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EDITORIAL

VARIETIES OF MENTAL AND RELIGIOUS TREATMENTS.

There are a number of cults professing to treat disease by mental, suggestion, or spiritual influence by making an appeal to the supernatural.

One of these cults is the well-known Christian Science practice and belief. This was founded many years ago by Mrs. Eddy. When Mrs. Eddy was a young girl she had a long illness, during which she came to believe that mind could control the body, and that she could be well if she so willed. When she began to put her beliefs into words she drew heavily upon the teachings of Dr. Quimby, who was an erratic medical practitioner, who had studied East Indian mystics, and became a follower of such teachers as are to be found in the writings of the theosophists, of whom Madame Blavatsky is a type. The Christian Scientist holds that disease is a delusion of mortal mind, and that the spiritual mind can dispel it. He believes that the properties of drugs are in them because we think so, so that opium is a poison because we have endowed it by thought with the power to poison. He believes that if every one will only get his mind in full accord with the All-good he cannot be ill, because disease is the result of sin, and we cannot be sinful if in full harmony with God, and thus cannot be ill. The Christian Scientist cannot work on a case with a doctor; and the reason is clear.

But the late Colonel Sabin, of Washington, modified these views materially. He said that God was Omnipotent and could cure any disease without medicine. Colonel Sabin said he did not need any medicines, as he was in such full accord with the will of God that he was beyond the need of them. He said further that if anyone had not full confidence in God, he should be allowed to have drugs and send for a doctor, as these aids were for moral weaklings. They should be allowed to have such things as would fill their carnal minds, and destroy their fears, as this was all the good that medicines ever did. This is the cult known as the Evangelical Christian Science Church.

One sect tries to improve on another, and, therefore, we have the Unity School of Christianity. These people allow everyone the utmost freedom to have doctors and to take medicines so long as they have faith in these agencies. They encourage people, however, to fix their faith on spiritual healing, and leave off material means. They contend that if people can only reach that state of mind where they have complete trust in divine healing they are immeasurably better off, and very much more certain to obtain speedy relief from sickness. Everyone is left free to be led according to his own spirit, and to express in what way he is led. No fixed rules must be laid down. The individual effort must be after spiritual and not the material help in curing disease.

In these three forms of spiritual healing, or rather, as the medical man would say, healing by suggestion, there is no distinction made between organic diseases, and mere derangement of function. The victims of paraplegia from a transverse myelitis, or from a hysterical condition are on the same level. Faith in the tenets of one or other of these cults is what is required to obtain relief. But this lands these devotees in a reductio ad absurdum. The child, the man who has been made unconscious from a blow on his head, or the man in the delirium of pneumonia, are not capable of placing faith in any spiritual essence. They cannot realize that disease is an error of their mortal minds, they cannot understand that the curative power of a drug lies in the power it possesses of filling the mind and casting out fear, nor that it is the faith they have in the treatment, whether by drug or mind, that is going to make them well.

The Emmanuel Movement took a new position. It held that it must work along with the medical profession. The advocates of this phase of religious or spiritual help in treating disease must first have a diagnosis of the cases made by a duly qualified doctor. If the case is due to some organic change, then it is unsuited, but if there is only some functional derangement of the nervous system the aid of the church should coöperate with the doctor. This is limiting the field of the spiritualists very decidedly. It limits their influence to those cases practically where the patients think there is something wrong with themselves; or as the late Sir J. Russell Reynolds said, to those who are victims of *identional* disease.,Tthe Emmanuelists claim that God has power to cure all diseases, but that He does not always make use of the same means, They admit the use of the scalpel and the drug, and that there is a wide range of diseases that are in no way caused by the mind. It uses faith healing and suggestion in coöperation with medicine.

Martin Luther said that "four-fifths of the people were going about with their mouths agape waiting for someone to befool them," and

Barnum said, "If this be true, I am after the four-fifths." We are saying no word against true faith and its sustaining power; but me are voicing our opinions freely against commerciatising religion and prostituting it by the ignorant.

A MODEL HEALTH SERVICE.

During the summer the Medical Officers of the Ontario Board of Health have been looking closely into the conditions of the summer resorts from the standpoint of sanitation. This had become necessary. It had become known by a study of the cases of typhoid fever in Toronto that very many of the attacks were contracted at summer resorts. Last year these places were notified that certain rules would be enforced.

This summer medical men from the Health Office have been making visits to these resorts without any notice going in advance of their coming. The results have been of a most gratifying character. In every instance when carelessness was found, the law was laid down in clear terms. Two years ago several summer resorts yielded a high percentage of typhoid fever cases. Last year this was very greatly reduced, and this year there has been a very decided further improvement.

Out of 430 cases of typhoid fever last year, 183 were traced to places outside of Toronto. The death rate in Toronto per 100,000 in 1910 was 40.8; in 1911 it was 20.; in 1912 it fell to 12.1, and in 1913 it was only 10.4. This sort of record is one for the Ontario Health Officers to feel proud of. If all the Provinces were to establish similarly active boards the death and sickness rates would be equally lessened.

THE SAFETY OF PATIENTS.

When a hospital receives a patient, it places itself in the position of a guardian of the welfare of that patient, whether the same be a public or a private ward patient. In the case of a private ward patient the patient has certain privileges as to medical and surgical attendance, and the right to engage a special nurse. Medicines and foods are supplied according to the directions of the physician or surgeon in charge of the case.

In the public wards, the patients are under the care of the hospital and have the medical and surgical attendance and nursing furnished to them by the institution in nearly all cases.

Under either condition the hospitals receiving patients whose minds are deranged should exercise special care to prevent accidents of every kind. From time to time patients are committing suicide by jumping from window or verandah, or by securing a knife or razor.

We think that mentally unbalanced patients should be placed on the ground floor, as nearly all the instances of suicide that we have been able to collect have occurred by the patients making their escape through windows of upper flats, or by jumping from a balcony. If these patients were on a ground floor the worst that could happen would be a temporary escape. There are no hospitals which could not adopt this simple suggestion, and we know of a number of lives that would have been saved by it.

BRITISH MEDICAL ASSOCIATION WINS.

A London cable states the British Medical Association has obtained a verdict in a libel suit which occupied the attention of the King's Bench Division for several days.

The action was brought by C. H. Stevens, who claimed to have discovered a cure for tuberculosis by means of a South African herb called unchalcabo.

In a book, entitled "Secret Remedies," in which the British Medical Association exposed a large number of so-called "sures," Mr. Stevens was called a "fraud" and a "quack." The jury found that the words complained of were not libellous, and that the comments were fair.

This is a very important verdict to secure from a jury. It goes to show that twelve jurymen, from the average classes of the community, can be found who are capable of recognizing a dishonest claim and making a pronouncement accordingly. With governments demanding purity in drugs and foods, with advertising men now trying honest methods, and juries rendering verdicts such as the foregoing, the way of the patent medicine man is not so rosy as it formerly was. It is high time that anyone who advertises a positive cure for consumption or cancer should be asked in open court for proof.

It does not follow that every true advance in medicine must be made by a highly trained medical scientist. A valuable discovery may be made, and has been made, by the ordinary observer. But the fact is that when anyone has made, or thinks he has made ,a discovery that is of great value in medicine, before he should be allowed to place it upon the market as a cure for some disease until it has been submitted

to competent experts with a view of determining its value. Some useless vegetable bitter could no longer be palmed off as some wonderful African or South American cure for cancer. The remedy for this sort of fraud is enforced publicity.

IT DOES NOT PAY.

We have more than once in the past called attention to the danger of yielding to the appeals of women to be relieved of a pregnancy, either out of sympathy or for a fee. In neither case does it pay.

If a medical practitioner performs an illegal operation from sympathy his reward will be that if anything goes wrong, the woman he was trying to befriend will give him away. He will have to bear the brunt of the legal storm, while she goes free.

If he performs such an operation for a fee he is entering upon a most dangerous form of practice, and one that in the end will not yield him much money, and bring to his office a most undesirable class of patients. Even if never caught or dealt with legally, the nature of such practice becomes one of talk, and no good clientele will come his way.

Compared with anything that can be made in this way, the anxiety and risk a thousand times outweighs it. All this, too, is saying nothing of the criminal and moral sides of this sort of practice. If a doctor is going to do this sort of practice he should charge $100,000 and at once leave for parts unknown. One thing rest assured of, namely, that sooner or later a case will "go bad."

One more point. It is the duty of every practising physician to render assistance to those requiring his skill; and no one stands more in need of good skill than the woman who is septic after an abortion. If such a case comes under the care of any practitioner he should at once seek a consultation. By this very simple course, if death occurs, he has placed himself in a proper position before the profession and the public. Medical men are not detectives, but they are bound to safeguard themselves. The woman who gets into trouble will get the doctor into trouble who tries to get her out of trouble.

A CANADIAN HOSPITAL SHIP.

The Independent Order of the Daughters of the Empire undertook the laudable task of raising $100,000 to supply a hospital ship to be placed under the control of the Admiralty for the use of the

army. No more noble and valuable service could engage the attention of this organization. The sum so far is near the $200,000 mark.

But there is another way to look at the question. The sacrifice anyone would make in giving money is small compared with those who risk life, limb and health in defence of the country which they live in who may with all confidence be asked to contribute. The statement has been issued over the signature of Mary R. Gooderham:

"To the I.O.D.E.,—I would like to remind every member of the privilege and obligation enjoined upon them at this time of Imperial crisis. The call has come to us to do our duty as urgently as to the soldiers and sailors of the Empire. The Daughters of the Empire ask the coöperation of the women of Canada to give this tangible expression of their sentiment in the service of King and country in providing a hospital ship to be placed at the disposal of the British Admiralty."

Mrs. A. E. Gooderham, Toronto, president of the I.O.D.E., was in the chair, and said the prayers which opened the meeting. Before her were women, not from Toronto alone, but from as far west as Calgary, and the societies represented included the National Council of Women, Women's Liberal Association, Graduate Nurses of the Toronto General Hospital, the St. John's Ambulance, the Women's Society of Old St. Andrew's Rosary Hall, United Empire Loyalist Association, the Association of Women Teachers, Women's Canadian Club, University Women's Club, Alumnæ of Grace Hospital, and many others. All the members of the executive of the I.O.D.E. in town were also present, as well as a large number of chapter regents.

It was agreed that if the war should end at an early date ,and the hospital ship not be required, the money subscribed would be turned over to military or naval hospital purposes. In any event the movement is a good one and worthy of support, and the funds collected will be wisely and well used. It is in such work as this and aiding the Red Cross funds that the women of Canada can do so much. Great occasions bring great duties, and now is a time when all must rise to a full sense of their responsibility. The ancient women of Greese would present a sword to her son when he went to fight for his country. There was no holding back from duty. The comamnd was "Bring back the sword or die beside it."

WATER POLLUTION.

That water pollution is of the utmost importance is gathered from the following figures, which set forth the death rate from typhoid fever in various towns and cities:

The Provincial Board of Health made an exhaustive return for the leading lake-front cities and towns of Ontario, covering the period from 1903 to 1912, inclusive, and the ten-year average of deaths per 100,000 is stated to be; Fort Frances, 111; Rainy River, 103; Port Arthur, 175; Fort William, 183; Sault Ste. Marie, 133; Steelton, 23; Sarnia, 90; Walkerville, 17; Windsor, 49; Amherstburg, 32; Sandwich, 78; Fort Erie, 29; Niagara Falls, 40; Niagara-on-the-Lake, 16; Hamilton, 16; Grimsby, 13; Oakville, 30; Toronto, 27; Whitby, 17; Bowmanville, 57; Port Hope, 41; Cobourg, 20; Belleville, 45; Trenton, 7; Kingston, 43; Gananoque, 8; Prescott, 31; Brockville, 47; Cornwall, 60.

This proves beyond a shadow of doubt that some places have a much contaminated water supply as compared with others, for typhoid is a crucial test on this point. Some years ago the United States and Canada appointed a joint international commission to deal with this subject. The commission has reported in part its conclusions.

The commission had to determine in what way and to what extent the boundary waters between the two countries are polluted, and unfit for domestic use. These waters extend over a distance of 2,000 miles.

According to a report of the sanitary experts it has been found that towards shore as high as 34,000 B. Coli per 100 c.c. exist. In addition to this 26,000 vessels passed along the Detroit River in 1912. It is estimated that 15,000,000 people were carried yearly by vessels navigating the Great Lakes and their connecting rivers.

The pollution of the chain of lakes and rivers occurs in several ways. First, there is the pollution due to heavy rain-falls and the melting of the snow in spring, rushing into the rivers and lakes impurities that have gathered on the country adjoining these bodies of water. Then there is the pouring of sewage into the lakes by the cities, towns, and summer resorts built along their shores. And, lastly, there is the contamination of these waters by the extensive summer lake traffic on the boats. Thus it is that at the mouth of the Detroit and Niagara Rivers the lake water is particularly impure, and this impurity extends easily for ten miles into the lake.

From all this it follows what the remedy must be. Sewage must be rendered inert before it is allowed to escape in these water courses. Summer resorts must be made to adopt sanitary methods. Boats must arrange a closet system that sterilizes fæcal matter before it passes into the water. It is a good omen to see two nations dealing with so important a question in this united manner.

THE CANCER RESEARCH WORK.

In several countries during recent years much excellent work has has been done on cancer. In one of the directions the effort has been made along the lines of prevention. Information has been given to the public and the profession urging early diagnosis and treatment. This is in the right direction and should receive the hearty coöperation of all.

Quite recently the general committtee of the Imperial Cancer Research Fund held its annual meeting. Among those present were the Duke of Bedford, K.G., the president; Sir R. Douglas Powell, president of the College of Physicians; Sir R. J. Godlee, president of the College of Surgeons; Sir Thomas Barlow, Sir William Church, Sir W. Watson Cheyne, Sir John Tweedy, and Professor Sims Woodhead. This is such a representative committee that it is sure to command respect. The committee felt that the work was not yet sufficiently advanced to justify it in issuing any general statement.

Dr Bashford, the general superintendent of the research work, gave his report. With regard to transplanted tumors there are two kinds. There was one group that tended to grow steadily, because they did not produce any resistance to their own development. The other group was one where the tumors tended to disappear because of resistance generated in the tissues to their growth. This fact explained many self-cures that occurred. In all cases where a certain strain of true cancer had been used in the experiments no remedy had been discovered that arrested growth. Up to the present time the only way whereby rabbits, rats, mice and guinea pigs had been freed from these transplanted tumors was by removing them with the knife at an early date.

The report goes on to state that there is an increase in the frequency of the occurrence of concer. In 1860 there were among females 500 cases per million of the population, whereas in 1911 there were 1,088. Among the numbers stood 200 per million in 1860 and 891 in 1911. In 1899 one woman in 12 after the age of 35 had cancer, and 1911 one in every 7.4 had the disease. Among the figures were one in 21 in 1899, and one in 9.7 in 1911. The increase was not uniform for different parts of the body. This was no doubt due to the chances of injury to certain parts, and the advance in skill in the treatment of other parts. There was a marked drop in the death rate from cancer of the uterus, due to the advances made in the surgery of this organ.

Cancer areas, cancer houses, and cancer contagion are dealt with. Evidence is advanced of a very weighty character to show that there is no contagious element in the disease, and that cancer houses must be regarded as a myth. It has become known as the result of observation that when several cases of cancer occur in the same house there are

causes of this, such as the habits and occupation of the people living in the house.

On the subject of heredity, no very definite information could be given out. In the case of mice hereditary predisposition had been shown to exist, so as to double the inridense of cancer in female mice where it had occurred not further back than the grandmother, as compared with those where the cancerous ancestry was more remote.

With regard to the Abderhalden serum diagnosis of cancer the report speaks rather doubtingly. The investigations are not quite complete, but it appeared expedient even now to sound a note of warning that too great reliance ought not to be placed on the reaction obtained from the use of the serum in the diagnosis of cancer.

DEATHS UNDER CHLOROFORM.

"Sudden Death Under Light Chloroform Anæsthesia." The paper defore the Royal Society of Medicine, London, Eng., on the subject of "Sudden Death Under Light Chloroform Anæsthesia" The paper deserves careful consideration.

The first point he considers is that of ventricular fibrillation. It states that we do not yet know the intimate nature of this condition, but when it occurs the ventricular contractions succeed one another at a very rapid rate, and that the function of the ventricle is abolished. The result is that there is a sudden vascular collapse and immediate death. In the human subject under proper treatment the heart may recover its suspended function. This ventricular fibrillation does not occur in the normal heart under chloroform; but is preceded by a highly irregular and distinctive ventricular action. In this condition the ventricles beat in response to impulses from many abnormal foci which are brought them through other channels than the auriculo-ventricular muscle bundles. These stimuli give rise to very rapid ventricular systoles, and may also be very irregular and described as fluttering. This condition of ventricular tachycardia is commonly observed under low percentages of chloroform. Chloroform possesses the quality of inducing these extra ventricular systoles which may terminate in true ventricular fibrillation, provided some other stimulant acts upon the heart.

"The effort of cardiac stimulation naturally varies with its intensity, or may be modified by antagonizing agents, such as exaggerated vagal action, but provided the heart be only slightly affected by chloroform, extra systoles will almost certainly appear as a result, and if they appear in a rapid sequence then they may appear as ventricular fibrilla-

tion. If the heart be more fully affected by choloroform and the stimulation be intense these irregularities may still appear, but they never terminate in ventricular fibrillation; generally even the irregularities are suppressed. The controlling influence of full anæsthetic concentrations of choloroform upon the heart is a fundamental point in the consideration of the cause of death under chloroform; it is, I believe, connected with the depressing influence which choloroform exerts upon the heart, an influence which, as is now well established, is manifested in a progressive fashion as the strength of the vapor is increased."

In a lightly chloroformed animal the following stimuli are liable to produce a fatal reaction:

1. Stimulation by excitation of the myoneural junctions of the sympathetic cardiac nerves (accelerator nerves), as by adrenalin.
2. Stimulation of the accelerator nerves by electrical excitation.
3. Stimulation of acclerator impulses from the central nervous system in a subconscious emotional state.
4. Stimulation by accelerator impulses originating as a reflex from the excitation of sensory nerves.
5. Stimulation by release from depressing or restraining influences.
6. Stimulation by reapplication of the vapor after an intermission, or in the course of a very light administration.

"Death from ventricular fibrillation under chloroform may be observed under any of the following and applied clinical conditions:

a. During the induction and early stages of the administration of chloroform, and exceptionally later in the administration: (1) During struggles and excitement; (2) on removal of the chloroform; (3) on abrupt readministration of chloroform after removal, or its sudden increase during a period of light anæsthesia; (4) by any combination of these occurrences.

b. During operation by strong sensory stimuli under light anæsthesia.

c. After operation on the removal of the chloroform, especially after a short operation."

Mixtures containing chloroform appear to have the same tendency to cause ventricular fibrillation as pure chloroform.

In ventricular fibrillation a few exaggerated respirations follow the sudden cardiac syncope, and then the breathing ceases entirely. There is a persistent tendency towards recovery of the repiration which may continue for some time after the heart has ceased to beat. Should the heart recover the breathing is at once resumed. With the onset of the cardiac syncope there is an intense pallor of the face and marked dilatation of the pupils.

Dr Levy then goes on to discuss the damages of underdose and overdose, and comes to the conclusion, after weighing the evidence, that there is much more danger in under-anæsthesia, especially if interrupted than there is from any overdose. The golden rule he lays down is *full anasethesia* and *continuous administration*. Full anæsthesia can be secured by a 2 to 4 per cent. vapor; but the latter strength should not be used for long. Narcosis should be maintained up to the last stages of the operation, and in short operations during the final bandaging. Never attempt to arouse the patient, but remove him to bed with the least possible disturbance.

With regard to resuscitation, the author contends that the only real remedy is massage of the ventricles. He would allow two minutes to elapse. During this interval he would keep the lungs full of vapor by artificial respiration. At the end of two minutes if the heart has not resumed action, the abdomen should be opened and with the hand compress the heart between the diaphragm and the chest fall forcibly and rhythmically. Artificial respiration should be maintained to obviate the risk of death by asphyxia.

The paper is a very decided contribution to the subject of anæsthesia by means of chloroform. It points the dangers to be avoided and how best to avoid them. It is particularly valuable on account of the attention given to the danger of light chloroform anæsthesia, and the very great danger of administering the drug in an interrupted and irregular manner. We have briefly summarized the salient points in the address. While a few patients may die from an overdose, by far the larger number die because they did not receive enough.

THE MEDICAL COUNCIL OF CANADA.

The Second Announcement for the year 1914 has been issued. It contains information regarding registration under the Canada Medical Act. It also gives information about the examinations set by the authority of the Act. Those who wish to secure a license covering the Dominion, either by registration or by examination, should write to Dr. R. W. Powell, Ottawa.

CANADIAN PUBLIC HEALTH ASSOCIATION.

The fourth annual Congress of the Canadian Public Health Association, which was to have been held in Fort William and Port Arthur on 10th, 11th and 12th September, 1914, will not now take place on account of the war.

ORIGINAL CONTRIBUTIONS

ABSTRACT OF THE PRESIDENT'S ADDRESS.*

By Murray MacLaren, M.D., M.R.C.S. (Eng.), F.A.C.S.

AT the termination of a very successful meeting of the Canadian Medical Association held in London last year I had an opportunity of thanking the members of the Association for the honor they had done me by electing me to the presidency, and I now repeat how sincere is my appreciation of this high distinction, which had so kindly been conferred upon me. I am quite conscious that I may fall short in fulfilling the requirements expected of one occupying this responsible position.

I have much pleasure in welcoming to our forty-seventh annual meeting the distinguished visitors who have come so far, from the Mother Country and the United States, and whose presence here will add to our enjoyment and greatly enhance the value of this gathering. Allow me as well heartily to welcome the members of this Association. It is proper also that I should here fully recognize the splendid work done by the St. John Committee of Arrangements and the admirable spirit which has prevailed throughout months of preparation.

This large assemblage of medical visitors has suggested to me that it might be of interest to review the history of the early and important visits of medical men to this city and province. There are there periods which seem of particular interest from this aspect.

The explorers, de Monts and Champlain, after receiving authority from Henry IV., King of France, to undertake the colonization of Acadia, sailed from Havre on the 7th of April, 1604, and arrived four weeks later at the southwest shore of Nova Scotia. De Monts and Champlain later on explored the Bay of Fundy in a smaller boat of eight tons. Leaving their ship with the greater part of the members of the expedition at St. Mary's Bay, Nova Scotia, they took with them about a dozen men. On the 24th of June, 1604, they entered what is now known as the harbor and river of St. John, as Champlain says in his remarkable account of the exploration, "one of the largest and deepest rivers we have yet seen, which we named the River St. John, because it was on that saint's day we arrived there."

*Delivered at the meeting of the Canadian Medical Association, St. John, N.B., July 7th.

Five hundred miles on its long career,
It flows on its lordly way,
Where the lofty pine and the cedar rear
Their crests to meridian day.
Through the forest dark, as it speeds along,
It winds through the valleys fair,
Where the boatman's voice and the raftman's song
Are borne on the morning air.

It is not mentioned whether they carried a surgeon with them in the pinnace, but it is probable there was one. There were at least two surgeons in the expedition, and as the leaders were in this boat, it is likely one was with them, more especially as it is known that on a later occasion, in a voyage made in a pinnace south of Cape Cod, a surgeon was carried. Were a surgeon present when Champlain disocvered St. John, as is likely, he would, of course, have been the first physician to visit these shores.

The stay of de Monts and Champlain in St. John was very brief as they soon proceeded to the River St. Croix, New Brunswick, to search for a locality suitable for a settlement. St. Croix Island was selected and the remainder of the expedition joined them there. As it proved, they were unfortunate in their choice. The situation of a settlement on an island prevented them, at some seasons of the year, having free access to the mainland for a supply of water and food; there was much illness resulting from their mode of living during the winter of 1604-05. Champlain gives an interesting account of the severe and fatal illness which appeared among the colonists; he says, "During the winter many of our company were attacked by a certain malady called the *mal de terre,* otherwise scurvy, as I have since heard from learned men. There were produced in the mouths of those who had it, great pieces of superfluous and drivelling flesh (causing extensive putrefaction) which got the upper hand to such an extent that scarcely anything but liquid could be taken. Their teeth became very loose and could be pulled out with the fingers without its causing them pain. The superfluous flesh was often cut out, which caused them to eject much blood through the mouth. Afterwards a violent pain seized their arms and legs, which remained swollen and very hard, all spotted as if with flea bites; and they could not walk on account of the contraction of the muscles, so that they were almost without strength and suffered intolerable pains. They experienced pain also in the loins, stomach and bowels, had a very bad cough and short breath. In a word they were in such a condition that the majority of them could not even be raised up on their feet

without falling down in a swoon. So that out of seventy-nine who composed our party thirty-five died, and more than twenty were on the point of death. The majority of those who remained well also complained of slight pains and short breath. We were unable to find any remedies for these maladies.

"A post-mortem examination was made of several bodies to investigate the cause of their malady. In the case of many, the interior parts were found mortified, such as the lungs, which were so changed that no natural fluid could be perceived in them. The spleen was serous and swollen. The vena cava, superior and inferior, were filled with thick coagulated and black blood. The gall was tainted. Nevertheless many arteries in the middle as well as lower bowels were found in good condition.

"In the case of some, incisions with a razor were made on the thigh where they had purple spots whence there issued a very black clotted blood. This is what was observed on the bodies of those infected with this malady. Our surgeons could not help suffering themselves in the same manner as the rest. Those who continued sick, were healed by spring, which commences in this country in May. That led us to believe that the change of season restored their health rather than the remedies prescribed."

From this narrative we will notice that there were surgeons in the expedition, and that they spent the winter with the others on the St. Croix Island. Their names are not mentioned. This is probably because of the very different status of physicians in those days; they were then, of course, nothing like the important members of an expedition that they are to-day. The surgeons, however, of this expedition conducted by de Monts and Champlain were the first to visit this portion of Canada, and it is interesting to have a record of their post-mortem findings in the cases of scurvy.

Champlain writes that the party was obliged to use bad water,, and they drank melted snow, as there were no springs or brooks; for it was not possible to go to the mainland in consequence of the great pieces of ice drifted by the tide which rises three fathoms between high and low water. Work on the hand mills was very fatiguing, since most of them slept poorly and they suffered from insufficiency of fuel, which they could not obtain on account of the ice; and they had scarcely any strength. They ate only salt meat during the winter. The latter circumstance was in Champlain's opinion the partial cause of their maladies. As a result of that unfortunate experience the members of the expedition left the island in 1605 and went to Port Royal.

At Port Royal one of the surgeons was Deschamps, of Honfleur,

and another was Master Stephen; both of these surgeons had scurvy to deal with and both performed post-mortems, but they were evidently not the same surgeons as those who came to New Brunswick.

— Later on the history of St. John is prominently associated with the name of La Tour, both on account of the eminence of Charles La Tour and the bravery and beautiful character of Madame La Tour. Professor Ganong writes me that in his work in connection with Acadian history he has found no reference to suggest the presence of a physician with La Tour, nor does he find or recall anywhere in pre-Loyalist documents anything bearing on the subject, except what I have just mentioned.

The second visit of interest from a medical point of view was on the occasion of the foundation of the city. Previous to 1783 there were merely a few log huts, where the city of St. John now stands. On the 18th of May, 1783, there landed from twenty ships three thousand men and women, in June of the same year two thousand, and in September three thousand. These men and women who desired to retain their allegiance to the British Crown, founded the city as it were in a day. Hence it is called the "Loyalist City," and the 18th of May is annually observed in commemoration of the landing of the Loyalists.

With the Loyalists came a number of medical men, seventeen of whom are mentioned in a paper by J. W. Lawrence. Several had held commissions as surgeons in the Revolutionary War. Of these physicians a number remained in St. John, others went to various portions of the province, while others returned to their old homes. Among these may be mentioned Dr. Paine who, with others in 1785, presented a memorial to the Governor-in-Council, praying that a charter of incorporation might be granted for the institution of a Provincial Academy of Arts and Sciences. This was the initial step in the movement that led to the foundation of what is now our Provincial University. Another was Dr. Samuel Moore, who has the distinction of having performed the first post-mortem examination in St. John and the following is his report to the Hon. George Leonard, J.P.:

"Sir,—Agreeable to your request I examined the black man's head, I am perfectly satisfied he was murdered, after examining where the fork perforated the temporal bone of the skull, I sawed off the arch of the head and found the ventricles of the brain everywhere impacted with matter. The symptoms before death were also very obvious. All the jury were spectators. Your servt., Sam'l Moore. October 6th, 1798."

The last important visits in the history of the province to which I shall refer are those of the Canadian Medical Association. The Asso-

ciation met here for the first time in 1873 ,six years after its formation, when Sir James Grant was president, and there were fifty-five members present. The next visit was twenty-one years later, when Dr. T. O. Harrison, of Selkirk, was president, and one hundred and nineteen attended. And now the Association is meeting for the third time in our city, and we hope there will be four hundred members here. Among the names of those who were present on the former occasions and who are no longer with us, one may mention Graham, of Toronto; Wright, of Ottawa; Hingston, Buller and Bell, of Montreal; Bayard, of St. John, Parker and Farrell, of Halifax; Muir, of Truro, and MacLeod, of Charlottetown. Surely these names are illustrious and revered in the annals of the Association.

It is interesting on looking over the records of the previous meetings to notice that a Dominion Medical Act, inter-provincial registration, and a uniform standard of medical education for the various provinces of the Dominion were among the subjects discussed, as they had been at earlier meetings and as they continued to be for many years.

The difficulties arising in obtaining Dominion registration, especially owing to the matter not coming within the jurisdiction of the Dominion Government, were fully recognized, but it is now well known to us all that ,after much patience and persevering efforts, the Canada Medical Act was finally brought into existence under the able leadership of our honorary president, Sir Thomas G. Roddick.

I would here take the opportunity of announcing to you, as Sir Thomas has requested, his regret at not being able to be present. He wrote me that he had to attend the meeting of the Dominion Medical Council in Ottawa early in June and that he would sail for Europe immediately after the most important business had been transacter, but he deeply regretted his inability to appear at this meeting, especially so because since his appointment as honorary president, in Edmonton, he had never been well enough to attend a meeting to thank the Association for the great honor they had conferred upon him.

I am sure it is the deep regret of all members of the Association that the absence of the honorary president is due to ill-health, and it is the hope of all that the visit which he is making to one of the continental spas will result in his speedy restoration to health. We heartily congratulate Sir Thomas Roddick on the hight distinction recently conferred upon him by His Majesty, which has been well merited and well bestowed.

Another subject with which the early meetings here dealt was that of vital statistics. This, with a proposal for a Department of Public Health under the Dominion Government, has been constantly brought

to the attention not only of the Association and of the Government from that date to the present time with, so far, little or no result. From the history of the Canada Medical Act we must derive the lesson that movements of this kind succeed after persistent effort, finally are accepted and pass into law.

The establishment of a Department of Public Health means so much to the state, it is a matter of such tremendous and vital importance, that the Association must continue its efforts towards prevailing upon the Dominion Government to undertake this great measure of reform.

Last year an important movement affecting public health was instituted in Great Britain, under the auspices of the leaders of the profession, to prevail upon the British Government to appoint a Royal Commission whose duty it should be to make a thorough inquiry into the subject of what has been termed the hidden plague, venereal disease, with the result that such a commission is now pursuing its investigations. The forthcoming report will be received with much interest and it is hoped that it will include practical suggestions for the diminution of this prevalent disease, prevalent, indeed, when one considers that the statement is made that there are 500,000 fresh cases of venereal disease every year in Great Britain, one-quarter of these being in the gravest form.

The International Medical Congress, in August of last year, held a weighty discussion on this subject, and I might quote the resolution which was passed: "Sensible of the ravages wrought by syphilis in the health of the country, and deploring the inadequacy of existing facilities for checking its dissemination, the International Congress calls upon the Governments of all countries represented, first, to initiate a system of confidential notification of the disease to a sanitary authority, wherever such notification does not already obtain; second, to make systematic provision for the diagnosis and treatment of all cases of syphilis not otherwise provided for." This resolution was said to embody the irreducible minimum of what was right for all civilized Governments to do.

Sir Malcolm Morris, who presided at the meeting, pointed out that the general public were almost entirely ignorant of the vast prevalence of the disease, the ease by which it could be communicated, the enormous number of those who were its innocent victims, its grave consequences unless promptly and effectually treated, of the means now available for its diagnosis and treatment, and the utter inadequacy of existing facilities for making proper use of these means. Even legislators imperfectly appreciated these facts. He thought that the facts when placed on

record must be pressed upon the notice of all who claimed to be in any sense leaders and teachers of the people, statesmen and politicians, the judiciary and magistracy, the press, the clergy, the teaching profession, and the members of the local government boards. An end must be put to the silence in which the subject had too long been shrouded. It is having this unfortunate secrecy in mind that I venture to bring this subject forward to-day, in order to gain for it a little further publicity and a little further consideration.

Sir Malcolm Morris well said what a monstrous, straggling anomaly it was that they were confronted with in Great Britain. The state encouraged the notification of many infectious diseases, took charge of the insane, encouraged the authorities to build fever hospitals, carried out a rigid inspection of factories and work-shops, and in a thousand other ways stretched out its long arm to safeguard the health of the community; yet it did not lift a finger to protect the nation from so devastating a disease. These remarks apply with equal force to Canada.

While a system of confidential notification would be attended with considerable difficulty, especially at the outset, and whole no doubt there would be much objection to it both in the profession and outside, it would seem a necessary step to take towards the successful handling of the disease, much as it is with tuberculosis, smallpox, and other diseases.

That this is inadequate provision for the treatment of syphilis, I believe we will all admit. All public hospitals should provide sufficient accommodation for such cases and readily admit them. Those who are unable otherwise to receive proper treatment should be encouraged to go to hospital. There are public hospitals in this country whose regulations forbid the admission to its wards of patients suffering from venereal diseases. This regulation is surely a misguided one and is not in line with the best thought at the present day. It is fair to say, however, that this rule where it does exist is not always implicitly observed.

It happens that at the present time the subject of the provision of public institutions for the care of the sick holds quite prominently the attention of people in this province. While therefore it is perhaps a matter of much less interest to other portions of the country, it would seem opportune to say at least a word.

The Jordan Memorial Sanitarium at Riverglade for the treatment of early cases of pulmonary tuberculosis has been receiving patients for upwards of a year, and the formal opening of the institution is arranged to take place during the present month. It is a pleasure to have this opportunity of recognizing the benevolence and generosity of the lady who has provided a beautiful and well-equipped sanitarium. May her example prove a beneficent stimulus to the liberality of many others.

That the further control and maintenance has been undertaken by the Provincial Government is a matter which has been received with much general approval and satisfaction.

The municipality of St. John is now undertaking the construction and maintenance of a home for advanced cases of pulmonary tuberculosis. The want of such a home is urgently and constantly brought before us, and its provision will give great comfort to the sufferers and great protection to the public.

And now the extension of the General Public Hospital is a problem that is being grappled with. The building is not the thing of beauty and a joy forever that some would have us believe. No, it is out of date, inadequate, cramped; not only does it lack accommodation for patients, but the provision for laboratories and special departments is woeful. Of all public institutions which may be erected in any community, the most noble of all is the public hospital. Its cost should not be too carefully scrutinized,, its equipment should be absolutely modern and its facilities such that everyone, but more especially the poor, could receive the best care and treatment available, in keeping with the scientific advances of the present day. Such an institution we hope to show the members of the Association when it next visits St. John.

Private infirmaries do not conflict with the larger hospitals, but supplement them and serve a most useful purpose, an excellent example of one has recently been added to this community and no doubt you will have an opportunity of viewing it.

Before concluding my address I wish to refer briefly to a branch of medicine in Canada which is deserving of commendation, and which I think has hitherto received but little notice—the Army Medical Corps. Previous to 1899 there was no medical service; each regiment had its own medical officer, that was all. At the present time there is an organized service of 700 medical officers and 1,800 non-commissioned officers and men ready for the field, and, as compared t othe rest of the service, it is very complete.

The inspector-general of the overseas forces, Sir Ian Hamilton, in his report on the military institutions of Canada, stated that the medical corps keeps well ahead of every other barnch of the service in the completeness of its preparations for war ,a state of affairs due largely to the whole-hearted support it receives from the medical profession in all its grades. A militia is ,or rather ought to be, the expression, for the purposes of war, of every form of national activity, and other departments of national life, such as railways, telegraph companies ,motorists and motor-cyclists, and the unions might well take a leaf out

of the doctors' book and set to work to organize themselves for the defence of the country. These words should give much satisfaction to the able Director-General of the medical services and to all connected with the corps so recently formed, and to the profession generally. There is, however, ample room for much further development and the medical profession of Canada can do a great deal towards assisting in the matter. As the establishment is unlimited, members of the profession, especially those who have recently graduated, can join the corps. In this way not only does one share a public duty, to be fairly assumed by all men, but the personal benefits are not inconsiderable; the physical training and discipline for a period of several years after graduation is to be recommended. The Army Medical Corps has acted as a school of instruction in sanitation in camps and has diffused more practical knowledge of sanitation than has any other organization in the country.

The national development of medical aid is of great service, whether in time of peace or of war, in connection with early military or civil life, and not only does the Medical Corps participate in this development, but the successful progress of such organizations as the St. John Ambulance and the Red Cross Society does much towards fitting our men and women to render aid to the suffering at all times and under all conditions.

It is written in the Apocrypha, "Honor a physician with the honor due unto him for the uses which ye may have of him; for the Lord hath created him." Here is instruction laid down for the laity. To merit the honor, the medical profession has its obligations, and how may they be met? Remember the old Scotch words, "Tak yer auld cloak aboot ye." The cloak may appear perhaps a little old-fashioned and sometimes be put aside, but when brought out again it will still have the fragrance of lavender, it is our precious heirloom, the mantle of glorious tradition, splendid achievement and high purpose. Let us take it about us.

THE METHOD OF ZADIG IN MEDICINE.*

By Thomas McRae, M.D., F.R.C.P.

Professor of Medicine, the Jefferson Medical College, Philadelphia.

PROFESSOR McRAE referred to his pleasure at having the opportunity of addressing a gathering of Canadian doctors, because he was a former Canadian now living in the United States. He then said

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that the story of Zadig, by close observation, was able to describe the lost spaniel and the horse that had broken away from the stable. When Zadig was brought before the judges he explained his method of observation in the case of the dog and the horse, which he had been able to tell so accurately so many things about them, though he had not seen them.

There are many followers of Zadig described in fiction, of whom perhaps Sherlock Holmes is the best known. Poe also was attracted by the possibilities of this subject. To the reader of fiction such stories always appeal, and why a detective story should have such a fascination for the majority of us is an interesting subject of enquiry. There is the charm of the unknown and mysterious, the problem of the setting of the powers of observation and reflection against a mystery and the knowledge that at the end of the story we are to have the solution. We have such problems as part of our daily task and our work may be regarded as much like that of the criminal detective. He has a general knowledge of the members of the criminal class; we of disease in general. He knows that certain men have certain methods of work; we know the features of special diseases. It is stated that the police can classify habitual criminals more or less by their methods and, knowing the men in their city who work in a particular way, can narrow down the possibilities of a given crime to a few men. This may be described as the natural history of crime. So, too, we in medicine narrow down the possibilities. But sometimes both doctors and police are puzzled by conditions which do not fall in with the usual manifestations and cannot be classified very readily. The analogy may be carried further, for as the public are often impatient over crimes which cannot be brought home to the guilty parties, so with us they may have similar feelings when we are unable to make a diagnosis promptly.

The essential factor in this method consists in working back from observations of conditions to the causes which brought them about. It is often a question of deciding the doings of yesterday by the records found to-day. It is very evident that in this we have two main processes to bear in mind and keep strictly distinct: first, the collection of the observations, and second, the inferences to be drawn from them. Keeping these separate is essential to any orderly solution of our daily problems, but how difficult this is for the majority of us is brought home to every teacher. Take a group of students who are working at physical diagnosis, and it is a constant struggle to keep them making observations and not giving inference—usually from insufficient observations, if from any at all. No pains are too great to hammer home into the mind of every student the importance of keeping these two processes separate

and not taking up the second until the first is as complete as he can make it. It is just as important for the practitioner as for the student, except that in the latter we are trying to form correct habits; the practitioner should have them. Some teachers are to blame in this regard. The writer once listened to a clinic in which a patient with a retracted chest following empyema was brought in. To the teacher's enquiry of "What do we see here?" the student made no answer. The professor answered his own question with "Fibroid lung." Well, perhaps he did see it—with the eye of faith, but that is not a good eye to use alone in diagnosis—and the student, if he saw with the same eye, could not give reasons for the faith that was in him.

It is an interesting subject of discussion as to whether, having made a mistake, there is any choice between the first and second division. Which is the worse error, to fail to observe certain conditions, or to observe them and interpret them incorrectly? In the writer's opinion the first is much the worse error. Observation is a matter of patience, training and thoroughness, in all of which a man may improve himself, but the use which he makes of his observations is partly a matter of his mental equipment. True he can train his powers of thought and judgment to some extent, but we vary greatly in the quality of our cerebral cells, and the saying of the father of medicine, "Experience is fallacious and judgment difficult," is always true. To observe correctly and decide wrongly is sure to happen to the best of us, but to observe carelessly happens only when we permit it. Perhaps it is not entirely within our power always to prevent this. There are times when the keenest mind seems to miss what may be obvious. The routine of seeing a patient every day may dull the perceptions and what is startingly obvious to a fresh eye may have escaped observation entirely. Yet here sometimes, perhaps often, it is because there has been a lack of searching rather than a lack of reflection. It is evident that if the first stage—the collection of the facts—is improperly done, we have not the basis for the second and it is bound to be wrong. The game is hopelessly lost from the start. How important, therefore, to give every effort to the collection of our facts.

It is essential, as already said, to keep in mind the two stages of the process—the collection of the facts and the inferences to be drawn from them. Let us discuss first the collection of the observations. How can a student best be trained to do this and how can a practitioner improve his capabilities of observation? If one has started properly as a student, his training as a practitioner goes on more or less automatically. Many of us may not have learned it as students and have, so to say, to educate ourselves. In this there are two principal things to be considered: first, the importance of method, and second, the importance of

inspection. The acquirement of method is more or less possible for us all. Some few have it by inheritance and deserve no credit; for the majority it is a matter of hard discipline. It is only by adhering rigidly to a definite routine with patient after patient and day after day that a proper reflex can be obtained. The value of this can be illustrated both by history-taking and physical examination. In the former many points are brought out which are missed if routine questions are not asked in regard to every system of the body. Examples of the importance of routine examination occur to all of us; in how many cases does a routine examination of the urine give information of value; how ofyten does a routine examination of the eyes give a clue to the diagnosis? It is a favorite saying of the laity that such and such a doctor can make a diagnosis at a glance. There never was a greater mistake. The principal difference between a good and a bad diagnostician is usually a matter of thoroughness and method. Brains count ,of course, but the man who has not collected his facts has but little chance to use his brains.

In the beginning one has to determine that every point is going to be investigated in regular order, and it is important that this order should be invariable, for if one switches about from one routine to another many things will be missed. Take, for example, examination of the head; general features are noted first and particular ones second. It makes no difference whether the eyes or ears are examined first, but the order should always be the same, for if one is accustomed to examine the ear first and the eye afterwards and with a given patient begin with the eye, the ear may readily be overlooked. A haphazard method usually goes with slipshod observations and careless thinking. To practise order and system requires steady adherence to a given plan until the order of events becomes unconscious. With training one observation follows another without any effort and a glance will do what formerly took repeated observations. The student or practitioner has to keep himself to the routine of noting point after point in its order and not to be tempted to look into some interesting condition first. There are some curious instances of this, as, for example, the recognition of precordial bulging. If this is not done at the onset of inspection—if a wide impulse or some other point catches the attention first—it will very rarely be done subsequently, unless some other sign demands its reconsideration. It may be said that this is unnecessary devotion to details, but no detail is too small to be worthy of attention.

The importance of this routine examination is not only for present diagnosis, but also for the future. An illustration of the importance of this and of careful observation may be given. A man aged fifty years began to show nervous symptoms which need not be entered into fully.

He consulted a number of neurologists who hesitated to express a definite opinion, but all feared an early stage of general paresis. This was some years ago before the days of the Wasserman reaction and spinal puncture. A most important sign in his case was the fact that his pupils were unequal. The uncertainty of the diagnosis worried him greatly and his condition became progressively worse. One day, while talking to an old physician who had long been a friend of his family but had never attended him professionally, he was giving an account of his symptoms and stated that the point which especially bothered his physicians was the persistent inequality of his pupils, to which the old man answered: "You have had that since boyhood, to my knowledge."

The importance of *inspection* cannot be overestimated, but its value is often not appreciated. Ask a medical student at the end of his first course in physical diagnosis which of the four methods—inspection, palpation, percussion, and auscultation—seems to him the most important, and the most common answer is auscultation, unless his instructor has been a disciple of Zadig. This is natural, for while he has been accustomed to using his eyes—carefully or carelessly—all his life, the use of the stethoscope comes as a new experience and appeals to his sense of working with some kind of apparatus. The value of inspection is twofold, both in the information it gives of itself and the fact that it starts one right in the further methods of examination. No average man can be a good diagnostician if he begins his examination by percussion or auscultation. The word average is used because there are some men who are superior to method although they would be better with it. It is not so very rare for a complete error to be made in the side of the chest in which a tuberculous lesion is situated. To begin percussion on the diseased side may give a false standard, and it is in avoiding this that inspection so often comes to our aid. As regards our knowledge of cardiac disease the writer feels that we would be much more efficient in diagnosis (as regards the essential state of function), prognosis, and treatment if we did not listen to a heart say for five years after graduation but obtained our knowledge from inspection, palpation, and percussion. Like all sweeping statements there are exceptions to this, but it is surprising, if the effort be made, how much can be determined without the use of the stethoscope. Certainly as regards treatment the indications are based better on the means of examination other than auscultation. The old direction, "Eyes first, hands next, ears last and least" is an excellent one to keep in mind.

In the recognition of one class of disease inspection is particularly important. The reference is to the disturbances due to disorders of the glands of internal secretion. We are learning of the frequent occurrence of these cases and for many of them the first suggestion of the

diagnosis must come through our eyes. There is no better example than the condition of status lymphaticus in adults to which special attention has been drawn recently by Haven Emerson. Here is a clinical picture which, once appreciated, seems to be frequently coming before our observation. I fancy that this is much like the common experience with a new phrase or word to which our attention is directed. We are always meeting it and we wonder how we failed to see it before. The eye has been trained to see it.

"The eye sees only what it is trained to see." This is a matter of daily example. The impression falls on the retinal eye, but not on the cerebral eye. No instance of this impresses me more than to look up a busy railway yard at night when the signal lamps are lighted. To me they are so many colored lights, but little more. To the engineer they chart his course and every one carries a plain message. Yet the impression on his retina and mine is the same. Somewhat of the same is seen if one rides on a locomotive at night. The engineer picks up the signal lights ahead sooner than the passenger. This, of course, is partly due to his knowledge of where the lights are situated, but greatly to his eye seeing what it is trained to see. Reverse the conditions and put the engineer in a hospital ward. He sees a sick man, recognizes that his breathing is labored and distressed, but nothing more; to the physician the whole condition is clear; he knows the signals along this track.

How can a man train his powers of observation? By use, may be answered, but this is not everything. Use may be careless and lead to deterioration rather than to improvement. It must be a use which involves proper method and thoroughness. For some of us the training which was given to Kim in Kipling's story of that name ma ybe helpful. He was trained for work in the secret service in India and at one stage under Lurgan Sahib he was allowed to look for a minute at a tray which contained various objects. It was then covered and he was required to detail who was on the tray. To Kim's enquiry as to how another had attained greater accuracy than himself in doing this, the answer was, "By doing it many times over till it is done perfectly—for it is worth doing." We might all carry this around as a daily reminder.

Daily life offers many chances of practice. It may be objected that this is unnecessary and tiresome, perhaps using up mental energy on things of no special importance. But nothing which trains the powers of observation can be unimportant, and far from being tiresome it adds to the interest of the day. "Strive to be one of those upon whom nothing is lost," said a wise teacher. To endeavor to make out as much as possible about those about us from observation alone is an interesting study. Besides it is using a part of our mental equipment which some

of us leave unused. It demands observation and reflection. We remember the bewilderment of Watson when Sherlock Holmes made what seemed to be marvellous statements about his doings, and his surprise at the apaprent simplicity of the methods.

We all know the man who has made an incorrect diagnosis, but who, before the operation or post-mortem is over, has nearly convinced himself that he did make the correct diagnosis and before night is quite sure of it. For him no good has come from the lesson. To learn we must face the mistakes and try to find out why we made them. Then comes our gain. In this connection is an excellent saying, "It is easy to be wise after the event, but very difficult to be wiser," which can be illustrated by an example. A patient dies in whom you have made a diagnosis of typhoid fever, and on autopsy miliary tuberculosis is found. You are *wise* after the event, but the laboratory *Diener* or a first year student is just as wise as you. To be *wiser,* or in other words to lessen the chance of you making the same mistake again, is quite another matter.

The second part of my subject—the inferences to be drawn from the observations—is a very different matter. Here the possibilities of error are much greater and what seems a simple diagnosis may involve complex inferences. A frequent mistake is to fail to recognize that there is any question of inference and to think that physical signs give a diagnosis directly. Take, for instance, the combination of diminished expansion of one side of the thorax, increased vocal fremitus, dullness and tubular breathing. We may say that we observe lobar pneumonia but we do not—that is only an inference which may be wrong.

No one can give rules for methods of thinking, but it is possible to carry certain principles into operation. One is to strive to be delivered from hasty judgments. "Men see a little, presume a good deal ,and so jump to the conclusion." How common this is needs only a little study of our mental processes. In some this is a habit, in others a fault of education. Take, for instance, the men for whom the hearing of crepitant râles has only one meaning—pneumonia; not uncommonly the same man never grants the presence of pneumonia in the absence of such râles. Another point is to endeavor to cultivate the habit of orderly thinking exactly as of orderly examination. This should be within the power of the majority, and is worth every effort. As a rule it is possible in a problem of diagnosis to state all the possibilities and by exclusion narrow them down to one, possibly to two or more. In the latter event it become a matter of deciding as to probabilities, and even if we do not decide properly, at any rate we know the problem and are better able to know subsequently why we erred if we go wrong. Otherwise it is usually a more or less haphazard process of guess work. The

assembling of possibilities and excluding one after another has all the delights of an intellectual game. Sometimes we are saved from error by our lack of knowledge of the finer points of the game. I well remember a fell house-officer and myself being much interested in the diagnosis of an obscure abdominal condition. We went over it from every side and to the best of our ability, coming at last to a diagnosis. The attending physician was much interested and examined the patient very carefully, at last making a diagnosis which had never even occurred to us to consider. He suggested a rare condition which neither of us had ever seen ,but we felt that consideration of it should not have escaped us. We were in a very humble frame of mind until the operation showed that our diagnosis had been right. It was so principally because the rare condition had not come to our minds. The moral of this is not that ignorance is an advantage. But some of us are too much attracted by the thought of rare things and forget the law of averages in diagnosis.

I feel very strongly that it is the duty of teachers of medicine to insist on their students learning the simple clinical methods thoroughly and to impress them with the view that nothing can take the place of our own powers of investigation. The advances on the laboratory side and the perfection of instruments have added much to our powers of diagnosis, but they have given some men the idea that they are everything and the use of one's eyes and hands is looked on as old-fashioned. The man whose first idea in an obscure thoracic case is to have an X-ray plate taken and who cannot "bother" with physical signs does not deserve the name diagnostician. The safety with which the abdomen can be opened has led many men to neglect the principles of abdominal diagnosis for the short cut of an abdominal exploration. Many men are not willing to make the effort to arrive at a diagnosis by more laborious methods. Two examples of this are in my wards at this time; one man has had three abdominal sections in the effort to discover the source of his abdominal pain which a thorough physical examination would have shown to be a spondylitis with referred pains; the other has tabes with severe gastric crises, and his abdomen was opened by a surgeon who made the statement that a laparotomy was the quickest way to make a diagnosis. It was not in this case. To my mind accurate habits of working and thinking are a great safeguard against these supposed short cuts to diagnosis.

To observe accurately, to reason clearly, to hold ourselves to as high a standard of efficiency as our equipment permits, are within the powers of all. The development of these depends on the man himself, and in this we may all be aided by a study and imitation of the methods of Zadig.

CHRONIC DACRYOCYSTITIS: THE INTRANASAL OPERATION, WITH CASE REPORT.

By James McGillivray, M.D., Winnipeg.

THE patient complains that water stands in the eyes which prevents him from seeing clearly, and on the least exposure to wind, dust or smoke, tears stream down the cheeks.

Inspection usually shows a fulness over the lachrymal sac, and pressure in this region forces mucous or pus back through the puncta.

Associated with chronic dacryocystitis, we also find a chronic conjunctititis, blepharitis and ectropion.

These conditions never improve; the lids grow thick and beefy, there is a foreign-body sensation in the eyes, while the constant epiphora is a matter of great discomfort to the patient.

In the lacrymal sac we find an ideal culture ground for all kinds of bacteria, and should the patient sustain an abrasion of the cornea very serious results may follow.

Obviously the line of treatment indicated is to re-establish free drainage down into the nose, by dilating the nasal duct. But this is not always possible, as a very tight structure may be encountered where the duct passes into its bony canal, and even should the operator succeed in dilating up to the required size, the relief obtained is only temporary. In time the patient becomes tired of constant probing. The stricture closes and the last condition is now worse than the first.

Dr. Geo. F. Suker, of Chicago, stated to the writer that he has quit probing these cases years ago. Extirpation of the lacrymal sac offers some advantages. The danger of corneal infection is removed, and the conjunctivitis is benefited, but the main symptom, "the watery eye," remains, and to overcome this some operators go farther and remove part of the lacrymal gland, but here we must see that an encroachment is made on the physiololgical conditions within the eye.

The intranasal operation, as shown by the following case, gives ideal results, and is not attended by the above objections:

Mrs. H., aged 64, has had trouble with her eyes for twenty years. They fill with tears which flow down the cheeks. Says she thinks there are hairs in her eyes. Ten years ago had probes passed on both sides and the condition was relieved for a while.

Present condition: Chronic conjunctivitis, with lids greatly thickened, constant epiphora, blepharitis and ectropion. The left nasal duct admits No. 2 Bowman, with aid of cocain and adrenalin. Right duct resists No. 1. An intranasal operation was decided upon for the right side.

The first step was to slit open the canaliculus, cocain solution 4 per cent. was then rubbed into mucous membrane of nasal chamber for half an hour, followed by adrenalin application (1-10000).

The Incision: Beginning at the tip of the middle turbinate, the scalpel was brought forward and a little downward for about one-half inch, cutting through mucous membrane and periosteum. The knife was then turned at right angles and directed downward for one-quarter inch. A lower cut was now made parallel to the upper, thus raising a quadrilateral flap. In the lower angle of this flop a window one-eighth inch by one-eighth inch was dissected out. The mucous membrane and periosteum elevated and bone exposed, a self-retaining speculum was now introduced and the bone chisselled away. By introducing a Bowman probe into the sac its movements could be plainly seen, also the limits of the sac determined. To this point the hemorrhage was not great, and the only thing complained of by the patient was the jar of the mallet while going through the bone.

The exposed sac was not seized with a pair of mouse-tooth forceps and its whole lateral wall cut away. The mucous membrane and periosteum were now replaced, and the nostril plugged with a strip of iodoform gauze. This dressing was removed on the next day, the newly-made canal syringed through, when a No. 14 probe was made to appear in the nose. On the second day the patient left the hospital. Three weeks later the healing was complete, perfect drainage established, and under approprite treatment the conjunctivitis and blepharitis are clearing up.

The dangers of the operation are few. However, the surgeon must remember that he is working close to the orbit, also that the point of his chisel is not far from the cribriform plate of the ethmoid bone.

The results are good, as shown by Dr. J. M. West's series of some fifty-odd cases in Prof. Silex clinic, Berlin. For the general technique the writer has followed as closely as possible that demonstrated by Dr. Max Hallé, also of Berlin.

NOTES ON CARDIAC IRREGULARITIES.

(Selected).

By M. D. Silberberg, M.D. (Melb.), Melbourne.

THE correlation of the results of experimental physiology and pathology, with the observations obtained from clinical work, has proved the shortest route to the unravelling of the mysteries of mechanism governing abnormal heart action. This applies to many other fields of

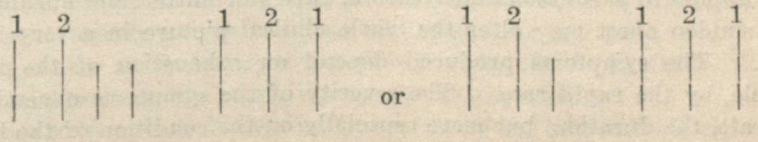
clinical activity, and particularly the advance in knowledge of nervous diseases might be used as an illustration of the direct value of method. Though finality is far from being reached, a more precise knowledge of the faulty mechanism brings a surer management of the case, a clearer view of the probable cause, and more definite principles of treatment. When sufficient numbers of a similar condition have been grouped together the further analysis of the age series, sex incidence, and the rest of the ætiological considerations may be reviewed, and a more or less definite clinical entity becomes easier to recognise.

If a single induction shock be made to stimulate the myocardium in the diastolic interval, the muscle responds by a contraction, which, though initiated at one point, will spread through the rest of the musculature. Provided the stimulus is adequate, the magnitude of the muscle contraction is independent of the strength of the stimulus, in accordance with the "all or nothing" law discussed by Bowditch in 1872. If a series of induction shocks are thrown in, we get a series of contractions originating from the point stimulated. By more rapid faradisation the rate can be raised higher and higher until the individual contractions are scarcely recognisable. Push the stimulation further and co-ordinate rhythmical contraction ceases, and is replaced by fine tremulous flickering movements over the whole of the chamber, whether auricle or ventricle. These three stages of stimulation are comparable to the clinical conditions of premature beats, tachycardia, flutter, and finally fibrillation.

The stimulation results have been common knowledge for very many years. The correlation of these and other experimental rhythms with corresponding clinical conditions had, however, not been fully elaborated till recent times. This was on account of the difficulty in registering these rhythms in a way that permitted of analysis and deduction of the mechanism. With the introduction of a clinical appliance such as the ink polygraph, and later by the perfection of the string galvanometer, or electro-cardiograph, this difficulty is gradually disappearing.

Analysis of abnormal rhythm and heart action is relatively simpler. The education which follows from the frequent use of graphic methods enables one to dispense with them in many instances, but not altogether, because the subject is full of pitfals, and the unexpected is a common reward for the amount of labor involved. Moreover, as this field of investigation is comparatively recent, the value of collected records of series of cases may be very high, and the actual record itself may be come of great interest if later on there is a departure from the observed events. There is nothing more convincing than an actual demonstration from such records of change of type of rhythm or the actual demon-

stration of a succession of changes or transition from one type to another. When such clinical records are comparable with experimental results, or conversely, when the clinical condition can be reproduced by experiment, we have gone a long way in reducing theories to laws. Naturally a disease condition in a degenerated tissue which may have taken months or years for its evolution, compared to an experimental result obtained in a brief period of time in healthy structures, has to be critically examined with considerable reserve. It may be stated at once that all the various types of arrythmia may be produced in the heart freed from nervous connections. Stimulus formation and contractility are inherent functions of cardiac muscle. In the same way, pathological stimulus formation initiating contraction may originate apart from nervous control. This must not be taken to mean that the nervous system plays no part in cardiac derangements, nor that numerous symptoms are not the outcome of interplay by and on the nervous tissue. It is distinctly more in accordance with the facts to state that pathological rhythms are the result of changes, degenerative or nutritional, in the heart muscle. The site of normal stimulus formation is at the sino-auricular node, a group of specialised muscle cells lying at the junction of the superior vena cava and the right auricle. It probably represents a remnant of the original sinus tissue; it has a good blood supply, and is intimately blended with nerve terminations of the vague and sympathetic. This is the "pacemaker" for the ventricle, and that is the physiological location for initating normal rhymthical contraction has been established by Lewis, and lately confirmed by Eyster and Meek, and others. Contractions initiated from foci beyond this area (ectopic beats) give a different outline in the electro-cardiographic curves. They are the premature beats of extra systoles. They may arise either in auricle or ventricle muscle. They cause an abortive type of systole; the beat felt or recorded at the wrist is small, and occure before the anticipated time, and is followed by a pause longer than the normal. If the contraction fails to open the aortic valves no beat reaches the wrist, and we have an intermittent pulse. The new seat of stimulus formation may originate contractions following every normal beat, so that we have the bigeminal pulse; or if such beats fail to effect the pulse the rate appears to halved. On auscultation these premature contractions cain nearly always be easily recognised. Following the normal first and second sounds occurs an early and feebler first and second sound, or a single sound if the aortic valves are not opened.



Sometimes such a focus will originate a series of contractions—a short paroxysm of a few beats. It is characteristic of these foci that they build up stimulus material at an abnormally rapid rate, and consequently while they are in activity they allow no opportunity for the pacemaker to assert itself. The dorminant or normal rhythm is submerged by the faster.

This leads to a clearer conception of what true paroxysmal tachycardia is. It is a succession of extra systoles or ectopic beats. This rhythm therefore shows a rapid rate; its onset is abrupt, and the duration may be anything from a few seconds to weeks. The termination of the tachycardia is equally abrupt. For some reason the centre of pathological impulse formation is exhausted or controlled, and the normal rhythm initiated at the sino-auricular node becomes again the dominant one. That this is not mere speculation can be shown from the electrocardiographic curves of these cases. This rhythm is definitely related to the occurrences of extra systoles in the same patient, because the individual beat of the nerve rhythm retains the outline of the extra systole it locates individual beats to definite areas of the musculature; as our knowledge widens this localisation becomes more precise. It shows the beat. One of the values of the electro-cardiograph lies in the fact that general direction of the spread of the contraction, and whether this is along normal paths or otherwise. It gives accurate measurements of the time relationship of auricle to ventricle, and therefore brings out conduction defects. Abnormal beats are recognized at a glance without as a rule elaborate analysis. Lesions not only of the main conduction bundle of His become apparent, but also even lesions of its branches. Such pictures are indubitable signs of myocardial in volvement, and usually more of a widespread change. The occurrence of an inverted "T" wave in Lead II carries with it as grave a prognosis as the discovery of pulsus alternans with the polygraph. The curve outlines representing auricle and ventricle, are recorded as long as the patient can be connected with the galvanometer, so that feebleness of impulse, dyspnœa, etc., do not impose such limitations as are met with in using the polygraph; in addition, the reading of the curves is much simpler. It is our most accurate means of detecting abnormal rhythm and certain heart muscle lesions, such as degeneration in branches of the conducting tissue, seat of origin of abnormal beats and rhythms, etc.,

An important characteristic of a new rhythm is abruptness of onset. This applies to paroxysmal tachycardia, auricular flutter, and fibrillation. The sudden onset may alter the whole clinical picture in a very short time. The symptoms produced depend on exhaustion of the heart muscle, by the rapid rate. The severity of the symptoms depends on the rate, the duration, but more especially on the condition of the heart

muscle. With the bulk of the ventricular muscle in a healthy state, the signs of heart failure may be surprisingly few; on the other hand, with widespread myocardial degeneration the patient rapidly drifts, and presents the picture of advanced heart failure.

True paroxysmal tachycardia can be distisguished from tachycardias of nervous or toxic origin by the history of the rough onset and offset, and also by the fact that rest or exertion does not slow or quicken the rates as it does in the latter types. A history of sudden attacks of palpitation ought always to be investigated from the point of view of a possible nerve rhythm. Patients of phlegmatic disposition are not infrequently free from palpitation symptoms; others, more observant, give accurate accounts of the attack, and excluding the exaggerated symptoms of neurotics, may supply valuable evidence of the initial onset. The graphic curves readily differentiate them. Auricular flutter is a new term in clinical medicine. It refers to a very high grade of auricular tachycardia (200 per minute or more), associated with a ventricular rate which may be as high but more commonly is some multiple of the auricular speed. In other words, auricular flutter is usually a combination of aurticular tachycardia, plus partia heart-block. McWilliam, in 1887 first used the term for the rapid auricular rhythm which was produced by rapid faradisation of the auricle, as the rate rises to about 300 or more per minute; the eye can scarcely follow the individual contractions, so that "flutter" well describes the appearance. If the stimulation is pushed further co-ordinate contractions ceases, and is replaced by extremely rapid flickering, tremulous movement over the surface of the auricle which stands in the diastolic (dilated) condition. The pumping action of the chamber is practically gone. This is the condition known as auricular fibrillation, and will be dealt with later. Though cases of rapid auricular rhythm, with slower ventricular rate, have been recorded from time to time, Jolly and Ritchie first applied the term auricular flutter to a case recorded by them in 1911 (*Heart*, vol. II.). Since the more extended use of the electro-cardiograph it has been found that these cases are by no means uncommon. Lewis discusses the condition very fully in *Heart*, 1912, vol. 2, and records sixteen cases. For the diagnosis, in the present state of our knowledge, graphic methods are necessary. The polygraph curves may be sufficient, but most cases require the electro-cardiograph, especially where the jugular pulse is small, or difficult to record on account of dyspnœa, etc. It may be suspected in any case of unexplained heart acceleration, especially in elderly people. In an otherwise irregular pulse where the tracing shows a few successive regular beats, which duplicate themselves further along the curve, it may also be suspected.

Regularly spaced beats are rarely found in auricular fibrillation

curves. Total irregularity in the main characteristic in this latter condition. The ventricle rate in cases of flutter may equal that of the auricle, so that the rhythm is extremely rapid, and the cardiac output correspondingly poor. Such patients show serious signs of distress, and may have syncopal attacks from cerebral anæmia. It is more common to have partial heart block associated, so that the ventricle fails to keep place with the quickly-beating auricle, the pulse rate is slower, and symptoms usually less severe. The pulse rate may be any multiple of the auricle, e.g., 200: 100: 2: 1: 3: 1, etc. Quit ecommonly there is a continual variation in the ventricular response, so that we get combinations of 2:1; 3: 1; 4: 1, etc., producing a seemingly hopless example of radial tracing for analysis. When it is further realized that the beats may be irregular in force, it will be apparent how closely this arrthmia resembles that of auricular fibrillation and why it so often demands the electro-cardiogragh for its elucidation. Most of the cases occur in eiderly people, probably as the result of degenerative and nutritional changes in the auricular muscle. It may occur in people under middle age, and may have been present for years without producing serious limitations. In this way it resembles auricular fibrillation. Hume has reported its occurance in diphtheria. The prognosis, as in all types of heart disturbance, depends on the relative integrity of the all-important ventricle muscle, and the rate contraction which it maintains. Once established, the rhythm tends to persist, but it may cease abruptly, and normal rhythm return. Under digitalis there are many of these cases which pass into the higher grade of irregularity—auricularfibrillation. If the drug is withheld when ths occurs normal rhythm not infrequently returns. This is the line of treatment reccommended by Mackenzie and Lewis.

The highest grade of rhythm disturbance which may overtake the heart is that of fibrillation . That this is so may be gathered from the results of experimental stimulation, and also from the observation made in clinical work, particularly from electro-cardiographic investigations. In this condition co-ordinate contraction does not take place, the chamber stands in diastole, and in place of regular rthmthmical propulsion of the blood we have flckering tremulous movements over the surface. These are practically inefficient in maintaing a blood circulatioi. The occurence of such a disturbance in the ventricle, if it lasts longer than some seconds, is comparable with life, and, indeed, as far back as 1889 McWilliam, on experimental grounds, suggested this condition as a cause of sudden death. Recently Levy has shown that it readily occurs (in cats) under light percentages of chloroform anæsthesia combined with a small injection of adrenalin, and he correlates these results with cases dying under chloroform administration and adrenalin

injections. Most of these have occurred during submucous resection of the nasal septum, when this combination of drugs has been used.

Fibrillation in the auricle is a different story. The blood reaches the ventricle readily enough through the venous filling of the auricle. pressure that results is sufficient to open the auriculo-ventricular valves in ventricular diastole, and the ventricle maintains a more or less efficient circulation. Though the auricle is not really contracting in the ordinary sense, it is alive with movement. The consequence is that stimuli are showered down to the ventricle through the conducting tissues. The ventricle responds to a certain proportion of these in a purely haphazard fashion, therefore the ventricular rhythm is wholly irregular in relation to the diastolic intervals. As the blood content of the ventricle will be variable so also is the force of the concentration and the pulse wave. The number of ventricular responses per minute depends mainly on the conducting power of the bundle of His. Where there is impairment of this function the ventricle rate is slower, but still irregular, though this is less manifest. Cases also occur where no auricular stimuli reach the ventricle. This latter assumes its own rhythm (the idio-ventricular rhythm), which is usually somewhere below 40 per minute. This may also occur as the result of digitalis administration.

It is thus seen that fibrillation in the auricle may be combined with any grade of heart-block and, in that it spares the ventricle, is an advantage to the patient. It prevents exhaustion of the ventricle by a too rapid rate.

Fibrillation, like other arrythmias, sets in suddenly. Sometimes patients give clear accounts of the sudden onset of palpitation due to this irregularity, others are quite unaware of the irregular heart-action. It may persist for years, and be consistent with fair health; and on the other hand it may rapidly cause heart-failure, and even sudden death. It is specially interesting in that it is of quite common occurrance, especially in elderly people and in late cases of post-rheumatic mitral disease. It has been observed in diphtheria and in other acute diseases. The chronic types, especially in younger subjects, show a remarkable response to digitalis in efficient doses. This is brought about by the drug's action in increasing vagal inhibition, in producing heart-block, and partly by a direction on the venticular muscle. It is essential in these chronic cases of auricular fibrillation to continue digitalis administration in sufficient quantity to maintain a reasonably slow ventricular rate. The amount required varies with the individual case; most patients, after some months, learn to regular the amount according to their feeling of dyspnœa. With a rapid pulse rate it is necessary to push the drug. Usually twenty minims of the tincture of digitalis, taken three time a day, will be sufficient. The pulse rate gradually

comes down, and the patient's general condition improves. Within four to eight days or so headache and nausea will be produced, and these are indications to suspend the treatment. After about twenty-four hours the digitalis should be recommended in doses of about ten minims three times a day, and so on in diminishing quantities, according to requirements. The heart rate must be carefully observed during the administration of the larger doses; pulse counts are unreliable owing to the irregularity in the force of the beats, so that the rate should be taken by auscultation. A rate of 60-80 per minute is a safe minimum. In addition to the danger signals of headache, nausea, vomiting, and marked pulse slowing, another of great importance must not be overlooked. It is the appearance of couple beats. In this curious arrythmia the ventricle gives beats in groups of two. The second beat follows on immediately after the first, and is then succeeded by a pause, i.e., a bigeminy results. The second beat may or may not be palpable at the wrist; it is really a premature ventricular contraction of similar nature to others of this work. The coupling most readily occurs in post rheumatic mitral cases, with auricular fibrillation. To continue digitalis after its appearance is to court disaster from sudden death.

In cases of auricular fibrillation where the heart rate is very rapid and irregular, and it is urgently required to slow the heart in a shorter time than digitalis can achieve. Strophanthin intravenously may be employed. It is given in doses of 0.004 grain or less, in about 60 minims of saline solution, and will slow the heart in about six hours. It may be repeated if necessary at this interval. A drug with such a powerful heart action must be used with caution, or over-stimulation results.

Both the tinctures of digitalis and of strophantus rapidly break down in water, and are better prescribed as simple tincture, or combined with tincture or syrup of orange as a corrective. It is needless to add that the usual measures of securing things rest, sleep, and bowel action, etc, are on no account to be neglected.

Cardias arrythmia of some type is of frequent occurance in elderly people. Premature beats are most common, but they are easily overlooked unless one takes the pulse for a minute or more. Auricular fibrillation is often the basis for heart symptoms, and the indications are that auricular flutter will also be shown frequently to be present.

Pulsus alternans, a regular rhythm of alternate large and small pulse beats, is generally found in association with chronic kidney disease, in angina, and generally in those with old-standing myocardial degeneration. As a grave prognostic sign it ranks with albuminuric retinitis. The expectation of life is usually less than three years, unless there is a removable cause for the heart exhaustion, e.g., an attack of bronchitis.

It needs a pulse tracing for its determination. There is little doubt that it is the frequency of myocardial degeneration which accounts for the appearance of these irregularities of rhythm in elderly persons. Conversely may be explained their comparative rarity in children. The youthful type of irregularity (sinus arrythmia) is a physiological vagal disturbance, and of no clinical import. It consists in a phasic acceleration and retardation of the pulse rate usually corresponding to the respiratory cycle, quicker during inspiration, slowed during expiration. However, when the whole heart action is slowed and irregular it may easily be mistaken for a serious disturbance, especially when it is prominent in the convalescense of such a disease as diphtheria. The phasic character of waxing and waning of the pulse rate is the best guide to its detection, and a graphic record will quickly relegate it to its place.

We are not yet in a position to classify distrurbances of rhythm in relation to focal changes in the myocardium. Our precise knowledge is in heart-block. Many cases have been examined histologically by serial sections, and the great majority show definite changes in the bundle of His, such as would cause discontinuity, and would interfere with conduction of the stimulus from article to ventricle. This corresponds entirely with heart-block produced in experiment by cutting or damaging the conducting tissues. However, clinical cases are on record where no such change could be found. Presumably in these we have a functional change produced by nutritional or tonic alterations.

Cases of auricular fibrillation or flutter have shown widespread degeneration throughout the auricle tissue, and in some the sino-auricular mode is particularly in volved. It is to be hoped that further investigation will yeild more precise localisation. The pathological changes underlaying the production of premature beats and paroxysmal tachycardia have still to be settled. We do not know whether it is a degeneration spreading in from an endo- or exocardial focus, or whether it arises deeper in the musculature. Probably the lesions are not gross, and may need more refined methods for their detection than the usual post-mortem and histological examinations.

Space does not permit of fuller details of the clinical and pathological aspects. The field is a wide one, and can be clinically investigated by most practitioners even without the aid of special apparatus. Those who may wish to pursue the subject further from the clinical side will find the following English works highly useful, viz., a small book by Lewis, "Clinical Disorders of the Heart Beat," and a companion book by the same author, "Clinical Electro-cardiography;" Mackenzie's "Diseases of the Heart" is a classic, and needs no further mention.—Selected from *Medical Journal of Australia.*

CURRENT MEDICAL LITERATURE

SURGERY

UNDER THE CHARGE OF A. H. PERFECT, M.B., SURGEON TO THE TORONTO WESTERN HOSPITAL

JAMES J. WALSH, M.D., Sc. D., ON MILITARY SURGERY.

The eyes of the medical and surgical world are fixed on the awful problems involved in properly caring for the immense number of wounded that will shortly have to be removed from the battlefiields of Europe. We have perfected the means of killing and wounding men until scarcely more could be expected. Machine guns of all kinds can mow soldiers down by the hundreds and thousands, but each of these men not killed has to be cared for individually, and we cannot cure them by machinery, nor in large numbers, but each individual case will require expert care and the special consideration of trained minds and hands.

The new armies and new bullets have added to the destructiveness of war, but have multiplied the surgeons' problems and have made military surgery a special study, for which, fortunately for humanity, there is not much experience provided, although, unfortunately for those who have to be treated right now, the surgeons will have to do their best under pressure from time and the number of their patients and conditions that are little suited for scientific surgery.

Prof. Octave Laurent, who spent 11 months campaigning with the Bulgarian armies during the recent war in the Balkans, has just published the story of his surgical experiences, and from this some idea of the gruesome work before the military surgeons of Europe can be obtained, although probably even this fails to give any adequate notion of the surgical experiences that will be forced upon the army surgeons. Prof. Laurent declares that ordinary civil surgery furnishes no real training for modern military surgery, and that the surgeon must literally train himself and do the best that he can. The wounds inflicted by modern bullets are quite different from those that have been so carefully studied and so much written about in the past, and only his knowledge of the general principles of surgery and his own common sense and power to meet the emergencies of all kinds will be helpful to the surgeon in the unusual con ditions that present themselves.

As Prof. Laurent himself is a well known professor of surgery, and the author of a text book on the subject which has gone through three editions and which has been translated into several modern languages, his

opinions on this subject are well worthy of consideration. His experiences have been presented to French medical societies, and his observations that have been the subject of serious discussion that has always recognized the value of his work. He is the surgeon to the hospital of St. John at Brussels, and his Balkan experience will now be of the greatest value to his countrymen in the war which has been so suddenly thrust on them, although, when his book on the campaign in Bulgaria was issued, a few weeks ago, there seemed to be no sign at all that Belgian surgeons would so soon have to know everything available with regard to the wounds of modern warfare.

There is no doubt that there will be a vast number of wounded to care for. The experience in the Balkans was that there were about four wounded for every soldier killed. The wounds infantry arm, inflicted by the ordinary infantry arm, while most of the dead are killed by the artillery. About three out of four of the soldiers wounded by the infantry survive. Nearly three out of four of those wounded by the artillery have fatal wounds inflicted.

More than one half of the fatal injuries in the Balkan campaign came from the artillery. Out of one hundred killed and wounded twelve would be killed by shrapnel, fifteen to twenty wounded by shrapnel, eight killed by the infantry and some sixty to sixty-five wounded. According to the old proverb, it still takes, in spite of the modern training of soldiers—at least so far as the experience in the Balkans went—a man's weight in lead to kill him. Many millions of balls were fired for the thousands wounded and killed.

Modern high velocity projectiles make very different wounds from the old musket balls and even very different surgical lesions from those that were seen during the Franco-Prussian War or even the Russian-Turkish War in 1876. The modern bullet, with very high initial velocity, produces certain serious consequences never seen before. Its power for harm is simply enormous. The average ball from one of the new modern rifles will at 600 metres distance, that is nearly two-fifths of a mile, pass through three men. It will penetrate a single man at a distance of 1,500 metres, that is nearly a mile. At more than a mile it will pass through the skull, making clean wounds of entrance and exit in both bony plates. It can produce a serious, even a fatal wound of the abdominal region at a distance of 3,500 metres, that is considerably more than two miles. Fortunately, owing to the circumstances of modern war, it is usually at these rather long distances that the wounds are produced. When the combatants are at shorter range the effects are often awful to contemplate.

The awful penetrating power of the modern bullet will be very well realized from some of the incidents described by Professor Laurent in his account of the surgery of the Bulgarian campaigns. In cases were soldiers, in order to protect themselves from the enemy's volleys, were directed to lie down, some of them were wounded in the shoulders and the wounds of exit for the bullets were often below the knees in the legs. In spite of the long course of such a wound, important organs and the internal viscera were sometimes found to have been spared or practically so, and some of those thus wounded recovered completely. Such a wound has been known to remain aseptic and to heal promptly, permitting the soldier to go back to duty in the course of a few weeks.

The higher the velocity of the bullet the greater the injury produced. From 300 to 500 metres, that is, at distances of from 1,000 feet to a little more than a quarter of a mile, the explosive effects of the modern bullets are noted. The lead projectile covered with the steel casing when its velocity suddenly tends to be arrested takes on an explosive action, which tears soft tissues to pieces and comminutes bones. The lead itself actually seems to be melted at times in this process, and is scattered through neighboring tissues in a rather finely divided state.

Almost needless to say, such wounds are extremely difficult to heal. They take a long time for the tissues to recover from the intense shock to which they have been subjected, and in the meantime they furnish many opportunities for the invasion of infectious elements of any kind that may happen to be present in the neighborhood. The wounds are seldom infected at the moment they are made, but infection readily occurs afterward, and is often very serious, if not fatal.

The explosive manifestations of a modern bullet at short range makes sad havoc, particularly in wounds of the brain. Matignon described a series of wounds of the head made in the course of storming operations in which the defenders were wounded as they put their heads for the moment above the upper ridge of the fortifications. As the storming party was only some five hundred feet away when the wounds were inflicted the effect was almost incredibly severe.

Portions of the cranium were blown away entirely and there was sometimes an almost emptying of the skull cavity of its brain substance. The brain itself actually seemed to blow up a sort of hydrodynamic action and be scattered entirely outside the cranium. The storming of redoubts and forts has taken on this new danger as a consequence of the improvements in armament.

NEO-SALVARSAN AND GENERAL PARALYSIS.

J. Nin Posades, *La Semana Medica,* December 4, 1913, reports the case of a lawyer, 40 years old, married, who had syphilis of fifteen years standing that had been treated regularly by means of mercurial inunctions. Two years ago vertigo and digestive symptoms set in, also loss of memory, disturbances of speech, difficulty in writing, zones of anæsthesia appeared and epileptiform attacks. The patient lost all desire to work and appeared absolutely indifferent in his surroundings. He still retained an interest in the matter of dress for he filled his wardrobes with clothing and refused to wear any one article of apparel more than two or three times. But when he commenced attending the theatre without having previously consulted his family, Dr. Posadas was called. He found tremor of the tongue and hands, diminution of the reflexes and cutaneous sensibility, unequal pupils and slow response and the Romberg pronounced. The patient was at times hysterical and at others indifferent. 3 grammes 30 centigrammes of neo-salvarsan were administered in all, in eight doses. The first two doses of 0.30 grammes—the remainder of 0.45 grammes, with the result that all symptoms save the inequality of the pupils disappeared. One year afterward, four additional injections of 0.45 grammes were given to make sure. The author does not state how the drug was administered, whether by intramuscular or intravenous route.—*Buffalo Medical Journal.*

SURGERY IN WAR.

Dr. A. K. Joosuf, of Worcester, Mass., concludes his article in *New York Med. Jour.,* thus:

1. Both in theory and practice, surgery in war is similar to emergency practice in ordinary life.

2. The surgeon must give the same attention to, and take the same precautions against infection in the soldier, as in the ordinary man.

3. The fate of the wounded depends more or less on the men applying the first aid.

4. A surgeon must not attempt to disinfect a wound on the battlefield.

5. In emergency, operations must be performed in the field hospitals.

6. No probing for bullets must be made on the battlefield.

7. Tourniquets, for hæmorrhage, must be applied for not more than four to six hours, as there is danger of gangrene.

8. The X-ray is the most valuable diagnostic agent in war.

9. Gunshot wounds of the extremities demand conservative surgery.

10. Penetrating gunshot wounds of the skull indicate operative interference.

11. Gunshot wounds of the chest demand strict antisepsis.

12. Celiotomy is indicated in penetrating gunshot wounds of the abdomen.

CEREBROSPINAL SYPHILIS.

Purves Stewart (in *Lancet*) deals with the several forms of syphilitic disease of the central nervous system and its membranes, laying particular emphasis on the importance of early diagnosis. Where destruction of the cells of this regions has taken place the best that can be accomplished is to check the disease. There is no hope of restoring a function lost through destruction of its controlling nerve cells. Our present methods of diagnosis should be able to prove the presence of cerebrospinal syphilis in the preclinical stages and before there has been time for cellular destruction. In a tabetic, for example, we should not wait for ataxia and other marked symptoms; where one or both ankle jerks are absent, where the light reflex of one or both pupils is wanting, we should suspect, and proceed at once to a diagnosis. A negative blood Wassermann reaction is not sufficient to rule out cerebrospinal syphilis; this test should be made on the spinal fluid. This, alone, is not enough, especially if doubtful or negative, and we should also examine this fluid for globulin and with regard to its cytology. With reference to treatment, it is not safe to give the full dose of salvarsan to a patient with cerebrospinal syphilis because of dangers of serious damage from liberation of large amounts of endotoxin through destruction of spirochetes. By using small and repeated doses the serious nerve relapses can be avoided. The method of Swift and Ellis for intrathecal injections is of considerable value in certain cases; he is of the same opinion as Ravant, who injects from six to nine mg. of neosalvarsan in distilled water directly into the spinal canal, completing the dose by injecting the remainder of the 0.45 gram into a vein at the same sitting. He speaks favorably of enesol in the treatment of the lightning pains of tabes, in one grain doses by hypodermic injection. It is known that the symptoms of cerebrospinal syphilis are often favorably influenced during the course of a febrile disease, fever, apparently, being the factor of importance. Administration of tuberculin to produce a rise of body temperature has been suggested and tried with good results, but Stewart considers large

doses of tuberculin dangerous and likely to lead to the lighting up of an old tuberculous process. Donath suggested the injection of sodium nucleinate into the muscles to raise the temperature. Stewart says that, under his treatment, "in a considerable proportion of cases a more or less prolonged remission occurs in the clinical symptoms, sometimes accompanied by a diminution in the intensity of the lymphocytosis of the cerebrospinal fluid." He knows of no case, however, in which the method led to a cure in the sense of a lasting return to normal. Of the intracranial methods of administering drugs in these cases, the results so far obtained hardly justify the risks associated with repeated intracranial injections.—*New York Med. Jour.*

INOPERABLE CANCER.

J. F. Percy, Galesburg, Ill. (*Journal A. M. A.*, May 23, 1914), after noticing the various agents that have been advised and used in cancer of the inoperable varieties, takes up the question of the vulnerability of cancer to heat, a fact which he thinks suggests the possibility of developing a method that will be of value. The methods which he enumerates as being possible or as suggesting themselves are: hot air, hot water, electric coagulation, fulguration and actual cautery. The first two may be dismissed as having too little penetration. Electric coagulation goes deeper, but the rapidity of its action and the inability to direct it in the cavities, aside from the complicated apparatus and skill required, make it impracticable. The Keating-Hart method of fulguration is also not favorably regarded by Percy, and in comparison with the difficulties of the foregoing method, he says: "I have devised a practical method for the application of heat in the treatment of carcinoma that has none of the objections that the various methods already enumerated have. The penetration of the heat by the method to be outlined can be definitely determined and regulated. Its applicability has almost no limitations; when the malignant process is at all accessible, the required apparatus is not expensive, and it is easily portable. The method to which I refer is the application of heat from an electrocautery, accurately controlled by a rheostat, and applied to the affected tissues." He describes experiments made on fresh beef muscle which show that by this method when a charcoal core is avoided, the area of coagulation far exceeds in size that ensuing from the application of greater heat for a longer period of time. It is better, he says, to develop a heat below the degree of carbonization than to try to burn up the mass with a heating iron at high temperature. The charcoal core that is left after cauterization, moreover, not only pre-

vents the scattering of the heat, but also interferes with subsequent drainage and endangers the patient from the absorption of killed cancer cells. If the primary gross mass of cancer, which is usually accessible, can be rendered innocuous by raising the temperature with an electric heating iron and the remaining small amount of lymphatic involvement be reached by thermic-raising, artificially produced toxins, serums or vaccines, as is emphasized by Vidal, then our dreams of doing something for cancer may be in the way of being realized. Percy believes that he has developed an efficient and harmless method of applying heat which may be useful in the eradication of certain forms of cancer.

ANKYLOSED JAW.

J. B. Murphy, Chicago (*The Journal A. M. A.*, June 6, 1914), discusses the subject of arthroplasty for intra-articular bony and fibrous ankylosis of the temporomandibular articulation, and reports nine cases. The most common type of ankylosis is the bony, which may be due to extensive suppuration of the middle ear, a local osteitis, metastasis from local infection elsewhere in the body, or it may be a part of a general metastatic arthritis or the result of a transmitted trauma from the chin. All parts of the jaw may be affected singly or together, and the anterior root of the zygoma is often involved. The middle-ear disease is the most common cause. The abscess may burrow forward into the joint or it may involve the subzygometic temple zone and produce myositis with cicatricial contraction. The diagnosis as to the side involved is often very difficult. When the ankylosis is bony, there is complete fixation; but when the ankylosis is fibrous, there is some motion in the jaw, and in the para-articular ankyloses there is always some motion. In the intra-articular ankyloses there is sometimes a little lateral motion on the unaffected side, a minute fraction of an inch on forced effort at opening the mouth, a point which is worth remembering. By clinical observation and experience, Murphy has learned that an accurate diagnosis of the side involved in unilateral cases occurring early in life can be made by noting the deviation and contrast formation of the two sides of the face. It seems full and round on the ankylosed side, but on the opposite one it is flattened and deformed. The chin is always retracted and turned to the ankylosed side. If ankylosis occurs late in life this is not so prominent, and if the case is recent there is not much deformity. In only one case of the nine reported did Murphy fail to diagnose the side affected, and in this he was misled by the history. He performs a typical

and uniform arthroplasty, using the pedicled flap, consisting of fat and the aponeurosis of the temporal muscle as the interposing material. The technic is not difficult, but must be exact in its details in order to obtain good results. A detailed description of it is given. The steps are: (1) the L-shaped incision coming down perpendicularly to the upper border of the zygoma and extending forward on its upper margin ¾ inch; (2) division of the ankylosis and removal of the segment of the mandibular neck; (2) raising the flap of temporal fascia and fat; (4) interposing and fixing the flap in place, and (5) closure of the wound. The results obtained are gratifying. In only one case did Murphy fail to have good results. The cases are reported. There is some danger of injuring the facial nerve in operating otherwise than with the L-shaped incision. There is also another danger. One cannot divide the ankylosis in the line of the original articulation for fear of penetrating the base of the skull. Murphy, therefore, always removes the condyle of the inferior maxilla and does not clean out the glenoid fossa to make an opening. The internal maxillary artery must be borne in mind in removing bone, as it hugs the inner side of the neck very closely. If injured, it should be ligated at the bifurcation of the external carotid. After-treatment is very important. Mastication should be started at the end of two weeks. For full details of the technic the article should be read. It is fully illustrated.

CESAREAN SECTION.

A. B. Davis writing on cesarean section finds the following advantages in the use of the small median incision entirely above the umbilicus: There is no danger of adhesions between the uterine and the abdominal wounds, and the uterus is therefore allowed to involute normally and take up its position in the pelvis without restricted mobility.

In the midline the abdominal wall is very thin; no important structures are divided and the tissues are quite elastic so that a small opening is all that is necessary for the delivery of the child. The small abdominal opening offers much less chance for the escape of intestine and omentum and less opportunity and necessity to handle the abdominal contents. Located above the umbilicus there is much less probability of the subsequent occurrence of hernia through the cicatrix, for it is above the most dependant part of the abdomen which is subjected to the greatest strain when the patient is in the upright position. More support is also given at this point by the recti muscles as they tend to come together toward their upper attachments.

PERSONAL AND NEWS ITEMS

Ontario.

Dr. Gordon G. Copeland, of Toronto, announces that he will commence practice at 73 Bloor Street East, and will confine his attention to gynaecology and obstetrics. He has recently returned after an extensive period of post-graduate study abroad.

Dr. R. W. Bell, Provincial Inspector of Health, and Dr. Collin, District Officer of Health, left a short time ago for an inspection tour of the Lake of Baye district. The two officials had just completed a survey of sanitary conditions in the Muskoka Lakes. A number of summer resort proprietors had to be warned to fix up their premises, but on the whole conditions were found to be considerably improved.

Dr. and Mrs. Graham Chambers spent a pleasant holiday at Kennebunk Beach, Maine.

On 8th August there was a serious fire in the Hotel Dieu Hospital at Cornwall. Much of the building was gutted out by fire, but the patients were all safely removed to St. Paul's Home. The building was erected in 1822, and was for some time the home of Hon. John Sandfield Macdonald, at one time Premier of Ontario. It was fixed up for hospital service and was connected with a recent new edition.

Dr. G. E. Cook, of 255 St. George Street, Toronto, whose automobile and baggage were confiscated in Germany, left Toronto a year ago last March in company with his wife, two daughters, a son, and a chauffeur, to tour the continent. In Edinburgh he bought a new car, and it was this which fell into the hands of the German officials.

Hon. Dr. Roche, Minister of the Interior, Ottawa, underwent an operation at St. Mary's Hospital, Rochester, Minn. He is improving in health again since the operation.

Dr. Hastings, Medical Health Officer for Toronto, states that it is much more dangerous to be a baby in Toronto than a soldier on active duty. The death rate among babies is twice as high as among soldiers in the field.

The war conditions threaten to make hospital drug supplies both high-priced and scarce. The conditions will also affect surgical instruments.

The Government has taken over part of the old General Hospital as a detention home, and, as a consequence, it has been exempted from taxes.

Much good work is being done in Toronto by the dental clinics for school children. The treating of decayed teeth, or their removal, has

proven of much value to the children's health, and their progress with their studies. Many years ago a dentist in Toronto fitted up a free office for the treatment of the poor. The city officials of that day sold his outfit for taxes, notwithstanding the fact that he was giving his time to the poor and had fitted out the office himself.

The Toronto Board of Contral has agreed to place a bust of the late Dr. Emily Stowe in the main corridor of the City Hall. She was the first woman physician of Canada.

Dr. Keith Simon has located at 653 Bloor St. West, Toronto. He is prepared to make pathological investigations for the medical profession, for which he is well qualified.

Dr. G. S. Ryerson was recently made a chief of the Six Nations on the anniversary of the battle of Beaver Dam, 14th June. His chief's name is Raderiyoho, "One who wins his way."

Dr. and Mrs| Milton Armstrong, of Ottawa, motored through Ontario, via Toronto, to Niagara, and home again.

Hon. Dr. and Mrs. R. A. Pyne had a pleasant holiday in Temagami district.

Dr. H. W. Hill, of the Hygienic Institute, of London, has gone to Minnesota Board of Health for a year. It is thought he may not return to London.

At a recent Coroner's inquest, Dr. Heywood, Assistant Medical Superintendent of the Toronto General Hospital, and one of the lawyers in the case had an encounter. He contended that lawyers were in the habit of altogether too readily bullying medical witnesses.

Dr. H. A. Bruce has returned by the Lacoma, and Dr. W. T. Greenwood by the Teutonic.

The Reception Hospital for mental defections is no wready for the admission of patients. Part of the old General Hospital has been fitted up for this work.

Dr. Hastings, Medical Officer of Health for Toronto is taking further steps to ensure a sanitary condition in the city; and cites the milk inspection regulations as justifying strict rules.

Dr. Thomas Kerr, Toronto, and family spent their summer holiday at Point au Baril.

Dr. and Mrs. Murray McFarlane have returned to Toronto from Camp Minnasing in Algonquin Park.

Dr. H. T. Machill, of Toronto, spent a pleasant holiday at Point au Baril.

Dr. W. P. Caven, wife, and son and daughter have returned from Europe.

Dr. Chabot, M.P., of Ottawa, will be one of the members of Parlia-

ment to go to the front with the Canadian troops. He promptly volunteered for active service. He is Surgeon-Major of the Princess Louise Dragoon Guards of Ottawa.

Dr. J. Harvey Todd, 163 College Street, Toronto, is going abroad with the Mississauga Horse, as Medical Officer.

Canadian women have raised $140,000 for the Hospital Ship. It is expected that when all sums have been reported the amount will be at $150,000. Splendid!

The Central Committee of the Canadian Women's Hospital Ship Fund state that all the money collected for this fund will be given for the alleviation of the sick and wounded during this war, either for the hospital ship or for the naval of military hospital as directed by the British Admiralty. Local committees are asked to close their funds at their own discretion, but for the benefit of distant places where collections are still actively being made for this purpose, the General Fund will not be closed until September 1.

Sir Edmund Walker, Mr. W. K. George and Mr. Eric Armour, representing the Governors of the University of Toronto, submitted figures to the Provincial Treasurer showing that the University required aid to the extent of $1,500,000 in order to maintain its position and cope with the demands made upon it by the rapid increase in the number of students in attendance.

Hon. Dr. Roche, Minister of the Interior, at Ottawa, underwent an operation at Rochester, Minn. The operation was reported as not being of a serious nature.

The prison parole system is working very well. During the past 15 years 3,454 prisoners have been released from the penitentiaries and 3,086 from jails and reformatories. Of the total number only 418 have forfeited their parole. Mr. W. P. Archibald, the Dominion Parole Officer, urges a greater uniformity in sentences and depend more on the parole.

Dr. William Oldright and family, of Toronto, are at their summer home in Muskoka.

The Congress of Clinical Surgeons, which held its meeting in London, England, in the latter part of July, elected Dr. H. A. Bruce, of Toronto, its vice-president for the coming year.

The wife of Dr. Morgan Blake, of London, died on 31st July. She was the daughter of the late Hon. John Ross, of Toronto.

Dr. J. E. Davey, Hamilton, has bee npromoted to be lieutenant-colonel in the Army Medical Corps .

Fire broke out on 7th August about 10 o'clock in the Hotel Dieu. A large number of patients and eighteen sisters were in the building at

the time. The patients were all moved out, many of the sisters themselves being scantily clad. The blaze originated in the nurses' residence, which is an annex to the main building, it is believed, from the overturning of a lamp. The fire was checked before it came to the main building, and the patients were taken back. The damage will probably exceed $1,000.

Ontario's offer of a supply of anti-typhoid vaccine for the Canadian contingent for active service has been accepted. Dr. J. W. S. McCullough, secretary of the Provincial Board of Health, has received a telegram from Col. Jones, of the Medical Service Staff at Ottawa, saying that the vaccine will be gladly received, and asking for information as to the quantity which the provincial laboratory could supply. Dr. McCullough replied that in three days the Ontario laboratory could manufacture 10,000 units of the vaccine, which could be pu tup in 50-dose bottles. It is expected that members of the Canadian corps will be advised to be vaccinated, as the water of the Rhine Valley is bad.

It is understood that the hospitals have an ample supply of drugs on hand, and that no inconvenience will be caused by the war for some time.

Miss Percy Haswell, the talented actress, gave a benefit matinee of James Eyre for the hospital ship fund. Over $800 was realized.

Dr. G. W. Ross, accompanied by Mrs. Ross and son, have arrived home from Europe, where he spent a couple of months.

The nurses of Toronto undertook to raise $1,000 for the hospital ship fund.

Many nurses have volunteered to go with the Canadian contingent. The Militia Act states that nurses must have had three years' training. They are subject to the same regulations as the officers of the militia, including examination for medical fitness. The necessary forms for enlisting were sent to the nurses who had registered their desire to go.

Quebec.

Dr. Herbert Stanley Birkett has been chosen to fill the important office of Dean of the Medical Faculty of McGill University. He follows the line of able men such as Professors H. P. Howard, T. G. Roddick and F. J. Shepherd. Dr. Birgett's many friends were pleased to learn of this unique honor, and tender him their hearty congratulations.

Dr. L. de L. Harwood, of Montreal, has returned to Montreal considerably improved after his serious illness.

Dr. Lowery, of the Montreal port, states that no orders have been issued regarding bubonic plague.

Mr. H. H. Lyman, Montreal, drowned i nthe Empress of Ireland, left McGill University $20,000; the Children's Memorial Hospital, $25,-000; Montreal General Hospital, $3,000; Royal Victoria Hospital, $3,-000; Protestant Hospital for the Insane, $3,000; Anti-Tuberculosis League, $1,000, and his entomolgical collection to McGill.

Sir Thomas Shaughessy, acting for the Canadian Pacific Railway, has offered to the Canadian women a ship for hospital purposes. The money collected by the women will equip the ship for hospital purposes.

Hon. Dr. Beland, Postmaster-General in the Laurier Cabinet, and still member for Beauce, is now in the Belgian ranks. Dr. Beland, who was recently married in Belgium, was in that country at the outbreak of hostilities. He immediately volunteered his services in the Belgian medical corps. Hon. Mr. Lemieux's announcement was greeted by cheers from both sides of the House. The first Canadian in the active field in consequently a French-Canadian Liberal member of Parliament from Quebec.

A short time ago there were in Montreal 66 nurses and 21 doctors who had volunteered in this city for service at the front, and all these names have been forwarded to Ottawa for approval. Among the women recruits is Miss Brenda Williams-Taylor, daughter of Sir Frederick and Lady Williams-Taylor, who is offering her services to the voluntary aid detachments, and is now attending ambulance classes to obtain the necessary certificates. Her brother and her fiance are both volunteers for the front.

Western Provinces.

An incendiary fire destroyed seven of the barns belonging to the Asylum for the Insane at Brandon, Manitoba. The loss was between $50,000 and $75,000. Many horses, cattle, pigs and fowl were lost in the burning buildings.

Dr. Anna Dodge Whitney, of Winnipeg, spent a month with friends in Toronto.

The University of Saskatchewan will spend this year $300,000 for new buildings. The university is located at Saskatoon.

The Moose Jaw Medical Society elected the following officers: Dr. G. P. Bawden, president; Dr. C. H. Freeman, vice-president; Dr. C. G. Sutherland, secretary-treasurer.

Dr. Chester Brown, formerly of the Ontario Board of Health, has taken charge of the health office at William Heal Quarantine Station, British Columbia.

From Abroad.

Prof. Ribemont-Dessaigne stated recently before the Paris Academy of Medicine that the problem of painless childbirth had been solved by the discovery of his new anæsthetic.

Prof, W. H. Saville, of Columbia University, has found evidences of the filling of teeth in the remains of the ancient aborigines of America. Some of the teeth retain the fillings in good condition. Dentistry had made considerable advances in Egypt at a period that antedates Moses.

Under the British National Insurance System there are now 14,000,000 clients, and the amount of money dealt with each year amounts to $100,000,000. Last year there were 11,000,000 claims. The staff at the head office numbers 500.

There were recently 900 cases of typhoid fever in Vigo, Spain, caused by bad water. The people accused the Mayor of being responsible for the contamination of the water supply. The Government took steps to improve the conditions.

The late Lord Strathcona left $25,000 for the founding of an institute for lepers in England. This sum was provided otherwise than in his will.

The New York Board of Health has issued a circular warning the public of the increasing danger from cancer. From this it appears that at the present time one man in every fourteen and one woman in every eight over the age of forty die of cancer. Cancer claims 75,000 victims every year in the United States.

The Clinical Congress of Surgeons of North America, which met in London recently, elected the following officers; resident, Dr. Charles H. Mayo, Rochester, Minn.; first vice-president, Dr. H. A. Bruce; secretary, Dr. Franklin H. Martin, Chicago; treasurer, Dr. Allen B. Kanavel, Chicago.

Many Canadian doctors in Britain and on the continent experienced great inconvenience on account of the war. Among their chief difficulties were those of securing passages home, and having cheques, money orders and travellers' letters cashed.

The Duke of Devonshire has handed over to the Government part of his residence, Piccadilly, for the use of the Red Cross Society.

The Admiralty has accepted the offer made by Mrs. David Beatty, daughter of the late Marshall Field, of Chicago, who is the wife of Rear-Admiral Beatty, of her yacht, the Sheela, to be used as a hospital ship.

Dr. W. S. Bloor, a Queen's medical graduate, has been appointed professor of biological chemistry in Harvard University.

Dr. G. L. Sleater, professor of anatomy in the University of Michigan, has been appointed professor of embryology in Johns Hopkins Medical School.

Dr. Simon Flexner, of the Rockefeller Institute of Research, has had the Cross of Chevalier of the Legion of Honor conferred upon him by President Poincare, of France.

During the eight months ending March 31st, 1915, the London County Council will provide for the treatment of 72,215 medical and dental cases of elementary school children, this representing a net increase of 9,610 cases a year. The children's care sub-committee report that the number of ear, nose and throat defects is steadily decreasing, and the provision for these, therefore, is to be reduced. The total number of dental cases to be provided for will be 49,720. During last year 31,858 children were examined for dental defects, and 80 per cent. were found to require treatment.

Besides contributing $25,000 to the Prince of Wales distress fund and $5,000 to the Red Cross Society, Lady Strathcona offered, and the War Office accepted, the use of Glencoe for a hospital, fully equipped and maintained by herself. The Hon. Donald Howard, who will be the future Lord Strathcona, is with his regiment, the 3rd Hussars.

Dunrobin Castle, the famous residence of the Duke of Sutherland, has been turned into a central surgical base for the North Sea fleet. The Duke has also placed his yacht at the disposal of the Admiralty for the transfer of wounded.

The Red Cross Society has been given possession of the ground floor of Devonshire house, Piccadilly, by the Duke of Devonshire.

The Albion, the private yacht of Henry Loeffler, is also in the Government service.

Palatial private yachts of peers and men of wealth of England are now in the service of his Majesty's navy as hospital ships. One of the first to offer his yacht was Lord Tredegar, who tendered the Liberty, a floating palace 268 feet long.

A number of Canadian doctors, eager to go to the front, are meeting with disappointment at the War Office because their local medical authorities in Canada refuse to reciprocate with the British medical authorities. Graduates of McGill, Laval, and Dalhousie are, however, available for service, those universities having reciprocated.

Mr. William Thorburn, Mr. Charles A. Ballance, Mr. W. McAdam Eccles, Mr. J. Stanley Boyd, and Mr. Charles Ryall were recently elected to the Council of the Royal College of Surgeons, England.

Dr. W. P. Herringham, vice-chancellor of the University of London and physician to St. Bartholomew's Hospital; Dr. William Milligan, aurist and laryngologist to the Manchester Royal Infirmary; Dr. S. J. Sharkey, consulting physician to St. Thomas' Hospital and medical referee to the Treasury; Lieut.-Col. Leonard Rogers, C.I.E., M.D., I.M.S., professor of pathology at the Calcutta Medical College; Dr. J. E. Godfrey, of British Guiana; Dr. T. P. Anderson Stuart, dean of the Faculty of Medicine at Sydney University, and Dr. A. E. Thomson, of Cape Town, have had the honor of knighthood conferred upon them.

A press report from Paris states that on June 30th Dr. Venonoff reported before the Academy of Medicine a successful case of implantation of a baboon's thyroid into a child of 14 with acquired cretinism.

The *Boston Medical and Surgical Journal,* with its issue of July 2nd, 1914, began an official affiliation with the Massachusetts Medical Society, and will hereafter be the organ of the society.

Dr. Charles Irving Fisher, for twenty-two years superintendent of the Presbyterian Hospital, New York, retired from office on July 1st. Dr. Fisher was at one time Health Officer of Boston, and for eight years before coming to New York was superintendent of the Massachusetts Infirmary. He will be succeeded at the Presbyterian Hospital by Dr. Charles H. Young, who has been his assistant for some time.

The Royal Naval Hospital, Chatham, England, was built between 1900 and 1095, and was opened by the late King Edward on 6th June, 1905. The site covers 39 acres, and the building cost $4,000,000.

Dr. J. B. Nicolas Duguet, vice-president of the Académie de Médecine, and physician to the Paris Hospitals, died recently at the age of 77. Born in 1837, he first studied medicine in the Rheims School. Proceeding to Paris at the age of 23 he became *interne* in the following year and took his doctor's degree in 1866.

Any doubts as to the causes of death in fatalities after salvarsan injection will be dispelled by a perusal of an able analysis of the published cases of Dr. Carl Schindler. The symptoms in practically every case recorded are strikingly similar—headache, vomiting, restlessness in the first twenty-four hours, a few hours of apparent recovery, and then relapse, leading to coma and death on the fourth day.

In reply to Mr. Pike Pease, the president of the Local Government Board, said that the rate of infant mortality in the United Kingdom in 1913 was 108 deaths under one year of age per 1,000 births registered. The proportion of stillbirths could not be stated, as they were not regis-

trable, and information in regard to them was obtainable only for areas which had adopted the Notification of Births Act, 1907. These areas did not in all cases tabulate the information, but it might be stated that during 1912 the stillbirths notified under this Act in the county of London numbered 2,593. This amounted to 2.4 per cent. of the total births notified, and to 0.57 per 1,000 of the setimated population at the middle of the year.

The first issue of the *Medical Journal of Australia* is to hand. It is a very attractive medical journal and is published weekly. It incorporates the *Australian Medical Gazette,* and the *Australian Medical Journal.*

A very praiseworthy effort is being put forward to raise sufficient funds to ensure the preservation of the splendid museum which the genius and industry of the late Sir Jonathan Hutchinson collected. This would be an excellent memorial of so great a man.

Sir John Tweedy, F.R.C.S., late president of the Royal College of Surgeons, has been elected president of the Medical Defence Union, in the stead of Dr. Edgar Barnes, who retired.

Sir Christopher John Nixon(a noted physician, and one who held many offices of distinction, died 18th July, at the age of 65.

The Edinburgh University Court, at its meeting on July 20th, received and approved a proposal from the honorary secretaries of the Royal Victoria Hospital for Consumption for the foundation of a chair of tuberculosis.

The Inspector-General of the Insane in New South Wales has issued a statement containing recommendations for improvement in the care and treatment of mental diseases and allied conditions. Dr. Sinclair says: "What is specially needed is a more vigorous treatment of early cases with a view to preventing them becoming less curable." It is pointed out that the lunacy laws in the past have taken more care of the legal requirements than of the medical. The report then goes on to state: "The best prospects of successful treatment in mental, as in other diseases, lie in its treatment in the early stages."

The gold medal of the Royal Institute of Public Health, awarded annually to a public health medical official at home or abroad, in recognition of conspicuous services rendered to the cause of preventive medicine in the British Empire, has been conferred for the year 1914 upon Dr. James Niven, M.O.H., Manchester.

The Bureau of Child Hygiene of the Department of Health of New York City, which has the supervision of the health of the city's school children, plans to extend the scope of its activities during 1915 and to make its work more efficient. To accomplish this a budget allowance of

$554,670, or $123,780 more than this year's budget, will be asked for.

At the meeting of the advisory council of the Committee on Food Inspection of the Department of Health of the City of New York, called for August 6th, among the subjects which will be discussed are the misstatements made in the advertisements of patent medicines. It is believed that under the sanitary code the department has authority to prosecute the manufacturers who make false statements regardiny the curative qualities of their products. It is possible that at a later date steps may be taken to require publication on the label of the formula of all proprietary medicines.

It is announced that the Rumford medal of the American Academy of Arts and sciences has been awarded to Dr. William David Coolidge, of New York, for his invention of a process for manufacturing ductile tungsten and its application to the new form of X-ray tube which bears his name.

The Misses L. E. and M. W. Lawrence have recently given to the British Royal Society the sum of £4,000, the interest of which is to be devoted to research into the causes and cure of disease in man and animals, in memory of Sir W. Lawrence, F.R.S., and Sir Trevor Lawrence.

Report from Geneva, Switzerland, on July 11th, states that the Swiss Society of Public Utility for Women is demanding the requirement of health certificates for brides as evidence that they are fit for motherhood.

It is announced by the trustees of the American Medicine Gold Medal Award that the medal for 1914 has been conferred on Dr. George W. Crile, of Cleveland, Ohio, as the American physician who in their judgment has performed the most conspicuous and noteworthy service in the domain of medicine and surgery during the past year.

Dr. Reginald B. Leach, M.D., has long advocated the use of arsenic as a preventative of yellow fever. He admits that the mosquito is the agent by which the disease is spread, but he contends that if a person takes arsenic they will not become infected. He advances many arguments in support of this. The Senate and House of Representatives, U. S., have authorized the President to appoint a commission to investigate this matter. One grain of arsenic is made into one hundred tablets, and one taken three times a day for one week, one twice a day for one week, and one a day till all are used.

A despatch from Brussels says the Duchess of Sutherland has been placed in charge of the Red Cross work in Brussels.

King George has offered Balmoral Castle as a hospital for wounded soldiers.

Sir John Bland Sutton, in a paper before the British Medical Asso-

ciation, said: "Soldiers and surgeons would be required as long as civilization endured; but their methods had undergone great changes, and greater were impending. Gunpowder revolutionized warfare; the discovery of anæsthetics and the invention of the microscope completely changed surgical methods. A famous surgeon told him that when he began to perform operations under chloroform, an old pupil of Guy's Hospital came in to see a leg amputated under the new conditions. When the surgeon pointed out the merciful nature of anæsthetic sleep, and the change it had wrought in the methods of removing limbs, the old fellow sighed, and said he had a fancy for the old ways, and liked to see some blood and sawdust about!"

OBITUARY

W. IVAN SINKLER.

Dr. W. Ivan Sinkler, son of the late Judge Sinkler ,of Brockville, died in Vancouver, B.C., on 30th July. He graduated from the University of Toronto some years ago, and went west and located in Vancouver. His wife, formerly Miss McKay, of Toronto, survives him. After graduating in Toronto he did post-graduate study in Britain.

HENRY WALMSLEY WELCH.

Dr. H. W. Welch, B.A., died at Calgary on 7th July, 1914. He graduated in 1890. He was a son of H. W. Welch, of Toronto.

EMERY NORBOT FERE.

Dr. Fere, L.R.C.P., Edin., died some time ago in London, England. He graduated from Trinity Medical College and University in 1891. He was 50 years of age, and brother of Rev. Dr. G. A. Fere, a medical graduate of University of Toronto.

JOHN JOSEPH CASSIDY.

After a brief illness Dr. John Joseph Cassidy, editor of the *Canadian Journal of Medicine and Surgery*, died on Saturday from heart trouble at his residence, 6 Spadina Road. For a couple of weeks Dr.

Cassidy had been confined to his bed with rheumatism, but his illness was not considered serious and his sudden death came as a shock.

Born in Toronto in 1843, Dr. Cassidy was the son of the late James C. and Mrs. Cassidy, formerly of Fermanagh, Ireland. He was educated at St. Michael's College and later at the College of St. Anne de la Pocatiere, Quebec. He took his degree of M.B. in Toronto Univrsity in 1868 and was a fold medalist. He took his M.D. degree one year later.

He was for some years physician at the House of Providence and was connected with the Toronto General Hospital. He was at different times president of the Toronto Medical Society, an examiner in therapeutics and medicine at Toronto University, a member of the Provincial Board of Health, the Separate School Board, and the Library Board. He was a member of the University Senate, representing St. Michael's College, and on several occasions addressed intrnational gatherings of physicians.

Dr. Cassidy was married in 1878 to Miss Messner, of Walkerton, and is survived by his widow and ten children.

MATHEW JAMES GLASS.

Dr. M. J. Glass, of Poplar Hill, near Strathroy, died 5th July. He was in his 65th year, and was a graduate of Trinity of the year 1887. He had practised continuously in Poplar Hill.

EDWARD ALEXANDER GAVILLER.

Dr. E. A. Gaviller died at his home on McNab Street, Hamilton, on 8th August, after a long illness that had lasted for a number of years. He was in his 74th year, and for many years was a very active practitioner, enjoying the confidence of a large circle of friends.

E. B. SMITH.

Dr. Edgar Byron Smith, one of the most widely known physicians in the State of Michigan, and a former Canadian, died at his home in Detroit 13th August. Dr. Smith was born in Hastings county, Ont., June 29th, 1841,

BOOK REVIEWS

VOLCANIC ACTION IN PRODUCTION OF DISEASE.

On the Effects of Volcanic Action in the Production of Epidemic Diseases in the Animal and in the Vegetable Creation, and in the Production of Hurricanes and Abnormal Atmospherical Vicissitudes. By H. J. Johnston-Lavis, M.D., D.Ch., M.R.C.S., Eng., L.S.A., Lond., F.G.S.., Late Professor of Vulcanology in the Royal University of Naples; Fellow of the Royal Society of Medicine; Member of the Societa Geologica Italiana; Hon. Fellow of the Scottish Geographical Society; Senior Consulting Physician to the Queen Victoria Memorial Hospital, Nice., etc., etc. John Bole, Sons and Danielsson, Limited, Oxford House, 83-91 Great Titchfield Street, London, W. Price, 3s. net.

Of all the phenomena of nature none is so likely as the volcanic eruption to make a profound impression on the imagination. When man knew nothing of the laws of nature he confounded the natural and the supernatural, and looked upon the natural as the cause of whatever he did not understand. It was, therefore, quite natural for him to regard the occurrence of disease following a volcanic eruption as caused by it.

The author points out that the physics of an eruption do not justify the conclusion that it would be the cause of disease. The matter ejected from volcanoes is of a very high temperature, often gaseous, maybe liquid, and contain mud and water, or other constituents. The heat may be destructive of life, and the gases surcharge the air. All this would be local, and have no influence in causing epidemic diseases. If one turns to the chemistry of lava there is nothing found in it that in any way could originate disease. Then, again, the heat of volcanic matter would render it quite sterile at the time of its ejection. On the mind of the ignorant there may be an injurious influence.

The author sums up some of the ill effects thus: The irritant and depressing effects of poisonous gases. This is local. Water courses may be changed and contaminated with mud and chemicals. The moral influence of fear.

It would appear that volcanoes do more good than harm to vegetation; that they have no influence in causing marked weather disturbances, and that on man their effects are local and irritant and not the cause of any type of contagion.

THE QUESTION OF ALCOHOL.

By Edward Huntington Williams, M.D., formerly Associate Professor of Pathology, State University of Iowa, and Assistant Physician in the New York State Service; author of the "Walled City," "Increasing Your Mental Efficiency," etc., and joint author of "The Wonders of Science in Modern Life." New York: The Goodhue Company, 120 West 32nd Street, 1914. Price, cloth, 75 cents.

The author advances strong views along certain lines, and backs these up with substantial arguments. He shows that among the commitments to the asylums drugs are a very much more common cause in the Southern than the Northern States. Then, again, he points out that in the South the insane habitues come from the prohibition areas mainly. The whites use morphine while the negro uses cocaine. The restrictions placed on the sale of alcohol have enormously increased the use of these drugs.

Another point that the author argues is that teaching temperance in schools is a failure. In 1896 there were 67,039,910 gallons of whisky used in the United States. In 1913, after many years of temperance teaching in the schools, there were consumed 140,418,289 gallons. With regard to cigarettes there were sold in 1903 3,000,000,000, and in 1912, after much teaching against their use, there were sold 13,000,000,000,

The author further goes on to show that in prohibition States the admissions to the asylums from alcoholic insanity are much more numerous than in non-prohibition States. From this one must conclude that those who wish to drink succeed in getting the beverage, and of a bad quality.

He also contends that in prohibition areas that commitments by the police for drunkenness are more numerous than where drink is obtainable in licensed places. He then goes on to advocate a modified control of the liquor traffic after the Swedish fashion. An important element in the successful prevention of drunkenness is to provide proper substitutes for the bar.

HANDBOOK OF FEVERS.

A Handbook of Fevers. By J. Campbell McClure, M.D., Physician to Out-Patients, the French Hospital, London, and Physician to the Margaret Street Hospital for Consumption and Diseases of the Chest, London. Formerly of the Smallpox Hospital and Belvidere Fever Hospital, Glasgow. London: Shaw and Sons, Fetter Lane, Fleet Street, E.C., 1914.

This 12 mo. volume of nearly 500 pages is one of the best medical books we have seen in a long time. The author first takes up those fevers whose bacterial origin is known. These are enteric fever, diphtheria, the plague, cholera, relapsing fever, malaria, epidemic cerebrospinal meningitis, anthrax, glanders, influenza, pulmonary tuberculosis, dysentry and kalaczar. Then comes a list of those of uncertain bacteriology. This list contains scarlet fever, measles, German measles, smallpox, chickenpox, typhus, mumps, rheumatic fever, yellow fever and whooping cough. Diseases due to diet are given as beriberi and pella

gra. On every question of symptomatology, causation and treatment the book will be found to measure up to the highest possible standard. As every general practitioner has to treat most of these fevers, this is a most valuable addition for the working library. It is well written and printed in clear type and on good paper. We bid for the book a very wide circulation.

MISCELLANEOUS

TORONTO'S HEALTH STATISTICS.

July was a fairly satisfactory month in Toronto from the Health Department standpoint, the total number of communicable disease cases reported to Dr. Hastings' department having been 277, compared with 526 in June and with 271 in July last year. The chief decreases in comparison with the previous month were in diphtheria, scarlet fever, measles, tuberculosis and mumps. An increase was recorded in typhoid fever, of which there were 18 cases, including one treated outside the city, compared with 11, including five outside, in June, and with 17, including seven outside, in July of 1913. The figures of the Health Department show:

Disease.	July 1914	June 1914	July 1913
Diphtheria	45	56	56
Scarlet fever	42	64	36
Typhoid fever	18	11	17
Measles	130	179	101
Smallpox	..	..	4
Tuberculosis	46	54	42
Chickenpox	11	19	10
Whooping cough	4	8	5
Mumps	11	135	0

GRACE HOSPITAL PICNIC.

Grace Hospital nurses held their annual picnic at Oakville on the magnificent grounds of the farm of Dr. J. Milton Cotton. The nurses, to the number of 25 or 30, had engaged a large launch, which they boarded at the foot of Bay Street earlier in the afternoon. Members of the medical profession connected with the hospital motored out from the city.

The whole party spent some time in viewing the extensive orchards and fields on Dr. Cotton's property, which extends with a fine beach along the lake front. About 5.30 o'clock nurses, doctors, and doctors' wives spread their linen on the lawn. After the picnic, speeches were made by Dr. Bruce L. Riordon, Dr. W. H. Harris, Dr. McConnell and Dr. J. M. Cotton. Others present were: Dr. Edith Beatty, superintendent of the hospital; Miss Rowan, Miss Rogers, matron, Dr. R. A. Thomas, Dr. Chas. Treble, Dr. and Mrs. Wm. Macbeth.

A DISTINGUISHED CANADIAN ARMY SURGEON.

Surgeon-General Sir John By Cole Reade, K.C.B., honorary surgeon to H.M. the King, attained his 82nd birthday on the 7th July. The Surgeon-General comes of a race of soldiers, and his name, as well as that of his three brothers, are all recorded in the "Distinguished Canadians in the Imperial Service" volume. Sir John was the youngest son of the late Colonel Sir George Hume Reade, K.H., formerly commanding the 3rd Regiment of Canadian militia. He was born in Perth, Ont., in 1832, and educated at Dr. Wilkie's school in Quebec, and afterwards at Edinburgh University, his two godfathers being the great Sir John A. Macdonald and Colonel By, of Bytown, now Ottawa. Sir John entered the Army Medical Corps in 1854, being attached to the Rifle Brigade. He served throughout the Crimean campaign, 1854-5, being present at the battles of Alma, Inkermann, Balaclava and the siege of Sebastopol (twice wounded, medal with three clasps, Turkish and French medals); in the Indian mutinw at Lucknow (medal with clasp); on the staff of Lord Roberts in the Afghan war (1879-80), mentioned in the despatches (medal); was sometimes professional assistant to the Director-General, Army Medical Department; C.B. (Mil.) 1886, K.C.B. (1903), Senior Knight of Grace of the Order of St. John of Jerusalem, Honorary Surgeon to Queen Victoria, King Edward VII., and the present King.

Sir John, who married a daughter of the late Major-General J. D. D. Bean, has no son living. His nephew, the Rev. G .G. Harper Reade, is Anglican rector at Blind River.

Sir John's elder brothers, also Canadians, were distinguished soldiers in the Imperial service, Surgeon-General Herbert Taylor Reade, V.C., C.B., winning the Victoria Cross at the assault at Delhi for conspicuous gallantry. The great Victoria novelist, Charles Reade, was a cousin of Sir John's. He is the last, with but few, if any exceptions, of the survivors of Lucknow.

IN AID OF NURSING MOTHERS.

Dr. Hastings, M. H. O. in the *Health Bulletin* calls attention to the unemployed problem and points out that as the result of the large numbers of men out of work the women are being forced into industry, many of whom are mothers, yet they are obliged to go out and work in order to provide food for the families. Dr. Hastings says when the mother is away it is inevitable that the children should be neglected, and the situation is much worse where there is a nursing baby. The Health Department is endeavoring to induce all mothers to nurse their babies in nature's way, but this cannot be done when the mothers have to go out to work. He says that in some places in Europe employers are compelled to provide accomodation for mothers obliged to work, where they can nurse their babies. Something of the sort, he thinks, should be provided in Canada, so that when mothers are compelled to work outside their homes the penalty should not fall too heavily upon the babies.

THE BOYLAN ACT OF NEW YORK.

The Boylan act, to restrict the sale of habit-forming drugs, went into effect on July 1. In Accordance with its provisions all prescriptions for such drugs must be written specially order blanks, serially numbered and duplicated, which are furnished by the Health Department. The name and address of the person for whom the prescription is issued must also be recorded. Not only must the prescribing physician make a physicial examination of his patient before giving his prescription, but the druggist is required to verify the prescription, by telephone or otherwise. No prescription can be filled which has been made out more than ten days before the date of prescription. Each prescription becomes the property of the druggist to whom it is presented, and he is forbidden to give the patient a copy of it. The filled prescriptions must be kept for five years, and must be open for all times for inspection by the proper authority.—*Boston Medical and Surgical Journal.*

MEDICAL COUNCIL OF CANADA EXAMINATIONS FOR 1914.

The examinations will be held this year at Montreal on October the 13th.

Candidates will bear in mind that certificates, fees, etc., etc., must be deposited with the Registrar not later than September 15th.

Forms of certificates necessary to qualify to write at the examination may be obtained by applying to the Registrar, Dr. R. W. Powell, 180 Cooper Street, Ottawa, Ont.

The Second Announcement is ready for disribution from the Registrar's Office.

MEDICAL PREPARATIONS

THE PHYLACOGEN TREATMENT OF HAY FEVER.

While Mixed Infection Phylacogen was formally introduced to the medical profession in 1912, it was some months later before adequate data as to its value in the treatment of hay fever were available. In 1913 hundreds of cases were reported, details of many of them appearing in the medical press during the latter months of that year. The results from these clinical observations were highly significant, showing a surprisingly large percentage of recoveries and warranting the belief that in Mixed Infection Phylacogen the physician had acquired a formidable weapon for his fight with one of the most stubborn diseases that he is called upon to treat.

Mixed Infection Phylacogen is administered hypodermically. The initial dose should be small, the usual procedure being to begin with a 2-Cc. dose subcutaneously or a ½-Cc. dose intravenously. The reactions occur more quickly, and are ordinarily more severe, following intravenous injection.

"In giving the subcutaneous injection," one writer explains, "I usually select as a site the insertion of the deltoid or the area just below the scapula. The latter seems to be the ideal spot, as absorption takes place very readily and the complaints from the local reaction are much less. I repeat my injection either daily or on alternate days, the interval to be determined by the clinical condition of the patient. It is seldom necessary to administer more than four to six injections, the symptoms often disappearing after the second or third injection. Almost immediate relief is noted by the patient. The irritating discharges from the eyes and nose are diminished in amount, the sneezing is lessened, the dyspnea is relieved, and the patient usually sleeps comfortably. All patients that I have treated successfully have remained well through the season. I have yet to record a failure, but I have not had a sufficient number of this class of cases as yet to warrant a positive claim that this remedy will act in all forms of this disease."

Mixed Infection Phylacogen is supplied in 10-Cc. bulbs. As is doubtless well known to most physicians, it is a Parke, Davis & Co. product.

BOVININE.

Its Uses in Ulcerative Processes.

The recent advances in our knowledge regarding the properties and powers of normal blood and blood serum have opened up a broad and important field in widening their therapeutic use.

Important among these properties are the activation of the function of the phagocytic white blood cell which combats bacterial infection, the supplying of complement to augment the immunizing and antitoxic power of the blood of the subjects of infection, and the power to diminish bleeding in those who have the bleeding tendency.

Such properties as these make Bovinine, which contains unheated normal beef blood serum, an exceptional preparation for use in the local treatment of ulcers—especially of the sluggish type of leg ulcer—which are so resistent to all previously known forms of treatment. Combining, as it does, these important biological properties with the fact that it is a concentrated albuminous food, rich in non-irritating hemoglobin, Bovinine has come to be considered the ideal medicament in all cases of gastric and duodenal ulcer. Taken alone in these conditions, or added to cold peptonized milk or plain milk and lime water, it diminishes the bleeding, raises the blood hemoglobin, and stimulates the local repair of the ulcer—activating the anti-bacterial power of the serous exudate at the base of the ulcer and stimulating the process of granulation.

DIE HEILWIRKUNG DES RADIUMS.

Nach einem Vortrage, gehalten vor der Roentgen-Society in London, von Dr. Siegm. Saubermann, Berlin-Vienna.

To be had by applying to Radium Limited, U.S.A., 25 W. 45th St., New York City.

This pamphlet, consisting of 40 pages, with 36 illustrations, is the latest publication on the subject of radium emanation therapy. It is of the greatest importance and interest to the physician desirous of using radium emanation in treating those diseases which it influences, on account of its thorough but still concise discussion.

The 36 illustrations contained are, in all probability, the first of their kind ever shown in this country, and demonstrate clearly the effects of the rays and emanation of radium.