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EXPERIMENTAL PRODUCTION OF ARTERIO-SCLEROSIS.*

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BEFORE taking up the study of the experimental production of arterio-sclerosis it is necessary to ask, What is arterio-sclerosis? (a) Is it an entity; or (b) are several distinct morbid conditions included under this one heading; or (c), what comes nearly to the same thing, in different states which we are accustomed to regard as arterio-sclerosis, do we find the different coats and constituents of these coats affected diversely?

It is necessary to ask these questions, because, as I shall show, different procedures and reagents have different effects upon the arteries, and whether we are to regard these experimental results as arterio-sclerosis must depend upon an answer to these questions. The subject of classification has been taken by Professor Veleh; fortunately, therefore, I need not discuss the various forms. All that I need say as indicating my point of view is that I do not agree with Jores' narrower definition. His extensive studies, which have received much attention, have led him to include only a particular histological change in the vessels as coming under the category of arterio-sclerosis, while the mass of other scleroses in the arteries remains unclassified. He and those who follow him would limit the term to conditions of intimal hyperplasia, with a peculiar splitting of the internal elastic lamina, conditions, which can only be distinguished under the microscope.

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Are we, then, to exclude the clinician from diagnosing arterio-sclerosis? The answer can but be, No! And this for the adequate reason that such is not the sense in which Lobstein applied the term arterio-sclerosis in 1835. Let us preserve the broader meaning, and regard all scleroses or hardenings of the arteries as included under this general term, recognizing, if need be, distinct varieties.

Thus I would point out that arterio-sclerosis is not a simple disease. Although, in some instances, a single coat of a vessel is found affected by a fibrous or other allied change, in others several tunics of the same artery are involved. Again, we may find that in a certain form of sclerosis particular tissue elements are picked out, while other tissues are unaffected, or that when muscle fibres are degenerating in the media the connective tissue elements of the intima are proliferating. Hence we find that we may have two or more such processes inextricably mixed in a progressive disease of the arterial walls.

Of the more common forms of sclerosis of the arteries I would point out that the hard radial vessels by which the clinician makes his diagnosis of arterio-sclerosis is a widely different disease from that recognized by the pathologist at post-mortem examination of the aorta. The sclerosed radial vessels represent a disease which is peculiar to the media; it has its origin in the muscle cells of the middle coat, and the middle coat alone is damaged. The intima and adventitia are not essentially involved in the process, though occasionally a secondary intimal thickening accompanies the medial degeneration. The main changes in the media are a fatty degeneration of the muscle and later of the elastic fibres, both of which become calcified. It is through these calcareous plaques in the media that the beaded character is given to the radials. At these sites of medial degeneration and calcification the vessel wall is perceptibly thinned, so that many small pouchings result. These pouchings, though small, are true aneurysms distributed irregularly in the vessel wall, and when held to the light are seen to be thin and quite transparent. This type of disease, which is most frequent in the vessels of the extremities, I shall later speak of as the Moenckeberg type of arterio-sclerosis, and I shall point out how closely some of the experimental lesions resemble it.

On the other hand, the nodular aorta, which we so frequently meet with at autopsy, is the result of repeated insults telling upon the intima alone. The thickenings of the intima may again be entirely proliferative, and in this case represent a chronic inflammatory production. This I acknowledge is not the view held by all; those who still uphold Thoma's conception of the arterio-sclerotic process see also in the typical nodose sclerotic aorta a primary giving way of the media, and regard the intimal

overgrowth not so much as an inflammatory as a compensatory process. Whichever view be accepted, or be correct, or whether, as would seem to be truly the case, we encounter both conditions. It is still an open question whether the newly-developed cells in the intima are of endothelial or of connective tissue origin; it may be again that both tissues take part in the overgrowth. At all events, few or many layers of cells, which are very like endothelial cells, are produced immediately beneath the endothelium, and it was the character of these cells which led Virchow to name it "endarteritis chronica deformans."

When a similar intimal thickening, by the proliferation of connective tissue or endothelial cells, occurs in the smaller arteries, so that the lumen of the vessel becomes distorted, or even wholly obliterated, the condition is spoken of as "endarteritis deformans sive obliterans." I may, however, mention that seldom if ever is a vessel occluded by the overgrowth of its intima alone. The usual result is that after a vessel has been partly obstructed by the thickened intima, complete blockage is brought about by thrombosis.

Now although we have ample opportunity to study the damage that has been done by the various noxae to the human arterial system, we are as yet largely without the means of recognizing which lesion has been produced by a particular irritant. It thus becomes evident that the histological changes in the arteries must be investigated by experimental means, for it is only in this way that the changes in the arteries produced by insults of different kinds can be followed step by step, and that a decision can be reached regarding the influence of the various injuries.

It is the common fault of experimenters that, having been able to reproduce a disease in whole or in part by experimental means, the conclusion is drawn that all the features of this disease are due to this one cause. To avoid this common mistake we must advance very cautiously towards our conclusions.

THE EARLIER EXPERIMENTS

In the earlier experimental attempts undertaken to produce arterio-sclerosis and aneurysms mechanical means were employed. Thus, Malakoff, and also Fabris, injured the vessel wall directly, either by forcibly pinching it through the skin or by laying it bare and crushing it, or applying corrosive substances to its outer walls. That damages of all kinds were obtained in this manner we can readily understand, but that neither true aneurysms nor arterio-sclerosis resulted is just as clear. Thromboses and inflammation of the arteries were the most frequent results of these violent measures, but these studies have thrown little light on the process of arterio-sclerosis. Malakoff, however, made another interesting experiment, in which he laid the end of the carotid artery bare, and, ligating the vessel about an inch or so away, he

put the isolated portion of the artery under artificial pressure and then returned it to its natural bed. This treatment he claimed led to a calcification of the media—a condition which he said was directly referable to the high pressure to which the vessel was subjected.

Several authors claim to have obtained positive arterial lesions of the character of arterio-sclerosis by irritating or severing the nerves of the leg. Of these, Lewaschew, Bervoets, and Fraenkel each described changes in the femoral and tibial arteries after performing these experiments, but in each case, as Czyhlarz and Helbing pointed out, the influence of the trophic inflammatory disturbances extending from ulcers about the limbs cannot be excluded. These experiments, thus, do not teach us more than that the coats of the arteries, including the intima, take part in an inflammatory process by direct extension from without. That the intima itself could become involved in an acute or chronic inflammation was denied by Rokitansky, who held that the thickening of this coat was the result of the organization of lymph thrown out of the blood. This contention has, however, been shown to be incorrect.

Soon after Thoma brought forward his theory that arterio-sclerosis is a compensatory thickening of a vessel in a region where the media has been weakened and the lumen of the vessel enlarged, several workers endeavored to prove this by experimental means. Thoma himself undertook to show that the stimulus or irritation required for the proliferation of new tissue in the intima lay in the slowing of the blood current. By ligating a vessel he found that on the distal side of the ligature, as far as the first compensatory artery, considerable intimal thickening took place. However, Fuchs (who repeated the experiments, though he found the same changes to occur in the arterial walls, attributed the changes to a diminution of the blood pressure, while others again reported the occurrence of arterial thickening on both sides of the ligature, and ascribed its presence to local thrombosis and inflammation.

The inflammatory theory of arterio-sclerosis received further support in the experiments of Sumikawa, who irritated the vessels by painting them with turpentine or silver nitrate or infected them with bacteria. Vessels so treated showed an inflammatory condition in all the coats, or else in the intima alone. In each case there was a degeneration of the muscle fibres along with a small celled infiltration along the vaso vasorum. His experiments with bacterial infection of the vessel walls bear out the pathological findings in man, where it is noted that inflammatory foci not only lead to a new formation of capillaries in the granulation tissue, but also of vaso vasorum in the neighboring large blood vessels, and, moreover, that the reaction in these blood vessels is accompanied by a connective tissue proliferation and thickening of the intima.

That lead, phosphorus, and mercury produce arterial lesions has long been described in medical textbooks, and yet such lesions have not been produced experimentally. It is true that Lunz, in his experiments with these salts, has found that the elasticity of the vessels was diminished, but Jores could not verify these results, and was unable to find any change in the vessels of animals so treated.

THE MORE RECENT EXPERIMENTS.

Thus until 1903 little advance was made in the experimental production of arterio-sclerosis, despite the many attempts. In that year Jores instituted a series of experiments at the Bonn Pathological Institute, in which he fed animals on adrenalin extract, hoping thereby to test the effect on the arteries of raising the blood pressure. Whether he obtained any marked rise in the blood pressure he does not report. His results, however, on the arterial walls were negative. Josué, using the same substances, applied it in a different way. He repeatedly injected a solution into the ear veins of rabbits. After several weeks of this treatment, he found that the aorta of the animals showed distinct pathological change, with aneurysmal dilatations. The lesions, which varied from the size of a pin's head to a split pea, were distributed irregularly over the thoracic aorta and over the abdominal aorta as far as its middle. The vessel changes consisted essentially of medial degenerations lying in the middle zone of this layer. The destruction of the muscle and elastic fibres with the later deposition of lime salts in them led to a thinning and weakening of the vessel wall, which later became the site of aneurysmal dilatations.

The success of Josué in producing experimental arterial lesions led immediately to like methods being employed by a large number of workers, and in the main their findings have agreed with one another and with Josué's original report. Fischer points out that the lesions produced by adrenalin are all of a medial nature, and that the process is really one of necrosis. He described the elastic fibres lying more closely together, while the muscle cells between the elastic lamellae are in part lost. Similar results have been obtained by Erb, Scheidemandel, Kurt Ziegler, Pearce, and Stanton and others. Sturli found no difference between the lesions produced by synthetic adrenalin and the adrenalin extract. Opinion, however, remains divided as to whether we are right in comparing the experimental results in the lower animals with arterio-sclerosis as we find it in man. Some hold that the lesions are like those commonly seen in the human artery, while others again can find no similarity between the conditions.

Kurt Ziegler and I almost simultaneously compared these adrenalin lesions with the Moenckeberg type of arterio-sclerosis. We have both pointed out how in each the essential lesion is a

degeneration of the muscular and elastic tissue of the media, while as a consequence aneurysms are produced in the vessels. I have found that the degeneration in both instances are of the nature of fatty metamorphoses of the involved tissue, which later goes on to calcification.

Ziegler holds that the lesions produced by the inoculation of adrenalin are of a nutritional character, or, rather, due to lack of nutrition. Torri and others, on the other hand, regard them as the outcome of heightened blood pressure, while Fischer considers the process as a pure necrosis due to the direct action of the drug on the muscle cells. Observations in favor of the degenerative or necrotic theory have been recorded by Braun. He found that the combination of adrenalin with amyl nitrite neutralizes the pressure-raising power of adrenalin, but, notwithstanding, the arterial changes manifest themselves just as when adrenalin alone is administered. A somewhat different result, however, was gained by Mironescu. He found that the inoculation of euthalmin alone had no effect on the arteries, while at the same time he noted that it produced a drop in the blood pressure. If after the inoculation of adrenalin the animals were also given a dose of euthalmin he found an initial rise with a secondary drop in the blood pressure, and that these animals showed arterial changes much sooner than those treated with adrenalin alone. Hence Mironescu concluded that it was the sudden change from a high to a low pressure that had a deleterious effect upon the arteries.

Harvey has recently demonstrated some very interesting experiments in regard to the degeneration of vessels. He notes that vessels under pressure undergo a more rapid destruction than those which are lax. This throws some light on the effect of high blood pressure in the arteries.

Experiments have also been undertaken by some to observe the effect of bacteria and their toxins on the vascular system. Gilbert and Lyon claim to have produced lesions similar to those produced by adrenalin.

In the main the different experimental results agree with one another, yet the inferences as to the nature of the lesions and the similarity with arterio-sclerosis in man differ widely; the majority of authors hold that the changes brought about in the arteries of animals are of an arterio-sclerotic nature, but in my opinion only one of them draws the proper inference and shows the identity of the changes in the vessels of the "adrenalin animals," and the Moenckeberg type of arterio-sclerosis in man.

THE AUTHOR'S OWN OBSERVATIONS.

It was the indefiniteness of the results obtained in the experimental work that prompted me to attempt the production of

arterial lesions. Simultaneously with Braun and Mironescu, I had conceived the idea of abolishing the high-pressure effects of adrenalin by combining it with a drug producing vasodilatation. I also observed the effect of adrenalin inoculated directly into the muscle tissue. Other substances, as digitalin and barium chloride, which have the effect of raising the blood pressure, were also tried. Lastly, the effect of producing a septicemia with different organisms was made, and in these experiments some interesting arterial lesions were obtained. In my series of observations over forty rabbits were used. In these animals I found that results are most easily obtained. Control animals were used in all cases where necessary, particularly in cases where the animals were inoculated with two substances simultaneously.

ADRENALIN CHLORIDE, BARIUM CHLORIDE. AND DIGITALIN.

Adrenalin chloride was administered intravenously to animals in doses varying from 0.3 c.cm. to 2.0 c.cm. of the 1 in 1,000 solution. The best results were obtained by giving large doses at intervals of three to four days. In several cases the animals died of acute edema of the lungs immediately after the inoculation of the adrenalin, but I have never met with a case of death from cerebral hemorrhage, as has been reported by others.

The arterial lesions varied in extent and severity with the length of time the animals were under treatment, with the quantity of adrenalin inoculated, and with the idiosyncrasy of the individual animals. The lesions were usually present at the end of two or three weeks, and the early changes consisted in small isolated plaques of calcification with pittings in their centres. When these grew larger, saccular aneurysms made their appearance. These lesions were distributed mainly over the thoracic aorta and in the abdominal aorta as far as the renal vessels.

Again, in other cases it was found that the entire thoracic aorta, half of the abdominal aorta, the vessels of the neck and those of the abdomen were completely calcified. The thoracic aorta, however, alone showed a diffuse aneurysmal dilatation, beginning at the aortic opening and reaching as far as the diaphragm. Neither the abdominal aorta nor any of the smaller vessels were involved in this dilatation.

The results obtained by the inoculation of barium chloride were exactly the same as those produced by adrenalin; in fact, the similarity is so striking that the lesions cannot be distinguished from one another either macroscopically or microscopically. In several cases I was able to produce the diffuse aneurysm of the aorta by the use of barium chloride, and in each example it was striking how the aneurysm was isolated to the thoracic portion of the vessel and did not advance beyond the diaphragm.

Fischer's experiments, too, of producing arterial lesions by

the intravenous inoculation of digitalin, were also repeated, and I agree with his findings that the arterial lesions isolated in the aorta are similar to the milder adrenalin destructions.

It was further found that, if the pressure-raising effect of adrenalin be abolished by the use of nitroglycerin, although the arterial lesions were not as extensive as when adrenalin alone was used, nevertheless, tissue degeneration in no way differing from that produced by adrenalin did still occur in the vessel walls.

In such cases where the arterial lesions were just beginning there was no change to be noted in the vessels macroscopically. I might point out, too, that in none of the vessels that I have obtained from animals treated with adrenalin was I ever able to make out any naked eye changes in the intima. This coat was at all times stretched smoothly over the damaged media. The earliest damage was always found in the muscle cells of the middle zone of the media. Here patches of homogeneous tissue were met with, where the muscle nuclei were lost, but where the elastic fibres passed through these areas unaffected. With the loss of the muscle cells the parallel elastic fibres were crowded closely together by the blood pressure within the vessel. This crowding of the elastic fibres from within outwards naturally led to a small dimple at this point and this was the beginning of a saccular margin of the aneurysm.

The loss of the muscle cells takes place by a form of necrosis, as was pointed out by Erb and Fischer. The elastic fibres later become affected, losing their elasticity and contractile power. This degeneration of both muscle and elastic fibres occurs through a process of fatty change, which is in some cases difficult of demonstration, but which is, however, readily brought out in those cases where the metamorphosis is slower. With the high calcium content of the rabbit's blood these areas of fatty degeneration in the media of the aorta and other vessels are converted into calcified plaques by the process previously described. Microscopically, no connection could be linked between the positions of the vaso vasorum and the arterial degenerations, and a true mesarteritis, as noted by Fischer, was not met with.

In no instance have I found a primary change occurring in the intima after any of the above treatments, though in one or two specimens I did note the slight thickening of the intima at cular aneurysm.

It is to be noted, too, that with the abolition of the physiological effects of adrenalin, the arteries are still affected, though more slowly and to a less degree than where the vessels are under tension. Boveri claims to have abolished the effects of adrenalin on the blood vessels by combining it with "Jodipin," though he was not able to prevent the toxic effect on the muscle cells.

The effect of adrenalin chloride inoculated directly into the

skeletal muscle depends upon the strength of the dose given. When the undiluted 1 in 1,000 solution of adrenalin chloride is inoculated into the muscle tissue the cells are killed outright, so that the nuclei and cell membrane disappear. Weaker solutions produce a fatty degeneration of the muscle cells. It was found also that the animals receiving the adrenalin treatment over an extended time developed fatty degeneration of the heart. So we can but conclude that adrenalin has a selective action on muscle tissue, and that its toxic effect thereon is the primary cause of the arterial lesions. The same holds true for barium chloride and digitalin. The three substances are thus similar in their effects, differing only in the intensity of their reaction.

The influence of high pressure in producing arterial change is well brought out in these experiments. We have noted that the most frequent site and the most severe changes occur in the thoracic aorta, and that the vessels in the remote parts of the body are only affected when advanced lesions are present there. We must admit that the inoculated substances are distributed equally to all parts of the body, and that from toxemia alone all vessels of similar structure should suffer equally. But the normal amount of work done, besides the increased strain that is produced by raising the blood pressure, is felt most severely in the aorta, mainly in the thoracic portion. As a result of this combined degeneration and high pressure, the thoracic aorta exhibits a fusiform aneurysm, extending from its origin to where it passes behind the diaphragm. From this localization of the diffuse aneurysm to the thoracic aorta, it is evident that the aortic opening in the diaphragm acts as a flood-gate in letting only a given quantity of fluid through. By this mechanical device the abdominal aorta is relieved of having an increased volume of blood thrown into it by the overworked heart, and thus is not subjected to the double degenerative forces of toxemia and high blood pressure, as in the thoracic portion. Focal degenerative lesions are nevertheless found in the abdominal aorta.

The important role that the muscle fibres of the media play in the strength of the arterial wall is well known. In fact, it is pointed out that they are the mainstay of the vessel. This fact is exemplified in these experiments, where it is found that with the primary degeneration in the muscle cells the vessel wall begins to give way in this region. The elastic fibres at this time, though themselves not visibly altered, no longer take on the wavy contour which is characteristic of them in a relaxed vessel. It would seem from this that the apparent elasticity, as shown by their undulations, is not an inherent quality, but is due to the contraction of the muscle fibres surrounding them—or, otherwise, that when the artery is in a condition of tonus, its contracted state is due mainly, if not entirely, to the muscle fibres; when

dilated it is possible that the elasticity of the elastic fibres comes into play.

A proliferation of the intimal tissue in these cases is to be regarded as secondary to degenerative processes in the media. The proliferation is either of the character of a hypertrophy of the musculo-elastic layer or of the subendothelial tissue. Whether this subendothelial tissue had its origin in connective tissue or endothelial cells we cannot discuss here.

INFECTIVE ARTERIO-SCLEROSIS.

I have also undertaken the production of experimental arterial lesions with infective agents. For this purpose *B. typhosus* and streptococcus were used in separate experiments, while again in others diphtheria toxins were inoculated. Each of these agents was inoculated intravenously into rabbits.

The results obtained with *B. typhosus* and the streptococcus were of the same order. The first part of the pulmonary artery and the ascending limb of the aorta showed warty thickenings of the intima. There were no aneurysmal sacs nor any sign of a calcareous degeneration of the media. Microscopically there was a fatty degeneration of the subendothelial tissue, while there was, however, much connective tissue advancing into the degenerated area. A small-celled infiltration was wanting, as was also any sign of calcification. At the areas of thickening of the intima it was found that the internal elastic lamina had split into several parallel layers, which were stretched between the proliferating cells. The area affected included the intima and the inner layer of the media. Thus we find that these infective lesions (*B. typhosus* and streptococcus) differ entirely from those produced in our adrenalin series. What we may term the adrenalin group are agents producing destruction of tissue leading to calcification with little or no local repair to make up for the lost tissue, while the mild infections lead to a slight degeneration of the vessel coats, though the process is followed step by step by the process of repair, and instead of getting a thinning of the vessel wall there is an actual thickening. It becomes self-evident that with the absence of extensive destruction of the muscle fibres in the media no aneurysms were formed.

In our experiments it must be remembered that we dealt with cultures of low virulence. The possibility must not be overlooked that virulent micro-organisms gaining entrance into the adventitia through the vaso vasorum, and proliferating there, might invade the media and induce local degeneration and destruction, and if the reparative process could not keep pace the weakening of the media might result in aneurysm formation. Such lesions would correspond to the mitotic aneurysms in man, which

have been described by McCrac and others; nay more, the observations of Heller, Chiari, and others upon syphilitic mesoarteritis, afford a like explanation for aneurysms in the syphilitized.

The presence of lesions in the pulmonary artery is worthy of note in comparing the distribution of the lesions with those of the adrenalin series. In the latter, the aorta and its branches were alone involved, while the heart became hypertrophied—a feature that was not seen after the bacterial inoculations.

The repeated inoculations of diphtheria toxin into rabbits gave surprising results. Here, instead of meeting with proliferative changes, such as the *B. typhosus* and streptococcus produce in the aorta, there were only lesions of a degenerative character. The degenerations were isolated to the first part of the aorta, and were identical with those produced in the adrenalin series. The thinning of the arterial wall, with calcification and aneurysmal dilatations, were all present, and the microscopical examination showed the lesions to be confined to the media. No proliferative or inflammatory changes were present in the intima, nor was there any change about the vaso vasorum.

Hence we have before us two interesting groups of arterial lesions resulting from infective conditions. On the one hand, lesions are intimal and proliferative, while on the other they are of a purely medial degenerative nature. The free toxins of diphtheria have a predilection for the muscle tissue of the circulatory system, whereas the endotoxins of typhoid and streptococcus infections are in small doses rather of a stimulating nature to the connective tissue and endothelial cells.

If, then, we are to consider the nature of the lesions produced in the arteries as a criterion in classifying the toxins, we must place the diphtheria toxin along with the adrenalin series, while the endotoxins, the stimulating or proliferative agents, form another. The marked differential characters which are brought out by the two series in experimental animals make it more than probable that such differences also exist in man—that is, that typhoid or streptococcus infection will lead to an endarteritis, while diphtheria will produce lesions of a degenerative character, affecting chiefly the muscle cells.

The fact that the streptococcal and typhoidal infections lead to a splitting of the internal elastic lamina with a proliferation of the subendothelial tissue (and also the musculo-elastic layer) places the lesion in very close relationship with arterio-sclerosis in man, as it is described by Jores.

To sum up the results of my experiments, I find that:

1. The effect of the high-pressure drugs (adrenalin chloride, digitalin, and barium chloride) on the arteries is a degenerative one, as was described by Fischer and Erb for adrenalin.

2. The muscle cells of the media are first attacked, while the elastic fibres of this layer are also involved later.

3. At a proper stage of the degeneration a fatty change can be demonstrated in the tissues, followed by calcification.

4. The middle zone of the media is always involved.

5. Occasionally secondary reactions occur in intima which are of a proliferative nature.

6. The effect of adrenalin is not abolished by lowering the blood pressure with nitroglycerin.

7. The aneurysms are produced as a result of the destruction in the media.

8. These experimental lesions are in every respect similar to the Moenckeberg type of arterio-sclerosis.

9. The effect of diphtheria toxins on the arteries is similar to that of the adrenalin series.

10. Typhoid and streptococcus infections produce little destruction of tissue walls, but tend to stimulate cell proliferation in the intima and inner layer of the media.

11. Vessel changes are brought about by these infections which correspond to arterio-sclerosis, as described by Jores.

12. Contrary to the general conclusions reached by Thoma, these experiments show that there is definitely a form of arterio-sclerosis in which, not a preliminary weakening of the media, but a primary proliferation of the intima, including the musculo-elastic layer, is the prime feature. To what extent this essentially proliferative type is to be encountered in the human aorta and other vessels must be left an open question. Undoubtedly, in the medium-sized arteries, the Moenckeberg type of medial degeneration is common. Undoubtedly also in syphilitic as well as other cases, we encounter in the aorta a secondary and adaptive or compensatory overgrowth of the intima—secondary, that is, to the medial degeneration.

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Proceedings of Societies.

MEETING OF EX-HOUSE STAFF ASSOCIATION.

The second annual meeting of the Ex-House Staff Association took place at the King Edward Hotel on Monday, May the 27th, at 7.50 p.m., some 40 of the members dining together. Dr. J. F. N. Ross presided. At the close of the dinner the following constitution and by-laws were adopted:

DRAFT COPY OF CONSTITUTION AND BY-LAWS Of Toronto General Hospital Ex-House Staff Association.

CONSTITUTION.

Article I.

The name of this Association shall be the Toronto General Hospital Ex-House Staff Association.

Article II.

The object of this Association shall be the meeting together of its members at stated times for the purpose of creating a feeling of *esprit de corps* among the various staffs who have served as internes in the Toronto General Hospital, and for the promotion of scientific medicine.

Article III.

Section 1. The membership of this Association shall be active and honorary.

Section 2. Active members shall be those who have served for a period of six months or over on the House Staff of the Toronto General Hospital.

Section 3. The fee for membership shall be the sum of \$1.00 per annum.

Section 4. Honorary membership may be suggested at any annual meeting by any member for any person whose services may entitle him to such recognition, or for any other person who in the judgment of the Association is entitled to such membership.

Article IV.

The executive officers of the Association shall consist of a President, a Vice-President, a Secretary and a Treasurer.

These officers, together with a Council of three, shall constitute the Executive Committee.

Article V.

The executive officers shall be elected at each annual meeting and shall serve until the close of the meeting next succeeding, or until their successors are regularly elected and installed.

Article VI.

All vacancies occurring in executive officers between annual meetings shall be filled by the Executive Committee. Three shall form a quorum.

Article VII.

Amendments to the Constitution shall be submitted in writing and signed by at least five members. These must be transmitted to the Secretary, who shall forward copies to every member of the Association at least five days before the annual meeting. They shall be passed by not less than a two-thirds vote of the members present and voting.

BY-LAWS.

Article I.—Meetings.

Section 1. The regular meetings of the Association shall be held at the place and date fixed by decision of the annual meeting or the Executive Committee of the Association. The Executive Committee shall also arrange a programme for the annual meeting.

Section 2. Special meetings may be called by the President, or in his absence, by the Vice-President, upon the written petition of not fewer than five members. This petition shall recite the object of the call. The President, through the Secretary, shall give notice of not less than thirty days before the proposed time of such special meeting, to each member of the Association. Such notice shall also recite the object of the meeting.

Section 3. A quorum of the Association shall consist of not less than 12 members.

Article II.—Elections.

Section 1. All officers shall be elected by ballot, except where it is otherwise ordered.

Section 2. A majority of the votes cast shall constitute an election.

Section 3. Only active members shall be entitled to vote.

Article III.—Duties of Officers.

Section 1. The President shall preside at all meetings of the Association. He shall appoint all committees, unless by vote of the Association other provision shall be made. He shall be *ex-officio* a member of all committees.

Section 2. The Vice-President, in the absence of the President, shall perform his duties.

Section 3. The Secretary shall keep the minutes of the meeting and the records of the Association in a book provided for this purpose.

Section 4. The Secretary shall conduct the correspondence of the Association, and keep on file all letters and all correspondence, together with all replies thereto.

Section 5. The Treasurer shall receive all dues and other moneys of the Association, and shall submit these accounts, together with a financial report, at the annual meeting of the Audit Committee, after which he shall present this report, with the endorsement of the Auditing Committee, to the Association.

Article IV.—Committees.

Section 1. The President elected at the annual meeting shall appoint the following committees: An Auditing Committee of three members; a Nominating Committee of seven members; a Committee on Constitution and Rules of three members; a Historical Committee of three members.

Section 2. The Auditing Committee shall receive and audit all accounts of the Treasurer, and all bills contracted on account of the Association, stamping its approval thereon, and return them to the Treasurer for submission to the Association.

Section 3. The Committee on Nomination shall nominate to the Association the name of candidates for President, Vice-President, Secretary, Treasurer and three Councillors. The action of this committee is at all times subject to the approval of the Association.

Section 4. The Committee on Constitution and Rules shall consider and report on all proposed amendments to the Constitution and By-laws and all rules of order.

Article V.—Dues.

Section 1. The dues of each member shall be \$1.00 (one dollar) per annum, and shall be paid to the Treasurer of the Association on or before each regular meeting of the Association.

Section 2. Any member delinquent in his dues more than three successive annual meetings shall upon the report of the Treasurer of adequate notification, be suspended from membership.

Section 3. The Treasurer shall notify the delinquent of such suspension, and at the same time the Secretary of the Association, who shall enter it upon the records.

Section 4. Any delinquent may reinstate himself upon payment of all back dues, as well as those for the ensuing Convention.

Article VI.

The Treasurer shall, upon the certification of the President and Secretary, pay all bills.

Article VII.—Guests.

Members of this Association may have the privilege of inviting special guests to the meetings with the consent of the President. Guests thus introduced shall be permitted to participate in the discussions.

Article VIII.—Discipline.

Section 1. All charges of violation and infraction of rules or unbecoming conduct shall be referred to a special investigating committee appointed by the President.

Section 2. Due notice of the charges shall be given to the alleged offender in writing, by the Secretary of the Association.

Section 3. The Association shall have the right and authority to reprimand, suspend, and expel any member guilty of violation of any of the provisions of the Constitution or By-laws of the Association, after a full and fair investigation of any allegation of such infraction or violation shall have been made.

Section 4. A four-fifths vote shall be necessary to sustain the action of such committee.

Article IX.—Order of Business.

Calling of the Association to order.

Reading of Minutes of previous Convention.

Announcements.

Unfinished Business.

Reports of Committees.

New Business.

Presentation of Papers, and Discussion.

Adjournment.

Article X.—Amendment to By-Laws.

No part of these By-laws shall be suspended, altered, or changed, except as provided for by Article VII. of the Constitution.

The Nominating Committee reported as follows: President, Dr. W. P. Caven, Toronto; Vice-President, Dr. Alexander Taylor, Goderich; Secretary, Dr. J. N. E. Brown, Toronto; Treasurer, Dr. W. B. Hendry, Toronto; Council, Dr. R. H. Robinson, Toronto; Dr. Greenway, Coldwater; Dr. Shuttleworth, Toronto.

This report was adopted.

The following were appointed members of the Historical Committee: Dr. H. B. Anderson, Toronto; Dr. Chas. O'Reilly, Toronto; and Dr. J. F. W. Ross, Toronto.

The President appointed Doctors Mackenzie, A. Adams, and D. Anderson as members of the Auditing Committee; and the following gentlemen on the Committee of Constitution and Rules: Doctors A. A. Beatty, Charles Trow, and J. N. E. Brown.

During the absence of the Nominating Committee, Dr. Brown laid before the Association a proposal to establish occasional clinics at the Hospital, to which, by courtesy of ex-members of the House Staff, who are now on the staff of the Hospital, members of the Association would be invited to take part. This would be in accordance, he said, with the spirit of the second object of the Association. It was ordered that this be referred to the Executive Committee and the members of the Hospital staff who were ex-house surgeons.

It was moved by Dr. G. W. Ross, Jr., seconded by Dr. Harold C. Parsons and resolved, That this meeting request the Executive Committee to arrange for a definite programme on the afternoon of the day chosen for the dinner next year, at which members of the Association may informally report any work they have done during the year.

The following gentlemen were elected as Honorary Members: Dr. Chas. O'Reilly, Toronto; Dr. A. Taylor, Goderich, and Dr. L. F. Barker, Baltimore.

Dr. Ross then delivered the following address:

Accept my thanks for the honor you conferred upon me by electing me as president for the year that is just passing.

It is my intention to endeavor to interest you in a few of the details connected with the lives of medical men who lived in Toronto and were active in connection with Hospital life here during the term of my incumbency as hospital intern, and who have passed away. It is not my intention to say anything regarding the living.

The General Hospital was established in 1819, through the efforts of the Military Surgeons when there were about one thousand souls living in Toronto. The Chairman of the Medical Board was Dr. Christopher Widmer, and he held the position for 35 years. He was the recognized leader of the profession at that time. He died in 1858. I have often talked to my mother about

him, as he attended the family of my grandfather, John McIntosh, who lived on Yonge Street, near the corner of Queen, and he attended my grandfather in his last illness. His conduct as a doctor was exemplary. He came in, pulled off his coat and hat, saw his patient, and went out as he came in, in a purely professional capacity, strictly attending to his own business. He was very particular regarding every detail of the proprieties of life. His domestic affairs were not satisfactory. His first wife was a very jealous woman, though a lady of accomplishments. He resented her jealousy, and as a consequence there were strained relations up to the time of her death. His second marriage was not all that was to be desired, and I have often heard my mother speak of this. His only son was wild and dissipated, but in spite of this the father's heart was filled with love for him; and after the death of the erring boy the father paid daily visits to his grave. Widmer lived on Front Street, between Berkeley and Princess, and I remember the house quite well. It was a double story roughcast building, with a verandah around it and placed on an ample lot. Hard by was the gaol, on a lot on which now stands a building of the gas company, and as Widmer was gaol surgeon the gaol was conveniently situated for him. In front of his residence was a large square called the Fair Green, where the boys of the time played games. His funeral was very largely attended. On the 7th of May, 1858, after it was over, a meeting of the prominent members of the medical profession was held, and it was resolved that a full length portrait of the deceased be painted and placed temporarily in the Board Room of the General Hospital until such time as the contemplated Medical College should be erected.

Widmer was a founder, and the first president of the Medico-Chirurgical Society of Upper Canada, established in 1833, so that he may be looked upon as at least one of the pioneers of medicine and surgery in Upper Canada or Ontario. The Medical Board was created by the Medical Act of 1818, just one year before the establishment of the General Hospital. The place of the Medical Board was taken by the College of Physicians and Surgeons, but as this body came into contact with the Royal College of Surgeons of England, the act creating it was disallowed, and a return was made to the Medical Act of 1818 and to the similarly constituted medical board. I show here one of the diplomas granted after the presentation of the certificate of the Medical Board to the Provincial Secretary, and signed by the Earl of Elgin and Kincardine, himself a graduate of Merton College, Oxford. The license of practitioner was granted to my father in the year 1851. I have also to show you a drawing made originally by the late Dr. Norman Bethune, and published in the *Anglo-American*, a current magazine of the period, and

given by me to the Ontario Medical Library Association, now the Academy of Medicine. It gives you a life-like and characteristic representation of Drs. Widmer (chairman) Herrick, with his thumb over his shoulder, King, Bovell and Workman.

From Robertson's Landmarks we learn that the first hospital was built in the grounds bounded by King, Adelaide and Peter and John Streets. Its erection was superintended by Dr. Grant Powell, and it was built largely with money raised by subscription. The building was a two-story one, and a plate representing it will be found in Robertson's Landmarks. In 1824, after the Parliament House had been burned, the legislature met here during the time of the terrible cholera epidemic of 1847, which scourged the people. The hospital was taxed to its utmost capacity, and many horrible scenes were witnessed. Several prominent medical men lost their lives. In 1850, we learn that there were about one hundred patients in the institution. It was endowed with land within the city limits and had also a grant from the legislature. After the hospital was removed to the present site the original grounds were built on, and what was subsequently called the Bridal Row occupied the King Street front next to John Street. I remember this row quite well; it was subsequently altered and now constitutes the Arlington Hotel. The present building is, as you know, situated on Gerrard Street East, bounded by Gerrard, Spruce, Sackville and Sumach Streets. At a subsequent date a fever hospital and an eye and ear infirmary were added. The eye and ear infirmary was built by money obtained through the death of Andrew Mercer. He left no will and his property fell into the hands of the government of the day. The fever hospital was built by two or three large subscriptions. Later on the Burnside Lying-In Hospital was removed from Richmond and Sheppard Streets to the north-west angle of the hospital grounds, and later still the present pavilion for women was erected as a convalescent home and then converted into a gynecological department.

It appears that there were petty jealousies of one kind and another; it was felt that a certain ring had too much power, and in 1836 an onslaught was made in an effort to manage hospital affairs on a broader basis. A resolution passed at that time was as follows: "That it is the opinion of this meeting that over the Hospital of this city a veil of obscurity impends which it is highly advantageous to have removed. No appointed days await the attendance of the medical men in connection with the institution. No published reports inform the public of the number of those who have been restored to their friends cured of their infirmities; the passing bier alone affords a melancholy proof that the institution still exists in active operation." I take this sentence from the excellent address to the Toronto Clinical Society,

by Dr. Anderson, "On The Evolution of Medicine in Ontario." Politics were very much mixed up in this attack, and Drs. Rolph and Baldwin were foremost in the fight. Rolph was undoubtedly a very remarkable man, but I should judge overbearing and dictatorial. He was originally an able lawyer, and becoming dissatisfied with what he considered an unjust decision, he studied medicine and passed the Medical Board in 1829, at the age of 40. The private medical school established by him in opposition to the newly-created medical faculty of King's College, afterwards became the Toronto School of Medicine. The Medical Faculty of King's College, in 1843, was constituted as follows: Surgery, Prof. Beaumont; Medicine, Prof. King; Physiology, Prof. Gwynne; Materia Medica, Prof. Nichol; Chemistry, Prof. Croft; Obstetrics, Prof. Herrick; Med. Jurisprudence, Prof. O'Brien; Anatomy and Curator of Museum, Prof. Sullivan.

Dr. James H. Richardson tells us that Beaumont's lectures, prepared with great care, were delivered to him alone, but that each of them wore academic costume during the recitation. And this was the faculty severed from the University to be re-united again in 1887, and to be followed by the amalgamation of our two universities, Toronto and Trinity, in 1903. Among the men I remember very well was Dr. Hodder; he died during my term as interne at the General Hospital, and to the amusement of my fellows of the interne staff I published a little versification that, to my mind, at any rate, at that time represented his character. I give but two of the four verses and trust you will spare my blushes:

Our sphere has seen no brighter, truer man
 Than that bright star which lit a world of doubt,
 A fire fanned by a gentle breeze from heaven,
 Which flickered, faded, fluttered and went out.

A noble man well read, well taught and one
 Respected by his brothers in his art,
 Sweet memory in grief will shed a tear,
 And sighs will come from many an aching heart.

Dr. Hodder commanded universal respect, and was the first here, as far as I know, to undertake ovariectomy. As this was in the days before antiseptic and aseptic surgery, the operation was an extremely hazardous procedure. He was an enthusiastic yachtsman and commodore of the Royal Canadian Yacht Club. I remember his residence quite well; he lived on Queen Street, in a large, double two-story house. Dr. Bovell was early attached to the hospital, and a favorite with all who knew him. His chief strength lay in his ability as a diagnostician, but he was like many a doctor, unfortunately, no business man. Later in life

he was ordained in the Episcopal Church, and removed to the Island of St. Thomas, of the West Indian Group.

Among the older men of that time was Dr. Philbrick. He lived and died in what was then called Yorkville, now the northern portion of the city. My father, as a young practitioner, had many consultations with him, and as I drove about with my father while making his rounds, I came frequently in contact with Philbrick as well as with Hodder, Nichol and Workman among the older men. Philbrick was shaggy, unkept, and though an able surgeon, was not of the modern aseptic type. He was a convivial companion, well read and interesting, though afflicted with deafness.

Another practitioner who held many inquests at the hospital, and is not often heard of now, was Dr. Riddell, who lived on George Street. He was afflicted with squint that was detrimental to his appearance, but intellectually he was a bright man. He was for a long time looked upon as our one ablest coroner, and living near my father's house, I saw him frequently and knew him well. I remember, as a boy, being very much shocked at a remark he made when asked by some inquisitive busybody, "if his sins had been forgiven," when he replied that, "he would easily wash them out with a scrubbing brush." He had a good heart, and his bark was much worse than his bite. Originally a printer, he deserved much credit for putting himself through. As he left Rolph's School of Medicine to finish elsewhere, Rolph, as a member of the Medical Board, endeavored to castigate him by refusing to sign the certificate upon which the diploma would subsequently issue. The matter was later straightened out by the strong hand of the President of the Board, Dr. Widmer, and Riddell was granted a license. He was one of the health officers of the city. One of the best surgeons on the staff at that time was Dr. Norman Bethune. He was the son of a Hudson Bay factor, and made a trip to Hudson Bay as a surgeon to one of the Company's ships. He practised for a time in Edinburgh and then removed to Toronto, where he remained to the time of his death. He was full of quiet humor and, as you can see by the sketch presented, he excelled as a caricaturist. I knew him quite well and had a very great admiration for him. He was not blest with wealth, but he had the happy knack of talking little and minding his own business. He was more difficult to know than many of the others with whom I was associated as hospital interne and afterward as a fellow practitioner, but he was absolutely reliable from a professional point of view, and he had an ever-ready kind word for the struggling young practitioner. Dr. John Small was on the visiting staff in my time. He and my father were well acquainted, as were our families. He had a large and fashionable clientele and was looked upon as one of our best consulting

physicians. He had no liking for surgery. I remember a peculiar characteristic, namely, his business-like method of looking after his fee. He would ask for it at the time, and insist upon obtaining it before leaving the house. He had given up his goods and demanded the price, and rightly so, but this did not prevent him from doing much for charity when charity was really needed. He lived at the corner of Church and Queen Streets, afterwards moving to the corner of Simcoe and Richmond Streets, where he died.

Among the surgeons was Dr. W. T. Aikins, an able surgeon and a leader among men. He lectured on surgery in the Toronto School of Medicine and attended on the staff of the Toronto General Hospital. At that time there was no division of service and the members of the staff were general practitioners, until a later date when, under the regime of Dr. C. O'Reilly, the services were divided into medical and surgical. Dr. Aikens lived on Queen Street West, near Terauley, and afterwards built a fine residence on the corner of Jarvis and Gerrard Streets, where the medical students of that time frequently partook of his generous hospitality. He was looked upon as the ablest surgeon in this part of the country, and was undoubtedly well in advance of his time. I knew him as a student, as an intimate friend of my father, and as I look back at this distant date, it gratifies me to see him stand out head and shoulders above his contemporaries in his department. His many friends learned with deep regret of his financial losses during his later years, but he never flinched, and died like a man with his face to the foe.

Another of the old teachers was Dr. H. E. Wright. Our families were on intimate terms, and owing to the proximity of our houses and the absence of telephones, there were frequent exchanges of professional courtesy between my father and Dr. Wright. Dr. Wright lived on Queen Street East, in the house vacated by Dr. Workman, after the latter's appointment as Superintendent of the Lunatic Asylum. Dr. Wright lectured on medicine in the Toronto School of Medicine and was for many years on the staff of the Toronto General Hospital. It was difficult to get very close to him, as he was wrapped up in the study of his profession, but notwithstanding his reserve, he was a man with a kind nature and a warm heart. He abhorred surgery. His lectures were excellent, though dry, and the tersely-arranged matter suffered from the peculiar manner of delivery. He was a fair fighter and was always scrupulous in his observance of the rules of medical etiquette. He lived to a very ripe old age. Following in his footsteps came a favorite teacher, James E. Graham. He studied in Toronto about 1868, and occupied the professorship of medicine in the University of Toronto from 1887 to 1889. No medical man in Toronto was held in greater

esteem by his fellow practitioners. He was of a quiet, retiring disposition. Tyndall has well said, "that without honest labor there can be no true joy," and indeed all that was achieved by James E. Graham was accomplished by honest labor, and he was rewarded by true joy. Happy in his family and in his home, enthusiastic in regard to everything that pertained to his beloved profession, he was at last rather suddenly taken away from a host of sorrowing friends. We all loved him and will keep his memory green in the years to come.

One of his intimate associates for years and also in the school, and an active member of the staff of the General Hospital, was Dr. L. McFarlane. He was genial and bright, but was disappointed owing to the fact that he had no family. He was a great favorite with the students, easily approached, and with a kindly disposition. His death was a tragic one. His life was sacrificed in an endeavor to save the life of a man who was ill with frost-bitten feet—a punctured finger, septicemia and death.

Another well known figure at that time was Dr. Thorburn, who lectured on *Materia Medica* and served on the staff of the General Hospital. Many of you here knew him, as it is but a short time since he passed away. He enjoyed a large practice for many years, and retired with a competency. He was businesslike in his methods; and a large attendance of the members of the profession at his funeral showed the marked esteem with which he was regarded.

One of the well known figures of that day was Dr. Workman. Long before I studied medicine he was placed in charge of the Lunatic Asylum. That was in the year 1854, and in the year in which I entered medicine, 1875, he entered into private life to enjoy well-earned repose. As he had transferred a large portion of his practice to my father in 1854, I saw a good deal of him, as our families were intimately acquainted. He was for many years a frequent visitor at the Toronto Medical Society, of which he was the first president. This society met at that time in the building of the Canadian Institute on Richmond Street, between Church and Victoria. Dr. Workman completed his course at McGill, but came to Toronto to attend to some business matters. After a time he longed to go back to his first love, and as Dr. Rolph was anxious to get him as a teacher in his school, he offered him the lectureship of midwifery and diseases of women and children, and in 1846 Dr. Workman accepted this offer. He was a member of the Medical Board, and can be readily distinguished in the sketch by Dr. Norman Bethune previously alluded to. He died in 1894. In 1896 his portrait was painted, and for years adorned the Meeting Room of the Toronto Medical Society, and now graces one of the walls of the

Academy of Medicine. He was respected and esteemed by all who knew him.

In 1850 I find that the attending physicians of the Toronto General Hospital were, Widmer, King, Telfer, O'Brien, Herrick and Beaumont. The resident surgeon was E. Clarke. During the winter sessions clinics were given twice a week, by Drs. King and Beaumont. In speaking of the General Hospital and mentioning the Burnside Lying-In, we naturally say, "Who was Burnside?" In looking up the records I find that he was a large-hearted Yankee quack, and promoter of the Mechanic's Institute, now the public library, an encourager of church music, and a man who died without a family, left all to charity and nearly all to Trinity University. After having been refused a license by the Medical Board, he was ultimately found, two years later, qualified to practice and granted a diploma. Though an ignorant man, he was undoubtedly a money-maker. In St. James' cemetery is a tombstone erected to his memory by Trinity University, and Dr. Richardson draws attention to the fact that the inscription has rather an ambiguous termination, stating that "he is gone, *we trust*, to a better place."

In 1878, six internes were appointed for service in the General Hospital, viz., J. W. Lesslie, Gerald O'Reilly, J. F. W. Ross, W. Lehmann, R. A. Ross, R. M. Stephen. Stephen and R. A. Ross have crossed the bar. At that time the Hospital was not what it should have been. Dr. C. O'Reilly, of the Hamilton Hospital, had but recently taken charge as Medical Superintendent, and he was forced by circumstances to make haste slowly. There were no trained nurses at that time, and I have still a very vivid picture in my mind of Mrs. Fogarty and Mrs. Pyne, two matronly women in charge of important departments, who have been some time deceased. "De mortuis nil nisi bonum," and yet in such a sketch it is difficult to follow on the march of progress without treading on someone's corns. But we must tread lightly. Enough of misery was caused to me by a youthful effusion called the Model Hospital, and published in the *Canadian Journal of Medical Science*, in 1881. From the time that the paper was written until a few weeks ago I never saw it in print. Let me read from it, and you can then judge of the prophesy:

"Among the newest discoveries has been that of a city in the desert of Sahara. Here, beneath this waste of sand, in this most barren of all lands, have been found the ruins of the once flourishing city of Otnorot, destroyed, it is supposed, by the sudden rising of the waters of the lake Oiratno, on whose shores it was built. It was famed for its 'Model Hospital,' an institution which had a small beginning, which was the incubator of many an acrimonious quarrel and party struggle, but which at length

attained, through its dearly-bought experience, a place in the foremost rank. Having obtained some scraps of its history, from papers recently disinterred from the ruins, I thought that they might prove of use and interest to some of your readers.

"In the 'Model Hospital's' immediate neighborhood flourished two medical schools, the Otnorot and Ytinirt, famed for their bitter hates and party jealousies. Neither took any interest in anything concerning the Hospital, and seemed (human nature to this day), chiefly interested, and were, perhaps, entirely interested, in the financial success of their individual undertakings.

"Then, too, the managers were too prone to look upon the Hospital as a place solely for the care of patients, and to forget the duty of teaching students to whom, as the medical practitioners of the future, the lives of their children and their grandchildren must be entrusted.

"At this Hospital, it was a rule that members of the visiting staff could not resign until they had served for at least thirty years; as a consequence, young men received no encouragement to work hard, and a sad lack of enthusiasm pervaded the clinics. The old 'fogies' were often unable to attend on their appointed days, owing to a severe attack of rheumatism, or, because they could not miss the chance of performing a certain operation, for which they were to be handsomely paid. These old men were so occupied with private practice that they had no time to read any new pamphlets, which were written in those days, not printed. If, in the hospital, a student, more eager than his fellows, wished, from personal observation, to learn what his teachers would not take the time to teach him, he was prevented from doing so by the rule that 'no student is allowed in the wards unless accompanied by some member of the staff,' for fear that he might disturb the homelike quiet of the ward, or the day dream of some nursing of charity.

"But at last a change came. The young men did not try—for it was a sore trial—they did not try to study medicine at home, but went abroad where hospitals were conducted differently. They returned home with the new ideas, and, reasoning as they did, any one unprejudiced must have coincided with them in their arguments. Every one was convinced, and even the impressionable trustees saw their faults and began to remedy them. The result was the formation of the 'Model Hospital,' and 'the Hospital Medical School.' The rule about the thirty years of service was changed and no one was allowed to remain on the acting staff for more than ten years. The old 'fogies' were shelved on the consulting staff, and deserving eligible young men were put in their places. These young men had been prom-

ised the positions and had gone abroad for several years to fit themselves for them. A physiological laboratory, a pathological laboratory and a chemical laboratory were built, and the university professors in the several branches conducted these institutions. All members of the hospital staff were nominally professors of the university of Otnorot.

"The medical school in connection with the hospital was a great success. The rival institutions soon closed their doors, and freely acknowledged that there was in Otnorot only enough talent to conduct one good school. The young lecturers in the new school were all trained abroad, each for his special branch. Lectures on chemistry and physiology were given in their respective laboratories. Anatomical lectures, pathological lectures were given, and dissections were made in the pathological laboratory. If a vacancy from any cause seemed probable, a young man was led to believe that if he went abroad and prepared himself he might obtain it. Acting on this he started for some foreign university. Thus a good school was kept up, so much so that finally one could study better at Otnorot than in cultured and civilized Europe. None of the medical assistants received any salary, and none wished for any; yet, there was always a surplus of candidates for office. The matron's salary was increased, as was her assistant's. The hospital was considered perfect in every respect, and well deserved the world-wide reputation the 'Model Hospital' obtained."

And now to return. The nursing was not such nursing as we have at the present time. These good-hearted women were about on a par with our present ward tenders. They had no lectures, no education, and no training school. A change was gradually brought about, and one of the finest training schools to be found anywhere was established. Whether it is keeping up to its high water mark or not I cannot say, but I hope that nothing will be allowed to interfere with the continuance of the high standard. The hospital improved step by step under the able management of Dr. C. O'Reilly. Those who were brought into contact with him and his work know what he accomplished. But we all weary of well doing, and such continual strain will wear down the strongest, and he wisely decided to take a well-earned rest. New blood was then instilled into the Board and into the internal management, and further changes are wisely contemplated in the personnel of the staff. Young men should undoubtedly be advanced, and other things being equal the trustees should pick from their own brood, the brood they have nurtured and instructed. They know better the young men they have trained than those trained elsewhere. And let me say to you that this very organization should begin to exert an influence to-

wards accomplishing this end. And now we can feel that the modern hospital of the Sahara Desert has about arrived, at any rate it is long over due. And, finally, let me say to you, cherish the old institution that has done so much for us, and to which we one and all owe more than we can repay. Faint praise is sure condemnation; but does she require any faint praise? Most assuredly, "No." A parent may love and chide; we may cherish, may reverence, and yet be ready to oppose with all our strength any innovations that we feel will be a source of weakness to our dear old Toronto General Hospital.

The toasts of "The King," "The Retiring President," "The Oldest Ex-House Surgeon," "The Youngest Ex-House Surgeon," and "The Officers Elect" were drunk with enthusiasm.

Speeches for the good of the Association were delivered by Dr. Meek, of Port Dover; Dr. G. Royce, of New York; Dr. Barnhardt, of New York; Dr. Meikle, Mount Forest; Dr. D. Anderson and others.

Telegrams of regret were received from Dr. Gerald O'Reilly, of Galt, and Dr. Thos. Cullen, of Baltimore. Letters of inability to attend and of regret were read from Dr. Chas. M. Stewart, London, Eng.; Dr. H. C. Scadding, Toronto; Hon. Dr. Pyne, Toronto; Dr. J. E. Jenner, Leamington; Dr. Chas. Ardagh, Kingsville; Dr. J. H. Radford, Galt; Dr. J. W. Leslie, Toronto; Dr. T. H. Middleboro, Owen Sound; Dr. J. Third, Kingston; Dr. W. D. Scott, Peterboro; Dr. Burr, London, England; Dr. P. E. Doolittle, England; Dr. Barber, Kingston; Dr. C. D. Parfitt, Gravenhurst; Dr. McPhedran, Stroud; Dr. T. S. Cullen, Baltimore; Dr. Roland Hill, St. Louis; Dr. T. H. Stark, Toronto; Dr. F. A. Cleland, New York; Dr. L. F. Barker, Baltimore; Dr. A. C. Hendrick, Toronto; Dr. Devitt, Grand Forks, N.D.; Dr. Chas. White, Woodstock; Dr. Fredk. Brodie, Cobalt; Dr. J. N. Harvie, Orillia; Dr. F. A. Bethune, Emo; Dr. R. Parsons, Red Deer, Alta.; Dr. A. B. Rutherford, Owen Sound; and Dr. G. H. Field, Cobourg, Ontario.

Dr. M. Stewart, Collingwood, and Dr. O. E. McCarty, Niagara Falls, deceased.

THE AMERICAN HOSPITAL ASSOCIATION HELD ITS NINTH CONFERENCE IN CHICAGO ON SEPT. 17, 18, 19 and 20th.

THERE was a large attendance. Canada was represented by eighteen delegates, mainly from Ontario. The Toronto hospitals were represented by John Ross Robertson, Esq., and Miss Brent, of the Sick Children's Hospital; Miss Patton, of Grace; Miss Grey, of the Hospital for Incurables; and Dr. J. N. E. Brown, of the

General. Dr. Bruce Smith, Inspector of Hospitals, also was present, and read a paper on "Waste." Dr. Brown read a paper entitled, "An Inoculation and Immunization Department." Dr. M. Webster, Superintendent of the Royal Victoria, Montreal, replied to the address of welcome. Through the influence of the Canadian delegation, the Association will meet in Toronto next year, during the last week in September. Mr. John Ross Robertson is Vice-President.

Other papers on the programme were the following:

1. "Relative Authority of the Superintendent and Staff in the Control and Discipline of Patients," Miss Louise M. Coleman, Boston.
2. "The Layman's View of Hospital Work Among the Poor," Miss Jane Addams, Chicago.
3. "Hospital Support and How to Secure it," Rev. A. S. Kavanagh, Brooklyn.
4. "Breakage and Loss and How Far Should Employees be Held Responsible," Rev. M. Wahlstrom, Chicago.
5. "An Experience with Floors," Dr. W. O. Mann, Boston.
6. "A Comparison of Hospital Pay Rolls, Employees, their Selection and Management," Mr. Asa Bacon, Chicago.
7. "The Organization of a Teaching Hospital," Mr. E. S. Gilmore, Ann Arbor.
8. "Some Suggestions for the Organization of Out-Patient Medical Work," Dr. Richard C. Cabot, Boston.
9. "Waste in Hospitals," Dr. Bruce Smith, Toronto.
10. "The Modern Hospital Hotel," Mr. Louis R. Curtis, Chicago.
11. "The Reaction in Training School Methods," Mr. Geo. P. Ludlam, of New York.
12. "The Work of an Inoculating and Immunizing Department," Dr. J. N. E. Brown, Toronto.
13. "Management of the Race Question in Hospitals," Dr. Eugene B. Elder, Macon, Georgia.

The report of the committee on hospital progress will include the following:

- (a) "Hospital Finance, Hospital Efficiency, and the Economics of Administration," Dr. S. S. Goldwater, New York.
- (b) "Hospital Construction," Dr. G. H. M. Rowe, Boston.
- (c) "Training of Nurses," Miss Mary L. Keith, Rochester, N. Y.
- (d) "Medical Organization and Medical Education in Hospitals," Dr. J. A. Washburn, Boston.

THE INTERNATIONAL CONGRESS OF PHYSIO-THERAPIE.

DR. WM. BENJAM SNOW, New York, Secretary of the American Committee of the International Congress of Physio-Therapie, requests the publication of the following notice: The Committee of the Congress to be held in Rome next October for the consideration of physical remedies in the treatment of diseases, have arranged special transit facilities for members of the Congress and their families with the following companies: Societa Veneziana di Navigazione a Vapore, La Veloce, Lloyd Italiano, Navigazione Generale Italiano.

The last named have agreed to a reduction of 30 to 50 per cent. The advantages proffered by the other companies can be learned through any transportation agency. The Committee have also arranged an especially favorable tariff for their visitors at the best hotels in Rome and other Italian cities, to which excursions will be arranged at very reduced prices. The Secretary of the Congress is Prof. Carlo Colombo, Via Plinio, Rome.

THE SIXTH INTERNATIONAL DERMATOLOGICAL CONGRESS.

THE Sixth International Dermatological Congress was held in New York from September the 9th to 14th, at the New York Academy of Medicine. The number registered was about three hundred, which compares most favorably with the attendance at any previous Congress.

The number of foreigners present was not very great, especially from England, the great majority of those present were from the United States.

Dr. E. Radcliffe-Croker, Dr. Arthur Whitfield, and Dr. Taylor represented the dermatologists of England.

From the continent came Prof. R. Campana, Dr. Neuserger, Prof. E. Gaucher, Dr. H. Hallopeau, Prof. E. H. Hoffman, and many others.

America was well represented, many of the leading dermatologists being present, such as Hyde, Fordyce, Gilchrist, Stelwagon, Pusey, Montgomery, Ormsby, Morrow, White, Fox, Keyes.

Canada had a delegation of five, Shepperd, Van Eberts and Burnett, Montreal; and Chambers and King Smith, of Toronto.

The clinic, held on three of the mornings, from 9 till 11, was exceedingly interesting, many of the foreigners stating that they had never seen a more interesting lot of cases, some very rare

diseases were exhibited, such as Darier's disease. Some splendidly-marked cases of Leprosy were shown.

An exceedingly interesting demonstration of the application of liquid-air in certain conditions of the skin was carried out by S. Dade, of New York. Some of the results in nævi-moles were most brilliant.

The Opsonic Method in Skin Diseases was presented by Dr. Arthur Whitfield and Dr. Van Eberts—the discussion of the papers was brief, the general idea being conveyed that the results, except in furunculosis, have been rather disappointing.

The arrangements of the Congress were perfect; everything was carried out on time, even at the early hour of nine o'clock the attendance was large.

The social side of the Congress was carried out most lavishly, many of the New York physicians gave private dinners and luncheons; the entertaining was not confined to New Yorkers, for many of the visitors also had dinners, in fact the kindness shown to visitors from abroad could not have been surpassed.

At the final session, on Saturday morning, the attendance was very large, and the consensus of opinion was that the closing Congress was most successful in every way.

D. K. S.

Recovery from Exophthalmic Goiter After the Use of Anti-thyroidin—M. L. Abelmann, of the Elizabeth Children's Hospital of St. Petersburg, after giving a short resumé of the work done by others with Moebius' serum, of antithyroidin, in the treatment of exophthalmic goiter, reports the history of a striking case which came under his own observation. The patient was a girl only thirteen years old—a very young patient to suffer from this disease. The father had exophthalmic goiter and died at a comparatively early age. The child was of medium size and weight; the skin was clear, although she was somewhat anemic. Syphilis and tuberculosis were denied in the family history. The symptoms of Basedow's disease were all characteristic: exophthalmos, Stellwag's sign, von Graefe's sign, and Moebius' sign. There was a marked thyroid tumor, being 9 Cm. across. The pulse frequently was raised from 130 to 150. The patient was placed upon antithyroidin, with beginning doses of 2 drops t. i. d., gradually increasing until 12 drops were given three times daily. At the end of three weeks the clinical picture had markedly altered. The patient became much quieter, the tachycardia disappearing completely. The exophthalmos diminished, so that the bulging of the eyelids was scarcely perceptible. The goiter had also disappeared. Stellwag's and Moebius' sign had also disappeared; von Graefe's sign persisted somewhat. The patient recovered completely.—*Russki Vratsch*, Sept., 1906.

The Canadian Journal of Medicine and Surgery

J. J. CASSIDY, M.D.,
Editor.

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Editorials.

THE VALUE OF ATOXYL IN THE TREATMENT OF SYPHILIS

FROM recent researches by syphilographers it appears that mercury destroys, by its direct action, the spirocheta pallida, the reputed causative agent of syphilis. It is also claimed that the spirocheta is the causative agent of relapses in this disease, and that it persists for a long time in the human organism, preserving all its proliferative powers. This last doctrine is confirmative of the soundness of the chronic intermittent method of treating syphilis,

established by Fournier, which, however, up to the time of the discovery of the spirocheta pallida as the etiological factor of syphilis, rested on purely speculative considerations.

Another question, much discussed up to the present time, was as to the proper time to begin the general treatment of syphilis. The majority of syphilographers agreed in waiting for the appearance of secondary symptoms, because it was often at that time only that the diagnosis of syphilis could be confirmed, and also because it was supposed that prior to that time the syphilitic virus had not invaded the whole organism, and that, consequently, it was useless to pretend to control the disease by general medication. To-day this opinion cannot be maintained any longer, as it has been demonstrated that the monkey can be inoculated with syphilis from the blood of patients recently infected with that disease.

Observers, however, have gone still further afield in their search for antisyphilitic remedies, or, in other words, for agents capable of destroying the spirocheta pallida. They have taken it for a proved fact that the spirochetes belong to the class of protozoa, and that there are chemical substances which act energetically on protozoa in general. Uhlanlut, depending on the results obtained in trypanomiasis by the use of atoxyl, the sodium salt of amido-phenyl arsenic acid, tried this drug on several occasions with success in the treatment of the spirillosis of chickens. From this result the notion grew that atoxyl might also be employed in treating syphilis, which is believed by many observers to be caused by the spirocheta pallida, a protozoon.

At a meeting of the Berlin Society of Internal Medicine (June 10, 1907), Dr. E. Lesser reported the results obtained at his clinic from this new method of treating syphilis. He had treated 28 cases; 22 males and 6 females; 3 primary infections, 19 in the secondary stage, 5 cases of galloping syphilis and 1 of tertiary syphilis. At first his results were negative. Attributing the unsatisfactory results to the smallness of the doses given (0.20 gramme pro die to each patient), larger doses were given with satisfying results. Of the 28 cases, 16 had never received mercurial treatment. To all of them atoxyl was given in intramuscular injections, in doses of 0.50 to 0.60 gramme in males, and 0.40 gramme in females. At first the injections were given every second day, afterwards every third day. The total amount

of atoxyl injected into each patient in no case exceeded 6.20 grammes. The symptoms of syphilis manifestly receded during treatment; but whether the results would be transitory or durable Dr. E. Lesser could not say. He would not be at all surprised if at the expiration of a longer or shorter interval of time, fresh syphilitic manifestations would appear in these patients. A good many years, he thought, would have to pass e'er one could speak authoritatively as to the real value of atoxyl in syphilis. At the present time, however, he was prepared to say that some important inconveniences had resulted in some of his cases: gastro-intestinal disorders in over 50 per cent. of the cases, 1 case of nephritic disease and 1 case of cystitis. In the majority of his patients a distinct increase in weight had been observed during the treatment.

Dr. F. Blumenthal, who followed Dr. E. Lesser, stated that he had made the toxicological study of atoxyl, which served as a basis for Dr. Lesser's therapeutic applications of the drug. He had proved that atoxyl remains in the organism for a longer time than the other arsenical compounds. On the other hand, however, he could not agree with an opinion expressed by some observers that the administration of atoxyl caused the formation of aniline in the organism, and that this serves as an explanation of the toxic accidents traced to its use. He added that atoxyl had been found only in the blood and bones of the patients, and never in their other organs, unless introduced in enormous doses.

In France, of late, atoxyl has been boomed in the treatment of syphilis. In Paris it has been written up in the lay press, with the result that atoxyl has been pretty generally discussed by the inhabitants of the gay capital. French syphilographers, however, have weighed it in the balance and have found it wanting. At a meeting of the Société Française de Dermatologie et de Syphiligraphie, 5 Juillet, 1907 (Vide la Presse Médicale, 13 Juillet, 1907), Dr. Hallopeau presented several syphilitic patients whom he had treated with atoxyl. In spite of some successes, toxic results had supervened in several of his cases. Diseases of the eye were quite common after he had employed some brands of the drug.

In discussing the paper, Dr. Lenglet remarked that the only patient, the bearer of cutaneous lesions, who had been presented to the Society showed such intense pigmentation of those parts

of the skin where syphilides existed that great caution should be exercised in the therapeutic employment of a drug, which left undoubted marks of its passage, and which, so to speak, writes the diagnosis of syphilis on the patient's skin. Dr. E. Fournier had had occasion to see several patients whose ocular lesions had been made worse by injections of atoxyl. Another patient continued to have mucous patches after the sixth injection of atoxyl had been given. Several other members of the Society spoke in equally uncomplimentary terms of atoxyl. So that we in Canada who have not had the opportunity of injecting it into our patients may calmly reserve our fire, and continue to pin our faith to the old reliable specific remedies for syphilis, which we have been in the habit of using.

J. J. C.

THIOSINAMINE AS AN AGENT FOR SOFTENING SCAR TISSUE.

THE specific property of thiosinamine to soften scar tissue, which is thereby rendered amenable to mechanical treatment, has been discussed in the medical press by several writers. A summary of some of the more important observations on this agent appears in the "Medical Annual" for 1907. A good article containing fresh data is published in *La Presse Médicale*, June 22, 1907, by Drs. Lermoyez and Mahu. Thiosinamine is an allyl-sulphocarbamide, obtained by the action of ammonia on essence of mustard. Its taste is bitter; it is not irritant. Its brilliant, white crystals are with difficulty dissolved in cold water, more easily in hot water, and quite easily in alcohol. However, the hypodermic injection of an alcoholic solution of thiosinamine is quite painful, and should not be used. Fibrolysin, prepared by Merck, contains one molecule of thiosinamine to half a molecule of salicylate of sodium, and dissolves easily in water in the proportion of 15 per cent. Michel, of Paris, has perfected the rapid solution of thiosinamine by the addition of antipyrine. Half a molecule of antipyrine united with one molecule of thiosinamine forms, at ordinary temperatures, a syrupy, colorless, odorless liquid, which dissolves in three parts of water. Drs. Lermoyez and Mahu employ the following 15 per cent. solution and do not find it irritating or painful:

Thiosinamine	15 grammes.
Antipyrine	7.50 "
Distilled water	100 "

The elective action of thiosinamine is thus explained by Glass. It produces edema in scar tissue. For instance, in a case of fibrous stenosis of the larynx, of syphilitic origin, which had not caused inconvenience for some considerable time, so much swelling of the pathological tissues ensued, after four hypodermic injections of thiosinamine that tracheotomy had to be hurriedly performed to save the patient from asphyxia. The action of thiosinamine is comparable with the venous stasis produced by Bier's method, interstitial edema and softening being produced.

According to Doliker, thiosinamine, four hours after its administration, produces marked leucocytosis, the leucocytes abounding in the scar tissue and acting on the connective tissue like phagocytes.

Though it softens scar tissue, thiosinamine does not destroy it. Its effects are rapid, and may be observed often in four hours, but they are of a passing nature, and disappear in a few days after the cessation of the injections. It is only an adjuvant to mechanical treatment, which should be employed to stretch scars rendered extensible under its influence. By associating the two therapeutic agents lasting cures of stenosed natural passages may be obtained. Thus in 1900 a lady patient of Fraenkel's, who had a fibrous structure of the esophagus, was unsuccessfully treated with bougies. Von Hebra afterwards gave this patient ten hypodermic injections of thiosinamine in twelve days, but also without curative result. Dilatation of the esophageal structure with bougies was then resumed, with the happy result that the patient was enabled to partake of food in the ordinary way. When examined by esophagoscopy, in 1902, it was found that instead of scar tissue, the smooth, reddish mucous membrane of the esophagus was observed.

Thiosinamine is not toxic, for Van Horn treated two female patients during 15 months, using, twice or thrice a week, a cubic centimetre of a 15 per cent. alcoholic preparation solution of thiosinamine on each of the patients. Urbantschitsch gave to a patient every second day a series of 20-30 hypodermic injections. Beginning with a dose of half a cubic centimetre of the 15 per cent. solution, the formula of which is given above, an operator may rapidly reach a dose of two cubic centimetres. When improvement is noted, the treatment should be suspended at the tenth injection, otherwise one runs the risk of producing over-relaxation of scar tissue.

A slight sense of heat is noticed by the patient after a hypodermic injection of the watery solution given above; this disappears in about five minutes. The skin at the seat of the injection becomes mottled with a blue and yellow stain, which disappears after a few weeks' time. Sometimes, at the spots where the punctures have been made, painless nodules appear after the tenth day, and they do not disappear for several months. These nodules are caused by the rapid crystallization of a part of the injected liquid, but they behave like aseptic foreign bodies. However, as the drug has no bactericidal properties, its solutions should be sterilized before use.

The influence of the hypodermic injection of thiosinamine on a patient's general condition is unobjectionable. Some complain of slight headache or a passing sense of fatigue. Contrariwise, others experience a sense of well-being and an improved appetite. Judgment should be used in the selection of cases for its use. Teleky mentions the case of a young man who had stricture of the esophagus and upon whom a successful gastrostomy had likewise been performed. Some weeks after he had recovered from the effects of the abdominal operation, thiosinamine was tried prior to the dilatation of the structure of the esophagus. The esophageal stenosis was easily dilated with bougies, but a fatal condition resulted from the rupture of the artificial fistula made in the patient's stomach.

Neither should thiosinamine be employed in tubercular cases, for von Hebra has seen an old-time tubercular caries fanned into life under its influence, and apyretic tubercular lesions developed into febrile ones. Neither should it be used when there is a suspicion of a malignant growth, in view of the fact that the opening of the lymphatic vessels exposes the patient to the risk of metastasis.

Thiosinamine was brought to the notice of the medical profession in 1892 by von Hebra, who used successfully a 15 per cent. alcoholic solution of it to soften the scars succeeding lupus. In the following year Latzko obtained equally satisfactory results. It was then applied successfully to the dilatation of urethral strictures by Hank. Richter employed it in similar cases, but failed because he depended on thiosinamine alone, without the aid of dilatation. Unna employed it in the treatment of keloids. Latzko and Kalnieruth in pelvi-peritonitis. Teleky obtained excellent

results from it in the treatment of fibrous structures of the esophagus. Lermoyez and Mahu speak favorably of its effects in the treatment of certain forms of deafness arising from adhesive otitis, catarrhal or cicatricial.

In suitable cases of deafness the following technic is recommended: Every evening, before retiring, the patient takes an carbath, lasting about five minutes, of a warm solution of thiosinamine-antipyrine. Twice a week he visits the aurist, who practices pneumatic massage of the tympanum. Should this treatment fail to relieve the patient's deafness, the aurist employs tubal injections of the above solution. Good results have been obtained in deafness of three different types: (1) Adhesive otitis resulting from a dried-up otorrhea; (2) adhesive otitis, a sequel to repeated tubotympanic catarrh; (3) adhesive otitis, a sequel to erysipelas of the face, which extended into the ear. In the opinions of these authors, neither the thiosinamine-antipyrine solution alone, nor mobilization alone, is capable of producing curative effects of an enduring character in such cases—the association of the two therapeutic agents is required.

J. J. C.

THE MONTREAL MEETING OF THE CANADIAN MEDICAL ASSOCIATION.

To write the word success is ever a pleasurable task, to inscribe the word failure is a sad and cumbersome duty. As "a half-truth is ever the blackest of lies," let us tell the truth as far as may be, "yet hitting no foul blow." Who runs may read—the 1907 meeting of the Canadian Medical Association, held at Montreal, was not a great success. Whose fault was it? Certainly not the fault of Dr. Roddick and his confreres, nor of those few elect members of the Association in Montreal who did their utmost to welcome and entertain their physician guests. The blame does lie at the door of every member who, like the darkey, Sam, said about the invitation to the party, that "He was sent for to went, but the gwyin' was so bad that he couldn't come." To create atmosphere or good stage setting for the few "lonelies" who foregathered, "The days were dark and dreary."

It rained, and the wind was never weary—and in Montreal it has to . . . in two languages, French and English, and, of

course, that takes time, and so the rain lasted during the entire meeting. It seemed to depress everyone, and no one had any incentive to enthusiasm, for the little band of the faithful were, to some extent, without the compelling inspiration of a Master. Outside of the resident physicians of Montreal, about 125 members registered. Surely a shame to have to consider, when we remember that over eleven hundred Canadians registered last year at the British Medical Association meeting in Toronto. Has inspiration dropped to zero? Truly an early frost, and a long winter of discontent for the officers of the Association if some greater interest does not manifest itself at next year's meeting at Ottawa.

The report of the Committee on reorganization was adopted with an amendment postponing rather indefinitely the publication of an official organ for the Canadian Medical Association. The President seemed to think that no Canadian Medical Journal was big enough, with the weight of a wonderful name, to publish the papers read at the Association meetings. Surely the highest ideal of even the big little men of this Canada of ours is not solely to advertise themselves? The Medical Journals of Canada are "being, and are becoming," and let Dr. McPhedran pause and remember that Kipling himself deemed a waste-paper basket a good enough destination for the poem that half of Christendom calls his masterpiece. The god of fame is ever busy with hook and line searching for the good things that have been thrown into the sea that "the fishes have swallowed."

The address of Dr. Rolleston, of England, was very carefully prepared and showed an exhaustive study of his subject. Dr. Olmsted, of Hamilton, delivered a fine address in surgery. The President's address was admirable, and gave his ideas, and an ideal,—perchance cast the horoscope of the Association? Time will tell.

The 1907 meeting has "folded its pale hands so meekly." There is only to-morrow, with the hope that beckons ever from the future, holding out its prospect of an endless chain of solidarity. Let every delinquent medical practitioner who stayed at home this year "take the high road" and answer to the roll call at Ottawa, where the Association will convene in 1908, under the Presidency of Dr. Montizambert.

W. A. Y.

EDITORIAL NOTES

Massage and the Passive Motion of Fractured Bones.—

In a paper read before the Edinburg Medical Society, Dr. Cathcart said that complete rest of the fractured bones was not requisite in seeking for bony union. The slight movements which are caused by massage of the parts and by passive movements seem to accelerate bony union. This treatment also causes absorption of the sero-sanguinous effusion, prevents the formation of adhesions, and strengthens the nutrition of the muscles. Bony union, therefore, takes place rapidly, the injured limb resuming its functions as soon as bony union has taken place. Splints and other retentive apparatus, including such as are used for continued extension, are necessary in order to prevent the union of bones in vicious positions, rather than to prevent defective consolidation of the bones. Hence their use is indicated when, owing to the weight of the limb, or from muscular contraction, the parts are with difficulty retained in the desired position. At the beginning of treatment, massage diminishes swelling of the injured parts and muscular contractions, and it relieves pain. At a later stage, it stimulates the local circulation, removes accumulated blood and serum and prevents atrophy of the involved muscles. For further information on this subject see Keen's *Surgery*, vol. 7, p. 136.

Cerebro-Spinal Meningitis, Communicated to Children by their Fathers.—At Leith, Scotland, an epidemic of cerebro-spinal meningitis prevailed in May, 1907. Bacteriological examinations of the secretions of the naso-pharynx of the patients and their nearest friends were made by Drs. Frazer and Comrie, and somewhat unusual results were obtained. The diplococcus was sought for in thirteen patients, who had cerebro-spinal meningitis, and was found in only two cases. This result was thought to be due to the difficulty experienced in isolating any microbes in patients who are very ill, and likewise to the fact that the nasal passages of those patients contained an infinite variety of all sorts of micro-organisms. An examination of the nasal secretions of the fathers of the patients showed that the diplococcus was present in 33 per cent. of the men, while only 9 per cent. of the other

relatives (mothers, brothers, sisters, etc.,) had it. Five of the fathers, whose children had the disease, had worked aboard the same vessel. Drs. Frazer and Comrie exposed Petri dishes containing agar-agar in different parts of this vessel and found the characteristic diplococcus in the air of the furnace room. Twenty-three persons who had no contact with the patients were also examined bacteriologically and the diplococcus was not found in any of them. The conclusion arrived at was, that the children who had cerebro-spinal meningitis had been infected through the expectoration or probably through the kisses of their fathers. Disinfection of the nasal passages of the fathers, with a very dilute solution of formol was prescribed.

Syphilitic Disease in the Elbow Joint of a Tubercular Patient Cured by Iodide of Potassium.—At a meeting of the Medical Society of the Hospitals, Paris, July 5th, 1907, Dr. Queyrat presented a woman of twenty, who at ten years of age had had enlarged tubercular lymphatic glands in the neck; the signs of pulmonary disease in her case were not of much account. A year ago she contracted syphilis, for which an energetic mercurial treatment, given in various ways, was administered. In October, 1906, disease in one of her elbow joints having developed, an intensive mercurial treatment was given; in spite of it, however, the affected joint became so swollen and painful that a diagnosis of white swelling was made, a plaster splint applied, and a resection of the diseased joint proposed. Thinking that the disease in the joint might be of syphilitic origin, Dr. Queyrat prescribed for the patient large doses of iodide of potassium. The result was marvellous: the swollen joint diminished in bulk; pain was relieved, and the disease was cured, save that a small fluctuating point remained, which, he thought, might be of a tubercular nature. The case, he thought, was most instructive, inasmuch as it demonstrated the good effects of large doses of iodide of potassium in curing a tertiary syphilitic lesion; besides the iodide of potassium had not caused any inconvenience to the patient, although she was tubercular. Dr. Brocq, who discussed the paper, insisted on the great interest attached to the therapy used in Dr. Queyrat's case. The result, he thought, would go far to rehabilitate among French practitioners the rather neglected use of iodide of potassium in tertiary syphilis.

Inborn Mental Deficiency or Instability as a Factor in the Etiology of Insanity.—In the third volume of the *Archives of Neurology*, from the Pathological Laboratory of the London County Asylums, Dr. Mott, Director of the Laboratory, expresses some uncommon opinions on the etiology of insanity. He says, *inter alia*, "While recognizing the fact that if the effects of alcoholism and syphilis could be eliminated, the total number of admissions to lunatic asylums might be reduced by from 25 to 30 per cent., and allowing that a certain number of patients may lose their reason, on account of other toxemic conditions, or from mental shock, grief, or other emotional or moral causes, the most important cause of insanity is an inborn mental deficiency or instability; what we term the cause may be a coefficient, and often merely serves as the spark which falls into the explosive matter." A serious enough doctrine, and not over-flattering to pride of intellect. The great majority of men do not require either the prevention or cure of insanity. Foolish they may be, at times, through passion or drink. Not wise, or even talented, but they have stability and sanity enough to guide them through life. Some there are, however, cursed with instability of mind, which they have inherited—a mental deficit ranging, in the individual instance, from eccentricity of character to occasional outbursts of mania. Happily placed, carefully guarded from shock or misfortune, some of this sad minority pass their lives without exhibiting marked insanity. Should they have to struggle with adverse conditions, physical, mental or moral, their minds may be upset by shocks, which would not jar the equipoise of sane ones. And what of dementia præcox, which darkens the career of blooming adolescence as a black cloud blurs the brightness of a summer morning. The bud of youthful promise conceals the worm in its bosom. What have modern systems of education to do with the etiology of dementia præcox? To an onlooker it looks like barking up the wrong tree to blame a cause, which, if really potent for evil, should have produced widespread insanity among the present generation of school children in America and Canada. The causes of the acknowledged increase of insanity among the natives of these countries must surely lie deeper than in improved systems of education and mental discipline. As well blame the tool-grinder for flaws and cracks in the grindstones he uses. Dr. Mott's teachings should go far to

convince us that sanity in men and women depends chiefly on sound brains, inherited from sane ancestors on both sides of the house. The natural corollary of this thought is that the chronic insane should be unsexed as soon as possible after the definite diagnosis of their infirmity has been made.

An Insanity Commission for Ontario.—In an oration on Surgery, delivered at the annual meeting of the Missouri State Medical Association, Jefferson City, May, 1907 (see *Journal Missouri State Medical Association*, June, 1907), Dr. P. Y. Tupper said that an insanity commission, composed of able and conscientious alienists, is appointed by the courts of St. Louis. Their duty is to examine and testify regarding the sanity or responsibility of criminals under the care of the city of St. Louis. They do not receive pay for their services. There seems some reason to think that there is room for such a commission in Ontario. Appointed by the Provincial Government, they might act in an advisory capacity to the courts, reporting on the sanity or responsibility of criminals and others having relations with the administration of justice, whose cases might be brought to their notice. It is likely that the primary interests of justice would be conserved by the operation of such a commission, and that is the first and most important matter to be considered. In all probability a suitable recompense would be provided for the services rendered, e.g., a per diem allowance. The methodical and thoroughly dispassionate reports of an insanity commission would inspire confidence in the minds of judges, lawyers, juries, criminals, litigants and the general public. If appointed, some of the members of the insanity commission would probably be selected from the staff of the proposed clinic of psychiatry, to be established in connection with the new Toronto General Hospital. The appointment of a non-political insanity commission is not necessary. The Government of Ontario, to sustain its own credit, would be careful in the selection of the members of the commission.

A Fall in the Birth-rate Lowers the Death-rate in England and Wales.—Dr. Tatham, superintendent of vital statistics in the office of the Registrar-General for England and Wales, remarks, in the decennial supplement of 1891-1900 (See *British Medical*

Journal, June 29, 1907, p. 1556), that it would not be accurate to attribute to the results of sanitary administration alone, the whole of the life-saving represented by the falling death-rate. In the last four decennia, the death-rate at all ages has fallen by 15 per cent. (21.5 to 18.2 per 1,000 of population.) He shows that a considerable share in this falling death-rate depends on changes in the age-constitution of the population. There has been a fall in the birth-rate of England, ranging from 36.3 per 1,000 in 1876 to 28.7 per 1,000 in 1900. This change in the birth-rate continuing for twenty-four years has modified the age-constitution of the population, and as mortality is much higher among children under 10 years of age than among adults, it has lowered the general death-rate. Until the decennium 1871-80, the proportion of children under 10 years of age increased, but thereafter it declined, and, in the decennium of 1891-1900, was considerably less than in 1851-60. The increase in the proportion of persons living at the age of 10 to 15 years continued until 1881-90; but thereafter the proportion diminished. Corresponding to these changes at the earlier ages, there was, at first, a decrease, and afterwards an increase, in the proportion of persons living at the earlier adult ages, inasmuch as the mortality of young children is very high, while that of young adults is very low. Hence Dr. Tatham concludes, that these changes in the age-constitution of the living will tend to alter the general rate of mortality at all ages, irrespective of any reduction caused by sanitary improvement.

The Extent of the Surgical Intervention in Cases of Osteomyelitis.—The extent of the surgical intervention which should be made in cases of osteomyelitis occurring in adolescents, that is to say, whether the surgeon should, in certain cases of subperiosteal abscess, limit the operation to a simple incision of the periosteum, or should, in addition, apply a trephine to the subjacent healthy bone, is a question which is yet under consideration. It is difficult, often impossible, to diagnose cases in which the infection is limited to the surface of a bone; but, at all events, after the surgeon has incised the periosteum at the seat of the disease he can ascertain whether the underlying bone is in a healthy condition or not, and then, if necessary, may trephine the bone. Dr. Delbet, who introduced this important question

at a meeting of the Surgical Society of Paris, July 17, 1907, was inclined to limit the operation to simple incision of the periosteal abscess, as he had observed that the trephining of subjacent healthy bone had provoked an extension of the infection to the marrow of the bone, necessitating amputation of the affected limb at a later stage. Dr. Kirmisson agreed with this opinion, similar to the one which he had frequently expressed when lecturing on this branch of clinical surgery.

Chemical Composition and Dietetic Uses of Tomatoes.—

Dr. J. M. Albahary reported, at a meeting of the Academy of Sciences, Paris, July 8, 1907, that the composition of the tomato (*lycopersicum esculentum*), in 100 parts was the following:

Water	93.5
Nitrogenous matter.....	0.95
Non-nitrogenous matter	0.50
Fat.....	0.20
Hydrocarbons	3.60
Insoluble organic matter	1.69
Insoluble inorganic matter.....	0.11
Total ash 0.74, of which 0.12 is phosphate of lime.	

The free acids found in 100 parts of the fresh fruit are as follows:

Malic acid.....	0.48
Citric acid.....	0.09
Oxalic acid	0.001
	.571
Tartaric acid.....	}Traces.
Succinic acid.....	

Besides the free acids, there were negligible quantities of acids combined with bases as salts which are insoluble in alcohol and water. A small quantity of iron, in organic combination, is present in the insoluble and soluble matter. Dr. Albahary thought that persons suffering from gout, lithiasis, or arthritis, could use tomatoes without any inconvenience to themselves, although a good many physicians entertained contrary opinions on this subject.

J. J. C.

PERSONALS.

Dr. Murray McFarlane has returned from a visit to the hospitals of England, France, Germany, and Austria.

The University of Giessen has conferred *honoris causa*, the degree of M.D., upon Dr. Louis Merck, of Darmstadt.

Dr. W. H. B. Aikins, entertained a number of medical friends on the evening of September 17th, to meet Dr. Montgomery, of San Francisco, Cal.

Dr. J. H. Elliott, for nine years in charge of the Muskoka Cottage Sanatorium at Gravenhurst, Ont., has taken up his residence at 611 Spadina Ave., Toronto, and will devote his attention to diseases of the chest and tuberculosis.

Any physician desirous of procuring, at a very reasonable figure, an almost new Static machine, 16 plate, with X-Ray attachment, should apply at once to the Business Manager, this journal. This Static machine was purchased quite recently by a Toronto physician, and has been used but little.

AMONG Toronto physicians who attended the medical meeting of the Canadian Medical Association were Dr. D. J. Jebb Wishart, Dr. G. S. Ryerson, Dr. F. N. G. Starr, Dr. R. A. Reeve, Dr. McKeown, Dr. W. A. Young, Dr. Irving Cameron, Dr. J. T. Fotheringham, Dr. John Ferguson, Dr. P. G. Goldsmith, Dr. W. H. B. Aikins, Dr. J. J. MacKenzie, Dr. Geo. Elliott, Dr. A. H. Wright, Dr. Alex. McPhedran, Dr. Dixon, Dr. Samuel Johnston, Dr. G. W. Ross, Dr. Graham Chambers, Dr. Harold Parsons, and Dr. A. R. Gordon.

News of the Month.

KING EDWARD SANATORIUM FOR CONSUMPTIVES.

THE new King Edward Sanatorium for Consumptives, situated near Weston, and that was officially opened on Aug. 28th, by His Excellency Earl Grey, rounds out an interesting quartette of Sanatoria in this Province that owe their inception largely to Mr. W. J. Gage, H. C. Hammond, Hon. W. A. Charlton, and a number of other well-known citizens.

The King Edward Sanatorium consists of two handsome buildings (a) The Hammond Cottage, or administration building, the \$10,000 gift of H. C. Hammond, Esq., (b) The Mulholland building for patients, a \$12,000 gift of R. Mulholland, Esq., of Toronto. Additional to these there is a third building, consisting of a dining-room, cottage and servants' quarters. Immediate accommodation has been made for some 15 patients, but the arrangements are such that increased accommodation can be immediately furnished up to 40 or 50 patients, as called for.

The King Edward Sanatorium is pleasantly situated on some 40 acres of ground near Weston, on the opposite side to where there has been located since 1904 the Toronto Free Hospital for Consumptives.

Whilst the King Edward Sanatorium for Consumptives is under a distinct board of management from the National Sanitarium Association, yet there is close affiliation between the two. Mr. W. J. Gage is Chairman of both Boards, and Mr. J. S. Robertson is Executive Secretary.

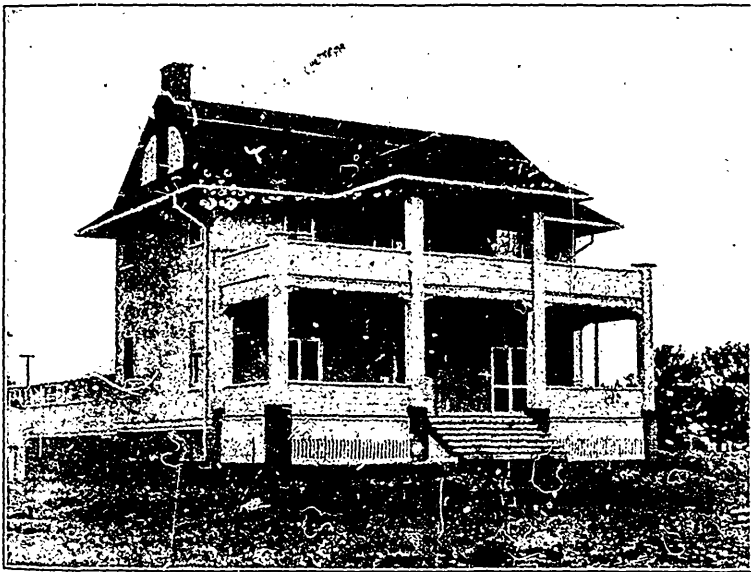
With the Muskoka Cottage Sanatorium in Muskoka, for pay patients, in the incipient stages of tuberculosis, and the Muskoka Free Hospital for Consumptives, a mile distant, for charity patients, and the two institutions at Weston for more advanced cases, provision has been made by the management for the reception of whatever class of patients may be seeking admission.

It is intended that the King Edward Sanatorium for Consumptives will be to some extent a reception home for patients. If in response to treatment, good progress is made by patients, then they can be transferred to the Muskoka Cottage Sanatorium and secure the benefit of treatment in that favored health section of the Province.

The growing interest in the tuberculosis problem was indicated by the large number of citizens who made their way to the opening ceremonies of the two Humber institutions. From 1,200 to 1,500 people were present on the grounds. The speeches of Earl Grey, W. J. Gage, Hon. W. A. Charlton, Hon. W. J. Hanna, Hon. Dr. R. A. Pyne, and Mayor Coatsworth, were very timely and listened to with interest by the many present.

After the speech-making, the visitors were escorted through the buildings by trustees and other officials.

W. J. Dobbie, M.A., M.D., is Physician-in-Chief of the King Edward Sanatorium and the Toronto Free Hospital for Con-



Administration Building. King Edward Sanatorium for Consumptives, by Special Permission of His Majesty King Edward VII. For Advanced Cases. Established 1907. The Gift of H. C. Hammond, Esq.

sumptives, and Miss E. Dickson is the capable Lady Superintendent.

The following incidents, narrated by Mr. W. J. Gage in his opening speech at the King Edward ceremonies, when introducing Earl Grey, emphasises the value of such institutions as exist to-day in Muskoka and Weston:

"A few months ago an applicant presented himself at the office of the physician-in-chief of the Muskoka Cottage Sanatorium asking admission. He told his story that he had been a railway conductor, that he had been turned out of the boarding house where he had lived for seventeen years because he had contracted tuberculosis. He then removed to a hotel in the town. There it

was shortly discovered that he was a victim of consumption, and the proprietor told him that they dare not keep him longer. He then applied for admission to the General Hospital of his town and was refused. In his desperate condition he started for the Muskoka Cottage Sanatorium. The physician there, after examination, advised him that his case was too far advanced for treatment there. The poor fellow, with tears streaming down his cheeks, begged the doctor to allow him to remain, saying: 'I have travelled for two days on the train. I have been turned out of my boarding house and out of the hotel in my own town. Then I was refused admission to the local hospital. Nobody wants me.



The Mulholland Cottage for Patients at King Edward Sanatorium for Consumptives. For Advanced Cases. The Gift of Robert Mulholland, Esq.

For God's sake, doctor, let me stay. I have money to pay for all I want.'

"The patient was cared for at the Muskoka Cottage Sanatorium until such time as he could be safely removed to the Toronto Free Hospital for Consumptives. There his needs received every attention that was possible to medical skill and tender nursing. He passed away some weeks ago.

"Now, Your Excellency, I have the pleasure of calling upon you to open the door of this new sanatorium, which His Majesty has graciously permitted to be called by his name, an institution that will provide a home and minister to the needs of just such a one as the conductor to whom I have referred, those who are

too sick to be admitted into the Muskoka homes and those whom other hospitals refuse—who have no place to go—those, indeed, whom their own friends in many cases do not want, for fear of contagion.”

NEW MATERNITY WING OPENED AT ST. MICHAEL'S HOSPITAL.

THE opening of the new maternity wing at St. Michael's Hospital marks the epoch in the progress of probably one of the most modern hospitals in Canada, and is a distinct achievement in the establishment of lying-in homes.

It has long been realized by the Sisters of St. Joseph, under whose management and executive care the institution has been equipped in the latest and most scientific manner, that the maternity flat, formerly at the top of the surgical wing, had become entirely inadequate to accommodate the many patients.

With this end in view, and also with the idea that the property directly to the south of the present hospital site would be a valuable acquisition, should it at any future time be thought desirable to extend the present handsome buildings, the sisters purchased the 100 feet fronting on Bond Street, together with three large brick dwelling houses.

It was then decided to convert the three houses into a lying-in wing, and to meet the requirements of this important branch of hospital works, plans were laid out for a complete renovation of the dwelling houses. To-day St. Michael's has probably the finest maternity home in the Dominion. In fact, several United States physicians shown through the new wing have stated that it is the brightest and most up-to-date maternity hospital that they have ever been in. One or two have gone farther and congratulated the sisters for their wonderful thoughtfulness in the arrangement of the various wards, the novel ideas suggested for the comfort of patients and the thoroughness with which every detail of such a home has been carried out.

A covered laneway leads to the new wing from the hospital building proper. The three houses are now all one big building, by means of new doors conveniently installed. The buildings from end to end have been papered and painted, not with an idea of extravagance, but with a view to having each ward, public or private, bright, airy and clean.

On the ground floor are three large public wards. Each ward contains from seven to ten beds. The newest and most modern cots have been secured for the public wards and the furnishings throughout have been selected with great care. Of the wards

are new bathrooms and medicine closets, etc. Immediately in the rear are commodious rooms which will be used as kitchens.

On the second and third flats are the private and semi-private wards. Here again have the sisters in charge shown wonderful taste in the furnishings, which are exact. The large semi-private ward contain three cots; the smaller ones have accommodation for two. There are 18 semi-private wards and a dozen private rooms.

The atmosphere of the private wards is homelike and in each case no comfort for the paying patient has been overlooked.

With the new wing the hospital will now have accommodation for eighty patients, where heretofore a dozen or so was all that could be taken at a time.

Dr. M. M. Crawford is in charge of the new maternity hospital.

COMMITTEE WHICH VISITED EUROPEAN ASYLUMS RETURNS HOME.

HON. DR. WILLOUGHBY, Dr. Clark, Superintendent of the Toronto Asylum, and Dr. Ryan, Superintendent of Rockwood Asylum, Kingston, have returned from their trip to Europe, whither they went as the representatives of the Provincial Government. They visited the asylums of Great Britain, France and Germany, and studied the methods of treatment in vogue there, with a view to obtaining data for use in the asylums of Ontario.

It was said that a beginning would be made in Toronto, where some changes must be made in the asylum for the insane. That institution will be removed to a new site, and it has been said that a psychiatric clinic, in some respects similar to that at Munich, Germany, may be established. This would form a part of the new Toronto General Hospital. Cases of acute mental diseases would be treated there, and it is believed that many patients on the borderland of insanity would be saved. Should a case prove incurable, the patient would be removed to the asylum. On the success of this system in Europe, Hon. Dr. Willoughby and his colleagues will report to the Government.

It has been suggested that a ward capable of accommodating 100 patients be located at the new Provincial Hospital. If this should be a success, similar wards might be opened at other points in the province.

The Physician's Library.

Surgical Instruments in Greek and Roman Times. By JOHN STEWART MILNE, M.A., M.D., Aberd. Keith Gold Medalist in Clinical Surgery. With Illustrations. Oxford: At the Clarendon Press. 1907.

Dr. Milne, after spending, as he says, five or six years in studying the literature of the subject, and examining the finds of surgical instruments in the museums of Switzerland, France, Germany, England, and other European countries, has attempted to reconstruct the surgical armamentarium of the ancient Greek and Roman surgeons.

Fifty-four plates, showing cuts of instruments exhibited at the museums of Naples, Cologne, Toulouse, London, and other cities, with original drawings by the author, splendidly illustrate the text. There is an appendix in which an inventory of the chief instruments in various museums is given; also another containing the bibliography of the subject. In addition to an index of subjects, in English, there is a Greek index and a Latin index.

The preparation of this book must have called for great industry and fine scholarship. Physicians who take an interest in the history of ancient medicine are under an obligation to this author.

J. J. C.

Surgery of the Rectum. By FRED. C. WALLIS, Surgeon to Charing Cross Hospital and to St. Mark's Hospital, London. London: Bailliere, Tindall & Cox. 1907. Canadian agents: J. A. Carveth & Co., Limited, Toronto.

This work of 168 pages is "intended to present the surgery of the rectum in a practical and condensed form to young surgeons and practitioners." Its author has had abundant opportunity for observation in this field, and has come to hold very positive opinions regarding his own views and practice. That any large proportion of practical surgeons will be found in accord with him is more than doubtful. His claim that the Whitehead operation should be the procedure of election in dealing with hemorrhoidal disease and the complicated colotomy with immediate opening of the bowel, and the use of two Paul's tubes, which he strongly advocates, will suffice as illustrations of his peculiar views. There is much that is original in the book and not a little that is of practical utility, but better works are available, and this cannot replace or displace them.

N. A. P.

Diseases of the Rectum: Their Consequences and Non-Surgical Treatment. By W. C. BRINKERHOFF, Chicago. Price, \$2.00.

The author of this book is decidedly enthusiastic over the injection method, as modified by his father and himself, for the treatment of hemorrhoids. The greater part of the book consists of a series of cases, all of them severe, and some of which have been subjected to operative procedure; they then have been treated by Dr. Brinkerhoff with a perfect result in every case. The chapter which deals with the method of treatment is decidedly disappointing, failing to describe what we would consider the essential points of the operation. The book is quickly read, and contains some useful things.

T. A. M.

International Clinics. A quarterly of illustrated clinical lectures and especially prepared original articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otolology, Rhinology, Laryngology, Hygiene, and other topics of interest to students and practitioners, by leading members of the medical profession throughout the world. Edited by A. O. J. KELLY, A.M., M.D., Philadelphia, U.S.A., with the collaboration of Wm. Osler, M.D., Oxford; John H. Musser, M.D., Philadelphia; Jas. Stewart, M.D., Montreal; J. B. Murphy, Chicago; A. McPhedran, M.D., Toronto; Thos. M. Rotch, M.D., Boston; John G. Clark, M.D., Philadelphia; Jas. G. Walsh, M.D., New York; J. W. Ballantyne, M.D., Edinburgh; John Harold, M.D., London; Edmund Landolt, M.D., Paris; Richard Kretz, M.D., Vienna, with regular correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels and Carlsbad. Volume III., Seventeenth Series, 1907. Philadelphia and London: J. B. Lippincott Co. 1907.

In looking over Vol. III. of "International Clinics," we find among the contributors such names as those of Dr. L. Brocq, Dermatologist to the Paris Hospital; Dr. D. L. Edsall, of the University of Pennsylvania; Dr. Leo Loeb, of Philadelphia; Dr. J. B. Roberts, of Philadelphia Polyclinic; Dr. J. E. Sweet, of the University of Pennsylvania; Dr. J. W. Wainright, of New York City; Dr. Ernest Thomson, Surgeon Glasgow Eye Infirmary, and Dr. Hugh H. Young, of Baltimore, M.D.

The volume consists of nine sections: Treatment, Medicine, Surgery, Gynecology, Genito-urinary Diseases, Ophthalmology, Neurology, Dermatology and Pathology. Dr. Edsall contributes a most instructive lecture on "Some Practical and Theoretical Considerations Concerning Diabetes," in which he throws new light on many points concerning a disease the actual cause and successful treatment of which we have yet much to learn. An-

other chapter that is well worthy of careful study is from the pen of Dr. J. B. Roberts, and is entitled, "Some Surgical Aspects of Tuberculosis." Dr. F. P. Gay contributes an original article entitled, "The Etiology and Experimental Study of Syphilis."

W. A. Y.

Inflammation: An Introduction to the Study of Pathology.

Being the reprint (revised and enlarged) of an article in Professor Allbutt's "System of Medicine." By J. GEORGE ADAMI, M.A., M.D., F.R.S., sometime Fellow of Jesus College, Cambridge; Professor of Pathology, McGill University, Montreal. Toronto: The Macmillan Company of Canada, Limited, 27 Richmond Street West. London: Macmillan & Co., Limited. New York: The Macmillan Company. 1907. All rights reserved.

This admirable work is a reprint of the article on inflammation in "Allbutt's System of Medicine," first edition in 1896, second in 1905, and now more complete and fully up-to-date in separate book form in 1907.

The book comprises 237 pages, including the index. It is divided into three parts, in all twenty-eight chapters.

Part I. gives a general survey of the process of inflammation from the lowest organisms up to the more complex and highly developed forms of life.

Part II. deals with the factors in the inflammatory process, including the part played by the leucocytes, the inflammatory exudates, the blood-vessels, the nervous system, the cells of the tissues and the temperature changes.

Part III.—General conclusions. In this part is considered the various inflammatory manifestations, the systemic changes consequent on inflammation, and the principles of treatment of the inflammatory state. Wright's opsonic theories and methods of employing toxins, Bier's hyperemic treatment, and Von Mekulicz's injections to develop the resistance period, are all discussed.

This is a work that every medical man should read.

W. J. W.

Surgery of the Genito-Urinary Organs. By J. W. S. Gouley, M.D. New York: Rebman Company, 1123 Broadway.

This work consists of brief annotations on the nature, diagnosis and treatment of some of the diseases of the genito-urinary organs that come within the province of surgery. They are designed to place before the profession the results of the author's own researches, as well as those of other laborers in the same field of science.

A. J. H.

Practical Fever Nursing. By EDWARD C. REGISTER, Professor of the Practice of Medicine in the North Carolina Medical College. Illustrated. Philadelphia and London: W. B. Saunders Company. 1907. Canadian agents: J. A. Carveth & Co., Ltd., Toronto. \$2.50 net.

The object of this volume is to provide for nurses a working text-book that will cover the field for practical fever nursing. Many useful hints are given in the opening chapter on general considerations for the trained nurse and her practical duties in fever cases. A short description of the causes, symptoms and treatment of the various important fevers follows in succeeding chapters.

The book is well adapted as a text-book for nurses. It is very readable, and contains a large amount of useful information.

A. E.

The Priest. By HAROLD BEGBIE. Toronto: William Briggs. Cloth.

A story with a purpose, supposedly the unmasking of the priests who outwardly are clergy of the Anglican Church. To those who enjoy flaring the X-rays of religious criticism upon the souls and bodies of men, this book will be meat and drink. That Harold Begbie can also write beautifully of the sunshine of the soul life is evidenced by a few rare chapters in his book that twine lovingly around a young girl who, "By the vision splendid is still attended." "The Priest" has had a very large sale in England and Scotland.

W. A. Y.

Gynecology and Abdominal Surgery. In two large octavos. Edited by HOWARD A. KELLY, M.D., Professor of Gynecologic Surgery at Johns Hopkins University, and CHARLES P. NOBLE, M.D., Clinical Professor of Gynecology at the Woman's Medical College, Philadelphia. Large octavo volume of 851 pages, with 405 original illustrations by Mr. Hermann Becker and Mr. Max Brodel. Philadelphia and London: W. B. Saunders Company. 1907. Per volume: Cloth, \$8.00 net; half morocco, \$9.50 net. Canadian agents: J. A. Carveth & Co., Ltd., Toronto.

As is always the case, any book bearing on its title page the name of Howard Kelly as editor, requires no criticism. Dr. Kelly's world-wide reputation as a surgeon is all that is necessary to attach to any volume of which he is the author an importance second to none, and we take this opportunity of congratulating him upon the scientific and literary excellence of Volume I. of "Gynecology and Abdominal Surgery." The interests of the general practitioner have not been neglected by

the editor, as a part of the book has been devoted to medical gynecology, so that all that the general practitioner has to do is to refer to the one section, where he will find concentrated a great fund of information which, had it appeared in similar works, would have made them more suitable for general practitioners and not altogether for specialists. Distinct chapters have been devoted to the consideration of the bacteriology and pathology of diseases of women, so that those who are specially interested in and wish to investigate the scientific basis of gynecology will find the information desired. This is a department that has been somewhat neglected in books devoted to gynecology. The different puerperal injuries and infections have been included in this volume, as also the treatment of incomplete abortion, ectopic pregnancy and the Caesarian operations, thus again interesting not alone the gynecologist pure and simple, but the physician and general surgeon practising abdominal surgery. Special chapters are also found dealing with operations during pregnancy and operations before puberty, conservative operations upon the uterine appendages, and the complications of operations. The book is full of illustrations, thus adding materially to the value of the text.

W. A. Y.

The Secret. By E. PHILLIPS OPPENHEIM. Toronto: The Copp, Clark Co., Limited. Cloth, illustrated.

Fascinating in its medley of political intrigue, courageous spirit, gunpowder, smoke, and over all the calcium light of love. This story would be a thriller if transferred to its proper setting—stageland.

W. A. Y.

Surgery: Its Principles and Practice. Volume II. In five volumes. By 36 eminent surgeons. Edited by W. W. KEEN, M.D., LL.D., Hon. F.R.C.S., Eng. and Edin., Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Phila. Volume II. Octavo of 920 pages, with 572 text-illustrations and 9 colored plates. Philadelphia and London: W. B. Saunders Company. 1907. Per volume: Cloth, \$7.00 net; Half Morocco, \$8.00 net. Canadian Agents: J. A. Carveth & Co., Ltd., Toronto.

In the April, 1907, number of this journal we reviewed the first volume of Keen's Surgery, and feel pleasure in saying that the second volume of this great work fulfills the promise of its predecessor.

The contents of Volume II are, Diseases of the Bones, by E. H. Nichols, M.D.; Fractures, by D. N. Eisendrath, M.D.; Surgery of the Joints, by R. W. Lovett, M.D., and E. H. Nichols, M.D.; Dislocations, by D. N. Eisendrath, M.D.; Muscles, Ten-

dons, Bursae, by J. F. Binnie, M.D.; Orthopedic Surgery, by R. W. Lovett, M.D.; The Lymphatic System, by F. H. Gerrish, M.D.; Surgery of the Skin, by J. A. Fordyce, M.D.; Pathology of Chief Surgical Disorders of Nervous System, by Wm. G. Spiller, M.D.; Surgery of Nerves, by Geo. Woolsey, M.D.; Traumatic Neurasthenia, Hysteria, and Insanity, by F. X. Dereum, M.D.; Surgery of the Insane, by J. Chalmers DaCosta, M.D.; Surgery of the Spine, by Geo. Woolsey, M.D.

The illustrations in the different chapters occupy a good deal of space. This, however, is a very pardonable fault; many readers preferring to learn from the pictured page rather than the text, the photograph assuming the rôle of teacher. The principle of doing the greatest amount of good for the greatest number being a sound one, the exhibition of this quality in a work on surgery should bring it to the favorable notice of surgeons and practitioners, who have not followed the latest advances of the science and art of surgery. Apart from the possession of this special advantage, the articles in the work bear the stamp of merit and show evidence of close study, each author conveying a terse presentation of the opinions, facts and data gleaned from the latest and best literature, as well as his own appreciation of the same.

J. J. C.

The Practical Medicine Series. Comprising ten volumes on the Year's Progress in Medicine and Surgery, under the general editorial charge of GUSTAVUS P. HEAD, M.D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Vol. I. "General Medicine," edited by FRANK BILLINGS, M.S., M.D., Head of Medical Department and Dean of the Faculty of Rush Medical College, Chicago, and J. E. SALISBURY, A.M., M.D., Professor of Medicine, Chicago Clinical School. Vol. II. "General Surgery," edited by JOHN B. MURPHY, A.M., M.D., LL.D., Professor of Surgery in Rush Medical College (in affiliation with the University of Chicago). Series 1907. Chicago: The Year Book Publishers, 40 Dearborn Street.

These two volumes are very much like the two that were published last year, with the addition, of course, of some mention of almost everything that has been written and considered worth repeating with regard to disease, both medical and surgical, during that time. About a third of the volume on medicine is given up to tuberculosis, a subject on which so much has been written of late years, and while perhaps there may not be much in this article that one has not heard of before, still there are many parts of it which are of undoubted value. The opsonic index is thoroughly explained, as well as the work done by Dr. Wright and the discussions which his work has led to. Some new diagrammatic

illustrations of diseases of the heart, and the question of probable life expectation in these diseases, will be of interest to all those connected with insurance companies. The article on urinalysis is in an excessively good form, and can be easily followed.

The surgical volume presents, of course, more new matter. Surgery is still making great advances, more particularly the surgery of special regions. Taken together, these two volumes, if carefully read, give one the best possible idea of the present position of medicine and surgery.

A. J. J.

The Brass Bowl. By LOUIS JOSEPH VANCE. Cloth, illustrated. Toronto: McLeod & Allen.

A racy, interesting, exciting little story, as bracing as a ride to hounds almost, so keen is the scent and so quick the chase. In truth, nothing more nor less than the hunting and trapping of a burglar.

W. A. Y.

Diseases of Infancy and Childhood. Their Dietetic, Hygienic, and Medical Treatment. A Text-Book designed for Practitioners and Students in Medicine. By LOUIS FISCHER, M.D., Visiting Physician to the Willard Parker and Riverside Hospitals, of New York City; former Instructor in Diseases of Children at the New York Post-Graduate Medical School and Hospital, etc., etc.; Fellow of the New York Academy of Medicine. With 303 text illustrations, several in colors, and 27 full-page half-tone and color plates 979 royal octavo pages. Extra cloth, \$6.50 net; half morocco, \$8.00 net. Sold only by subscription. Philadelphia: F. A. Davis Company, publishers, 1914-16 Cherry Street.

The rapid strides that have been made in diagnosis and treatment of infantile and children's diseases is sufficient reason for the presence of another extensive text-book on this subject. But the danger lies in an overlapping, and in this instance the author by some pruning might have narrowed down the limitations of the work very considerably. The section dealing with the very essential subject of infant feeding is most thorough in detail and replete with valuable hints. The disorders arising from improper feeding have been given prominence. An extensive experience at the large service of the Riverside and Willard Parker Hospitals has afforded the author abundant opportunity for comparing various treatments, and attention is called to many frequently neglected points of treatment. As a teacher of physicians at the New York Post-Graduate Medical School and Hospital the author has proven the value of photographic and color plates to express the true nature of disease, consequently we find every article liberally illustrated.

In a miscellaneous part we find much practical information on such subjects as anesthetics in children, disinfections, the administration of drugs, local remedies, rectal medication, etc.

The book is comprehensive and complete with the teachings of to-day, and we cordially recommend it to practitioners and students in medicine.

W. H. P.

New Chronicles of Rebecca. By KATE DOUGLAS WIGGIN.
Toronto: William Briggs.

Could anyone bear to lose Rebecca of Sunnybrook Farm for ever and a day? Surely not. Then read the "New Chronicles." They seem little forgotten bits of quaintness left out by mistake from Rebecca's life history. As there is "only one of everybody," her own pen must write her story.

W. A. Y.

Modern Methods of Diagnosis in Urinary Surgery. By EDWARD DEANESLY, M.D., B.Sc. (Lond.), F.R.C.S., Hon. Surgeon Wolverhampton and Staffordshire General Hospital. London: H. K. Lewis, 135 Gower Street, W.C. 1907. Price, 3s.

This is a work of ninety-seven pages, dealing with the diagnosis and treatment of the various affections of the urinary tract. The differential diagnosis is well given, and the minutiae of the various procedures, including the newer methods, for diagnosis and treatment are carefully explained. There are cuts illustrating the interior of the bladder, the combined examination of the prostate gland, the cystoscope and two varieties of separators.

We are much pleased with the work, and feel sure it will prove helpful to the general surgeon, for whom it was written, and interesting to the urinary specialist.

W. J. W.

Manual of Diseases of the Ear, Nose and Throat. By JOHN JOHNSON KYLE, B.S., M.D., Professor of Clinical Otolaryngology, Rhinology and Laryngology in the Medical College of Indiana, Department of Medicine of Purdue University; Otolaryngologist, Rhinologist and Laryngologist to City Hospital, St. Vincent's Hospital, and City Dispensary, Indianapolis; Fellow of the American Academy of Ophthalmology and Oto-Laryngology, and Fellow of the American Laryngological, Rhinological and Otolaryngological Society; Member of the Association of Military Surgeons of the United States; late Major and Surgeon U. S. Vol. Second edition, revised and enlarged, with 169 illustrations. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1907. Price, \$3.00.

In a compact little volume the author says he has endeavored to give to students and general practitioners of medicine part of the essential information relative to diseases of the ear, nose and

throat, and has given those methods of treatment that have been most successful in his own hands. The work is well illustrated, and contains many formulæ which will be of special help to general practitioners. The subjects are handled in a clear and concise manner. Free use has been made of European authors, to whom the author gives unstinted credit. One cannot help thinking that Kyle's patients are of a strange make-up, as he says the pain in adenectomy is slight in youths and he prefers a local anesthetic. He prefers to remove the tonsils after the adenoids.

The book is nicely gotten up, and reflects credit on both the author and the publishers.

P. G. G.

The Diagnosis and Modern Treatment of Pulmonary Consumption.

With Special Reference to the Early Recognition and the Permanent Arrest of the Disease. By ARTHUR LATHEM, M.A., M.D. (Oxon), M.A. (Cantab.), F.R.C.P. (Lond.). Author of the Prize Essay on the Erection of King Edward VII. Sanatorium; Physician and Lecturer on Medicine at St. George's Hospital; Senior Assistant Physician at the Brompton Hospital for Consumption and Diseases of the Chest; Advisory Physician to the Throat Hospital, Golden Square; Advisory Physician to the York Lying-in Hospital. Third edition. London: Bailliere, Tindall & Cox, 8 Henrietta St., Covent Garden. 1907. Canadian agents: J. A. Carveth & Co., Ltd., 434 Yonge St., Toronto.

It will be interesting to know that the author has made mention of the value of the opsonic index in treatment and diagnosis, the use of Koch's new tuberculin in treatment, and Dr. Paterson's interesting observations on the value of manual labor at Frimley Sanatorium. This, the third edition, is an up-to-date work in every respect.

A. J. H.

Manual of Diseases of the Eye. By CHARLES H. MAY, Chief of Clinic in Ophthalmology, College of Physicians and Surgeons, Medical Department, Columbia University, New York. Fifth edition, revised. 362 illustrations, with 22 plates, 63 colored figures. 1907. \$2.00 net.

This popular manual, which has been translated into French, German, Dutch, Italian and Spanish, has now reached its fifth edition. It maintains its former excellence. Some illustrations, its author says, have been replaced by superior ones. His attention might well be drawn to the picture, labelled exophthalmos, on page 70—the most vivid imagination would not recognize it as such. Yet the excellence of the plates and illustrations as a whole is most unusual in a manual of this size.

M.

Five Hundred Surgical Suggestions. Practical Brevities in Surgical Diagnosis and Treatment. By WALTER M. BRICKNER, B.S., M.D., Chief of Surgical Department, Mount Sinai Hospital Dispensary, New York; Editor-in-Chief, *American Journal of Surgery*, and ELI MOSCOWITZ, A.B., M.D., Assistant Physician, Mount Sinai Hospital Dispensary, New York; Associate Editor, *American Journal of Surgery*. Second Series. Duodecimo; 125 pages. New York: Surgery Publishing Co., 92 William St. 1907. Price, \$1.00.

This little volume is gotten up in a very attractive style, and contains the condensed experience of the well-known authors. It is a book for the busy man—or to be picked up while waiting for a street car. Every part of the human frame is dealt with, and a variety of surgical axioms given in connection with each section.

E. A. M.

A Practitioner's Handbook of Materia Medica and Therapeutics. Based upon established physiological actions, and the indications in small doses. To which is added some pharmaceutical data and the most important therapeutic developments of sectarian medicine as explained along rational lines. By THOMAS S. BLAIR, M.D., Member American Medical Association, Pennsylvania State Medical Society, Harrisburg Academy of Medicine; Member of Visiting Staff of Harrisburg City Hospital, etc. Philadelphia: The Medical Council, 4105 Walnut Street.

The author has made two chief divisions in his work, the first under the heading of botany, the second under materia medica and therapeutics. There seems to be nothing in this book which cannot be obtained from any of the numerous works on this subject.

A. J. H.

The Diagnosis of Nervous Diseases. By PURVES STEWART, M.A., M.D., F.R.C.P., Physician to Out-Patients at the Westminster Hospital; Joint Lecturer on Medicine in the Medical School, etc. London: Edward Arnold, 41 and 43 Maddox Street, Bond Street W. 1906.

This is an excellent work that will prove to all, the beginner as well as the expert in neurology. The book opens with a brief clear outline of the anatomy and physiology of the nervous system. Then follows a description of the various symptoms and signs of nervous diseases, with an explanation of their causes and an explanation of their significance. It is much more useful than the usual works on diagnosis, as the author is not content with labelling each symptom as a sign of a special disease. The book is well worthy of a place in any library.

Diseases of the Intestines and Peritoneum. By DR. HERMANN NOTTINAGEL, of Vienna. Edited, with additions, by H. D. ROLLESTON, M.D., F.R.C.P., Physician to St. George's Hospital, London, England. Second edition. Octavo of 1059 pages, illustrated. Philadelphia and London: W. B. Saunders Company. 1907. Cloth, \$5.00 net; half morocco, \$6.00 net. Canadian agents: J. A. Carveth & Co., Ltd., Toronto

This new edition has appeared unexpectedly early, and, as the editor remarks in the Preface, little change has been made beyond a considerable number of additions and some alterations in the arrangement and substance of the editorial additions made in the first edition. The text, the work of the late distinguished author, remains unaltered beyond the omission of a few case histories. As remarked in the previous review, the translation is very good and clear. The editor has shown himself thoroughly acquainted with Canadian and American literature, so that little of value in this wide field has failed to receive due credit. The views of both author and editor, which are well abreast of the times, are characterized by sound conservatism, and the work can be highly commended to the profession. It is needless to say that the work of the publishers is well done.

A Comparative Study of the Influence of Cod Liver Oil and Cod Liver Oil Emulsion upon the Nutrition of Normal and Tuberculous Pigs. by J. W. WELLS, M.D., Manchester. At the University Press. 1907.

This small monograph contains some experiments that are intended to show the comparative values of cod liver oil and cod liver oil emulsions when fed to normal and tuberculous pigs. The experiments were conducted in the Public Health Laboratory of the University of Manchester, and they show that the nutrition of tuberculous animals was improved by the addition of cod liver oil to their food.

A. E.

Green's Encyclopedia and Dictionary of Medicine and Surgery. Vol. V. of "Green's Encyclopedia and Dictionary of Medicine: Wm. Green & Sons.

Vol. V. of "Green's Encyclopædia and Dictionary of Medicine and Surgery" contains 908 subject-headings. This now completes the first half of what is turning out a splendid and most valuable reference book. Perhaps the most lengthy article in Vol. V. is that on labor, consisting of seventeen subdivisions, written by twelve or more authors, amongst them being Drs. F. W. N. Haultain, H. Jellett, W. R. Dakin, W. Stephenson, G. E. Herman, W. E. Fernergill, W. W. H. Tate, T. W. Eden, Sir Alex. R. Simpson, J. W. Ballantyne, and Murdoch Cameron. The volume

also contains articles of more than ordinary value on life insurance, leucocytosis, leprosy, diseases and injuries of the knee joint, invalid feeding, physiology and surgical affections of the kidney, and diseases of the lacrymal apparatus. "The purely dictionary part of this work endeavors, without striving after the degree of copiousness attained by some works which are dictionaries only, to give the meaning of every medical term which is at all likely to puzzle the general practitioner in his reading of current medical and surgical literature, while the part which constitutes the encyclopedia consists of articles which are authoritative, coming as they do from the pens of men who are experts in their various departments."

Nephritis. A Manual of the Disease commonly called Nephritis or Bright's Disease, and of Allied Disorders of the Kidneys. By SEELYE W. LITTLE, M.D. New York: The Grafton Press. 1907.

This brochure may find a useful place in the library for ready reference. The chapter on foods and dietaries is good, and the book may be read with benefit to many. A. J. H.

Essentials of Chemistry and Toxicology. For the use of Students in Medicine. By R. A. WITTLAUS, A.M., M.D., Professor of Chemistry, Physics and Toxicology in Cornell University. Thirteenth edition, revised by R. J. E. Scott, M.A., B.C.L., M.D., author of "The State Board Examination Series." New York: William Wood & Company. 1907.

This is a compact little work of about three hundred pages, arranged as a quiz compend. It has a complete index of paragraphs, making it an exceedingly handy reference. It deals with both inorganic and organic chemistry, and the sections on toxicology give it a useful place in a medical student's or practitioner's library. W. J. W.

The Elements of the Science of Nutrition. By GRAHAM LUSK, Ph.D., M.A., F.R.S. (Edin.), Professor of Physiology at the University of Bellevue Hospital Medical College, New York City. Philadelphia and London: W. B. Saunders & Co.

Professor Lusk presents a work showing infinite care and absolute veracity—no theoretical fancies, but solid, proven work in every statement. Any practitioner would be well repaid by studying hard the chapters on metabolism, and those interested in the feeding of infants and children, wherein the demand for caloric percentages in all foods is scientifically placed before us, cannot do better than obtain this work and give several hours to its perusal. It is not an easy book to read—must be taken seri-

ously and digested leisurely. We think it rather diffuse—too many figures for the ordinary student—but as a work of reference it is capital. As usual with all the productions of W. B. Saunders & Co., the printing, paper and general get-up is first-class in every detail.

Merck's 1907 Index (third edition). An encyclopedia for the chemist, pharmacist and physician, stating the names and synonyms, source or origin, chemical nature and formulas, physical form, appearance and properties, melting and boiling points, solubilities, specific gravities and methods of testing, physiological effects, therapeutic uses, modes of administration and application, ordinary and maximum doses, incompatibilities, antidotes, special cautions, hints on keeping and handling, etc., of the chemicals and drugs used in chemistry, medicine and the arts. Merck & Co., 15 University Place, New York; St. Louis, Mo., and Rathway, N.J.

For a full description of this useful volume, one that we feel sure will be found universally useful to medical men and pharmacists, we cannot do better than refer our readers to the title page, as above. The book contains a fund of information, and is, in fact, a *multum in parvo*. It has been most popular in the past, and will, no doubt, continue to be so in the future.

W. A. Y.

Diseases of the Stomach. By DR. I. BOAS, Specialist in Gastro-enteric Diseases in Berlin, Germany. The sole authorized English-American edition from the latest German edition. By ALBERT BERNHEIM, M.D., Freiburg, Germany, Assistant to the late Dr. D. D. Stewart at the Philadelphia Polyclinic Hospital and Post-Graduate School, as Instructor in the Department of Diseases of the Stomach and Intestines, etc., etc. Appropriately illustrated with five full-page plates and sixty-five engravings in the text. 730 royal octavo pages. Extra cloth, \$5.50 net; half-morocco, \$7.00 net. Sold only by subscription. Philadelphia: F. A. Davis Company, publishers, 1914-16 Cherry Street.

In his preface to the fifth German edition the author states the principles which guided him in this work, viz.: "Hypotheses as few as possible, but practical hints in precise, easily comprehensive form as many as possible."

We must congratulate the author on having kept so well to his text. The work is concise and practical, one we can with confidence recommend to those who wish a good work on diseases of the stomach.

The first two chapters give a short account of the topography

and histologic anatomy, with remarks on the chemistry and physiology of the stomach.

Part I. of the general division of the book is devoted to the methods of general diagnosis, while Part II. treats of diagnosis and therapeutics.

It contains 730 pages, including the index. The binding is neat and attractive and the type clear. There are sixty-five illustrations and five full-page plates.

W. J. W.

Treatment of the Diseases of Children. By CHARLES GILMORE KERLEY, M.D., Professor of Diseases of Children, New York Polyclinic Medical School and Hospital; Attending Physician to the New York Infant Asylum; Attending Physician for Children, Sydenham Hospital, New York; Assistant Attending Physician to the Babies' Hospital, New York; President of the American Pediatric Society, etc. Fully illustrated. Philadelphia and London: W. B. Saunders Company. 1907.

This is a book of six hundred pages, which has been prepared specially for the use of the physician in active general practice, and it is written in a way that enables the practitioner to find and use what perhaps is contained in other books on this subject, but in them cannot be so easily handled. This is what might be called essentially a practical book, and a book that should be of practical value to every medical man in general practice. It is a book that has been written largely from personal experience, and contains a large amount of very interesting and useful matter which is often overlooked in more elaborate books. The chapters devoted to development, described under "Gymnastic Therapeutics," are illustrated in a way that makes it particularly easy for the busy practitioner to see the effect and value of the treatment suggested.

A. J. J.

The Diagnosis and Treatment of Intussusception. By CHARLES P. B. CLUBBE, Sydney, Australia. London and Edinburgh: Young J. Pentland. 1907.

This small volume is a type of a class of monographs of which the supply is at all times too limited.

Scholarly, critical and practical, it presents within limited space just what one who is confronted with a case of intussusception would wish to have at hand for consultation. The author shows clearly, but with all modesty, that he has a comprehensive knowledge of both the older and the more recent literature of his subject, and his conclusions regarding diagnosis, pathology and treatment are based upon an ample personal experience. No less than 144 cases have come under his care, and the percentage of recoveries has been surprisingly large. This reviewer is prepared to go on record as endorsing the book before us most heartily.

N. A. P.