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EDITORIAL

THE NEW GENERAL HOSPITAL, TORONTO.

This great work has reached its completion. The following facts tell what has been accomplished and what is yet to be done:

Cost, $3,500,000. First estimated cost, $1,250,000, estimated in 1904.

Cost of site, $612,615.

Time of construction, 31 months. Work commenced November, 1910. Official sod-turning, April --, 1911.

Number of beds, 670, this being 300 more than the old hospital. Public Ward patients' accommodation, 520. Private Ward patients' accommodation, 150.

Contributions, city, $610,000; University of Toronto, $600,000; private citizens, $1,400,000. Funds unprovided, $750,000. To offset this, old hospital site on Gerrard Street, valued around a quarter of a million.

Nurses' and doctors' accommodation, 176 nurses and 26 resident doctors. Other employees, 200.

Number of buildings, 11.

Space covered by site, nine acres.

As the Board of Trustees advanced with the scheme, the first ideas gradually gave way to those of a much larger and grander conception. More land was secured and more and larger buildings were planned.

Of the larger donors we may mention: Hon. G. A. Cox, $100,000; the Massey Estate, $100,000; Mr. Cawthra Mulock, $100,000; Mr. J. C. Eaton, about $300,000, and Miss Shields, about $100,000.

The wards are large, airy, well lighted and most attractive in every way. The floors are concrete, on which is laid a thick linoleum. This is soft to the feet, and avoids the cold effect of some hard compositions that are in use in some hospitals.

The system of ventilation is as perfect as can be made. There are many verandahs, and the institution is well supplied with roof gardens.

The building was officially opened by his Honor, Lieut.-Governor Gibson, on 19th June. The Board of Trustees are entitled to the warmest congratulations of the public.

THE WHITBY HOSPITAL FOR THE INSANE.

This great institution is unique in many ways. The first feature is that it is the most modern in plan of any such institution in the world. It is intended to do for the insane more than has been accomplished heretofore anywhere else. Hon. Mr. Hanna, who took the lead in the Prison Farm at Guelph, was also the moving spirit in this great movement.

It must be understood, in the first place, that the Provincial prison at Guelph is a manufacturing proposition, the Hospital for the Insane at Whitby is essentially agricultural. The Whitby farm comprises some 640 acres purchased eighteen months ago at a cost of about $85,000. The growth of the City of Toronto and the general encroachments of industrial activities upon the precincts of what has heretofore been known as the Queen Street Asylum influenced the Department to make a change, and after a number of sites had been investigated the one at Whitby was decided upon.

The leading feature in the treatment of the insane at Whitby is the outdoor employment that will be furnished them. They will be kept employed at light farming. This year about 130 acres are under cultivation. It has been observed that such a life is the best for the insane, and does most for their recovery, and, when curable, does most for their health and happiness.

There is a complete separation between the farm and the construction work. A great deal of the building is being done by prisoners from the Guelph farm. There are about ninety-five prisoners on the place now engaged in excavating for foundations, constructing the sewage disposal and filtration plants, carpentering, hauling material and a score of other occupations.

The situation is a beautiful one. The farm is to the west of Whitby, fronting on Lake Ontario, and sloping gently to the shore. The buildings are on a slight rise of the ground looking to the south. The grounds around the buildings are dotted with orchards, shrubs, hedge rows, and a fine group of pines.

The buildings are being arranged on the unit system of cottages with one central administration building. Shrubbery and garden sur-

roundings will be so arranged that not more than two cottages will be seen at one view, the whole being intended to create a cheerful, home-like atmosphere. The present plans when completed will provide accommodation for 1,500 patients, and are so arranged that additional units of 500 each may be added without conflicting with the original construction.

The hospital centre consists of four buildings, with kitchen and dining-rooms. These buildings contain the observation wards, and two convalescent cottages. These buildings also contain the wards for the acute cases. In all about 350 patients can be cared for in these central buildings.

The cottage centres consist of two groups of cottages, accommodating fifty-two patients in each cottage. For each group an infirmary is provided, which will take care of all those patients assigned to cottage centres, and who require special nursing on account of general feebleness or physical illness.

This method of arranging the buildings has the effect of separating the patients into groups, such as those requiring constant supervision and medical care, and those who only require such care as is of a hygienic character and who are able to work at various employments. These cottages take on much of the features of a comfortable home life. By this plan a much more satisfactory classification of patients is possible. There is ample provision made for the treatment of such patients as may be taken ill with any form of medical or surgical disease.

Central Prison labor is made use of in the preparation of the material required, and the prisoners in Toronto and Guelph are engaged on doors, sashes ,etc., while many of the prisoners are employed on the work of construction of the buildings, the drains, sewers, etc. The cost is thus reduced from $1,400,000 to one-half this amount.

MORE HOSPITALS FOR TORONTO.

It would appear from some of the reports in the daily press that some medical men think that all that is required to get up a new hospital is to call a meeting and secure a charter and leave some items in the newspapers. Experience will prove this to be a dream, and shall vanish into air, into thin air, as did Prospero's vision.

Look into what has to be done. In the first place a site of not less than two acres is required. Buildings must be separated from each other. There must be a building for patients. There must be one for the nurses, there must be minor buildings for detention cases, laundry,

morgue, etc. These buildings and site will cost a great deal of money. Land in the city is now very dear, and the buildings for hospital work come high, as they must conform to modern requirements. It may be said without hesitation that the site, the hospital proper, the nurses' home, and the minor buildings will run up to an average of $3,000 a bed for the patients. A hospital of 100 beds would therefor cost not less than $300,000. A hospital of less accommodation is of no use, as it would not afford sufficient beds for the various classes of patients.

Then the next great difficulty is that the city council and the government must be made to feel that the new hospitals are necessary, and should be placed on the list of those recognized as entitled to receive civic and provincial grants for charity patients. This may prove no easy task|

It has been suggested by some of the speakers at these preliminary meetings that the city should be asked to vote a sum of money for sites and buildings. But just see what this means. The city has voted $50,000 to the Home for Incurables for the care of a certain class of poor patients. It has also given $100,000 to the Western for accommodation for 100 city poor patients. It has also given $612,000 to the new General. St. Michael's Hospital has also received $50,000. There is also the gift of $250,000 to the Children's Hospital.

The city has no concern with hospitals other than as they are required for the care of the city's poor . It is more than likely that the city will consider that in these large gifts it has done its full duty in the way of providing accommodation for such patients as are entitled to city orders. These hospitals have now ample bed accommodation for all the patients the city may be called upon to care for by issuing city or charity orders. This being the case it is very improbable that the city would again vote a large sum of money to new hospitals.

But the reports of the various speakers at these meetings very clearly show that they do not understand the difficulties in the financing of a hospital. No hospital can be conducted at a cost of less than $1.30 per day per patient. The city pays $1.00 and the Government 20 cents. There is, then, a loss of at least 10 cents per day. This makes it more than plain that the fraternal societies cannot get accommodation for 70 cents a day. This amount together with 20 cents from the government would only be 90 cents, or 40 cents a day less than cost. Fraternal societies need not look to new hospitals to do for them what the existing hospitals find they cannot do.

One speaker said that the government should be asked for the land. This is nonsense. The government is not in the hospital business, and discharges its full duty when it gives 20 cents a day to aid

in the care of those who cannot pay more than $1.00 a day. The new General has 520 public ward beds, the Western 150, and St. Michael's 200. This is ample to meet for many years to come all the needs of the city for charity patients. Neither government nor the city will advance capital for new hospitals under these conditions.

Mr. A. R. Hassard, a lawyer, is reported in the Star as follows:—

"You are asked to pay from $20 to $40 a week for room and attention, and what do you get? A room that if you were shown it in a boarding house you wouldn't pay more than $2.50 or $3 per week? Meals—a little milk and the yolk of an egg. Attention—some young man just through college, who gets no remuneration for his services except the experience which he may gain by the mistakes he makes during the year, and which assist to make him a better physician when that year is up."

"When a man is sick he is the legimate prey of physicians and undertakers. Why shouldn't physicians and undertakers—yes, and even hospitals—come under a taxing official?"

Such talk either displays great ignorance, or extreme ill-temper—perhaps both. Such fulminations may be dismissed as thunder without the lightning—noise that harms no one, and can only scare those who are ignorant of every form of natural phenomena, including those people who utter such opinions as the foregoing.

The following is the latest move. It is easy to secure hospitals on such a plan. A deputation from the east end to-day waited upon the Board of Control. They requested a grant of land on the banks of the Don for a hospital site on the proposed extension of Danforth avenue. The land they ask is owned by the city, and they want a site, together with a sum of $300,000 for building.

THE FRIEDMANN "CURE" UNDER THE BAN.

On 29th May the Board of Health of New York, adopted the following resolution:—

"*Whereas* certain tests of the efficiency and safety of an alleged cure for tuberculosis now being made in this city are now being rendered unsatisfactory, unscientific and practically futile through the insistence of the originator of the alleged remedy on conditions which involve inadequate observations, inaccurate methods of administration and the insistence on secrecy regarding the substances employed in some phases of the treatment, and *Whereas* evidence is already at hand to

show that the so-called remedy not only does not fulfill the promises of efficiency and safety under which its use was at first permitted in this city, but on the contrary during its administration many patients have suffered serious and unduly rapid progress of their disease, therefore be it *Resolved,* That the use of living bacterial organisms in the inoculation of human beings for the prevention or treatment of disease shall be and hereby is prohibited in New York City until after full and complete data regarding the method of use, including a specimen of the culture and other agents employed therewith, and a full account of the details of preparation, dosage, and administration shall have been submitted to the Board of Health and until permission shall have been granted in writing for the use of the same."

This resolution does not mention Friedmann's vaccine, but it has the effect of preventing its use, as it contains living tubercle bacilli.

F. F. Friedmann on 9th June made application to the New York Board of Health for permission to use his vaccine. The Board took the matter into its consideration.

From Montreal comes the statement that a child with tuberculosis of the bone, treated by Friedmann, has died; and that a woman who had been injected developed a tumor at the site of inoculation. Dr. Eugene Grenier, of the Bruchesi Institute for Consumptives stated that the treatment was unscientific.

Many other cases are now being reported to the effect that the patients have died, or are becoming worse, or are not any better.

In the press despatches of 18th June from Berlin it is stated that the medical men of that city are almost unanimously opposed to the treatment. Professor Max Westerhoefer of the University of Berlin, said that in a post-mortem he had made on a case treated by the Friedmann method there was a marked acceleration of the tubercular process. Prof. Robinowitch, of bacteriology, stated that tubercle bacilli cultivated in cold-blooded animals were not harmless. Prof. Wolff of the University stated that the patients he had examined after this treatment showed no improvements. Dr. Schleich, who has been representing Friedmann, alone attempted to defend the treatment.

The New York Medical Journal of 7th June, while discussing the Friedmann question, remarks thus:—

"States in which adequate protection against such abuses does not exist should follow the example set by New York. In Pennsylvania the authority of the health commissioner is such, under the act which created the department, that Doctor Dixon can and, we learn, will impose upon Friedmann conditions practically similar to those which fortunately now prevail in New York city."

The press despatches of 17th June had this item:—

Dr. Friederich F. Friedmann, the Berlin physician, who announced several months ago that he had a cure for tuberculosis, sailed for home 17th June. His institute in New York was closed recently after the Board of Health had forbidden the use of his vaccine. The doctor did not say whether he would return."

We now think it is the duty of all health boards and public health officers to issue definite and positive orders for the prevention of the use of the Friedmann vaccine. Until it can be shown by trusted experts that the living bacilli obtained from the turtle is harmless, by oft-repeated experiments on animals, it should not be employed in the treatment of the human victim of tuberculosis.

CARE OF THE FEEBLE-MINDED.

To Hon. W. J. Hanna in a greater degree than to any one else the hospitals and charities of Ontario are specially indebted. He has had in the discharge of his duties as provincial secretary an open mind, and the imagination to see what was most needed. Step by step he has conducted this phase of his departmental work to its present position. The various acts he has been responsible for, such as the Hospitals and Charities Act., etc., and the Prison Farm, and the new Hospital for the Insane at Whitby, are examples of his good work.

But this is not all. The general care of the sick, the insane, the feeble-minded and the prisoner has been constantly before his mind. All over the province are evidences of his thoughtful care in the way of numerous improvements in the public institutions for the care of the foregoing classes.

The latest move is the creation of a new office for the care of the feeble-minded. This has been in the air for some time, and has now some to be an accomplished fact. The office, however, would be of no value without a suitable incumbent to fill it. We think that all will approve of the appointment of Dr. Helen MacMurchy to fill this position. She has very many of the qualities both of head and heart that fit her for it, and, in addition to these, she has unlimited energy.

We congratulate the government on the new movement in behalf of a certain unfortunate class, and we congratulate Dr. Helen MacMurchy on being chosen to put this new department into useful operation.

THE TORONTO GENERAL HOSPITAL.

The opening ceremony of the new General Hospital was held on 19th June. Mr. J. W. Flavelle, the chairman of the Board of Trustees, acted as chairman of the meeting.

Sir John Gibson, Lieut-Governor of Ontario, performed the official act of opening the door with a golden key. He then gave a short address in which he congratulated all concerned, and referred to the splendid group of buildings in the centre of the city that had been erected at great cost for the treatment of the sick and injured.

Sir James Whitney, Premier of Ontario, also gave a short address. He fittingly referred to the assistance rendered the great undertaking by the Province, the University of Toronto, the City of Toronto, and the citizens in their private capacity.

His Worship, Mayor Hocken, spoke of the city's share in the enterprize. He referred to the good work that is being done by St. Michael's Hospital, the Children's Hospital, and Mr. Ross Robertson's share in the it, and the rapid growth of the Western Hospital. He said that the completion of the new General did not end all labor in hospital work. With the growth of the city, new hospital accommodation would have to be found.

Mr. J. W. Flavelle gave an exhaustive account of the efforts of the Board of Trustees, in bringing to completion their work. He said that the Government and University had contributed $600,000, the city, with its latest donation of $210,000, had contributed in all $610,000, or the value of the site. He referred to the numerous large gifts from private sources, such as the surgical wing by Mr. J. C. Eaton, the emergency building by the Misses Shields, the nurses' home by Senator Cox, the outdoor pavilion by Mr. Cawthra Mulock, and other large gifts from the Massey Estate, Sir Edmund Osler, etc., amounting in all to about $1,500,000.

He said that the sale of the Gerrard Street property and the recent donation had reduced the outsanding liabilities to about $500,000. This sum they hoped soon to secure. He referred at some length to the means of maintaining the annual cost of the hospital, such as the income from patients, donations, the contributions of honorary governors, and $45,000 a year from the original lands grants.

ORIGINAL CONTRIBUTIONS

TERMINAL DISINFECTION IN TYPHOID FEVER AND DIPHTHERIA.*

By Geo. A. Dickinson, M.O.H., Port Hope.

NOTES ON TYPHOID.

TYPHOID fever is caused by the typhoid germ, which for practical purposes it may be said lives and grows only in the human being.

Persons who harbor the germ, may be divided into three classes. (1) *Notified cases* under treatment. (2) Mild *unrecognized cases* and concealed cases. (3) *Healthy or apparently healthy* persons who may or may not have had an attack of typhoid fever, called "carriers." Carriers have been classified as (A) precocious, (B) temporary convalescent, and (C) chronic, or into, urinary, intestinal and sputum carriers.

Percentage of carriers. About one-quarter of those who have had typhoid (convalescent carriers) continue to secrete the bacilli for some time after complete convalescence, and one or two per cent become chronic carriers. While from about one in five hundred to one in two hundred and fifty of the population are said to be chronic carriers.

Distribution of bacilli takes place through the discharges. They may be given off in the faeces, the urine or in both, rarely in the sputum.

Period of infectivity. Those having the disease may distribute the germs from the time of infection, during the period of incubation up carriers are infective so long as they continue to secrete the typhoid germs.

Origin of cases. It is impossible to ascertain the exact origin of many cases of typhoid but as every case must arise from a pervious case, or from some one harboring and distributing the germs it is interesting to consider the infectivity of the different classes of distributors. The notified cases cause only a small percentage of the cases. If there be some five thousand notified cases under medical care each year in Ontario there would doubtless also be another five thousand or more persons who had a mild unrecognized ambulant type of the disease. And there would probably also be as many as fifteen hundred car-

*Read at the meeting of the Ontario Health Officers' Association at Toronto, Thursday, May 29, 1913.

riers. There is every reason to believe that only a small percentage of all the cases develop from recognized cases and this is doubtless due chiefly to a lack of proper investigation. For instance in the City of Providence in 1912 the number of secondaries in families was five per cent. of the cases, and it was estimated that as a usual thing the number of secondaries in Providence would amount to about ten per cent. And it is said that in the City of Toronto hardly any secondaries develop at all. So that if we make the allowance for error it seems probable that a large per cent. of all the cases of typhoid develop either from the unrecognized cases, from the concealed cases or from carriers. The chronic carrier is certainly a factor of very great importance in the spread of the disease. Not, however, on account of the number of cases he may cause but because he is the link between one outbreak and another. We know very well that the majority of the germs of typhoid live but a few hours outside the human body while the life of all typhoid germs outside the body is usually measured in days.

Means of prevention. To deal effectively with the disease we must have control of all those who harbor and distribute the germs. And as we have control only over the notified cases which probably cause but a small percentage of all cases our limitation are apparent and so much so that the following statements seem an exaggeration, viz:—"The contraction and spread of the disease can almost certainly be avoided by the strict observance of the rules set forth in this pamphlet." To prevent typhoid two things only are necessary, pure water and drainage." "Typhoid fever is so easy of prevention that its marked increase in recent years is a disgrace to communities where it has become epidemic."

Management of a notified case. Perfect cleanliness and proper care in handling and disposing of the patient's discharges is the one and only way to prevent secondaries. Cleanliness from the time of infection up to the final disappearance of the bacilli from the discharges. Keep the patient, especially the hands, scrupiously clean. Wash articles which he has handled in hot soap suds and sterilize by heat or steam the bed pan and the discharges. Attendants must wash hands often, and always before taking meals or handling foods. As about twenty-five per cent. of those who have had typhoid continue to secrete the bacillia for some time after convalesence the urine and faeces should be examined monthly for a year for bacteria, so as to discover carriers.

Unrecognized cases. Over the probable five thousand concealed or unrecognized cases in Ontario we have no direct control, and except to protect our food and water supplies, to prevent the spread of infection

by flies and to teach the community habits of cleanliness we can do little.

Carriers. We can search for carriers by using the Widal test and by examining the discharges of suspects for bacilli. And if found instruct the carrier to keep the hands clean and never touch food without making free use of soap and water. And after using the urinal or water closet the hands must be washed in soap and water and dried on an individual towel after which the hands may be rubbed with alcohol or Cologne water. There is no sure way of curing a typhoid carrier.

All foods and drink should be protected from contamination by unsanitary modes of handling and from flies. And as the prevention of typhoids is to a very great extent a matter of personal cleanliness the chieldren of the public schools should be taught habits of personal hygiene.

NOTES ON DIPHTHERIA.

Cause of Diphtheria. It is caused by the bacillus diphtheriæ which may be found in the pharynx, the larynx, the nose or in the discharges from the mucous surfaces of those ill with the disease. The bacilli may also be present in the discharges from the ears, from the vagina or skin rashes in various parts of the body. The germs may also be found in the throats of well persons called "carriers" on in those ill with a concealed or unrecognized attack of diphtheria.

Classes of Carriers. *Convalescent* carriers are those who harbor the bacilli and are just recovering from an attack of the disease. *Precoccious* carriers are those who are carrying the bacilli and who sooner or later develop acute symptoms of the disease. *Healthy carriers* are those who show no symptoms that they are harboring the germs of the disease.

Percentage of Carriers. In districts where no outbreaks of the disease have occurred for some time there may be no carriers. In urban districts or in institutions where epidemics are common the percentage of carriers may vary from ten to ninety per cent. of the population. At one time or another a large proportion of the population appear to be immune to the effects of the bacillus and as healthy carriers harbor the bacillus usually for only a few weeks it is probable that at any one time the total number of carriers may not be more and may vary from one-fifth to one-third of the total population of the locality invaded. During an outbreak there may be ten times as many carriers as cases.

Circumstances Affecting the Number of Carrier. All the members of a household where diphtheria is present may at one time or another have the bacilli in their throats if they are in close contact with the patient and are careless in their habits of cleanliness. Those with throat troubles and those ill with and recovering from scarlet fever are especi-

ally liable to harbor the bacilli. But virulent bacilli are often found in the throats of perfectly healthy persons.

How long may Bacilli infest the Throat. The healthy carrier, the concealed case and the unrecognized case usually harbor the bacilli for about four weeks all told while the chronic carrier or the person with an attack of chronic diphtheria may harbor the bacilli for years. The bacilli sometimes appear intermittently. They may be present to-day and then to-morrow a negative result may be obtained and in a few days more a positive result and even after three negative results they may again appear in the throat. A person may be a source of infection during all the time that the bacilli are in the throat.

Spread of the Disease. Every one who harbors the bacilli may under favorable conditions act as a distributor. But one who harbors the bacilli may be closely associated with susceptible persons for weeks and not infect any one because bacilli are not readily detached from moist surfaces or moist mucous membranes. And unless there be marked discharge or utter carelessness infection may not take place. It is said that a teacher who harbored virulent bacilli in her throat taught a kindergarten class for three months and a half and did not transmit the disease to any one. We know, too, that many cultures of the Klebs-Loefler bacillus from well persons are non-virulent. Deep breathing will not disseminate the droplets of sputum containing the bacilli but the act of sneezing, coughing and spitting readily scatters the bacilli in droplets of sputum for several feet, but usually not more than a yard around the distributor. And if these particles of sputum containing the virulent germs should lodge on the mucous membrane of the throat of the succeptible the disease may become established there. A very probable way is that a person ill with some chronic nose or throat trouble becomes a chronic carrier and thus harbors the bacilli from a previous outbreak; he then contracts a cold and the increased secretion and the coughing, spitting and sneezing which results therefrom readily disseminates the bacilli. It will thus be seen that the chronic carrier is a very important factor in the spread of the disease. Not however on account of the number of persons that he may infect but because he is the link between one outbreak and another. Children are very subject to colds, they are apt to get the hands soiled with nasal secretion and saliva when coughing and sneezing. Then they may smear pencils, cups, towels, toys, etc. And if these discharges contain the bacillus diphtheriæ the way of the fresh moist germs from the throat of the infected to the well is more or less easy and direct. Then again we may have milk infected with the germs as well as other food stuffs and be a means of disseminating the disease.

Degree of Infectivity of the different classes who harbor the bacilli. The *diagnosed case* under the care of a physician should not often be a source of infection. And it is probable that the secondaries in diphtheria do not amount to ten per cent. of the notified cases. In the city of Providence the secondaries amounted to six and two-thirds per cent. of the primaries. The chance of a child in a family where diphtheria was present contracting the disease was one in five, or twenty per cent.; the chance of an adult becoming infected was only one in forty, or two and a half per cent. Thus in Providence children between two and six years old were eight times as liable to get the diseae as adults and the women were three times as liable as men. So that *carriers and the concealed and the unrecognized cases must be responsible for something over seventy-five per cent. of all the cases of diphtheria.* It thus seems plain that it is no easy matter for the guardians of the public health to "stamp out the disease"—it hardly seems possible at present.

Means of Prevention. If we would control the spread of infection thorough cleanliness throughout the whole course of the disease up to the final disappearance of the bacilli from the throat and nose are necessary. The patient's hands must be kept clean and soiled linen, cups, knives, toys, pencils, and other things that may have become contaminated with the discharges should be either destroyed or cleansed in boiling water and soap. If the patient be subject to spells of coughing or sneezing or be careless in spitting the chances of spreading the infection is greatly increased. Such a patient should be instructed to hold a handkerchief in front of the face when sneezing or coughing and to expectorate in a piece of cotton which should be burnt. The attendant should make frequent use of soap and water and always wash the hands after assisting the patient, handling soiled linen and always before handling food or taking meals. Members of the household should have a bacteriological examination made of two or more swabs with a half day interval taken from the throat and nose both for diagnosis and release.

Carriers, Concealed Cases and the Unrecognized Cases. Over these we have very little or no control. We can look for carriers among members of a household where we have a known case and if carriers are found give directions about sneezing, coughing, etc., and prescribe antiseptic gargles and give warning in regard to the dangers of spreading infection through the nose and throat discharges. There is no satisfactory way of ridding the throat of the bacilli which survive so long in chronic carriers. On account of the concealed and unrecognized cases the control of diphtheria is to a considerable extent a matter of personal hygiene. With correct habits there is no great danger of an

adult who is a carrier or who has an attack of the disease infecting a well person. With children on account of their being subject to colds and from their careless habits of coughing and sneezing and their liability to get the hands smeared with the infectious discharges the case is very different.

TERMINAL DISINFECTION.

As a means of preventing the spread of typhoid fever and diphtheria nothing has been said about terminal disinfection. It should we think be discontinued, for the following reasons, viz:—

(1) It is quite impossible by the burning of sulphur and the generating of formaldehyde gas, the methods usually employed in towns and rural districts to disinfect mattresses, carpets, cushions, pillows and such articles in the sick room, as these gasses have very little power of penetration. Such disinfection is nothing more than a fumigation and at best is only a surface disinfection. Sprinkling and spraying with liquids is little better. So that if the fresh living germs of typhoid or diphtheria should become embedded in cushions or mattresses there is no guarantee that they would be destroyed by this fumigation.

(2) Terminal disinfection is based on a mistaken theory concerning the diffusion of the virus of these diseases. The typhoid germs are not transmitted through the air of a room, neither are the diphtheria germs, except by sneezing, coughing and spitting, and this operates for only about a yard about the patient. And should these germs fall on cloth goods, doors, floors or walls they stick there and become fixed and it is no easy matter to remove them. And in any case they do not get to the mouth unless they are carried there by the hands or by contaminated food or drink. And if diphtheria germs do light on the floor or on other inanimate objects they lose their vitality very quickly and become harmless.

(3) Bacteriologists say that typhoid germs are more hardy than those of diphtheria, but even the typhoid germs do not long survive strong light or even diffused light, much drying, want of nourishment or unsuitable temperature. Some strains are hardier than others and under favorable conditions may live for weeks, but under the conditions usually found in a sick room they die off in a few days or even hours. They are said to live only a few days in market milk and in water over ninety-nine per cent. of them are dead at the end of a week. So that if water causes typhoid fever it must have been rather receintly polluted. For practical purposes the growth of either typhoid or diphtheria germs outside the human body may be neglected.

(4) Diphtheria is not spread through the air except by droplet infection, therefore it does not extend from one family to another living

in the same house or from one person to another only and unless there be commingling of the two families or of the two persons and an actual transference of the rather fresh moist discharges of the throat or nose through coughing, etc. One writer says that of two hundred and ten maids employed in families suffering from diphtheria only one was attacked by the disease and in this case every member of the family was attacked and this maid assisted in their care. Of two hundred and seventy-one males in these families five contracted the disease, and of six hundred and seventy-three adult females twenty-eight contracted it. If the germs flew around the sick room so as to light on walls, ceilings, furniture, etc., during this aerial flight of the germs. Would not all the inmates or at least the attendants contract the disease? There are hospitals for diphtheria and othed infectious diseases where no attempt whatever is made to disinfect the wards after the termination of a case and where one case rapidly follows another and no instance whatever has been recorded in which infection has been attributed to the neglect of terminal disinfection.

(5) Typhoid fever is safely treated in the wards of a general hospital. All that is necessary in order to avoid secondaries is to destroy the infectious discharges and to prevent contact infection by the employment of aseptic methods. No amount of terminal disinfection, no amount of isolation, of separation of the sick from the well will prevent the spread of either typhoid or diphtheria if the patient's discharges be carelessly dealt with. In the management of typhoid and diphtheria all that is necessary is that the attendants take the same care to avoid infection as the surgeon does in the treatment of a surgical case. The free and frequent use of soap and water, the prompt destruction of all discharges is as a rule quite sufficient.

(6) It is said that bacteriologists have amply demonstrated the difficulty or even the impossibility of living germs of disease being transferred by air under conditions which usually obtain in the sick room. As the air really plays no part in the transmission of contagium except through droplet infection, it is hardly possible except by great carelessness for the room and the things about the room to become contaminated and this is fully shown by the success obtained in treating different contagious diseases in the same open wards without any air isolation or any terminal disinfection. Room fumigation survives in medical practice when the analagous procedure in surgery of spraying the table, walls, etc., of the operating room has been discontinued. Let the physician in the management of infectious diseases take the same precautions to prevent the transference of contagium as the surgeon does in his practice to prevent septic infection and all will be well.

(7) Terminal disinfection encourages the belief that inanimate objects harbor and convey infection when they really play but an insignificant or no part at all in the dissemination of disease. And if after the final disinfection, say in diphtheria, secondaries should develop laymen are quick to attribute the cause to a failure of the disinfection. Why not tell the people that the disease had been carried by some one who had harbored the bacilli in the throat? And that infection is spread by persons and not by things.

(8) If we continue to lay so much stress on this final disinfection, this final cleaning up, how can we teach correct habits of personal hygiene and the continuous daily cleanliness which is so essential to prevent the spread of infection? And why not tell patients and attendants that the development of secondaries depends in very great measure upon themselves. And with care and cleanliness there should be no secondaries. Bacteriologists say that from five to ten per cent. of the people who are called clean carry on their hands colon bacilli. If this be so with clean people what would we expect of the class we look as not being clean? Colon bacilli is considered a very good proof of the presence of fecal matter. A water supply which contains colon bacilli is said to be dangerous. But here we find from one in twenty to one in ten of the good clean people carrying on their hands unmistakable evident of fecal matter and smearing clothing, doors, towels, food and faces with it, and maybe eating myriads of fecal bacilli! Horrible you say! But this is not all, where we find colon bacilli there also we may find typhoid bacilli! Does it not seem and plainly so that the eradication of tpyhoid fever is very much a matter of personal cleanliness? And that the liberal use of that univeral antiseptic—*good old-fashioned and unequalled soap and water*—good common soap of all kinds will go a long way to help in preventing typhoid fever when isolation and terminal disinfection have utterly failed? And so long as the butcher, the baker, the dairyman, the delicatessen man and the green grocer continues to carry on his trade ignoring the simple rules of cleanliness, just so long are we likely to have typhoid with us?

(9) We now know that in every community there are many carriers and many other persons suffering from unrecognized attacks of diphtheria or maybe typhoid and that these persons are probably responsible for a large percentage of all the cases of these diseases. How can we tell the real truth about carriers and the truth about the unrecognized cases if we insist so much upon this terminal disinfection upon which the laity place so much dependance?

(10) The laboratory worker is constantly receiving for examination myriads of deadly organisms. He spends day after day in their

study, in their examination and in their growth. And he makes these investigations with little or no thought of becoming infected. He knows where the bacilli are, he knows they do not fly around the laboratory lighting on floors, chairs, carpets, clothes, etc., and he knows that they cannot and will not get to his mouth and infect him except by being carelessly carried there by his own hands. He knows the life history of these organisms; there is nothing mysterious in the way he protects himself from infection. He puts his chief dependence in common sense and common soap and such a proceeding as terminal disinfection could of necessity play no part in his daily routine in the laboratory. The physician treating a case, say of diphtheria, has the same knowledge of the habits, growth and where-abouts of the deadly germs. Let him use the same preventive measures and he and the attendants should possess the same safety in the sick room as the bacteriologist does in his laboratory.

(11) Abandon terminal disinfection and such occurrences as the following should not happen, viz: — The health authorities of a certain place ordered the disinfection, in February, 1913, of a house where a person had in June, 1912, died from tuberculosis, and it is is said that the longest time that tubercle bacilli have been known to live in New York tenements under condition very favorable to growth was three months, yet this was eight months after the patient had died. And it so happened that at the time of the person's death the regulations requiring terminal disinfection of premises after death from tuberculosis had not been issued. These regulations were issued in August, 1912. A layman who had no experience in the use of disinfectants was ordered to do the work. Again in 1913, a board of health demanded that the purchaser of some furniture should procure a certificate that such furniture had not been obtained from an infected house before they would allow the furniture to be brought into the municipality over which they had jurisdiction. The public has long been led to believe that the sick room and the things about the room are apt to retain and spread infection and it is not long since houses and their contents were destroyed to prevent the spread of infection. And recently those in authority ordered the removal of a family, a member of which had just recovered from an attack of diphtheria. The family lived in an adjoining building while their residence was being fumigated and a part of their furniture and some bedding was being burnt.

(12) If disinfection be of great value it should during an outbreak, say of diphtheria, be used daily for the cleansing of school rooms. But I think that a little calculation would convince any one that the cost would be prohibitive. Indeed epidemic after epidemic in schools has

been handled with perfect success without disinfection of school rooms and by keeping the schools open.

(13) The real need for disinfection is confined almost entirely to the patient, to the patient's hands and the things which he may handle, to the patient's discharges and the things which may become contaminated by the patient's discharges, and to the attendant and especially the attendant's hands, because the hands go so frequently to the mouth and the need for this disinfection is urgent and continual, and without this continual daily disinfection the final cleaning-up is well nigh useless. It is true that cases might arise in which one would feel like ordering a thorough disinfection at the termination of a case, for instance where there had been an utter lack of cleanliness throughout the course of a disease and where the health officer felt that something ought to be done. In such a case he might feel justified in ordering disinfection if for nothing elese than a lesson in cleanliness.

In putting these notes on terminal disinfection together I have purposely placed emphasis on what may be thought to be extreme views in order to call forth as much controversy as possible and in order to get from the meeting an expression of opinion on two points, viz.:— What is the value of terminal disinfection. And what truth if any is there in such expressions as the following, viz.:—"The typhoid epidmeic of to-day is an unpardonable crime against the world." " . . . . typhoid epidemics are preventable by well-known and thoroughly tested methods, which, if not adopted, render the authorities guilty of murder."

In closing we may add that much that has been said about terminal disinfection in these two diseases applies with equal emphasis to some other contagious diseases. And recently it has been stated by a committee of the American Public Health Association that:—" . . . terminal room disinfection, as at present practised by the average board of health, has little effect in controlling the spread of infection and that it appears so far as figures are available, that the percentage of return cases is practically the same in those communities where disinfection is compulsory as in those where it is not required."

It has been a difficult task to get together and clothe in appropriate language these few random thoughts. It is hard to write anything instructive on a subject about which, not being a bacteriologist, one knows very little, but I have proceeded along the lines that the uninstructed may propound views, may ask questions, which the wise only can answer, and in the answers great truths may be brought out. If any good really does come from these efforts it will be due to the Program

Committee in being so reckless as to suggest that one who is not an authority on a subject should present a paper. And to the authoritative answers that may be brought out in reply. The object of these few notes is not to lay down rules of guidance for the management of these diseases, either for myself or any one else but on the other hand simply and solely to have the whole matter thoroughly discussed.

P.S.—The above paper has been criticised somewhat severely. Replying to only one argument used against it, it is but right to say that it is not intended in any way as a criticism of the regulations requiring disinfection after certain communicable diseases. These regulations are mandatory and it seems to me that any medical man who does not loyally enforce these regulations should not hold the office of M.H.O.

G. A. D.

DISPOSAL OF DOMESTIC SEWAGE IN SUBURBAN AND RURAL AREAS,

By Robt. E. Wodehouse, M.D.

THIS paper is intended to be a practical discussion of the above subject, from the point of view of a Medical Officer of Health, rather than a technical, engineering treatise of the same.

Fuller's work, 1912, defines sewage as "the spent water supply of a community, together with those household wastes which are removed by water carriage in underground channels, supplemented in some instances by street washings and industrial wastes."

The chemical constitution of sewage might be approximately represented in grams per capita daily as follows:

Nitrogen (total	16 grams.
Chlorine	18 grams.
Oxygen (consumed, boiled 5 min.)	20 grams.
Suspended matter (mineral, 10 grams), (organic and volatile, 50 grams), total	60 grams.

These suggested proportions of constituents vary exceedingly in different houses, different localities, and even in the same place at different hours of the same day. Another important constituent of sewage is bacteria—estimated at 320,000,000,000, passed per capita per day.

When the day's, or a portion of a day's, sewage is gathered in a receptacle it will consist of a fluid portion and an undisolved or solid

*Synopsis of paper read at the meeting of the Ontario Health Officers' Association, Toronto, 29th May, 1913.

portion. This solid or undissolved portion goes to make up sludge and is held in suspension. Part of suspended portion will float and part will sedimentate.

Modern requirements in the disposition of domestic sewage are that sewage be conveyed from the place of origin to the place of treatment in underground channels, free of offence to the public. The end product of treatment must be one which has no objectionable odor and will not contaminate soil or water. Water or soil may be contaminated by sewage owing to

(a) bacteria contained in the sewage,
(b) bacteria originating in the sewage,
(c) it may be an injurious effect on the land,
    (1) as souring of the soil,
    (2) saturating the same, making it undrainable and unfertile or non-productive,
(d) coloring matter in the sewage,
(e) sewage utilizing all the available oxygen, or sufficient to starve out fish and other contained life requiring same. Finally, it may be
(f) the production of ptomaine poisoning in the water, due to the action of putrefaction which has taken place in the sewage—the bacteria being dead, but the resulting toxines, in their bodies, excrete by their bodies during life as well as those formed during the decomposition of the materials the bacteria were working on forming poison.

The methods undertaken in urban areas to accomplish this ideal end result have been numerous in their principle, crude in the early history of the work, and exceedingly developed in mechanism, cost and efficiency of late.

The present-day knowledge of sewage disposal resolves itself practically into the reduction or oxidation of all the content which can be reduced or oxidized; the separation or extraction of all non-reducible solids contained and the disposal of the resulting sludge and liquid effluent.

This oxidation or reduction is not so much a straight chemical as was one time thought. Bacteria are now known to play a most important part in the change.

The treatment equipment consists of a storage or sedimentation tank, a septic tank, a sludge drying bed, and an effluent bed. The Imhoff or Emscher tank answers the purpose of the first two in one. The sludge drying beds are of crushed stone or similar material of 1½ inches size, being 6 to 12 inches in depth, in concrete containing walls

and bottom. The effluent beds may be of natural soil (broad irrigation) surface, or under tiling distribution; artificial soil (intermitent sand beds); or be made of crushed rock, in beds fed from bottom or top (contact beds), or with sprinklers (percolating beds).

Cost per Head for Installations and Maintainence.—The cost of installation depends on the system of treatment installed. The choice of system of treatment depends upon endless local conditions.

(The calculations for tables below are based upon (1) 100 gals. sewage per day per capita, five people to a household; the acreage per 1,000,000 gals treated is based upon a plant for 156,000,000 gals. plant).

Average per 156,000,000 gals. treated 13,000	1,200	300	80
Acreage per household 1-24	1-260	1-1045	1-3900
Cost of construction per acre..$1,500	$5,000	$35,000	$50,000
Cost of const. per household ..$52.50	$19.23	$33.65	$12.82
Cost of maintenance per 1,000,000 gals. treated	24.91	20.03	15.50
Cost of maintenance per household per year (200,000 gals. per year	4.98	4.00	3.10
Cost of treating effluent per 1,000,000 gals. (chlorinating).	2.43	2.73	1.50
Number of people accommodated per acre ..... 500 to 1,000	1,200	5,000	10,000

The basic figures have been obtained from Kinnicutt, Winslow & Pratt's book on sewage disposal.

Economic Solution of the Disposition of Domestic Sewage adapted to a single building or units of buildings numbering up to 100. Broad irrigation is the most feasible owing to its simplicity of construction, maintenance and repair. The entire equipment for treatment would consist of:

1. Sewers from origin to treatment plant.
2. Imhoff tank and automatic dumping retention chamber to hold effluent.
3. Conveyors from retention chamber to different parts of treatment bed.
4. Drying bed for sludge.
5. Broad irrigation beds.
6. Booster pumps if plant cannot be operated by gravity.

Area of drying bed required for sludge is 1 cub. ft. for every household. Imhoff tank costs about $7.20 a household. Cost of operation of complete plant is about 25c a household per day.

In concluding, the writer desires to state that he has confined his remarks to the water carriage of sewage and treatment of same in this state. It has been his experience to find in small communities water carriage in individual houses and groups of houses, with the aid of gasoline pumps supplying necessary pressure from wells. In the same blocks other residents maintained incinerator closets and other disinfectant sanitary closets. The water carriage was very little more expensive and gave numerous other advantages in domestic economy, not the least of these being fire protection. The water carriage is nearly always sanitary and nuisance free. It has therefore been deemed unnecessary to discuss non-water carried sewage, owning to the incompleteness, insanitary wroking, usually nuisance creating and seldom accommodating kitchen or laundry refuse water.

Fort William, May 2, 1913.

MR. ABRAHAM FLEXNER'S REPORT UPON MEDICAL EDUCATION IN THE BRITISH ISLES.

By Lawrence Irwell.
(Statistician).

HAVING failed to find any definite and detailed criticism of Mr. Flexner's *Report* on British medical colleges in any publication, educational, medical or general, the writer has decided to publish a short paper to point out a few of Mr. Flexner's inaccuracies and inconsistencies. He proposes merely to "scrape the surface." In common with Mr. Flexner, he is not a physician. Had any physician published an examination of the *Report*, he would have remined silent.

Mr. Flexner's *Report* upon American Medical Colleges was of undoubted benefit to the public and to the medical profession. One result of it has been that a number of commercial schools with low standards and inadequate equipment have ceased to exist. Nevertheless, the *Report* indicates that its author is not an expert on medical education. Indeed, if *Who's Who* (American) is to be relied upon, he cannot be an expert on this form of education, for his sole experience as a teacher appears to have been obtained at a high school at Louisville, Kentucky. Signs are not wanting that Dr. Flexner has taken Johns Hopkins Medical College as a standard and has condemned, either mildly or forcibly, all medical schools which fall below this standard in some particular. This is the method which most laymen, including the writer, would probably have adopted. The most serious objection to it is that it ignores the

personality of the teacher. For example, any intelligent student could have learned more physics from Oliver Lodge when that gentleman was demonstrator (lecturer) at University College, London, even if the apparatus had been very meager, than the same student could have absorbed from certain other so-called professors with the aid of unlimited apparatus. Moreover, although Johns Hopkins trains excellent laboratory workers and teachers, there exists a widespread opinion among medicol men that its system does not produce as able practising physicians as are graduated from some other American medical colleges. In a few words, the average Johns Hopkins general practitioner cannot be classed as a thoroughly practical man.

Mr. Flexner realizes, no doubt, that medical education is controlled, like everything else, by the process of evolution. The history of medicine is, therefore, of paramount importance in criticizing medical education. Upon the former topic, however, Mr. Flexner does not appear to be very well informed. On page 156 of American *Report*, the following words appear:

"Allopathy was just as sectarian as homeopathy. Indeed, homeopathy was the inevitable retort to allopathy. . . . The champion of big doses will be confronted by the champion of little ones. But now that allopathy has surrendered to modern medicine, is not homeopathy borne on the same current into the same harbor?"

To learn from Mr. Flexner—or from any other source—in what country an allopathic school of medicine existed at any period in the world's history would be most interesting. Prior to Hahnemann's time the word "allopathy" did not exist. Hahnemann "coined" that word. He was not, however, a mere advocate of small doses in opposition to big ones; this system of therapeutics involved much more than that. Had he merely advocated the ingestion of minimum quantities of crude drugs, without insisting upon his peculiar method of making diagnosis, and without his "potency" procedure in dispensing medicines, he would not, in all probability ,have aroused the great amount of opposition which he did arouse in Germany. Let us hope that Mr. Flexner's knowledge of the history of medicine generally is superior to his knowledge of the history of homeopathy.

In the *Seventh Annual Report* of the Carnegie Foundation, President Henry S. Pritchett refers (p. 122) to Mr. Flexner's "carefully prepared study of medical education in England, Germany and France." The "English" Report, of course, includes the medical colleges of Scotland and Ireland. The casual perusal of it, however, appears to indicate that President Pritchett's eulogy of the British part of the *Report* cannot be justified. The writer is not sufficiently familiar with medical

education in Germany or France to criticize Mr. Flexner's laudations or denunciations of medical education in those countries.

Page 51 of European *Report*: "Almost all the Cambridge and Oxford students first obtain a degree in arts; but this is required only at Dublin University." The Registrar of Oxford University authorizes the statement that Oxford continues to require the B.A. degree before the Bachelor of Medicine degree can be secured. By taking the B.A. degree through the Natural Science School (course), that degree can be obtained in four years, the M.B. three years later.

Page 126.

"The research journals bear constant testimony to the activity of Starling's laboratory at University College, Halliburton's at King's. . . . Schäfe'r at Edinburgh—to pick out only the best known."

Page 136.

"The only really active laboratory in Edinburgh is the independent research laboratory of Professor Ritchie, not a part of either school."

Dr. Edward Schafer is professor of physiology at Edinburgh. According to Mr. Flexner, his laboratory is not "really active," although, according to the same authority, "the research journals bear constant testimony" to its activity. These assertions appear to be contradictory. Yet President Pritchett writes of the European *Report* as "carefully prepared."

The matriculation examination of the University of London consists of five subjects, viz.: English—two papers covering three hours; mathematics—two papers, covering six hours; Latin or Greek or chemistry or botany or physics—a paper of three hours. The other two subjects can be chosen by the candidate from a list of about a dozen topics—German, French, history, logic, advanced mathematics—a paper of three hours in each subject: Let us contrast Mr. Flexner's opinion of this examination with President Pritchett's opinion of a similar, but less difficult examination before entrance to Oxford, or as soon as possible after entering Oxford. Candidates for the London matriculation examination must be at least sixteen years of age. Failure in any subject means, of course, that the whole examination must be taken a second time. Thirty years ago this examination consisted of about twice as many subjects as it now does. It was denounced with considerable regularity and some vigor by certain distinguished physicians on the ground that the amount of work necessary in preparing for it was likely to injure the health of growing boys.

Mr. Flexner's Opinion (European *Report*, p. 53.

"The real difficulty is not that matriculation for the London (Bachelor of Medicine) degree is harder than the entrance basis adhered to by the (medical) corporations, but that neither represents a sound secondary schooling from the standpoint of medical education."

President Pritchett's Opinion, (*Fifth Annual Report* of Car- . . negie Foundation, p. 72).

"What sort of a test can be devised which will try the student's general knowledge of fundamental subjects and his ability to use his mind? The English university responsions examinations furnish some suggestions by way of reply to this question. Students entering Oxford or Cambridge undergo no such detailed examinations as are exacted of students entering Harvard, or Columbia, or Princeton, They are, however, called upon to pass examinations in elementary mathematics, in Latin and in Greek, which test their fundamental knowledge of these subjects and their ability to think. The examinations are of such a sort that they cannot be met by a few months' of cramming. . . . The student who is to be admitted must pass the examination entirely; if he fails in part, he fails of admission. Imagine for a moment what an effect would be produced if all the candidates for admission to Harvard, and Yale, Princeton and Columbia, were examined in elementary English and rejected altogether if they proved unable to write good idiomatic English!"

In making the above assertion, Mr. Flexner would have shown a sense of fairness if he had informed his readers that before the candidate for the London M.B. can begin his strictly professional studies, he must "take" another examination, "to be passed, as a rule, not less than nine months after matriculation." Professional studies pursued before passing the examination in question are not allowed to "count toward the four-and-a-half years' course subsequent to passing this examination," which consists of three subjects—physics, inorganic chemistry, and general biology—two papers and a practical examination in each. The entire examination occupies three days—six hours per day. Mr. Flexner's criticism now simmers down to the fact that German is not a "compulsory" subject, as it is at Johns Hopkins, which institution is clearly taken as a standard by the expert of the Carnegie Foundation. This

criticism is to some extent answered by Mr. Flexner himself when he says (p. 54: "Not only is a knowledge of German not required—its necessity is not even keenly felt." For English or American physicians to *know* German is more important than for German physicians to *know* English. Nevertheless, the following points should be emphasized:—The average Johns Hopkins M.D. cannot be said to *know* German; the average German physician has little *knowledge* of English. If English were a "compulsory" subject in the pre-medical course at German universities, so much praised by Mr. Flexner, and if German physicians as a class knew sufficient English to read and translate that language, would the following important announcement appear on page 122 of *Report* of Carnegie Foundation for 1912?:

"The interest which has been displayed in the last bulletin (Medical Education in Europe) . . . has been most gratifying. Following the suggestion of a number of those most actively interested in medical education and medical practice in Germany, an edition of the bulletin will be printed in German."

On page 195 Mr. Flexner congratulates Oxford upon having called Sir William Osler from Baltimore. Sir William is, therefore, according to Mr. Flexner's view, an authority upon the practice of medicine. As is well known, the Regius Professor of Medicine at Oxford is a therapeutic nihilist. On page 192 Mr. Flexner writes in a condemnatory manner of the methods of English physicians and expounds some well-known Johns Hopkins laboratory ideas which do not always in private practice give results satisfactory to patients.

European *Report*, page 192, Mr. Flexner's Opinions.

"The validity of the scientific attitude does not depend upon accurate and exhaustive knowledge of the particular case in hand. . . As a matter of fact, scientific method may guide the physician, whatsoever complex of factors he is handling, not only in handling what is mathematically exact. . . . except in isolated instances, the English physician is still of the intelligent emperical type."

Encyclopaedia Americana, vol. 10 (no page numbers), article on "History of Medicine," by Dr. Osler—last par. but one of article. "Yet after all the psychical method has always played an important though largely unrecognized part in therapeutics. It is from faith which buoys up the spirits, sets the blood more freely, and the nerves playing their part without disturbance, that a large part of all cures arises . . ., faith will enable a bread pill or a spoonful of clear water to do almost miracles of healing when the best medicines have been given over in despair. *The basis of the entire profession of medicine is faith in the doctor, in his drugs and his methods.*" (Italics are not in original).

The writer begs every reader to note that Sir William Osler is Mr. Flexner's authority, not his. Experience alone can enable a physician to determine when to treat diphtheria with anti-toxin and when to use "clear water"; when to employ bread pills to relieve the pain of angina pectoris, and when to prescribe the inhalation of nitrite of amyl. If Sir William Osler's idea of what constitutes the basis of the entire profession of medicine is correct, scientific treatment of disease necessarily involves empiricism. I have, however, the highest authority for asserting that what I believe to be the most common of all serious diseases, and one of the most difficult to cure—gonorrhea—cannot be cured in the true sense of the word, by faith, bread pills, or even by "clear water in the form of hot douches. This evidence, which is unquestionably reliable, appears to be in direct opposition to Sir William Osler's opinion, and it has reference to a disease which is fearfully prevalent in the United States, and probably in the United Kingdom.. I am informed that the only treatment of gonorrhea which cures in the proper sense of the term must be classed as to a great extent empirical.

Page 14 (of European Report): "Oxford and Cambridge, for centuries a collection of colleges of secondary school grade, have begun to develop under the eyes of the university, scientific institutes of modern type related to all their constituent colleges."

What the exact meaning of these words may be, Mr. Flexner alone can explain. The colleges have not been as low educationally as "secondary school grade" during the past forty years—probably they have not been of this low grade for a much longer period, if they ever were. The colleges are an integral part of each university, Oxford and Cambridge, and they do a considerable portion of the teaching; the university does most of the teaching for "honor" as opposed to "pass" degrees. It alone can confer degrees, consequently it alone examines for degrees. Mr. Flexner's slur upon the educational standard of the Oxford and Cambridge colleges shows how very little the expert of the Carnegie Foundation knows of the educational methods of the two old English universities.

The British system of medical education is designed to train men for the practice of medicine. Although it has certain faults, it, nevertheless, does this very well. It does not train large numbers of laboratory workers of the German type or the Johns Hopkins type. It does, however, produce a small number of investigators of high rank.

Mr. Flexner's *Report,* so far as British medical colleges are concerned, is probably as accurate and reliable a volume as any non-medical man who has never been a teacher in a medical institution could compile. A complete and thoroughly satisfactory report upon all the med-

ical colleges of the British Isles could only be made by a well-educated and experienced physician who for some years had taught in a medical college of high rank. To produce such a work would necessitate at least six months' residence in the United Kingdom.

425 Jorter Ave., Buffalo, N.Y., U. S. A., June 13, 1913.

PUBLIC HEALTH LEGISLATION IN THE PROVINCE OF QUEBEC.

By John A. Hutchinson, M.D., Westmount, P.Q.
Member of the Provincial Board of Health.

PUBLIC health legislation in this Province began in the reign of Louis XVI. when Canada was under the fatherly protection of the French regime.

In 1663 a system of registration of baptisms, marriages and burials was ordered by the King of France, and it was enforced in Canada. This was a part of the Civil Code, and it was ordained that the clergy keep the registers. The ordinance reads as follows:

"There shall be kept in each parish two registers, in which to inscribe the baptisms, marriages and burials; one shall remain in the hands of the parish priest and be considered as the original, the other shall be turned over to the judge royal and recognized as a copy."

This system proved to be a good one and furnished much useful information. It has been largely continued ever since in the Province of Quebec, but it is lacking in certain points, in order to give an accurate statement as to births. However, registration of the non-baptized was provided by the Civil Code at a later date.

In 1893 very comprehensive enactments were passed by the Legislature, enabling the Provincial Board of Health to obtain a very full record of all births, marriages and deaths. Quebec and Mexico were the first on the continent of America to make use of the International Nomenclature of Deaths.

In 1677 the Council of Quebec made regulations about the inspection of bread, and again in 1707 an order was enforced that "no butcher could, under penalty of confiscation and fine, slaughter an animal, without previously notifying the Procurer of the King, so that it might be determined whether the animals were or were not in a fit condition to be sold to the public." Also regulations were made at this period, to enforce cleanliness of the streets and dwellings. These sanitary laws

and regulations were marked by good sense and intelligence. Considering the period of time and the crude state of the new country, it strongly indicates that those in authority were doing what they could to maintain the health of the inhabitants. Many years went their way before anything further appears to have been done to protect the health of the people.

Canada passed under English domination. In the year 1795 typhus was brought to our shores and created a panic. Strong measures were taken and vessels coming from infected ports were forcibly inspected and frequently quarantined. As early as 1815 medical vaccinators were appointed by the Government and every one was urged to be vaccinated, as smallpox at that time was menacing the people. In 1832 cholera invaded Quebec, Three Rivers and Montreal. Health Boards were organized and a quarantine station was established at Grosse Isle.

In 1887 the Provincial Board of Health was orgnaized, charged with the enforcing of sanitary measures. Dr. E. P. Lachapelle was appointed president, and Dr. E. Pelletier, secretary. I am happy to state that after 26 years these two veterans in sanitary science are still in the same positions and to them the chief credit is due for the excellent Public Health Acts now in force in this Province. The board consists of nine persons appointed by the Lieutenant-Governor-in-Council, and health inspectors, analysts, a sanitary engineer, statistician, and other officers. The expenses shall be paid out of the moneys voted by the Provincial Legislature. The duties of this board are very extensive and cover a wide field. To even enumerate these duties would take up too much time, and I can only refer to some of the chief matters dealt with in recent years.

The provincial by-laws concerning municipalities, establish a standard which municipalities have to obey, but in no way prevents them from making municipal regulations, which would be more adapted to their needs, provided that, in the opinion of the Provincial Board of Health, such municipal regulations are at least equivalent to the provincial provisions.

The milk enactments, contained in the provincial "by-laws concerning municipalities," date from 1906; notwithstanding that, the "Ontario Commission on Milk," in their report, dated three years after (1909), state (page 79) that "Quebec laws say nothing about milk delivered to the consumer."

In October, 1909, the Board organized a *sanitary engineering division,* which took charge of waterworks and sewerage systems, and systematically makes a sanitary survery of all the rivers of the Province. Up to date, the Ottawa River, the des Prairies River and the Richelieu River have been surveyed.

In 1910, when our Provincial Board of Health decided to divide the Province into ten sanitary districts, the Health Act was found sufficiently elastic to cover the appointments of the ten inspectors without having to go to the Legislature. Six of the ten districts have been organized with an inspector located in each one. These medical inspectors are not only required to have a diploma in public health from one of our universities, but they also have to pass an examination before a committee of the Provincial Board of Health, as to their fitness for an inspectorship.

With this new service of district inspectors, the Provincial Board of Health feels that it possesses better facilities for having the health laws carried out. The district inspectors residing within their respective jurisdictions will succeed better than was formerly possible, in helping the municipalities that are well disposed, and to supervise those that are refractory or inert. Also these physicians are expected to educate the public in matters of sanitation, by elementary lectures and other means suitable to the district where they are located.

The menace of smallpox throughout the Province has always been a serious problem, and it is hoped that these inspectors will do much toward enforcing vaccination and thereby rid the community of this loathsome disease.

The Provincial Laboratory does free of charge the following work:

Chemical and bacteriological analysis of existing and proposed municipal water supplies, privately and municipally owned.

Chemical and bacteriological analysis of milk collected by health officers of municipalities.

Analytical work on sewage and water in cases of stream pollution, notably samples collected on river surveys.

Diagnostic work on samples for diagnosis of tuberculosis, diphtheria, typhoid fever, taenia, gonorrhea and syphilis.

Chemical and bacteriological analysis of foods for municipalities, as regards public health especially.

Among amendments to provincial by-laws which only await the sanction of the Quebec Cabinet, are clauses relating to:

1. Placarding dark rooms.
2. Cleanliness in hotels, restaurants and boarding-houses.
3. Notification of possible cases of contagious diseases by families who have not called a physician.

As to contemplated amendments to the Health Act, four principal ones will be submitted at the next opportunity, viz.:

(a) Power to be given to the Provincial Board of Health to force municipalities to establish aqueducts and sewerage systems.

(b) To oblige proprietors of shanties in unorganized territories o employ medical practitioners, as is done in Ontario.

(c) To render vaccination compulsory in the first year of life and re-vaccination during both the eleventh and twenty-first years, as done in Germany and France.

(d) An Act somewhat similar in its provisions to the Beau Act of Ohio, which would enable the Provincial Board to have existing water-works and sewerage systems corrected.

I am loath to close this paper without reference to the important question of the pollution of streams. As so many of our cities and towns are using these streams to supply the citizens with the water necessary for drinking and domestic purposes, it is absolutely imperative that proper legislation be enacted to prevent streams being polluted to such a degree that it might increase unfairly the burden of the municipalities which have to go to these streams for their supply of water.

Canada, especially the Provinces of Quebec and Ontario, have had many experiences of typhoid fever epidemics, caused by the pollution of streams above the intake of a water supply.

There ought to be joint action between the Federal Government and the Provincial Governments in order that strict measures be adopted to remedy this state of affairs. A move in this direction has been made by the Bradbury Committee of the Conservation Commission. Their report recommends that the Government arrange for a conference of representatives, of each of the Provinces, and of the International Waterways Commission, to discuss the whole problem "with a view to overcoming local difficulties, and agreeing upon some form of remedial legislation, which could be passed concurrently by the Dominion Government and the Provincial Legislatures."

CURRENT MEDICAL LITERATURE

MEDICINE

UNDER THE CHARGE OF A. J. MACKENZIE, B.A., M.B., TORONTO

ANTITOXINES BY THE MOUTH.

Ever since the introduction of antitoxines attempts have been made by clinicians to substitute their administration by the mouth for the usual hypodermic method. The reasons for the preference are obvious, even if not very convincing. The hypodermic method involves considerable care in the technic, entails pain and annoyance to the patient, and generally marks such a radical departure from the usual methods of medication as to introduce an element of considerable apprehension on the part of the layman. By mouth one can administer anything without fear of criticism. Besides, one can leave a prescription and have the drug administered ever so often without the necessity of personal supervision. It is noteworthy that these attempts were made in the early days of serum therapy, when this kind of agent was new and regarded by the laity and a considerable proportion of the profession with some misgivings. Chantemesse was the first to administer diphtheria antitoxine by the mouth in twenty cases of diphtheria, with, he alleged, favorable results. This was in 1896. Following this observer, De Minceis, in France, Urkevitch and Zahorsky, in Russia, and several clinicians in Germany have tried the method and reported favorably on it. However, all these reports lacked scientific support. They were based almost entirely on bedside observations. Nedrigailoff (*Bolnitchuaja Gazetta Botkina*, January 13, 1899) submitted the question to an experimental investigation, and found the administration of antitoxine by mouth or rectum to be without the slightest protective value. His experiments showed that no antitoxine could be found in the blood following its administration by the gastrointestinal tract, and that seven hours after the introduction by the mouth no antitoxine could be found in the stomach or intestines. Recently, Pivovaroff reported before the St. Petersburg Pediatric Society his experiments on guinea pigs, showing the possibility of immunization against diphtheria toxine by antitoxine administered by the colon. Blumenau and Dzerzhgovsky (*Roussky Vratch*, March 9, 1913) applied the method clinically with unfavorable results. They then conducted a series of experiments on ani-

mals, with the result that in no instance could they secure immunity by this method of introduction of antitoxine; neither could they discover any antitoxine in the blood of the animals so treated. Moreover, even the administration of toxine by the bowel remained without apparent effect. Incidentally they discovered that the vagina offered a very satisfactory cavity for the absorption of both toxine and antitoxine.. In view of the fact that Sokoloff (*Pediatria,* No. 13, 1912) stated that he had employed tuberculin successfully by the colon, the authors administered tuberculin by the bowel to six children known to be tuberculous. None of them reacted, although subsequent application of the tuberculin subcutaneous test proved positive. These facts would seem to throw considerable doubt on the efficacy of the method of internal administration of tuberculin recently advocated. So long as the results obtained by various observers at the bedside and in the laboratory are so contradictory, it does not appear to be good therapy to depend on a method so uncertain, particularly in conditions fraught with great danger to the patient.

THE SERUM TREATMENT OF EPIDEMIC MENINGITIS.

At the present time there probably remains little doubt in the minds of physicians of the efficacy of the serum treatment of epidemic meningitis. It is, however, not the less interesting and important to note just how valuable this treatment has proved to be. The Rockefeller Institute for Medical Research began the preparation and distribution of the antimeningococcus serum in 1906 and continued it until a short time ago when the work was turned over to the Department of Health of New York City. During this period the Institute collected the records of 1,294 cases which received the treatment. Flexner, in an article analyzing these records (*Journal of Experimental Medicine,* 1913, xvii, 553), presents figures based on the pandemic of 1904-9, which show that the mortality among patients not receiving the serum treatment varied from 42.5 to 90.0 per cent., with an average of not far from 75 per cent. The death rate remained remarkably constant in all parts of the world and seemed to depend more upon the virulence of the infecting organism than upon race or occupation. Among the reported cases the mortality was 30.9 per cent., a reduction of over 50 per cent.

A study of the figures makes this reduction all the more remarkable. All cases are included, early and late, fulminant and mild ,those receiving the serum in modern hospitals at the hands of trained physicians and those treated in country districts by men little practised in

the art of lumbar puncture. Under favorable circumstances with early and expert administration the mortality should be still further reduced. Figures are also given of two other series of cases treated with the serum. One in Greece of 186 cases with a mortality of 22.6 per cent., the other in three cities in Texas in 1911-12 where among 876 patients who received the serum the mortality was 25.5 per cent., while of 562 who were not so treated 77 per cent. died. Even in the fulminant cases in which death usually occurs in less than twenty-four hours, the serum not infrequently has a decidedly beneficial action. In the patients that recovered the complications and sequelæ were reduced in number; indeed the number of permanently injured among the serum-treated has become very small.

These figures carry their own argument and the conclusion from them can best be stated in the words of the first report of 1909. "In view of the various considerations presented, the conclusion may be drawn that the antimeningitis serum, when used by the subdural method of injection, in suitable doses and at proper intervals, is capable of reducing the period of illness; of preventing, in large measure, the chronic lesions and types of the infection; of bringing about complete restoration of health, in all but a very small number of the recovered, thus lessening the serious, deforming, and permanent consequences of meningitis; and of greatly diminishing the fatalities due to the disease."

HEART DISEASE AND THE MODERN RUSH.

In the annual report submitted by Dr. Newsholme, the Medical Officer of the Local Government Board in London, the truth well known among physicians is restated—that heart and arterial diseases have in recent years been increasing among those in the afternoon of life; and Dr. Newsholme attributes this to the strain ,the worry, the hurry, and the dreadfully high pressure of modern commercialism, all tending to abnormal wear and tear on the precious organ which, with its vessels, must supply to the body its life-sustaining fluid. The nervous system, which is basic for all existence, and which especially controls the circulation, is under constant stimulus. Thus in England, it appears, one-third of the deaths in the age period 55 to 65 come about through damaged myocardium and sclerosed vessels.

Medical men in this country have for more than a decade recognized the phenomena referred to by the English observer. Not to add statistics-delving to the strains above mentioned, we may note simply that the

Census Bureau at Washington gives the following percentages which the death rates in the years progressively from 1901-7 inclusive, represent of that in 1900—Circulatory diseases (heart and vessels): 101.2, 105.7, 110.7, 119.8, 120.0, 122.9, 134.1. And our last Census report (issued Sept. 11, 1911) states: "During the last decade there has been a large increase in the number of deaths and death rates from organic diseases of the heart and of the circulatory system in general." As to cities, heart disease is reported to have caused many more deaths in 1907 than in 1906—in Chicago and Boston 13 per cent. more, in New York 29, in Detroit 26, in Philadelphia 5, etc.

A factor coupled in its fatal consequences with the abnormal stress of modern life is, that men of affairs who have come down with pneumonia, grippe, and like infections (the toxins in which are dreadfully disintegrating of the organs and other vital tissues), can simply not be made to take the prolonged rest which is imperative during the convalesence from these diseases. Many of these patients (and elderly men, too) are in their offices when they should most decidedly be in their beds. "Such a fussy lot, these doctors," declared such a one. "Besides an old horse that once lies down never gets up." He put on his overcoat, went to business, returned that afternoon in collapse, and died next day.

The fault is not here with the doctors, to whom it is not given to command the *zeitgeist*, to dominate the manners and customs of the age. They can but warn against fast living, undue indulgence in indigestibles and intoxicants, and against business habits conducive to such nerve tension as must inevitably wreck the organism to its untimely dissolution; they can but indicate the weak and uncertain pulse, the dyspnea, the blue lips and finger tips, the ashy face, the distended veins in the neck—and tell the dire meaning of these signs.—*Medical Record.*

THE FRENCH COMMISSION ON ANTI-TYPHOID VACCINATION

The report of this commission of the French Academy of Medicine is summarized as follows:

1. This method of procedure has been carried out on more than 100,000 soldiers in the English, German and American armies.

2. The benefits of preventive inoculation are seen in the comparative statistics of typhoid mortality and morbidity. Only half as many of the vaccinated have had typhoid fever, as of the non-vaccinated.

3. Vaccination does not abolish typhoid fever, it diminishes its fre-

quency, and the vaccinated who get the fever have it in a mild form.

4. Two or three inoculations with bacillary vaccine are betterd than one, and four will be necessary with antilysates of living bacteria.

5. Immunity lasts from one to four years, and hence revaccination is desirable.

6. Anti-typhoid vaccination is not dangerous. Dead bacilli when injected will cause fever and pain from twenty-four to forty-eight hours. An antigen of living bacilli will cause little or no pain.

7. Preventive vaccination should usually be performed before the appearance of the disease as an epidemic.

8. Vaccinated persons should not relax their precautions in the matter of food and drink for at least two or three weeks.

9. Soldiers and sailors may be vaccinated at their port of arrival if the disease is not epidemic at that port at that time, otherwise the innoculation should be made about three weeks before leaving home.

10. Vaccination should be performed only on those who are free from all forms of disease.

Those who are likely to be benefited by anti-typhoid vaccination are:

a. Physicians, nurses and medical students.

b. Families in which there are bacillus carriers.

c. Those who have gone from salubrious localities to localities in which typhoid is epidemic.

d. Dwellers in cities in which typhoid is prevalent.

e. Soldiers and sailors who are sent to colonies where typhoid is epidemic or endemic.—*American Medicine.*

INFLUENCE OF LECITHIN UPON NUTRITION AND THE BLOOD.

After reviewing comprehensively the literature on lecithin, William Bain, of the Physiological Laboratory of King's College, London, states:

"It will be seen from this review of the previous literature that there is a general consensus of opinion that lecithin has a most favorable influence up on the nutritive condition, and especially upon the blood. Its other effects are doubtless secondary to this. The various statements regarding its effect on the urinary constituents are somewhat conflicting. My own experience with licithin extends over the last three years, during which time I have prescribed it extensively. I have invariably given it in pill form, two grains three times a day. It never

disagrees with patients, and a further advantage it possesses is that it may be taken in conjunction with almost any other drug. I can fully confirm the statements of previous observers as to its usefulness, especially in aneima, and in convalescence from more or less acute illness. It can also be prescribed with advantage in tuberculosis and rickets. I have found further it beneficial in many cases of neurasthenia and allied disorders. In the case of sufferers from nervous tension, or overmentarium; and it has sometimes proved efficacious in grain doses in cases of insomnia associated with neurasthenia."—*Lancet*, April 6, 1912.

A THEORY OF PERNICIOUS ANEMIA.

Ludke and Fejes (*Deutsches Archiv fur klinische Medizin*, 1913, CIX, 433) have sought to show that pernicious anemia may be due to the absorption from the intestinal canal of certain portions of the bacterial cells growing there. It is known that the bothriocephalus may produce an anemia having the typical blood picture of pernicious anemia. According to Faust and Tallquist the substance producing the anemia in such cases is of lipoidal nature, containing oleic acid. The authors have sought to isolate lipoidal substances from the bodies of intestinal bacteria and to show that these have a hemolytic action. They have shown that certain strains of colon bacillus, especially those which have passed repeatedly through the bodies of animals and those which have been grown on artificially catarrhal mucosa of the intestines, contain such lipoidal hemolytic substances. These latter are very active on washed blood corpuscles but their activity is inhibited by blood serum. When injected in large doses into animals those substances may produce the typical blood picture of pernicious anemia, namely, high color index, megaloblasts, normal leukocyte count. They therefore are inclined to attribute pernicious anemia to such bacterial products arising in the intestinal canal. They attribute the absence of pernicious anemia in certain patients having chronic inflammatory processes in the intestines to differences in disposition.—*Physician and Surgeon.*

BACTERIAL VACCINE THERAPY.

The discussion of bacterial vaccine therapy is continued in *The Journal*, May 17, with reference to classification. Vaccines may be fur-

ther subdivided. Autogenous vaccines are derived from bacteria taken from the patient himself and are usually simple, derived from a single causative organism of his disease. In some cases, however, differentiated mixed vaccines are employed as in cases of mixed infection as shown by bacterial examination. The species are isolated in pure cultures and converted into vaccines and these are combined in proper dosage for each species at the time of inoculation. An undifferentiated vaccine has been employed without isolating, but this is a crude method, deserving condemnation. The vaccine made in bulk and subdivided to obtain proper dosage is called a stock vaccine. Such are all commercial vaccines. Stock vaccines may be single, containing only one variety, or mixed containing two or more of the same species. To these last the term "polyvalent" has been applied. This is offered as a substitute to save trouble and they offer a sort of a shotgun method which is here condemned as complicating vaccine therapy and encouraging a false sense of security on the part of the physicians using them. Mixed mixtures of stock vaccines are possibly permissible under certain circumstances, as when a preliminary bacteriologic diagnosis has been made by which the identity of the mixed infection has been ascertained, and the mixture of the corresponding bacteria is performed at the time of inoculation. This, however, requires some qualification which will be explained later. Objectionable mixed stock vaccines include practically all the mixed stock vaccines on the market and for the most part are designed to be used by the unscientific processes of guesswork. Theoretically autogenous vaccines are the agent par excellence of vaccine therapy. By their use antibodies of precise specificity are aroused, giving exactly that class of immunizing substances required and practice has confirmed this. Of course they may fail, but they are therapeutically successful and should be more generally adopted for the following reasons: "1. Any result that is possible in therapeutic immunization can be secured by autogenous bacterial vaccines. 2. Therapeutic results otherwise unattainable may follow the proper use of autogenous vaccines. 3. Autogenous vaccine therapy makes prerequisite a bacteriologic diagnosis, the only real scientific method of approaching the treatment of an infection. 4. If carried out in detail by the practitioner, it assures the possession of a certain skill and experience without which vaccine therapy is merely an empiric procedure. 5. It assures a personal, intimate touch between the practitioner and the patient. 6. It assures the independence of the practitioner from commercial vaccine interests. 7. It elevates vaccine theraphy to its proper level of a special practice in the hands of thoroughly qualified physicians." The objection that have been raised to autogenous vaccines are the loss of time involved and the

difficulty of obtaining pure culture of the germs in some cases. The first objection is less serious in itself, but the latter has some weight and one may be compelled to resort to stock vaccines while the effort is being made to secure the autogenous one. In some cases it becomes a question of stock vaccines or none at all, as in some gonorrheal rheumatism cases in which the germ is inaccessible. In case of the tubercle bacillus practically all workers resort to the stock vaccine.

INFLUENZAL MENINGITIS—ANTI-INFLUENZAL SERUM.

Some four years ago, Dr. Simon Flexner perfected the antimeningitis serum which now is the recognized treatment for acute cerebro-spinal meningitis, and has in its use, reduced the awful mortality in that disease from 80 per cent. to nearly 20 per cent. In his goodness of heart and generosity, he was anxious to spread this blessing everywhere. For this purpose he chose various centres from whence the distribution should take place, and amongst these, we are glad to announce, was the Hospital for Sick Children in Toronto.

He has also been working for some years upon the meningitis caused by influenza, and has at least succeeded in perfecting a serum of undoubted value. This discovery he has again, with characteristic kindness, immediately given into the hands of the medical profession, and the only remuneration he demands is a full clinical report of the cases in which it is used. The benefit of this serum also has been given to the Hospital for Sick Children, Toronto, and can be obtained upon application. Moreover, the Board of that institution will, at the reque' of any physician, send one of its laboratory physicians to make the subdural puncture, give a thorough bacteriological examination of the fluid, and administer the spinal injection in suitable cases. This we feel sure, will be a boon to any physician not having the necessary time or technique at his disposal.

CAUSES OF DEATH IN THE UNITED STATES.

In a bulletin of the Census Bureau of the Department of Commerce, prepared by Dr. Cressy L. Wilbur, are presented the following considerations relative to causes of death in 1911 in the United States registration area:—

"There were 12,451 death from typhoid fever in the registration area of the United States during the year 1911, a slight decrease from the number for the preceding year. The death-rate was 21 per 100,000 population for 1911, 23.5 for 1910 and 21.1 for 1909. The rate for 1911 is the lowest from typhoid fever since the institution of the annual reports and probably the lowest in record. This fact and the progressive reduction in the mortality from this disease, from 32 per 100,000 population for the period 1901, indicate that the public health officials of the country and the people who support their efforts are awakening to the necessity of wiping out this filth disease. The mortality from this cause in the United States is still far in excess of that of progressive European countries. If it could be reduced by three-fourths, so that it would be only 5 per 100,000 as in England and Wales, the Netherlands, and Prussia, for 1910, it would represent a saving of nearly 10,000 lives at the period of their greatest usefulness, as a rule, in the registration area alone.

The cities of 100,000 population and over having the highest death rates from typhoid fever in 1011 were: Atlanta, 66.1; Memphis, 65.4; Nashville, 53.9; Birmingham, 45.5; and Spokane, 35.6—all but the last, cities of the South; while the lowest rates, valuable as evidence that the typhoid mortality of American cities need not exceed that of the well-regulated European cities, are recorded for Cambridge, 2.8, and Bridgeport, 3.8. Chicago and New York had the same rates for the year, 10.9; and several cities, besides Cambridge and Bridgeport, had rates under 10 per 100,000, namely, Worcester, 6; Paterson, 7; Jersey City, 7.2; Lowell, 7.3; and Boston, 8.7.

"The total number of deaths from all forms of tuberculosis in the registration area during 1911 was 94,205, the death-rate being 158.9 per 100,000—slightly lower than the rates for the preceding years, 160.3 and 160.8 for 1910 and 1909 respectively. The rates for the past three years are considerably lower than the annual averages for the quinquennial periods 1901 to 1905, 192.6; and 1906 to 1910, 168.7. There would appear to be a marked reduction in the death-rate from this disease, although the rate for the past three years has remained practically unchanged.

"The highest death-rates from all forms of tuberculosis shown for the States in the registration area were those of Kentucky, 229.3; Colorado, 218; California, 206.8; Maryland, 203.3; and the lowest rates were those of Utah, 46.8; Michigan, 96; Wisconsin, 103.8; Washington, 106.7; and Montana, 107.1. The high death-rate for the group of North Carolina municipalities, 256.8 per 100,000 was due to urban conditions and the large colored population.

"The cities of 100,000 population and over in 1910 having the highest death-rate from tuberculosis of all forms were Denver, 292.7; Los Angeles, 277.5; Albany, 269.4; Cincinnati, 265.3; and New Orleans, 260.5; while those with the lowest rates were Milwaukee, 106.5; Portland, Ore., 106.8; Spokane, 109.4; Grand Rapids, 110.3.

"Organic diseases of the heart caused more deaths, 83,525, than any other disease or group of diseases shown in the Abridged International List, although the number of deaths from tuberculosis of all forms, 94,205, was considerafly greater. The death-rate for 1911, 140.9, was slightly lower than that for the preceding year, 141.5, but the rate for each of these years was much higher than the rate for 1909, 129.7; and the rates for the quinquennial periods 1901 to 1905, 124.2; and 1906 to 1910, 133.2.

"The mortality from heart disease is largley that of persons of middle and advanced age; hence the age distribution of population is an important factor in the rate . The States with the highest rates are Vermont, 211.8; New Hampshire, 197; Massachusetts, 193.5; Maine, 179.8; and California, 178.7; while the lowest rates are shown for Montana, 80.8; Utah and Washington each, 82.8; Kentucky, 86.5; and Colorado, 89.4. Among the large cities the highest rates were shown for Albany, 237.7; Worcester, 228.8; San Francisco, 227.9; Nashville, 220.8; and Washington, 214.5. The lowest rates are shown for Scranton, 93.9; Minneapolis, 95.1; Milwaukee, 95.6; Seattle, 96.9; and Spokane, 99.6.

"The total number of deaths from pneumonia of all forms in the registration area in 1911 was 79,233, the death-rate per 100,000 population being 133.7. The death-rate of the white population, 128.4, was about one-half that of the colored, 252.2.

Among the death-rates from pneumonia (all forms in the registration States in 1911, the highest were those of New York, 177.8; Massachusetts, 153.8; Connecticut, 153.5; Rhode Island, 152.1; and New Jersey, 151.4; and the lowest those of Washington, 64.8; Wisconsin, 85.7; Montana, 90.2; Michigan, 90.4; and Minnesota, 96.1. The large cities showing the highest death-rates from this cause were Atlanta, 227.8; Nashville, 222.6; New Haven, 212.1; York, 209.6; and Pittsburg, 207.2.

VERTIGO.

A. C. Reer, Port Penn, Del., (*Journal A. M. A.*, May 17), says that there are two conditions causing vertigo; one the integrity of the end-organs and the other paralysis of certain ocular muscles. While it is only a symptom its diagnostic significance is important. The indica-

tions in any case are to remove the underlying or essential cause and, when this is not apparent or the vertigo is reflex in origin, to use measures for the relief of the symptom. To judge as to the essential cause one must keep in mind a clear classification of the conditions that may produce it at different ages of the patient. In the child transient vertigo is often due to mechanical causes, but most commonly it is due to a middle-ear infection following the acute infectious fevers. It may be due to anemia of malnutrition, and occasionally one must consider the possibility of brain abscess of cerebellar tumor. In early adult or middle life vertigo can most often be traced to a vascular or reflex source, such as some disorder of the digestive or genital organs, or to the arterial or myocardial changes. Ocular disturbances causing vertigo are also fairly frequent at these ages, and, of course, mechanical or aural vertigoes may occur. With increasing age the vascular and certain types of reflex vertigo become more common. The vertigoes from reflex irritation are taken altogether, most commonly due to irritation in the digestive tract or the pelvis. In treating these a sharp purgative may be given, followed by stimulants and sedatives and such medicines as may affect favorably the trouble in the exciting organs. Neurotic vertigoes are somewhat similar to the reflex ones. They are common in neurasthenia and in certain degrees of nervous and emotional stress. Barany says that the vertigo of neurasthenia is characteristized by irregular nystagmus, differing from the quick return of labyrinthine vertigo. Palliative treatment is secondary to thorough and persistent attack on the fundamental neurotic condition. Vertigo from purely vascular conditions or derangements, such as congestion, arterial sclerosis, anemia and other disturbances of the cerebral circulation, should be treated according to the vascular underlying condition. Toxic vertigo, as from alcohol or a nephritis, calls for a like management. Auditory vertigo may signify organic disease, and is due to disturbance of the function of the space sense of the eighth nerve. This may be due to slight causes, such as the sudden occlusion of the eustachian tube, deranging the pressure in the tympanic cavity. Of the two labyrinthine vertigo from organic disease is more serious, and Reed quotes somewhat at length from Carrison as to the symptoms and mechanism of these cases. Operative interference is seldom required in purely vestibular vertigo, but rest and quiet in bed are the prime needs. The second or paralytic type of vestibular vertigo following vestibular irritation, can be treated by progressive graded movements to re-educate the spatial sense of orientation. Meniere's disease is a term used to cover various forms of auditory vertigo with tinnitus and is always due to labyrinthine disease. Charcot's plan of giving increasing doses of quinin to cinchonism is recom-

mended in this type and salicylate of soda is said to be a good substitute for quinin in such cases. Vertigo from the disturbance of the ocular arc is less frequent than reflex of aural vertigoes, and correction of the refractive error gives relief. Mechanical vertigoes, like sea-sickness, car-sickness, etc., calls for no special method of treatment. To relieve the symptom when the cause is not apparent, Reed recommends a purgative, rest, some volatile stimulant, and for internal administration sodium bromide 20 grains, three times a day, is probably the most satisfactory. A mustard plaster on the back of the neck, keeping the extremities warm and contra-irritation with weak mustard bath or hot water bags outside of the blanket and occasionally a slight cautery of the mastoid region may be useful.

SURGERY

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

THE SURGICAL TREATMENT OF GRAVES'S DISEASE.

The surgical treatment of Graves's disease is a modern development, following on the general acceptance of Möbius's theory that the disease is due to a hyperfunction of the thyroid gland. Some surgeons have gone so far as to recommend operative measures in the earliest stages of all cases. A Schlesinger gives an account of his experience of this surgical treatment of exophthalmic goitre in 20 cases, including severe, moderately severe, and mild cases, all of which were at least of six months' duration (*Berl. klin. Woch.*, January 13th, 1913). In all cases a medical form of treatment had been previously undertaken. In cases a medical form of treatment had been previously undertaken. In three cases the enlargement of the thyroid gland was only moderate, while the nervous symptoms were marked. In spite of having looked carefully for it, he has never been able to satisfy himself that the thymus gland had persisted in any case. He removed one lobe and part of the other in two cases; and in the remainder of the cases he removed one lateral lobe and the middle lobe, save in one case, in which he merely excised the middle lobe. The operations were conducted with local anaesthesia (½ per cent. novocaine and suprarenin), but in a few cases the anaesthesia was not sufficient, and ether had to be given as well. The superior thyroid artery was always tied first of all, and later, before the posterior wall of the gland was freed, the inferior thyroid artery was

also ligatured. In one case he experienced a severe haemorrhage on disengaging the lower end of the gland, which he was able to control with forceps. He also experienced secondary haemorrhage once, owing to the slipping of the ligature in the superior thyroid artery. Since then he applies a double ligature. Aphonia followed the operation once, but this disappeared spontaneously after a time. The recurrent laryngeal nerve was not damaged. Of the twenty patients three were in good condition, with markedly diminishing symptoms. The remaining seventeen patients were kept under observation until the time of writing. Of these three were cured completely, no symptoms having been seen for two years. Four were nearly cured, that is, subjectively and objectively almost without signs of the disease. He gives the details of two of these cases, showing the very remarkable diseappearance of a severe psychosis, which he was forced to regard as being due to the disease. The other case was a typical one of secondary Graves's disease, goitre having been present from birth, and the symptoms having developed with an increase in size of the middle lobe. On the removal of this the symptoms practically disappeared. Seven further cases were considerably improved. In one of these cases the operation was followed by a diminution of the symptoms, but there was still severe cardiac asthma. When seen three years years later the patient had developed well-marked myxoedema, she was practically demented (she had not been intelligent before), and there was distinct tetany. He had left a piece of the left lobe of the size of a man's fist, but no trace of this could then be felt. The asthma had diseappeared. On giving her thyroid gland she improved considerably, but there were still traces of the myxoedema an dthe tetany. In two other cases recurrence of the symptoms were observed after two and three years respectively. These symptoms disappeared after medication with arsenic and electricity. The last of the eseventeen patients also suffered from a recurrence. He discusses the question of persisent thymus and the risks of sudden death after operation, and then passes on to consider the technique of the operations. He regards his results, in that there was not a single death or total failure, as good luck, since other operators have only obtained from 15 per cent. to 75 per cent. cures.—*British Medical Journal.*

FUCHSIN IN LEG ULCER.

After giving a summary of his experimental work, E. S. May, Oakland, Cal., and M. L. Heidingsfeld, Cincinnati (*Journal A. M.A.*, May

31), report the results of the clinical treatment with Grübler's basis fuchsin (Grübler's Fuchsin fûr Bakterian) the germicidal action, of which he had described in his former paper (*Journal A. M. A.*, April 20, 1913, p. 1174). The obstinate cases of leg ulcer have had no reliable and satisfactory treatment and in nearly all his cases almost every suggested remedy had been employed. On March 1, 1913, twenty selected cases were treated with ointment made as follows:

Fuchsin (Grübler's Fuchsin fûr Bakt.).... 5 parts
Eucalyptus oil .... 10 parts
Anhydrous wool fat .....100 parts

The results were remarkably good. The ulcerations cleaned rapidly, and pus and all evidences of secondary inflammation disappeared promptly with relief of pain. In a few cases, however, use of the remedy over a period of several weeks caused mild inflammatory reaction and dermatitis, and the formula was changed to the following:—

Fuchsin (Grübler's Fuchsin fûr Bakt.) .... 1 part
Petrolatum .... 5 parts
Anhydrous wool fat ..'.....100 parts

This has been well borne in all cases. A second series of cases was taken up in the fall of 1912 and, the effects being not quite so favorable, it was found that commercial fuchsin was being used and not so well tolerated. When the change was made back to Grübler's basic fuchsin the same improvement and tolerance were again manifested. He insists on the importance of the character of the fuchsin employed and he is strongly impressed with the belief that in this class of cases basic fuchsin possesses the most satisfactory therapeutic efficiency. He heartily recommends its use in chronic leg ulcers. Other measures such as, antisyphilitic treatment, corrective appliances, etc., should be employed when specially indicated. If the drug is efficient in this hopeless class of cases it also gives promise of a wide field of usefulness in many directions.

BONE-PLATING.

Carl E. Black, Jacksonville, Ill. (*Journal A. M. A.*, May 31), offers the profession what he esteems a new and improved method of bone-plating. Not having tried it yet to the ultimate he passes over conclusions and offers it in the nature of a suggestion for trial. Convinced that the last word has not been said on the retaining of fragments of bones in the operative treatment of fractures, he says he is impressed with the necessity for an ample array of plates and instruments with

which to apply them, and the use of thinner and more pliable (hence adjustable) plates than those commonly used. These he thinks far too bulky and heavy, while most of the tools offered and used are too cumbersome for rapid and accurate work and interfere with asepsis. For holding the fragments in proper apposition, while applying the plates he has devised a clamp. It consists of several pairs of blades of various sizes, each blade having two fingers. There are sizes and widths designed for the varying size, shape and condition of the bone at the site of fracture. The blades are freely movable in the handle and adjust themselves to the contour of the bone. The plates are not intended to be held under the clamp, space being left between the fingers of blades to allow their application without changing the position or pressure of the clamp. Disagreeing with Lane, who prefers a long, strong steel plate carrying as many screws as space permits, he claims that the plating of a fracture should have the least bulk consistent with providing the support and meeting the strain required dur-clock-spring steel varying in size from ¼-inch wide, 1-128-inch thick and 12 inches ling up to ⅜-inch wide and 1-64-inch thick, which latter has a double saw of holes for No. 1 screws. The importance of having all the screw-holes the same distance apart is emphasized, so that in special cases several thickness of plate may be used, although he has rarely found this necessary. Only two numbers and two lengths of screws are used, No. 1, ¼-inch long and ⅜-inch long and No. 4 of the same lengths. These he has found ample for all needs. The advantages claimed for his method are that the plates may be adapted to fit any contour of bone at the operating table and that they may be made as long or as thick as may be desired, and that narrow, thin plates placed on both sides of the bone, in a direction to meet the greatest strain which muscular action will apply, meet every indication. Holding that the ordinary plates are too thick and heavy and the screws too long, he maintains that it is unnecessary to have the screws penetrate beyond the dense bone, which is rarely more than ¼-inch thick. In conclusion, he says that the use of thin steel ribbons leaves little space for the gathering of blood and serum, hence infection is less likely; the periosteum can be better approximated, the necessarily remaining foreign body is very much less and the fascia and skin can be brought together with no difficulty.

URETHROTOMY.

After mentioning Young's method as the best modern procedure for external urethrotomy and describing it, A. B. Cecil, Baltimore (*Journal*

A. M. A., May 24), says that it is not always possible with this procedure to follow exactly the thread-like torturous urethral canal through its bed of scar tissue. He, therefore describes a method used recently in a small series of cases in the Johns Hopkins Hospital. It consists in injecting into the urethra before operation a one 2,000 solution of methylene-blue with an ordinary urethral syringe. It should be made at first with little force but after moderate pressure more force should be employed. In all cases the penis should be elevated to facilitate the injection. "The uretha having been injected and the stain allowed to remain in for about five minutes, it should be washed out with sterile water. A sound is then passed through the auterior meatus as far as possible and an incision made directly down on it in the mid-line of the perineum. The urethar is then laid open and retarcted by means of silk sutures. The further course of the canal is easily seen as a dark blue passage. A grooved director may then be passed along the course of the canal as indicated by the blue stin, and the incision continued along it, but it is often easier simply to follow the canal with a pair of scissors. The staining makes it easy to see false passages branching out from the true canal. On account of the subsequent dilatation which must be carried out after the operation in any form of structure, it is believed that it is well to close the false passages by removing the mucous membrane and uniting the tissues about them. Having laid out the course of the urethra the scar-tissues on each side is excised and the urethra thus rendered mobile. In a good many cases it will be found that the tortuous urethra, when freed and brought into the midline, will easily cover a large sound. This is due to the true shortening of the canal. A catheter is then passed into the bladder through the penis and the mucous membrane sutured about it. A small drain is next passed down to the urethra and the external wound closed with a few sutures." When the urethral canal has been obliterated and one or more fistulas are present, it has been the author's custom to inject both the anterior urethra and fistulas; both can then be traced and a new canal opened through the scar-tissue. Several cases illustrating the method are described. Cecil sums up the advantage of staining the urethra in impassable stricture as follows: "It allows the recognition of false passages, and renders, in many instances, what may be a most difficult operation a comparatively simple one."

SALVARSAN.

In view of the recommendations that have been made of injections of salvarsan in an oily medium and of the fact that such preparations

are on the market, H. H. Hazen, Washington, D.C., (*Journal A. M. A.*, May 24), thinks it advisable to state his experience with this method. Up to the present time he has given fifty-eight of these injections to forty-four individuals, fifty-two of salvarsan and six of neosalvarsan in an oily medium. In general ,the effects on the lesions and on the Wassermann reaction were excellent, and all the patients are willing to take another. There is a more serious side, however, when cases are followed up. Four cases presented complications shortly after injection, two had slight abscesses of no special importance; one developed peripheral phlebitis two weeks later, but the most serious accident was pulmonary embolism. "In six instances abscess at the site of injection developed in from three to twenty-four months after treatment. In one of these patients both buttocks broke down about three months after injection, although the injection was unilateral. In this case it is rather difficult to hold the salvarsan responsible for either side. In the most interesting case of this series exactly two years after the administration of salvarsan, an abscess pointed in the buttock. It was opened, and about 6 ounces of sterile pus and considerable tissue debris was evacuated. In another case five small injections were given at bi-weekly intervals without any especial trouble, but about three months after the last both buttocks became red, swollen and painful, with distinct fluctuation. Operation was refused, and the swellings resolved in about two months; but even now ,one year later, are still sore and tender on pressure. Several other men have told me of similar experiences, the longest interval between injection and abscess being one year. One other patient has had permanent nodules left on his buttocks and complains bitterly of pain radiating down both sciatic nerves." Hazen says it is difficult to account for this late trouble excepting by the hypothesis that the material injected is toxic to tissue at the site of injection, and that the non-absorbed tissue may act as a foreign body. He speaks of the pain accompanying the injection of neosalvarsan, which he finds more painful than salvarsan in oily injection. He says anyone using it must be prepared to meet this disadvantage, and, in view of the abscess formation with oily injections and the pain of all other methods, he thinks that only the intravenous injection should be employed, remembering, of course, that it should be used with caution in certain cases, notably those with heart or central nervous disease.

PHYSIOLOGICAL SURGERY.

Under this title (*Münch. Med. Woch.*,) Klapp of Prof. Bier's Clinic mentions with approbation Krehl's well-known work on pathlogoical

physiology and states that it should be supplemented by a work on physiological surgery. Physiological therapeutics is of course largely surgical in character, and naturally the physiological idea should be omnipresent in all therapeutics. From this view-point a great deal of treatment of approved value is distinctly unphysiological. Under this head the author includes asepsis. As illustration he cites peritoneal interventious. One thing is certain, to wit, whatever else we do, we must maintain physiological conditions as far as possible. Rehn states that whenever the intra-abdominal pressure has been disturbed we must seek to restore it. This necessitates the closure of all intra-abdominal incisions. The author asserts, on the other hand, that this is a matter of subordinate significance. He claims that closure of these openings makes for recovery, not only because of restored pressure condtions, but also for the reason that other physiological factors are favored—avoidance of lowered temperatures, and of loss of water, while the normal peristaltic motion of the intestines is maintained. All this amounts simply to the dictum that if we open the peritoneum for any purpose it is physiologeal to close it as soon as the desired result is attained or found unattainable. In general making good of losses is at the bottom of physiological surgery, for example, in all kinds of plastic and artificial substitution.—*Med. Record.*

CURING TUBERCULOSIS AS AN INVESTMENT.

Dr. H. L. Barnes, Superintendent of the Rhode Island State Sanatorium, has recently demonstrated by some interesting studies of patients discharged as "apparently cured" from that institution, that a sanatorium is a sound investment for any state or city. The gross earnings of 170 ex-patients in 1911 amounted to $102,752, and those of 211 cases in 1912 to $112,021. By applying the same average earnings to all ex-patients of the sanatorium living in 1911 and 1912, Dr. Barnes concludes that their income in these two years was $551,000. This sum is more than three times the cost of maintenance of the sanatorium, including interest at 4 per cent. on the original investment and depreciation charges. Dr. Barnes concludes, however, "While institutions for the cure of tuberculosis are good investments, there is good reason for thinking that institutions for the isolation of far advanced cases would be still better investments."

PERSONAL AND NEWS ITEMS

Ontario.

The many friends of Dr. W. P. Caven, of Toronto, will be pleased to learn of his satisfactory recovery after his operation of appendicitis.

Swatting the fly is the order of the day. It is much more effectual to swat the place where the flies breed. Prevention is better than cure.

Two cases of smallpox were reported recently in Meaford. The district health officer closed the schools and ordered vaccination.

Dr. Bruce Smith, inspector of hospitals, has reported somewhat severely on the condition of the public wards of the General Hospital in Hamilton. He recommended that the Government grant be withheld.

The 69th annual convention of the American Medico-Psychological Society met at Niagara Falls. There was a large attendance of at least 600 delegates. The meeting extended from 9th to 13th June.

Several new cases of smallpox appeared in St. Thomas recently. The cases have been removed to the Isolation Hospital.

Dr. Hastings, Medical Health Officer for Toronto, has been raiding the slums. A number of houses have been closed, and many condemned unless put in fit condition for people to live in them.

J. A. Berube, M.D., graduate of Laval University, Montreal, was sentenced to five months in Central Prison by Magistrate Weegar, of North Bay, in default of fines and costs aggregating $162.61 on five charges of practising medicine illegally in Bonfield, not having passed the Ontario Medical Council examination. W. J. Conners prosecuted for the Ontario Medical Council. Several previous convictions had been registered against Berube, on one of which he received thirty days in jail. He pleaded guilty to all five charges.

In the early part of June the patients of the Sick Children's Hospital were taken to the Island. There were 100 little patients. They will remain on the Island until the end of September. The hispital is well located on the lake shore, and has large verandahs. Since the opening of the Lakeside Home 5,631 patients have been treated in it.

After a careful investigation it was found that the charges against the Ottawa Isolation Hospital had been greatly exaggerated. Minor defects in the conduct of affairs will be removed

A number of investigations will be carried on during the summer to ascertain the amount of sewage pollution that is going into the rivers

and lakes. The work will be under the direction of Dr. J. W. S. McCullough.

A new operating room is to be added to the Belleville Hospital at a cost of $3,000.

A small hospital has been established at Timmins by the Canadian Mining and Finance Association. It is for the benefit of miners.

The equipment of the operating rooms in the new Toronto General Hospital, is the gift of Mr. J. C. Eaton.

The Berlin and Waterloo Hospital now contains 65 beds. The cost of the new wing was $35,000.

An isolation cottage for diphtheria and another for scarlet fever are to be built at St. Thomas.

Dr. T. A. Lomer, of Montreal, has been chosen for the position of medical health officer for Ottawa, at a salary of $4,000.

Dr. F. Arnold Clarkson has removed from 471 College street, Toronto, to 421 Bloor street, west.

Dr. S. M. Hay returned from his four months' trip about 1st July. He enjoyed his visit to European hospitals.

The medical men of Perth County have formed an association. It is to meet in January, April, July and October, in Stratford, Listowel and St. Mary's. The officers are Dr. Thomas Sparks, St. Mary's, president; Dr. A. F. MacKenzie, Monkton, vice-president ,and Dr. F. J. R. Forster, Stratford, secretary.

Drs. H. G. Barrie and H. D. Couper, of Toronto, have been admitted members of the Royal College of Surgeons, England.

Dr. Charles Sheard, Jr., has returned to Toronto after a post-graduate period of study of three years in Europe.

The Council of the City of Toronto has made an additional grant of $210,000. This will make up from the city the entire cost of the site, which was $612,000. The city had already voted $400,000. The question will not be submitted to the people.

Hon. Mr. Hanna has created a new office, known as Inspector of Feeble-Minded and Assistant Inspector of Hospitals. Dr. Helen MacMurchy has been appointed to fill this responsible position.

The governors of the Hamilton City Hospital and the controllers met recently and discused ways and means for improving the hospital. It was thought that $25,000 should be expended in needed improvements.

Dr. Allan W. Caulfield, of Toronto, announces that he will restrict his practice to diseases of children, and has located at 313 Brunswick Avenue.

Quebec.

Professor Nathaniel H. Alcock, of McGill University, died 13th June, at the age of 42. He was a noted authority on physiology.

An effort is being made to have a new hospital at Sherbrooke.

The Alexandra Hospital of Montreal, treated last year 778 cases. The daily cost was $1.98. Plans are ready for a nurses' home to cost $60,000.

It has been decided to sell the present site and building of the Women's Samaritan Hospital, Montreal. No choice of a new site has been made.

There is a movement on foot to secure a Protestant Home for Incurables for Montreal.

Maritime Provinces.

The report of the Hospital for the Insane at Charlottetown, Prince Edward Island, shows that during the past year 327 patients were under treatment. There were 20 deaths, 31 cured, and 9 improved.

In Prince Edward Island Provincial Infirmary, there were 44 admissions during the year. At the end of the year there were in the hospital 100 patients.

A hospital for tubercular patients has been completed.. It will accommodate 20 patients.

In the Kentville Sanatorium, N.S., there were last year 57 patients, and 40 were discharged. Of these 11 appeared to be cured, 20 improved, and three unimproved. Much attention was paid to the educative value of sanatorium treatment.

A hospital for the accommodation of 40 patients is to be built at Glace Bay to cost $42,000.

Dr. N. G. McKay, Professor of Surgery in Dalhousie University, has resigned. He was presented by his class with an address and a handsome ring.

A fire broke out in Brooklands Hospital in Sydney, N.S., which destroyed the building. At the time there were thirty-three patients in the hospital. They were all rescued, twenty being placed in the theatre and thirteen being removed to their homes. The damage is estimated at $12,000, and is covered by insurance.

Western Provinces.

Over three hundred students were in attendance at the University

of Alberta last session. The problem is to find accommodation for them, as the members are outgrowing the buildings.

The Canadian Public Health Association will be held in Regina, 18th, 19th and 20th September. It is felt that there will be a large attendance and that the educative influence will be good. The first meeting was held in Montreal, and the second one last year in Toronto.

Arrangements are being made to have the hospitals of Vancouver and vicinity managed by a commission. It is hoped in this way to reduce the cost and avoid some of the abuses of charity by those who should pay.

Dr. W. A. Whitelaw has resigned his position as superintendent of the Vancouver General Hospital, to take effect on 1st July.

The Saskatchewan Medical Association will be held in Regina in July 16th, 17th and 18th. It is expected there will be a large attendance, and an excellent programme is in preparation. Dr. Arthur Wilson, 221 Cameron Street, Regina, is secretary.

The medical practitioners in the district of Theodore and Lanigan, in Saskatchewan, have formed an association. Dr. Johannesson is president, and Dr. Ross, secretary.

The Sisters of Providence will erect a new hospital at Moose Jaw. The building will contain 50 beds.

Dr. Cullbeck has been appointed medical officer of health for Hardisty to succeed Dr. MacRury.

At the recent session of the Alberta Legislature a medical bill became law that places the standard of medical subjects and examinations shall be in the Senate of the Provincial University. The law recognizes homoeopathy and osteopathy. Followers of the latter who hold a certificate from the American Osteopathic Association and have practised for four months in the province are admitted. Otherwise they must pass the examination.

The Saskatchewan Medical Association will hold its annual meeting in Regina on 16th, 17th and 18th July. An excellent programme will be provided. Those wishing to contribute papers should communicate with Dr. Arthur Wilson, 2221 Cameron street, Regina. Dr. D. Law, of the same city, is president.

An institution for nervous diseases is to be opened near New Westminster, B.C. It will have every modern convenience and appliance for the treatment of nervous diseases.

From Abroad.

Dr. Forbes Winslow, the noted alienist, died in London, 8th June, at the age of 70 years. He was an extensive writer in mental diseases.

He was connected with many trials where the mental status was under consideration. He took an active interest in securing the release of Mrs. Maybrick. He was the founder of the British hospital for mental diseases, to which he gave a large sum of money.

Hon. Dr. W. J. Roche, Minister of the Interior, sailed from England to Canada on 20th June. He is much improved in health, but it is rumored he may be appointed Lieut.-Governor of Manitoba, as the duties of his portifolo are too heavy for his state of health .

Dr. Harry M. Lyle, a son of Rev. Dr. Lyle, of Hamilton, Ont., has been appointed as one of the professors of surgery in the College of Physicians and Surgeons, Columbia University, New York.

At the meeting of the American Medico-Psychological Association held recently at Niagara Falls, Dr. Carlos Macdonald, New York, was elected president; Dr. S. G. Smith, Richmond, Ind., vice-president; and Dr. C. G. Wagner, Binghampton, N.Y., Ses.-Treas.

Professors Scala and Alessandrini, of Rome, have recently announced that pellagra is caused by bad water. They contend that there is no foundation for the theory that it is due to the consumption of diseased corn.

Professor E. A. Schafer, professor of physiology, in the University of Edinburgh, was knighted recently. No one could be more worthy of the distinction.

The International Medical Congress meets in London, 6th to 12th August. It is expected that the attendance will be large. Sir Thomas Barlow is president. Those intending going should write to Dr. W. H. B. Aikins, 134 Bloor Street, west, Toronto, for information.

The American Medican Editors' Association met on 16th June in Minneapolis, Minn. There was a good programme and an interested attendance. There was a banquet in the evening.

The Mental Deficiency Bill is up again in Britain for consideration. It proposes methods of dealing with certain classes of defectives. A lunacy commission will be appointed under the Act. Several medical men will be appointed to the board.

The Jewish doctors of Palestine, have formed an association for the purpose of promoting better sanitary conditions. Instruction will be given to those who have charge of infants. An effort will be made to suppress certain infectious diseases, such as malaria, trachoma, etc.

There will be an institute for medical research at Johannesburg, South Africa. The building will be completed in about one year. Dr. W. Pitchford is the medical superintendent.

Th fourth International Congress on School Hygiene will meet in Buffalo on 25th August. Sir James Grant, of Ottawa, is the chairman

of the Canadian committee- and Dr. Charles A. Hodgetts, the secretary.

The International Association of Medical Museums met in May in Ann Arbor under the presidency of Dr. A. S. Warthin. It was decided to ask the co-operation of medical museums in Britain, France, Germany, Italy, etc. A central bureau will be formed at McGill University for North America, Dr. Abbott having charge of the same.

In China medical education centres are being established in Moukden, Peking, Chinanfu, Nanking, Hankow, Chengtu, Canton, and Fee Chow. There will be attached to each school a staff of qualified European and Chinese doctors and tachers.

At the International Medical Congress three prizes will be given. The Moscow Prize of 5,000 francs, the Paris Prize of 4,000 francs, and the Hungarian Prize of 3,000 crowns. These prizes are for the best work on medical subjects and researches.

A College of Surgeons has been organized for the purpose of maintaining a high standard in surgery. Dr. Finney, Baltimore, is president; Dr. Chipman, Montreal, 1st vice-president; Dr. Matas, New Orleans, 2nd vice-president; Dr. A. J. Ochsner, Chicago, is treasurer; Dr. F. H. Martin, Chicago, is secretary. Dr. Bruce, Toronto, is on the council.

Guy's Hospital, London, has now a handsome new medical college which has been completed at a cost of $500,000. It consists of three main blocks and contains every known facility for teaching medical science.

Dr. Roberts Thomson, who was president of the British Medical Association in 1891, has ben presented with the honorary freedom of Bournemouth, where he has lived so long and for which he has has done so much.

A strong anti-cancer association has been formed in the United States. Many medical and surgical societies have joined in its formation. There are a number of influential laymen in connection with the movement. The study, prevention and cure of the disease, will engage the attention of the association.

Dr. William H. Welch, professor of pathology at Johns Hopkins Medical School, has been elected President of the American National Academy of Sciences for a term of six years.

William McEwan bequeathed to the Royal Infirmary of Edinburgh the sum of $75,000.

The Provincial Hospital at Port Elizabeth, South Africa, has recently benefitted from bequests to the extent of $15,000.

A perusal of the proceedings of the Transvaal Medical Council, shows that much good work is being done to raise the standard of medicine, dentistry and nursing.

In the death of Dr. Louis A. Duhring, of Philadelphia, the United States lost a distinguished member of the medical profession. He was born in 1845, and became an eminent dermatologist.

The new Phipps Institute in Philadelphia has been dedicated. Henry Phipps gave $1,000,000 to it.

In a German town a man had killed two wives and tried to kill a third by the administration of living typhoid bacilli.

The late Henry Rutherford, of Grand Isle, Vermont, left to the Rockefeller Institute for Medical Research, the sum of $200,000 in aid of cancer investigation.

The New York Hospital Saturday and Sunday Association raised this year $105,000 for distribution among the hospitals.

The late Mrs. W. T. Eaton, of New York, has left the Presbyterian Hospital $15,000, the Foundling Hospital $25,000, and St. Vincent's Hospital $30,000.

Dr. J. Argyll Campbell, assistant to Professor Schaefer, of Edinburgh, has been appointed professor of physiology in the University of Singapore.

The late Dr. Daniel B. Bower, a dentist of Bogerton, Pa., left $25,000 for the establishment of the Bower Charity Hospital.

Professor F. S. Jaccoud died in Paris in his 84th year. He was perpetual secretary to the Academy of Medicine.

The recently published fourth annual report of the Boston Milk and Baby Hygiene Association records the work of that organization for the past season. During the year 1912, over 3,000 babies were cared for, and nine milk stations were maintained. For the current year $2,000 are needed.

Report from Aix-les-Bains, France, states that on May 15 the new Leon Blanc Hospital, presented to that city by the late J. Pierpont Morgan, was formally opened by the local mayor in the presence of representatives of the French Government, of the Red Cross Society ,and of various medical organizations.

By he will of the late Mrs. Catherine Reilly of New York, $220,000 is left to charitable societies and institutions. Among the latter—each receiving $5,000—are St. Francis' Hospital, Misericordia Hospital and St. Agnes' Hospital at White Plains.

The will of Mrs. Charlotte Thompson Ames Brown, who died in Boston on January 18th, provides for the erection of a new hospital building, at a cost of $250,000, for the New England Baptist Hospital on Parker Hill, to be known at the Samuel Newell Brown Hospital. This hospital is also made the residuary legatee of her estate. Other public bequests are $5,000 to the Home for Crippled Children in Bos-

ton; $10,000 to the Cullis Consumptive Home; $5,000 to the Burnap Free Home for Aged Women; $50,000 to the Brockton Hospital to be known as the Franklin and Martha K. Ames Fund in memory of her father and mother; $10,000 to the Brockton Hospital, in memory of her niece; $5,000 to the Home for Aged Couples in Boston, and $10,000 to the New England Moral Reform Society.

Canadians will be glad to learn that Mr. Arbuthnot Lane, senior surgeon to Guy's Hospital, and who had charge of the case of the Duchess of Connaught, has been made a baronet.

Dr. Forchheimer, of Cincinnati, died on 1st June. He was a well-known author, especially on children's diseases. He was 60 years of age.

The J. B. Lippincott Company, the well-known publishers of Philadelphia, have removed their Montreal office to 201 Minty Building.

OBITUARY

SEVERIN LACHAPELLE.

While on his way to a meeting of sympathizers of the "Free and Pure Milk Movement," Dr. Severin Lachapelle, of Montreal, whose life work has been identified with the cause of better hygienic conditions in Montreal's slum districts, died suddenly on 18th June.

Dr. Lachapelle made a speciality of hygiene and public questions, and he leaves some popular works much appreciated, among which may be mentioned "Woman and Nurse" and "Health for All."

He was professor of pathology and pediatries at the Laval University, and founded the organization known as the "Gouttes de Lait," whose aim is to supply poor children with pure milk free of charge, and to sell pure milk to those who can afford it.

Dr. Lachapelle was returned member for Hochelaga in 1896.

T. H. STARK.

Dr. Thomas H. Stark, a well-known physician of Toronto, died 9th June, at his home, 21 Carlton Street, of heart failure. Dr. Stark attended to his professional duties the day before. At 7 o'clock he was taken ill. Dr. H. B. Anderson was summoned, but Dr. Stark passed away five hours later.

Dr. Stark was 57 years of age, and had practised in Toronto since his graduation from Trinity Medical School. He was for a time house

surgeon at the General Hospital, and later was attached to the staff of the Western Hospital. He leaves a widow, one son and two daughters.

JUSTUS S. W. WILLIAMS.

Dr. Justus Samuel Wright Williams of Oakville, Ontario, died recently in his seventy-third year.

The late Mr. Williams was a brother of the late Canon Williams of Toronto, and is survived by a widow only. He had practised medicine many years in Ookville.

EDWARD A. PRESTON.

Dr. E. A. Preston, of St. John, N.B., died 4th May, at the age of 59. He had practised in St. John for 32 years. He was a graduate of Long Island Medical College. He leaves two sons and three daughters.

AMELIA YOEMANS.

Dr. Yeomans died in Calgary at her home in her 72nd year. She graduated from the University of Michigan in 1883. She practised for 16 years in Winnipeg before going to Calgary. She took a keen interest in all matters of social reform.

S. C. MACLEAN.

Dr. S. C. MacLean, of Spencerville, Ontario, died in his 67th year. He graduated from Queen's University, Kingston, in 1874. He practised at different times in North Augusta, Bishop Mills, and Spencerville. He had a large practice and was highly respected.

JOSEPH L. G. MASSON.

Dr. Masson, of Terrebonne, Quebec, died 19th April, in his 50th year. He obtained his M.D. from Victoria University. He was resident physician in the Hotel Dieu, Montreal, for some years. He did a good deal of post graduate work in Paris. He leaves a widow and four children.

BOOK REVIEWS

NARCOTIC DRUG DISEASES.

The Narcotic Drug Diseases and Allied Ailments, Pathology, Pothogenesis and Treatment. By Geo. E. Petty, M.D., Memphis, Tenn., member Memphis and Shelby Medical Society, Tennessee State Medical Association, American Medical Association, Tri-State Medical Association, Mississippi Valley Medical Association, Southern Medical Association, and the American Society for the Study of Alcohol and Narcotic Diseases. Illustrated. Philadelphia: F. A. Davis Company, Publishers, 1913. Price, $5.00.

In the preface the author states "that drug habitues are, in most cases, the blameless victims of disease, and that they not only merit sympathy and consideration, but are entitled to rational and skillful medical aid." In the great majority of cases this is true. There is often some morbid condition of the body that leads up to the drug or drink habit. There is also a morbid state of the body the result of the habit, induced by the environments. This habit in turn creating an appetite for the drug. "The volume treats narcotic addiction as a disease, a toxæmia, of drug, auto and intestinal origin, the management and treatment of which belong to the field of internal medicine and not to neurology." These quotations from the preface set out the viewpoint of the author. The statement is made that the writings of DeQuincy, nearly a hundred years ago, did much to induce many to resort to the use of opium for the sake of the pleasurable sensations that author said were caused by its use. In 1864, the first case was reported due to the use of the hypodermic method. The author treats at length of the morphine habit, that due to cocaine, hyoscine, chloral hydrate, and alcohol. All the way through the book the author shows that he has given these subjects very careful attention, that he has been a close student of the literature upon the subject, and that his views on treatment are sound. In no class of cases is tact of so much importance. No feature of treatment is omitted or hurried over. Diet, exercise, environment, mental influences, and the administration of suitable drugs are given full consideration. Each section of the book proves most interesting and instructive. The publishers and the author are to be congratulated on the results of their efforts to give the medical profession so valuable a work. It is a true guide in the management of these unfortunate victims.

SURGERY OF THE EYE.

A Hand-book for Students and Practitioners. By Ervin Torok, M.D., Surgeon to the New York Ophthalmic and Aural Institute, Ophthalmic Surgeon to Beth Israel Hospital, Consulting Ophthalmologist to the Tarrytown Hospital, and Gerald H. Grout, M.D., Assistant Surgeon to the New York Ophthalmic

and Aural Institute, Instructor in the Eye Department, Vanderbilt Clinic, Consulting Ophthalomologist to the Bellevue Hospital, First Division. Octavo, 507 pages, with 509 original illustrations, 101 in colors, and 2 colored plaates. Cloth, $4.50 net. Lea & Febiger, Publishers, Philadelphia and New York, 1913.

The eye is one of the most important and delicate organs of the entire body, and the successful treatment of its diseases and injuries requires great skinll and precision. As a large part of ophthalmic work is of a surgical nature, it is important that those interested in it should have in convenient form a practical statement of those operations which have yielded the best results. Such a book is of even greater value and importance to the general practitioner, who is almost certain at some time to be called upon unexpectedly to treat some injury of the eye because of its urgency.

This volume may claim two especially attractive features, its arrangement and its wealth of illustrations. The following plan has been pursued throughout the book: First, before describing each group of operations the authors have discussed the disease for the relief of which they are intended, and have given clear indication for the selection of the proper procedure in any given case. A detailed description of the steps of each operation then follows, with a list of all the instruments required. After this the complications that may occur at the time of operation and later are taken up, together with the post-operative care of the patient.

The authors have included all operations in common use to-day and also others that in their personal experience have given good results. This experience comprises fifteen years of practical work in Budapest, at the Royal Hungarian University Eye Clinic, with Prof. W. von Schulek, Prof. E. von Grosz, and Prof. L. von Blaskovics; in Berlin with Prof. J. Hirschberg, and in New York, at the New York Ophthalmic and Aural Institute, with Drs. Herman Knapp and Arnold Knapp.

The illustrations are all new and original, and over one hundred are in color. They have been used unsparingly wherever it was possible to elucidate the text. They are designed to make clear the text. In the employment of color there is a fine red line to indicate the extent and position of the incision. The more one examines this book the more its merits stand out. As a monograph on the surgery of the eye it could not be surpassed.

FIBROIDS OF THE UTERUS.

Their Pathology, Diagnosis and Treatment. By Sir John Bland-Sutton, Surgeon to the Middlesex Hospital and its Concer Charity. With 39 illustrations. London: Science Reviews, Limited, 36-38 Whitefriars Street, E.C. Price, in cloth, 4s 6d. Pages, 240.

Sir John Bland Sutton is a well-known surgeon and one who has done his full share of sound authorship. One naturally expects something good in a new volume from his pen. This expectation is not disappointed. "The description includes the natural history, diagnosis and best methods of removing them." The several forms of fibroids are carefully considered, and their etiology. The dangers of these new formations are fully discussed. In dealing with fibroids and cancer of the uterus the author has some excellent observations for the consideration of the medical profession. He remarks that cancer of the uterus may arise in any portion of it where expithehal cells are to be found. He claims that the division of uterine cancer into those of the cervix and those of the body is fully justified, on account of the difference in clinical history. Among some of the statements we note these: "Fertility protects against fibroids, but predisposes to cancer of the neck of the uterus." With regard to sub-total hysterectomy, "There is no special liability of the cervical stump left after this operation to become cancerous." "In women over 50 years of age, with fibroids 10 per cent. will have cancer as a complication." "In most instances the cancer is in close proximity to the fiboid." In dealing further with fibroids the author states: "This should warn us of the danger of allowing women to retain fibroids which are troublesome at the time of Menopanse."

The methods of operating, the after-treatment, the anaesthetic, etc., are all taken up fully. In the text the author emphasizes certain statements by the use of heavier type. Thus we find: "When a woman, between thirty-five and forty years of age, seeks relief because she suffers from retention of the urine for a few days prior to each menstrual period, it is almost certain she has a fibroid in her uterus." Another key sentence is: "In operating for conditions known to be septic, no sutures should be buried." Then, again: "The chief cause of post-operative thrombasis and the embolism is sepsis." He closes his book with these words: " 'A woman, having an issue of blood twelve years, which had spent all her living upon physicions, neither could be healed of any,' (Luke viii., 43), no longer applies."

The book is a very handsome one. It is got up in a most attractive form. The best of paper and the clearest of type always add to the value of a book, by making it a pleasure to read it. We can recommend this volume as one well calculated to interest in a special way its readers.

DISEASES OF THE HEART.

The Nauheim Treatment of Diseases of the Heart and Circulation. By Leslie Thorne Thorne, M.D., B.Sc., M.R.C.S., S.R.C.P., Consulting Physician to St, John's House of Rest, Late Examiner Condon County Council Technical Education Board Fourth edition. London: Baittiere, Tindall & Co, 8 Henrietta St., Covent Garden, 1913. Illustrated. Price, 3s 6d.

This is a very useful small book. It shows how the Nanheim treatment may be carried out at home. The treatment here outlined is of a most valuable character in those cases of chronic heart failure where the health is being steadily undermined. Its pages will well repay a careful study.

PROGRESSIVE MEDICINE.

A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hubart A. Hare, M.D., Philadelphia, and L. F. Appleman, M.D., Philadelphia. June 1st, 1913. No. 2, Vol. xv. Whole number, 38. Philadelphia and New York: Lea & Febiger. Price, $6 per year.

The contributors to this volume are: W. B. Coley, on Hernia; J. C. A. Gerster, on Surgery of Abdomen; John G. Clark, on Gynæology; Alfred Stengel, on Diseases of the Blood; and Edward Jackson, on Ophthatmolgy. This volume is both well written and illustrated, and got up in an attractive form so far as paper and pres work could make it so. This series can be recommended as one that will give its readers every satisfaction.

SASKATCHEWAN MEDICAL SOCIETY.

This is the report of the proceedings of the annual meeting of last year. It is got up in pamphlet form and is well printed. There are a number of excellent papers in this report, and they certainly do credit to the association. We congratulate the medical profession of Saskatchewan on their enterprize in preserving the papers read at their annual gathering in this form. There are two full page photographs and a number of illustrations in another paper on European medical schools. It would be a good thing if all the Canadian associations got out their transaction in a similar form.

THE HISTORY OF THE TORONTO GENERAL HOSPITAL.

Dr. C. K. Clarke, medical superintendent of the Toronto General Hospital, has done a real service to the public and the medical profession by publishing a history of the hospital. In the medical history of

Ontario, and, indeed, of all Canada, this hospital has taken a prominent part, and "been much of all that has been." We may say of the old General Hospital, "That what has been, has been, for what is to be." Old things have passed away, and new things have come to take their places; but we should not forget those bygone stepping stones. The great philosophy of life and progress as given to the world by Gœthe, and embodied in verse by Tennyson in his In Memorian, is true here:—

I hold it truth with him who sings
To one clear harp of divers tones,
That men may rise on stepping stones
Of their dead selves to higher things.

And so one hospital succeeded another as stepping stones to the present one.

In the old town of York a hundred years ago, a temporary hospital was erected, by the Loyal and Patriotic Society, to care for the sufferers in the war of 1812. This was followed by a permanent structure in 1818.

At the time of the war gold and silver medals were sent out from Britain to be awarded to the heroes of that day. These medals were not bestowed as had been intended, but disposed of as bullion, and the money so obtained was employed as part of the funds needed for the founding of the hospital.

In the year 1820 a two-storey red brick building was erected on the the corner of King and John Streets, where the Arlington hotel now stands. This was used until 1854. In that year the cholera epidemic occurred, and a frame building was erected on the Gerrard street site.

In 1869 the hospital was compelled to close its doors for lack of funds. The city refused to give any aid, but the province made a small annual grant, which enabled the institution to go on with its work. One of the first private gifts that helped the hospital very much was that by Erlandson.

In those early days the cost of conducting a hospital was light as compared with to-day. In 1830, the secretary was paid $200 a year. In 1846, the sum of $25 was expended for surgical instruments, while in 1847, the sum of $37.50 was paid for medicines.

Treatment in those days was very crude. Bleeding was regarded as a sovereign remedy. To change the air of a ward, specially at night, was thought to subject the patients to many risks. The nurses were untrained, careless, ignorant and dirty, and no one had any idea of infection, and the laws of prevention and sanitation were still *in nubibus*.

These were also ante-chloroform days in surgery. A nurse would go from a case of smallpox to the bed of a lying-in woman. It was not till 1863 that the trained nurse came into use.

The book containes many anecdotes about Bishop Strachan, Beverley Robinson, Justices Powell, Scott and Campbell. Of the medical men there are many references. Among these may be mentioned: Dr. Clarke, the first medical superintendent in 1829, and Drs. Rawlings, Beaumont, Hodder, Widmer, and Richardson.

The book then takes up the new General Hospital, and speaks of its equipment and efficiency, and wonders if people in 2013, will think it as antiquated for the conditions, as would be the old York hospital to-day.

MISCELLANEOUS

UNIVERSITY OF TORONTO MEDICAL RESULTS,

Degree with Honors—Group I.—F. M. Walker. Group II.—H. W. Wookey. Group III.—A. A. Fletcher, K. M. B. Simon.

Medals—W. A. Scott, A. A. Fletcher, gold. K. M. B. Simon, 2nd, silver. H. W. Wookey, 3rd, silver.

Chappell Prize in Clinical Medicine—A. A. Fletcher.

M.B.—S. L. Alexander, W. C. Allison, J. P. Austin, H. H. Argue, C. A. Brisco, F. A. Brokenshire, J. F. Burgess, F. A. Butters, T. C. Clark (Medicine and Obstetrics), T. D. Cumberland, G. P. Dunning, P. E. Faed, O. E. Finch, R. O. Frost, R. W. Gliddon, G. C. Graham, G. G. Greer, B.A.; E. R. Hastings, R. Home (Obstetrics), B. F. Keillor, C. F. Knight (Obstetrics), E. P. Lewis, B.A.; G. W. Lougheed, J. L. Mahoney, J. G. Morgan (Medicine, Gynaecol, Obstet. and Paed.), G. S. McAlpine, Miss A. McEwen, T. H. McKillip, D. B. McLean, S. W. Otton, R. C. Phelps, W. A. Reddick, S. A. Richardson, W. L. Robinson, B.A.; H. P. Rogers, A. C. Rowswell, T. M. Savage, W. B. Seaton (Obstet, and Therap.), J. D. Shields, E. A. Smith, H. A. Snetsinger, J. Thomson, J. G. Turnbull, G. A. Watson, F. E. Webb, G. E. White.

nI the 4 th year—Medals—C. P. Grown, gold. O. M. Irwin, 1st silver. A. Brady, 2nd silver. G. E. Darby, 3rd silver.

In the 2nd year—Scholarships—1st, H. B. Maitland; 2nd, F. M. Johnson.

First Examination—Scholarships—1st, B. S. Cornell; 2nd, A. M. Jeffrey.

The James H. Richardson Fellowship in Anatomy has been awarded to H. P. Robinson.

QUESTION DRAWER—ONTARIO HEALTH OFFICERS' ASSOCIATION.

By Dr. J. W. S. McCullough.

1. Should the Sanitary Inspector attend quarterly meeting, and if he does, should he get paid extra in a municipality only paying $15 to Sanitary Inspector?

Answer.—There is no provision for Sanitary Inspector attending meetings. He should get sufficient salary. He is not obliged to attend meetings unless instructed by the board.

2. In case of disposal of sewage according to your regulations re septic tank, what course do you advise where there is not sufficient ground for system?

Answer.—If there is not sufficient land area, the effluent from septic tank should be otherwise provided for. If the soil is unsuitable (clay) 12 or 18 inches of said might be deposited over the clay and the subsoil pipes laid in this, as described in pamphlet on Sewage Disposal issued by the Provincial Board.

3. What does this convention consider a reasonable minimum salary for H.O.H. in villages, towns and townships?

Answer.—In towns a reasonable salary might be based on the population, say $100 for the first thousand and $25 or $50 for each additional thousand or portion thereof.

In townships it is difficult to say what is a reasonable salary. Some townships pay $100, some $5 or $10. As soon as the M.O.H. demonstrates to the public that he is worth it, he will usually obtain a better salary. It would be a good plan for the M.O.H. to call public meetings for the various schools in his municipality and give an address to the ratepayers, children and teachers upon sanitary matters. If he desires it, the District Officer of Health will help him in any way possible.

4. Explain intentions of the Act in the case of payment for time in addition to hotel and railway fare:

(a) Where the M.O.H. has a special amount as salary.

(b) Where the M.O.H. has no salary specified.

Answer.—The M.O.H. can only collect for hotel and travelling expenses. Usually, however, the municipal council pays a per diem allowance for loss of time. Under Section 22 of the Public Health Act, the local Board of Health might vote a sum for services rendered which might be made to include the per diem allowance.

5. What are the duties of District Officers of Health in relation to township local boards?

Answer.—To advise and assist the M.O.H. in improving sanitary conditions of the municipality.

6. Can the municipal local Board of Health compel the trustees to give a report as to the sanitary conditions of school, and if they do not and we send our inspector, can we compel the trustees to pay for expense of sanitary inspection?

Answer.—No, it is the duty of the M.O.H. to inspect the schools and disinfect at expense of the municipality if necessary.

7. Can a man whose lot does not run 100 feet from his home in a small country village keep a pig?

Answer.—No. See paragraph 20, Schedule B, Public Health Act.

8. What should be given as *immediate* cause of death in this case: A man had paralysis agitans for three years and epithelioma of face for two years. He refused operation for the latter and gradually becoming weaker died at age of 79. The disease which caused death was epithelioma, but what would you put down for immediate cause, and how would you determine its duration?

Answer.—Cause of death—Carcinoma of face, because it is of shorter duration. Immediate couse—None.

9. I visited a house suspected of having had scarlatina, and found a girl eight years old who, they said, had the "grip" six weeks previously. They stated positively that there had been no rash and no vomiting, but a sore throat lasting for two or three days. There was no sign of desquamation, but a pronounced cervical adenitis, the glands on one side being as large as a hen's egg, and the child was very anaemic looking, but no physician had seen her. Should I have ordered the house and the child's person and clothing to be disinfected? Should I have placarded the house till this was done?

Answer.—If scarlet fever in neighborhood, this was probably a case of it. Best to have had house and child disinfected. No need to placard after six weeks.

10. Visited a house in which I found a young lady who had been sick three weeks previously. Had had slight rash, sore throat and vomiting. Slight desquamation on face, especially forehead at roots of hair. I placarded house, but allowed girl's father to continue gathering cream upon the mother agreeing to keep girl isolated. Should I have done so? No physician had been called.

Answer.—This is a case of scarlet fever. Should have stopped the father collecting cream. See regulation 4.

11. Have heard that these people are going out in spite of quarantine, but no complaint has been sent in and they live ten miles from here. Should I go and investigate?

Answer.—If the M.O.H. has quarantined, he should be satisfied that his orders are carried out.

12. Does certificate have to be signed before the M.O.H. can collect his expenses from the municipality?

Answer.—The member's ticket will be sufficient voucher. If any difficulty, write the Chief Officer of Health.

13. We are supplied with a very inefficient sanitary inspector, who will not follow instructions nor try to make himself efficient. The city council have been notified of the condition and asked to supply a competent inspector, which so far they have failed to do. What do you advise the local Board of Health to do to remedy the condition?

Answer.—The local Board of Health may employ and pay any sanitary inspector they wish. Payment may be made under authority of Section 22 of the Public Health Act.

14. Description of suitable box for manure at stables, as to size, etc.

Answer.—Size about 4x4x4 feet, with screen top. As flies require 14 days in which to breed and grow to full size, there will be no necessity for screening if manure is removed and spread on fields once a week.

15. We find that some householders put old tins and broken china, etc., in privy vault and this creates an objection on part of farmers to receive the night soil or give dumping ground. How may this be prevented?

Answer.—Educate and prohibit by by-law. The greater portion of household garbage should be dried as well as possible and burned in the stove or furnace.

16. Appointment of M.O.H..

This officer should be appointed by by-law at a stated salary, which the Act says must be a reasonable salary, Sections 37-39. He cannot be dismissed except for cause and with the approval of the Provincial Board.

By a decision of Mr. Justice Lennox, the M. O. H. of 1912, unless appointed by the council of 1913, does not retain office, but the properly appointed officer of 1913 continues in office subject to terms of Section 37.

17. Cost of disinfection is borne by the local Board of Health (Section 29) except as covered by Section 62, 1 and 2.

Expenses of persons with communicable disease.

This is supplied in the first instance by the M.O.H. or local Board of Health, but the corporation of the municipality may recover from the person the amount spent in providing medicine, nurses and other assistance and necessaries for him, but not for the expenditure incurred in providing a separate house or in otherwise isolating him. Section 58, (1) and (2).

18. In a garnishee action now pending between the local Board of Health, plaintiff, and one Reid, a lumberman, defendant, where payment is demanded by the local Board of Health for cleaning up the nuisance perpetrated by Reid in his lumber camp, counsel for defendant claims that in such action the local Board of Health is non esse; that action must be taken by the municipality. Kindly rule.

Answer.—Council must take action. Section 58, (1) and (2).

19. Is it advisable to compel all farmers in back country townships to clean out well annually where the townships are not very wealthy and find it hard to carry out the Act?

Answer.—Advise that all wells be cleaned out. Don't attempt too arbitrary measures. Educate the public and they will soon see the benefit.

McGILL MEDICAL GRADUATES.

Sixty-one members of the graduating class in medicine at McGill University, received their M.D. degree at the medical convocation on 6th June. The results of the examinations were announced recently. R. H. Malone, of Antigua, received the Holmes gold medal for the highest aggregate in all the subjects for medical curriculum, and W. C. Gowdy, of Bridgetown, Barbados, was awarded the final prize for the aggregate in the fifth year subjects.

The following Ontario students qualified for the degree of M.D., C. M.:I. F. Bruneau, B.A., Cornwall; D. Crombie, London; W. D. Crinskhank, Hamilton; H. F. Cummings, Russell; J. Cumming, South Gower; A. L. Dahley, Pembroke; D. A. MacLeod, Ottawa; J. S. McDirmid, B.Sc., Ingersoll; G. D. McIntyre, Avonmore; T. A. Malloch, B.A., Hamilton; Monroe Finlay, Maxville; J. G. Munroe, Woodstock; J. E. O'Donnell, Fort William; J. C. Phillips, Forest; T. J. Scobie, Kars.

THE MEDICAL CORPS AT NIAGARA CAMP.

To furnish field training for the field ambulances, a field manoeuvre took place on 7th June, when a supposed detached force of one cavalry regiment, one battery, two infantry brigades, and one ambulance held a position along Four-mile Creek. The advance post is driven in by the enemy, when the main body made a counter attack. The Field Ambulance was ordered to make all arrangements to carry out the duties on these conditions.

Major Marlow, commanding the first clearing hospital, had his command complete. It included in addition to officers, N.-C.'s and men, three nursing sisters, Miss Morris, Miss Hammond, and Miss Courtice, and one dental surgeon, Captain Morrison, whose tent was equipped with everything that a dental office could require.

QUEEN MARY HOSPITAL.

Before the flag-draped entrance of the new Queen Mary Hospital for Children at Weston, Ontario, on June 3rd, great crowds of those interested waited expectantly for the signal bell to announce that her Majesty Queen Mary of England, was about to press the electric button in Buckingham Palace and by cable connection formally open the Canadian hospital. A few minutes before half-past one the bell pealed out, the doors swung open, and the first hospital of its kind in the world held out its arms to suffering children.

After Chancellor Burwash of Victoria College offered the beautiful dedicatory prayer, the Chairman, Sir John Gibson, Lieutenant-Governor of Ontario, addressed the gathering. Queen Mary's act was but another evidence of the sympathy of Royalty in all philanthropic enterprises for assisting the afflicted and making easier the lot of the unfortunate. In paying a tribute to the efforts of Mr. Gage, the chairman referred to the difficulties that had been met and the problems that had been solved before the movement could make such progress and to-day be in a position for "comparatively clear sailing." To-day the new institution is to be conducted by the co-operation of the Sanatorium Organization and the city of Toronto.

Mr. W. J. Gage moved that a cablegram be sent to the Duke of Connaught advising him of the opening of the building for which he laid the corner-stone last year, and asking him to convey the thanks of the trustees to he r Majesty, and birthday wishes to the King. Of the work, he said that thirty-five children have been in temporary quarters awaiting the opening of the Queen Mary Hospital. In the last annual report of the Toronto Free Hospital it showed that during eight years 49 per cent. of the patients in residence more than a month had been improved. In ten years at Muskoka 71 per cent. of the patients have been cured or greatly improved. It is believed that 90 per cent. of the children will be cured or greatly benefited.

Through the able and energetic work of Dr. Hastings, Toronto, in her leading position in the campaign against tuberculosis, will soon hold

the unique position of having the lowest consumption death rate on the continent.

Ontario has more sanatoria for its population than any other Province or State on the continent. This is due largely to the help of the Provincial Secretary, Mr. Hanna .

Mayor Hocken, in seconding Mr. Gage's motion, said he was proud that Toronto should be in the forefront for the eradication of tuberculosis in Canada. The great spirit of philanthropy exhibited yesterday done more for the relief of the suffering and the distressed. When men and women learn to give and to serve they reap great harvests of happiness and confer great benefits on others.

After hearty cheers for the Queen Hon. Mr. Hanna paid his compliments to the work, and said that though "It is your money that is being used it is your trouble they are bearing out."

A few years ago the death rate was 148 in every 100,000, last year it was only 92. For children the respective rates are 100 and 60—a decrease of 2-5 in a few years.

"Now with people aroused to interest it is not too much to hope with confidence that in a few more years it will be cut down another two-fifths."

Dr. Hastings said that if the institution were the means of saving one child it would be worth all the effort—"if it were your child." This work is the most important problem in preventive medicine, but too many must have it brought right home to them.

"We have no idea of the extent to which tuberculosis exists in our country."

Statistics from Edinburgh show that from 1,270 to 1,570 of the victims of the white plague are under fifteen years of age. In Germany and England post-mortems prove that 99 per cent. of the cases under thirty years had had tuberculosis at some time during those years. This is one proof that the disease is curable. The cure is by natural laws—fresh air and sunshine, clean homes and good food.

It is a crime to allow firms to advertise positive cures for the disease. Those who do so are guilty of homicide and even of murder.

Controller McCarthy said the most outstanding feature of the work was the fact that a quarter of a century ago men planned for and dreamed of this preventive work. The success of it all depends on the co-operation of the city and the institution in the great work of prevention.

Hon. J. K. Flemming from New Brunswick, brought greetings, and said he was glad to meet gentlemen who in their hearts saw the need and labored so earnestly to accomplish present-day achievements.

Lately the work of prevention has been undertaken in all three of the Maritime Provinces.

After the benediction by Rev. Dr. Gilray the guests went through the large, airy building, complete with all modern equipment, even to the open-air school on the roof.

Across the lawn is another new building dedicated to the memory of Katherine Honorah Prittie, who died of the white plague at the age of twenty. In a few words Rev. S. C. Graeb, of High Park Presbyterian Church, told of the desire of Miss Prittie that something should be done to curb the inroads the dread disease is making on humanity, so that others might escape what she suffered. The new wing is not open to those of means, but only to those without money or price, that they may receive such attention as is procurable by those of wealth. The new building is not the only record of Miss Prettie's influence, for in the High Park district there is an organization of about fifty women who meet regularly to sew and prepare things ofr the patients.

Coming away, several of the girls in the regulation middies and blue skirts were met. They seem to enjoy the life there very much, and, indeed from all accounts it is "as good as being at boarding school."

There are 131 adults and 40 children in residence now, and there is accommodation for 220 adults and 90 children. The staff consists of three doctors, Dr. W. J. Dobbie, Dr. S. L. Hodgins and Dr. J. A. Anglin. Miss E. M. Dickson, Superintendent; five graduate nurses and twenty-four in training. There are forty-two employes at the several buildings.

DALHOUSIE MEDICAL GRADUATES.

The following have obtained the degrees of M.D., C.M., from the University of Dalhousie, Halifax: Geoffrey Alden Barss, Roderick Owen Bethune, Alex, Rae Campbell, Francis Stanislaus Finlay, John Parry Harrison, James McGregor Johnson, Albert Hugh MacKinnon, John Edminstone Park, and Arthur Augustine Cuthbert.

THE DUHRING MEDICAL LEGACIES.

Broadly considered as it was the entire life of their donor, the legacies for humanitarian purposes in the will of the late Dr. Louis A. Duhring are many sided. Those of peculiarly medical interest were contingent gifts of $5,000 to the Aid Association of the Philadelphia County Medical Society and $1,000 to the Philadelphia School for Nurses.

Manuscripts on cutaneous diseases, as well as notes of cases of the donor, are to be given to the university. The testament directs that they edited scientifically. The medical library of the testator is give nto the University of Pennsylvania, and duplicate volumes are given to the College of Physicians. A permanent trust fund of $3,000 is created under the care of the trustees of the University of Pennsylvania for the care of drawings, portraits, medical works, models, and photographs which comprise the collection of the testator. The will also directs that $5,000 be given to the College of Physicians with which works on cutaneous medicine and surgery are to be purchased. The library of the University of Pennsylvania is given $3,000 without direction. The income of $25,000 is to be used for the department of cutaneous medicine of the University of Pennsylvania. A museum for the study of cutaneous diseases is to be established. Should any of the income of this $25,000 trust fund be available for other purposes, lectures, prizes, and scholarships are to be awarded and cacilities for research work are to be obtained. The University Hospital is to receive $50,000 for the support of wards of free beds for the treatment of skin diseases and similar physical disorders. The residue of the million dollar estate is to be given to the trustees of the University of Pennsylvania, to be distributed in a specified manner, and to the College of Physicians.

ANTIQUITY OF THE HUNGER STRIKE.

The hunger strike is not an invention of the suffragists, although they may, perhaps, claim the introduction of it as a means of realse from prison. In the *Journal* of May 10th (p. 1010) we cited the case of John Scott, who in the sixteenth century, while confined in David's Tower, in Edinburgh Castle, abstained from meat and drink for thirty-two days in order to show that he was under the special protection of heaven. But hunger striking is a custom of great antiquity. In a letter published in the *Tablet* of May 10th a writer, who signs himself "Anglus," points out that in an article on the "Ascetic Traditions of the Celtic Church," which appears in the current number of the *Irish Eccles Record,* Dom Gougaud, of Farnborough, mentions "a legal institution of ancient Ireland—the procedure of fasting. Having exhausted all legal means to conquer the resistance of a powerful doctor, his creditor has only one means of constraint left to him—that of standing before the door of the debtor and of refusing to take nourishment till the debt had been paid. If the debtor allowed the person fasting to die of

hunger he was responsible for his death and had to pay his family a considerable indemnity in addition to the original debt. This was called 'fasting *against* or *on* a person.'" Dom Gougaud adds that in no Christian society to his knowledge has there been made such frequent and daring use of this curious process as in mediaeval Ireland. The custom is frequently mentioned in the Brehon laws. Fasting seems to have been practised when it was desired to turn a heathen king into a Christian, and the monarch, if hard of heart, counterfasted as a means of protecting himself against conversion. It is recorded that St. Patrick "fasted upon" Loegaire, the heathen over-king of Ireland, until the latter embraced Christianitly, and in accordance with the superstitions of the times the king and his family felt it incumbent upon them to fast at the same time until this test of endurance was won by the saint. The custom of hunger-striking for the same purpose was formerly common in Indian, but it is now almost obsolete. It it known in the East as dharna (or dhurna) baithna, or "sitting dharna." It was chiefly resorted to in order to force payment of a debt. The creditor would sit at the debtor's door and taste no food until his claims were satisfied. If the debtor allowed the creditor to starve, it was believed that he laid himself open to supernatural punishment, especially if the starver happened to be aBrahmin; accordingly, Hindus of lower caste would sometimes engage a Brahmin to starve for them. The custom was much abused, being utilized to levy blackmail upon persons who were not debtors at all.—*B.M.J.*

THE ONTARIO HEALTH OFFICERS' ASSOCIATION.

The second annual conference of the Ontario Health Officers was held on 29th and 20 th May in the reception room at the Parliament Buildings. Over three hundred delegates were in attendance. Owing to the time taken up in registration, several of the morning papers were transferred to the afternoon session, among them being one entitled "Does Vaccination Protect?" by James Roberts, M.O.H., Hamilton, and another on "How can Cross-Infection be Prevented in a Hospital for Communicable Disease?" by M. B. Whyte, Isolation Hospital, Toronto.

Dr. Roberts dealt with the opposition given to vaccination. "People who object to the system are as a whole ignorant of the value of inoculation, and if they can be shown that by refusing the sanction vaccination they will incur a financial loss, they will soon become amenable to reason." He also cited several cases in which unvaccinated people had

contracted smallpox on coming in contact with the disease, while others who had been inoculated remained immune. Five per cent., he considered an exaggerated percentage of teh children who after vaccination had contracted smallpox. In closing, he pointed out that it was the duty of every medical health officer to teach their ignorant and misinformed neighbors the truth about and the value of vaccination.

The next paper, "The Value of Vital Statistics in Relation to Public Health," by G. E. Whipple, professor of sanitary engineering, Harvard, was a splendid treatise of this subject. Prof. Whittle showed the folly of treating statistics as mere figures rather than as numerical statements of facts. He urged that statisticians and not mere clerks be employed to gather and present date, for it is only by so doing that accurate data can be accumulated.

"The medical health officer owes it to the community to study the saved from epidemics by such careful study. To use statistics with power and value the M.O.H. must be a technically trained man, and in that phase of the work, I am sorry to say that England and Canada are ahead of the United States."

In his presidential address Dr. Adam H. Wright, of Toronto, dealt largely with the proposed acquirement of the street railway by the city. He spoke of the grave dangers of infection in the crowded condition of the cars, especially during the winter, when they are clased, and atributed a great deal of tuberculosis, quinsy and diphtheria to the present system. He paid a tribute to Dr. Hastings, whom he declared in spite of all the abuse that has been levelled at him, has acquitted himself faithfully, and always in the best interetsts of the health of the city.

Dr. M. B. Whyte presented a very interesting paper on the dangers of cross-infection in a hospital for communicable diseases. One of the greatest dangers lies in the use of the clinical thermometer, he said. "It is impossible to sterlize a thermometer properly as it cannot be boiled and it seems to me that the use om individual thermometers would lessen the dangers of cross-infection materially."

"It is now possible under the Public Health Act of 1912, for the health authorities to extenr their work into the cubical contents of the shack and the palatial apartment house," said Dr. C. A. Hodgetts, of Ottawa, in his paper on "The Scope of Work in Home Hygiene." He deplored the absence of an adequate system of garbage disposal, and pointed out that if the authorities would appoint inspectors to show the housewives how they could burn and dispose of much of the garbage that is now thrown into the yards, much would be done to alleviate this nuisance.

Owing to the inability of Mayor Hocken to be present Controller

McCarthy welcomed the delegates to the city in a short address in which he spoke of the funds the City Council had appropriated this year for the betterment of public health, and showed that half this money would be wasted if the towns and cities all over Ontario did not co-operate in the work of preventing disease.

"The whole fight is to watch the individual, the one who has the disease and the one who has come in contact with the disease, for it is from such individuals that disease is transmitted, in a larger degree than from manure piles, garbage barrels and sewers." Such was the statement made by Dr. John A. Amyot in his lecture on "The Transmission of Cummunicable Diseases" be fore the Ontario Health Officers' Association.

Dr. Amyot told in a very simple manner the dangers of infection from such diseases as typhoid fever, diphtheria, infantile paralysis, and rabies. He explained that in order to become infected with typhoid fever or diphtheria it was necessary ofr the germs to penetrate the skin and break down the tissue. A person, he said, could have the bacilli of either disease in his mouth and yet not be infected, though he would be a menace to the community. He laid stress upon the fact that it was by personal contact that such diseases were transmitted, and because this is the case he emphasized the necessity that persons having or persons coming in contact with communicable diseases exercise the greatest care. He disposed of the idea that disease is spread by the gas arising from sewers showing by statistics and experiments that there were very few bacilli present in sewer gas.

In treating infantile paralysis he explained that the carrier was the common horse fly, and also the manner in which the germ attacks the body. Rabies he said could be transmitted by allowing a rabid dog to lick a part of the body on which there was even a microsopical abrasion, as well as by being bitten.

Under the auspices of the Ontario Board of Health, moving pictures were shown depicting the fly as a germ carrier, and the part played by air in respiration.

Speaking of the disposal of garbage in towns of between five and ten thousand population, Dr. W. R. Hall, Chatham, said the whole matter was left too much to individual attention and private enterprise. This should not be, because the health of the entire community might villages where wood was used for fuel garbage might be burned in kitchen ranges after the liquids had been allowed to drain off. The larger accumulation from hotels, etc., might be carted off for hog feed.

Dr. Hall seemed inclined to the opinion that it was an easy matter to induce hog raisers and gardeners to truck away garbage and manure.

He recommended the furnace for waste paper, boxes, tin cans, etc., before the residue was used for filling material. By proper furnace manipulation all these elements could be converted into ash.

For towns of a reasonable size Dr. Hall recommended the establishment of municipal piggeries, which would prove useful and profitable.

Dr. C. N. Laurie, Port Arthur, contributed a valuable paper in sanitary work among the foreign population. The importunity of these people made them seek cheap dwellings in poor locations, where little or no sanitary conveniences were available, and the spread of disease by flies and vermin was an easy matter. The antipathy of the foreigner to fresh air has resulted in almost an epidemic of tuberculosis among the Finlanders in Thunder Bay District. Fever patients are sent back into the cities, and servant girls from that class are frequent means of transporting germs. Dr. Laurie could see no other solution than consisten education, especially among the children of foreign parents, who are quick and ready to learn. Rigid enforcement of the law might have some effect, but prosecutions that he had instituted seemed to be barren of the desired results.

Miss Eunice Dyke, Toronto, spoke upon the Department of Health as the organizing centre for all tuberculosis work, since it was the only agency reaching all classes of patients. Of the 2,600 cases recorded by the Division of Tuebrculosis in Toronto in the past two years, only 781 had sanitarium care, and only 1,019 attended a dispensary. The tuberculosis nurses working at present throughout the Province were employed by voluntary agencies. Their efficiency could be increased by giving them the authority of a health department nurse. In some rural districts it might be necessary for the nurse to combine the duties of tuberculosis visiting, school inspection, instruction in the care of infants and sanitary inspection.

Pointing to the necessity of a pure milk supply, Dr. A. W. Macpherson, Petrolia, said that recent inspection had shown that a much larger number of school children were affected with tuberculosis than was generally supposed. It was not unreasonable, in view of all that was known, to suppose that milk from tubercular cows was a grave source of danger.

Dr. Nasmith showed that the control of the milk supply in smaller communities was not so serious as had been supposed. It was possible for the authorities to keep close to the producer, inspect frequently and insist on proper machinery being installed. This was more easily done in a small place than in a city like Toronto to which 2,000 producers were shipping within a radius of eighty miles.

The desirability of compelling doctors to report all cases of com-

municable diseases precipitated a warm discussion in the morning over the question of receiving a fee. "There is no classe of people who do so much for the public for nothing," said Dr. Vardon, Galt, in arguing that fifty cents should be allowed by the Government for each report. Dr. Hastings, Toronto, would have the fee one dollar, but Dr. McCullough thought fifty cents was enough. Dr. Hanley, Almonte, was satisfied that the report should be made and paid for, but the difficulty arose in getting the public to let the doctors know when cases arose.

"There is no class of people who do so much for the public for nothing," said Dr. Vardon of Galt, in urging before the conference of the Ontario Health Officers' Association in the morning that such payment should be made. "Any man who has been practicing for the last twenty years must realize that he has been working a quarter of his time for nothing."

Another fact adduced in favor of the medical profession was the improvement of health in Toronto. "When we used to come to Toronto it was in fear that we would catch scarlet fever; now Toronto is getting a decent city to live in, sof aras health is concerned," added Dr. Vardon, amid laughter. He pointed out the disability under which doctors now labored, in that if they reported cases of communicable diseases they might be reproached by their clients, who naturally did not like cards on their doors announcing the illness.

"The fee should be half a dollar," said Dr. McCullough, Provincial Health Officer, who pointed out that doctors were paid for reporting cases in England.

Dr. Hastings, Medical Health Officer of Toronto, would have made it a dollar. "I have never been associated with a medical man who would refuse to go out at any time of the day or night to attend a the legal profession or any other profession or business would do that?" Dr. Hastings asked. Every case of communicable disease should be reported, and the doctor was now protected by the new Health Act, which ordered the reporting of every suspected case.

Dr. W. E. Wodenhouse gave an elaborate, through highly technical description of the various methods that may be employed by a town or small community in the disposal of its domestic sewage. He condemned the cesspool and advocated the percolating bed system.

A resolution to amend the Provincial Health Act, so that the inspection of school children will be placed under the jurisdiction of the Provincial Board of Health, instead of under the Boards of Education, was unanimously passed by the Ontario Health Officers' Association at the afternoon session. Dr. G. A. Dickinson, of Port Hope, pointed out the advisability of such a move, in the interests of towns and smaller

communities where the medical inspection of schools is not strictly enforced. Copies of the resolution were sent to Hon. W. J. Hanna and the Minister of Education.

The following officers were elected: President, Dr. C. J. Hastings, Toronto; Vice-President, Dr. W. R. Hall, M.O.H., Chatham; Secretary-Treasurer, Dr. J. W. S. McCulloch, Toronto; Committee on Papers, Drs. J. A. Amyot, Toronto; Coutts, Agincourt; James Roberts, Hamilton, and J. H. Bull, Holland Centre.

DINNER OF HOUSE SURGEONS.

The annual dinner of the former house surgeons of the Toronto General Hospital, held 18th June, at the Albany Club, was graced with the presence of Dr. Taylor, of Goderich, the oldest living house surgeon in Ontario, and Dr. Charles O'Reilly, who was house surgeon from 1876 to 1905.

When Dr. Hillray, the president, called the gathering to order, there were eighty ex-house surgeons seated around the festive board, the largest assemblage in the history of the organization.

Dr. Hillray in his opening remarks called attention to the fact that the new General Hospital, the largest and finest equipped on the North American continent, was to be formally opened on the birthday of Dr. Charles O'Reilly, who for many years labored in the old hospital. The remark was received with prolonged cheers. Dr. Hillray also read a paper dealing with the history of the General Hospital, covering many interesting features, dating back almost to the inception of the institution.

Following this interesting insident, Dr. O'Reilly gave a brief talk coveri ig his connection with the institution, during which he made comparisons of the obstacles which the house surgeons had to contend with be fore the introduction of the modern medical equipment which has been instrumental to a large extent in elevating the work of the institution to a position scarcely thought possible a few years ago.

Dr. W. E. Gallie of Toronto, was presented with a gold-headed cane, for contributing the best essay on "modern medical science," a prize which is given annually by the association. Dr. Thos. Cullen of the Johns Hopkins Hospital, Baltimore, was the runer up in the competition in which some twenty-five house surgeons competed.

The speakers who responded to the different toasts were: Dr. Nevitt, Dr. Doolittle, Dr. N. J. Yellowlees, Dr. R. K. Haywood, Dr. Phillips, Dr. D. C. Robertson, Dr. C. K. Clarke, Superintendent of the General Hospital, and Mr. J. C. Eaton.

THE DOMINION MEDICAL COUNCIL.

The Dominion Medical Council which was in session in Ottawa for three days concluded on 18th June. The organization under the Dominion Medical Act was completed and by-laws and regulations were adopted for submission to the Government, whose approval is necessary. Arrangements also were made for the first Dominion examinations. They will begin at Montreal on October 7. The Dominion register will open at Ottawa on July 1, which is not only Confederation Day, but also marks the confederation of the Canadian medical profession. The first annual meeting will be held here on June 16 of next year.

The final establishment of the council marks the completion of medical reciprocity, which has long been advocated. The moving spirit the Dominion Council may, without further examination practise anywhere in Canada upon registering. Physicians of good standing for ten years before October, 19 12, may secure the diploma without examination upon payment of a fee of $100. If a medical graduate locate in any province and intends to stay there, the Dominion examination provinces on the strength of a provincial license. This privilege is granted only to those who pass the Federal Council or register, without examinations, after having practised ten years.

The fundamental princple of the bill is to away with provincial limitations and pjrovide that a physician who secures the Dominion certificate may practise in any province without the necessity of undergoing an examination before the provincial authority. Hon. Dr. Roche, Minister of the Interior, who convened the first council meeting in Ottawa la stOctober, was elected an honorary member, and Dr. R. W. Powell, of Ottawa, is the registrar. The first name on the Dominion register will be that of Dr. Roddick, the president and father of the bill. The Act was first passed by the Dominion Parliament and afterwards ratified by the different legislatures.

ONTARIO MEDICAL COMMISSION.

"The Government has decided to appoint a commission to investigate the whole subject of medical education and the practice of medicine in Ontario . . . the object being to acquire information upon which to base legislation for every imaginable application, in order to regulate and control all in the interests of the province.

"The term medicine will include all plans or means of alleviating or curing human defects, disorders, diseases or wounds.

"The investigation will include the College of Physicians and Surgeons, and the exercise of their powers and duties. It will also cover the medical faculty of any university or college, and what is taught there.

"It will include osteopathy, dental schools, nurses, training schools, as well as opticians and their training.

"The investigations will also include the practice of any branch of medicine by Christian Scientists, or by any other class or sect; and by the time they get through all these their statement will be of such a great and comprehensive character as to be a lasting benefit to the province and the Legislature, enabling the Government to deal with all such matters in an intelligent manner."—Sir James Whitney at the opening ceremonies of the Toronto General Hospital.

EUGENICS.

No whispered words of love I bring;
But at your feet I lay my chart,
  Such sentiments are old and stupid;
Nor yet of passion will I sing;
  We've long since superceded Cupid.
  Descriptive of my rare attractions
(My muscles fill the greater part,
  My beauty's shown in vulgar fractions).

Nay! answer not, "Pray ask papa!"
  In manner of our predecessors,
Poor pa is now a fallen star—
  We ask consent of wise professors,
In council they'll discuss our claim,
  Where none their wisdom may disparage,
And on the minutes they'll proclaim
  Our bans in scientific marriage.

—*London Opinion.*