible for this movement, and the consultants will be entirely from among the ranks of our women physicians.

THE *Medical Bulletin* has taken up extensively the subject of favorable climatic conditions for those afflicted with phthisis, and Dr. John Shoemaker has written many interesting facts about the neighborhood of the Pinellas Peninsula, Florida. All physicians interested in the subject should try and find time to read the articles.

DR. WILLIAM OSLER, of Baltimore, will deliver the address on medicine before the British Medical Association at Montreal in August. Dr. Stephen Mackenzie will be Chairman of the Section on Medicine, Mr. Chas. Heath of the Section on Surgery, and Mr. Watson Cheyne of the Section on Pathology. Lord Lister has announced his intention to be present.

A STATUE of the late Dr. Samuel D. Ross, Professor of Surgery in Jefferson Medical College for twenty-six years prior to 1882, has been cast at Paris. It will soon arrive and be placed in the grounds of the Smithsonian Institute in Washington, D.C., and will be unveiled during the Congress of American Physicians and Surgeons in May. The statue is the gift of the American Surgical Association. Congress has appropriated $1,500 for the pedestal.

Editorial Commercial Notes.

LIGHT IS LIFE.

THAT the heading of this short article is correct is undoubted. Just as the plant cannot exist without sunlight, so the human being cannot expect to enjoy the share of health the Creator intended he or she should have without sunshine. Compare for a moment the ghastly and anæmic appearance of the factory girl, who trudges to her work in the morning at seven o'clock, labors till sundown, in a badly lighted and poorly ventilated factory, with the robust full-blooded young man whose daily occupation necessitates his being out of doors for at least ten hours in the twenty-four. What a contrast! In one there is not only the appearance of inactivity, but her every movement betrays inability for what should otherwise be to a large extent light employment; in the other there is vim and life and hope, and in every step is the picture of good health. A poorly ventilated office or bedroom is bad enough, but a poorly lighted room, especially in a case of sickness, is worse than dismal. How different are one's spirits in a dull wet day in the autumn months to the condition which exists in a bright sunshiny morning in leafy May. Nowadays one of the principal points in the building of any hospital or sanitarium is the amount of space given to the sun-parlor and verandahs, where the patients can loll around in their invalid chairs and enjoy the life-giving properties of Old Sol, always feeling thereby greatly improved, and their energies considerably revived. Take again the condition of the people who live in those countries where rainy wet weather is the usual routine, and compare them with those who enjoy life where bright daylight seems to be the case almost eighteen hours out of the twenty-four, and it does not take a moment to pick out the one person from the other. At the present day every architect is following the trend of public opinion, and now the windows of an ordinary residence cannot be made sufficiently large, or the rooms sufficiently airy. Taking it for granted then that light is absolutely necessary to life and health, the question naturally arises, how shall it best be provided so as to at the same time economize space, as in these days of rapidly growing cities and ever increasing values in properties we cannot have our houses built with all their windows towards the south.

The rays of sunlight, as we know, fall directly downward; they do not accommodate themselves to necessity or desire. Heretofore it has been necessary to catch them, if at all, by direct exposure to the sky itself. It has, however, been demonstrated

recently in the invention of the Luxfer prism, that by the employment of the principle of refraction, scientifically applied and carefully adapted to the peculiar location in which it is to be used, light can be so successfully refracted as to lose but little of its direct power, and also can be directed to any point at almost any distance required. To characterize this new prism as one of the most remarkable improvements of the century in its bearing on practical architecture is to speak but mildly. What could be therefore better adapted for hospital and sanitarium use than the Luxfer prism, so used that the patients will enjoy the health-giving properties of light to a much larger extent than before? Take the sick room anywhere, how much more rapidly convalescence would ensue if the sufferer could enjoy a sun-bath at the same time as he is deriving benefit from the therapeutical effects of judiciously administered drugs. The ultra-fashionable habit nowadays of wearing glasses is due, as we all know, to a large extent, to that constant strain placed upon the muscles of the eyeballs through deficient light; and it has years ago been found that the cause of the high death-rate among rapidly growing young men in old London, where half and more of the offices are actually underground, and the occupants subjected all day to a poor light, as well as a constantly over-heated atmosphere from the burning of gas, is due to lack of sunlight and the consequent undermining of their otherwise strong constitutions. The Luxfer prism simply means small 4 x 4 plates of glass, one side of which is smooth and the other covered with semi-prisms, giving it a rough, corrugated appearance. The new idea is the very old one of prisms, for is anything new under the sun? In on old museum there is a small box filled with earth. It had been brought from a mountain in Arran, and when examined with a pocket lens the earth was found to be full of small objects, clear as crystal, fashioned by some mysterious geometry into forms of exquisite symmetry. The substance was silica, a natural glass, and the prevailing shape a six-sided prism, capped at either end by little pyramids modelled with consummate grace. To the man of science their beauty signified perhaps not so much as their utility.

But it certainly appeals much to the nineteenth century love of the æsthetic that the prism will also readily lend itself to the ornamental in design. As seeing is believing, a visit to the Toronto office of the Luxfer Prism Co. (Ltd.), at 58 Yonge Street, will be of interest to all physicians, where will be seen such an arrangement of these prisms that an otherwise dark cellar downstairs, and an exceptionally deep showroom upstairs, are so lighted up that the pure daylight penetrates fully one hundred feet, and that so brightly that one can read with satisfaction and ease a newspaper at that distance.

THE FEDERAL LIFE ASSURANCE COMPANY.

THE fifteenth annual report of the Federal Life Assurance Company, which we have the pleasure of publishing in this issue, is the most favorable ever laid before its shareholders. The sanguine anticipations in the report of 1895 were based upon the hope of a revival in business. There has not been any marked improvement in general business, but in that of the Federal Life the improvement was most gratifying, as is manifest from the following exhibit of the result of the year's business, as compared with 1895:

FINANCIAL MOVEMENT.

	1895.	1896.	Increase + Decrease—	
Net premiums received	$257,647	$312,398	+	$54,751
Interest, rents, etc	19,929	24,344	+	4,415
Total income	277,576	336,742	+	59,166
Payments to policyholders	115,224	131,856	+	16,632
Expenses, etc	95,800	97,968	+	2,168
Total outgo	211,024	229,824	+	18,800
Excess of income over outgo	66,552	106,918	+	40,366
Total assets	498,471	607,713	+	109,242
Policy reserves and other liabilities	415,621	517,878	+	102,257
Surplus to policyholders, guarantee capital not included	82,849	89,835	+	6,986
Surplus over all liabilities	2,652	8,538	+	5,886

MOVEMENT OF POLICIES.

	1895.	1896.		
No. of new policies issued	1,362	1,496	+	134
Sums assured thereunder	$1,830,000	$2,085,050	+	$255,050
No. of policies in force	5,775	6,014	+	139
Sums assured thereunder	$10,156,227	$10,337	+	$181,255

It will be noticed that every item of business shows an increase over 1895. An increase of $59,166 of income was secured at the very trifling outlay of $2,168 additional expenses. The excess of income over payments to policyholders and all other expenses was $106,918, an advance over the excess of 1895 by about 60 per cent. The assets received the large addition of $109,242, the total at the close of 1896 being $607,713. To this is added $618,703 for "guarantee capital," making a total of $1,226,415, as "total reserve for security of policyholders." The liabilities are $495,478 for "Reserve Fund," and $22,400 as "claims unadjusted," a total of $517,878. The average premium for each $1,000 of insurance, and the average amount at risk on each life, are now regarded as more satisfactory than at any previous period in the Company's history. In 1895 the average premium per $1,000 was $14; in 1896 the average was raised to $14.98 per $1,000. Under the vigorous and skillful management of Mr. David Dexter, Managing Director, with the able co-operation of Mr. James H. Beatty, President, the Federal is rapidly rising into a strong and prominent position.

EDITORIAL COMMERCIAL NOTES.

THE Toronto Biscuit and Confectionery Company wish the family doctor to know that they are making a special kind of biscuit, which for purity in composition and care used in manufacture cannot be excelled. Cream Sodas ARE PACKED IN TIN BOXES, so that they retain their crispness and are always palatable.

WE think it will interest our readers to know that Dr. Joseph H. Lopez, of Philadelphia, in discussing the treatment of diphtheria by antitoxin, says of the antitoxin as made by H. K. Mulford & Co.: "This house has introduced a highly concentrated serum, which I prefer, since it removes all objections to the serum treatment, due to the large quantity of serum to be injected, and is in my opinion the greatest improvement yet made in diphtheria antitoxic serum."

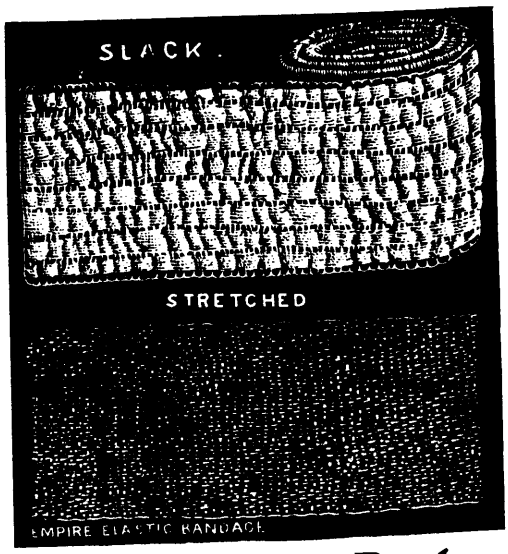
THE Johnson Electric Company, 34 York Street, manufacturers of electrical goods of all kinds, have struck a bonanza in their "Chloride accumulator." After five years' effort on the part of the original firm, they have now produced *an accumulator* constructed on correct mechanical, chemical and scientific principles, and its advent now inaugurates a new era in electric storage. Doctors will find the *chloride accumulator*, especially as mounted by this firm in portable cases, of the greatest use in X-ray work, and will be repaid for their trouble by a visit to this firm's warerooms on York Street.

"I AM convinced Maltine is one of the most valuable constructives ever introduced to the medical profession."—*Prof. L. P. Tansell, Louisville, Ky.*

"There is no remedy known that can be substituted for Maltine, with equal benefit, in cases of anæmia and nervous prostration."—*J. M. Fothergill, London, Eng.*

"Maltine is superior in curative and nutritive value to any extract of malt made from barley alone. It is nutritive to every tissue of the body—from bone to brain."—*Prof. Ogden Doremus, New York.*

Health, a journal of medicine and surgery, diet and sanitary science, London, Eng., says editorially: "We have received from the Antikamnia Chemical Co., St. Louis, Mo., U.S.A., a brochure dealing with the action, history, indications and administration of their preparation, antikamnia. There is no remedy so useful and attended with such satisfactory results in the treatment of melancholia with vaso-motor disturbances, anæmic headaches, emotional distress, and active delusions of apprehension and distrust; and it also increases the appetite and arterial tension, and promotes digestion, as well as being particularly serviceable in relieving the persistent headache which accompanies nervousness.



The Empire Elastic Bandage

SPECIALLY ADAPTED FOR VARICOSE VEINS.

We invite the attention of the Medical and Surgical Profession to the various merits combined in our Bandages:

1st. ITS POROSITY—the greatest in the "Empire." It never causes itching, rash, or ulceration under the bandage.

2nd. ITS ELASTICITY, which will enable the surgeon or nurse to put it on at any required tension, and which will follow a swelling up and down, as the case may be, a feature unknown to any other bandage.

3rd. ITS ABSORBENT PROPERTIES—greatest in the "Empire."

4th. ITS EASY APPLICATION to any part of the body, not being necessary to fold over as with other bandages, as it follows itself with equal uniformity around any part of the abdomen.

5th. ITS SELF-HOLDING QUALITIES. No bother with pins, needle or thread, or string, so tiresome to surgeons, as simply tucking the end under the last fold insures its permanent stay until its removal for purposes of cleanliness.

6th. The only Bandage that is SUPERIOR TO THE ELASTIC STOCKING for varicose veins.

Send $1.00 for 3 in. by 5 yds. Bandage on approval.

As an Abdominal Supporter with Button inserted at the Navel.

Is made of the same material, and possesses the same merits as the Empire Elastic Bandage and Abdominal Supporters, and is pronounced by all who have seen it to be the BEST IN THE WORLD. All of our goods are sent free by mail upon receipt of price, and money refunded if not satisfactory.

Infants, $1.25. Children, $2.50. Adults, $4.00.

THE EMPIRE ABDOMINAL SUPPORTER

Is superior to all others for the following reasons : : : :

1st. It adapts itself to every movement of the body, giving strong and even support.

2nd. It produces warmth without irritation or sweating, as it is perfectly ventilated.

3rd. In pregnancy, corpulency, tumors, or other cases of enlargement of abdomen, it supports weight of body from the backbone, relieving the sinews of their overwork.

4th. Its easy appliance (lace and drawn on over head or feet).

5th. It is cheap; durable. It can be washed when soiled, proper care being taken to cleanse it in lukewarm water and dry in the shade.

In ordering give the measure of the abdomen.

PRICES:

Six inches wide	$2 00
Eight inches wide	2 50
Eleven inches wide	3 00
Twelve inches wide (double rubber)	4 00

Manufactured by

The Empire Manufacturing Co.

43 SPRING STREET,

LOCKPORT, N.Y., U.S.A.

EDITORIAL COMMERCIAL NOTES.

A TYPEWRITER is almost as indispensable to a busy practitioner nowadays as a wheel. The Williams Manufacturing Company (Limited), of Montreal, manufacture a typewriter named "The Empire," which in mechanism is as nearly perfect as it can be made, and in adaptability will be found a great acquisition to a doctor's desk.

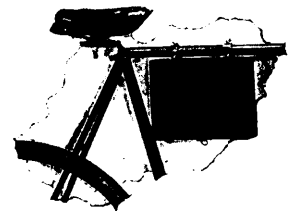
IN all cases of anæmia, chlorosis, and any condition of bloodlessness, a remedy which will be found of especial value is Bovinine. It will be found that by its use patients will soon lose their paleness in color, and their old-time appetite will return. Physicians will consult the interests of their patients by putting them on a course of this preparation, the properties of which are more fully explained in this firm's advertisement, which appears on the second cover page of this issue.

THE adulteration that is practised in the coloring and preparation of Japan Teas for the market has been well understood by the profession for some years. The introduction of Ceylon Teas into Canada will prove a benefit to the whole community of tea drinkers. The "Salada" Ceylon Tea Company have their pure teas for sale in nearly every town, village and hamlet in the country; and they are sold only in sealed lead packets, thereby retaining their delicious flavor and aroma till they reach the hand of the consumer.

PHYSICIANS are aware that absolute cleanliness in cooking utensils is one of the necessaries of a well-kept household. Since the introduction to the market of granite ware, many objectionable features have disappeared, and there is, for instance, no longer contamination of boiling water from rust, so common from the use of tin vessels. The Kemp Manufacturing Company of Toronto have a very large plant for the production of this ware. They manufacture a complete line of granite goods, and are anxious that physicians should recommend their use.

ONE of the oldest houses in the world manufacturing Chloroform is the well-known Edinburgh firm, Duncan, Flockhart & Co. Wherever one goes, the very name of chloroform is so intimately associated with that house, that when that anæsthetic is asked for, it is taken for granted that it is Duncan & Flockhart's that is wanted and no other. For purity, high specific gravity, stability and prompt action, the medical profession cannot err in specifying always "D. & F." It must be most gratifying to this firm to find that the profession in this country have taken up and endorsed their Pil Capsules to so large an extent, thus following in the footsteps of the medical men of the Mother Country.

Bicycle Kodaks.



$5.00, $8.00, $10.00, $25,00.

NOTHING SO FITS INTO THE PLEASURES OF BICYCLING AS PHOTOGRAPHY.

Pocket Kodaks, Cartridge Kodaks, Bullets and Bulls-Eyes

are especially adapted to use awheel. They use our light-proof Film Cartridges and can therefore be

LOADED IN DAYLIGHT.

They are the lightest and most compact cameras made, and with our perfected bicycle carrying cases are entirely out of the way yet instantly available for use.

"Bicycle Kodaks" is the title of a little booklet that tells all about them. Free for the asking.

EASTMAN KODAK CO.

Rochester, N. Y.

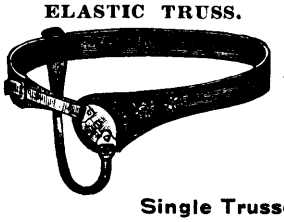
$2,853.00 in Prizes for Kodak Pictures.
$1,475.00 in Gold.
Send for "Prize Contest" Circular.

FLAVELL'S ELASTIC TRUSSES.

Worn day and night with Comfort and Ease.

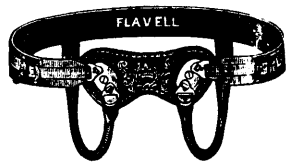
WE SOLICIT THE PHYSICIANS' PATRONAGE DIRECT.

ELASTIC TRUSS.



DIRECTIONS FOR ORDERING.—Give circumference of abdomen on the line of rupture. State if for Single or Double, Right or Left.

ELASTIC TRUSS.



NET PRICE TO PHYSICIANS.

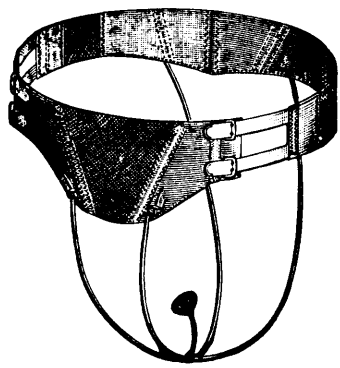
Single Trusses.

	Adult's 28 to 42.	Youth's 22 to 28.	Child's 12 to 21.
A, Plain.....each,	$1.50	$1.25	$1.00
B, Fine..... "	2.00	1.75	1.25
C, Silk..... "	2.50	2.00	1.50

Double Trusses.

	Adult's 28 to 42.	Youth's 22 to 28.	Child's 12 to 21.
A, Plain.....each,	$2.50	$2.00	$1.50
B, Fine..... "	3.00	2.50	2.00
C, Silk..... "	4.00	3.00	2.50

FLAVELL'S IMPROVED UTERINE SUPPORTER.



Price to Physicians

$2.00

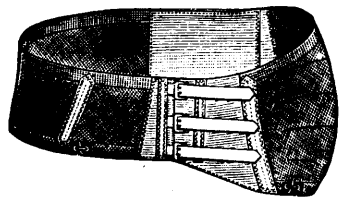
Satisfaction Assured.

DIRECTIONS FOR ORDERING.—Give circumference of abdomen two inches below the navel, and state if for Prolapsus, Anteversion or Retroversion.

Flavell's Abdominal Supporters

DIRECTIONS FOR MEASUREMENT.

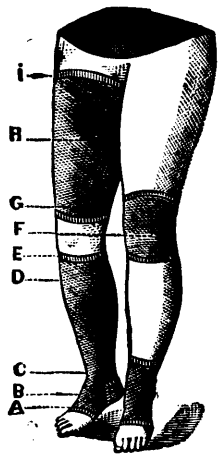
Please give exact circumference of body at K.L.M.



PRICE TO PHYSICIANS.

Silk Elastic, - - each, $2.75

Thread Elastic, - " 2.00



Elastic Stockings, Etc.

PRICES TO PHYSICIANS.

	Best Silk—Each.	Best Thread—Each.
Stocking from A to E	$2.50	$1.50
" " A to G	4.00	2.50
" " A to I	5.50	4.00
Knee Cap from E to G	1.50	1 00
Legging " C to E	1.50	1.00
Anklet " A to C	1.50	1.00

Directions for Measurement.—Give exact circumference and length in all cases. We allow for expansion.

Goods sent by Mail upon receipt of price.

G. W. FLAVELL & BRO.

MANUFACTURERS

1005 Spring Garden Street, - - - PHILADELPHIA, PA.

Syr. Hypophos. Co., Fellows

Contains the Essential Elements of the Animal Organization—Potash and Lime;

The Oxidizing Agents—Iron and Manganese;

The Tonics—Quinine and Strychnine;

And the Vitalizing Constituent—Phosphorus; the whole combined in the form of a Syrup with a **Slightly Alkaline Reaction**.

It Differs in its Effects from all Analogous Preparations; and it possesses the important properties of being pleasant to the taste, easily borne by the stomach, and harmless under prolonged use.

It has Gained a Wide Reputation particularly in the treatment of Pulmonary Tuberculosis, Chronic Bronchitis and other affections of the respiratory organs. It has also been employed with much success in various nervous and debilitating diseases.

Its Curative Power is largly attributable to its stimulant, tonic and nutritive properties, by means of which the energy of the system is recruited.

Its Action is Prompt; it stimulates the appetite and the digestion, it promotes assimilation and it enters directly into the circulation with the food products.

The prescribed dose produces a feeling of buoyancy and removes depression and melancholy; *hence the preparation is of great value in the treatment of mental and nervous affections.* From the fact, also, that it exerts a double tonic influence, and induces a healthy flow of the secretions, its use is indicated in a wide range of diseases.

NOTICE—CAUTION.

The success of Fellows' Syrup of Hypophosphites has tempted certain persons to offer imitations of it for sale. Mr. Fellows, who has examined samples of several of these, **finds that no two of them are identical**, and that all of them differ from the original in composition, in freedom from acid reaction, in susceptibility to the effects of oxygen when exposed to light or heat, **in the property of retaining the strychnine in solution**, and in the medicinal effects.

As these cheap and inefficient substitutes are frequently dispensed instead of the genuine preparation, physicians are earnestly requested, when prescribing the Syrup, to write "Syr. Hypophos., **Fellows.**"

As a further precaution, it is advisable that the Syrup should be ordered in the original bottles; the distinguishing marks which the bottles (and the wrappers surrounding them) bear, can then be examined, and the genuineness—or otherwise—of the contents thereby proved.

Medical Letters may be addressed to—

MR. FELLOWS, 48 Vesey Street, NEW YORK.