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Editorials

SEXUAL INSTRUCTION

It is now generally recognized that venereal diseases, especially syphilis, lie at the roots of many constitutional disorders, and that, in order to obtain a high standard of public health, the prevention of venereal diseases should be diligently sought for. Proceeding with the argument, it is said that venereal diseases are acquired by innocent people, even children, through ignorance. Hence plausible inferences would be, that oral instruction in sexual hygiene should be given to school children by their teachers, and that elementary physiology, in which the structure and functions of the sexual organs are mentioned, should be one of the subjects taught in public schools. Also that in colleges, the reproductive processes, as they occur in plants and animals, should be studied as any branch of physics may be studied, but that the instruction in this branch should not go far. A text-book, known as "The Ontario Public School Hygiene" is used in Forms IV and V of the Public

Schools of Ontario, but it contains no reference to sexual hygiene. Neither is this subject dealt with orally by the teachers. As most of them are unmarried women their avoidance of this subject is easily understood. Even if they were authorized by the Minister of Education to teach it, the instruction given would be very limited.

Most mothers of families are not incompetent to give some instruction in sexual hygiene to their children, and it should be remembered that they have a knowledge of this subject, not possessed by unmarried teachers. The family doctor—if there is such a being now-a-days—should co-operate with the mother of the family in giving this kind of instruction. Even if the assistance of a doctor is not asked for, a mother of a family, whose knowledge of the nature of her child is greater than that possessed by a teacher—knows when to be truthful in replying to its questions on sexual matters and when to avoid revealing too much.

Instruction given in schools and home training are different in their methods and results. The former deals chiefly with the dawning intellect of the scholar, explains the reasons why things are so, but does not offer any appealing motive to induce a boy or girl to repress the promptings of sexual passion. Home training is acquired by imitation—by the natural exercise of the senses. To be effective, however, in instilling correct notions of sexual hygiene into children, home training presupposes the existence of parents who practise, in their daily life, the

decencies of correct behavior and from whom the children learn something of these verities of sexual hygiene which will cling to them in later years. Besides, the far-reaching influence for good exercised by a mother, even on her grown-up sons and daughters, must be given its full value. Sexual continence is not practised solely because it is taught by moralists. "Scio meliora proboque, deteriora sequor," is a sentiment which reveals the weakness of the intellect in the grasp of passion, as surely in our day as it did twenty centuries ago. Yet if a man has been trained by decent parents, especially by a loving mother, even though he should wander far on forbidden paths, yet will he return, through the force of ancient habit and loving memories of a happy childhood, to the practice of morality and decent living, acquired by home training.

Biology is a subject of study, which deserves the notable place it occupies on the curricula of colleges and universities; but even a full acquaintance with the arrangement of the different tissues or parts of animal or vegetable organisms will not impart a power of resistance sufficiently strong to overcome temptations, which often lead to infection with gonorrhea or syphilis.

J. J. C.

A ROYAL COMMISSION ON MEDICAL EDUCATION

RECENTLY, upon the occasion of the opening of the New Toronto General Hospital, Sir James Whitney, at the conclusion of his congratulatory remarks, digressed from the theme of the moment long enough to say that a Royal Commission would be appointed by the Provincial Government to inquire into the whole system of Medical Education in Ontario.

As many were aware, Sir James explained that hardly a session of the Legislature passed without applications of a variety of descriptions being received, asking that the Government protect and place upon a proper footing in the Province members of various schools of medical thought and promoters of different forms of medical education. It was most difficult to deal with all such applications. "The Government," he said, "has decided to appoint a commission to deal with the whole subject of medical education and the practice of medicine. The object of this will be to secure information on which to base legislation under which every imaginable application such as I have described can be regulated and controlled and governed in the interest of the people."

"Under the powers given to the commission medical treatment will include all means of preventing, healing or curing human disorders. It will be the duty of the Commission to investigate and report upon any matter relating to the education or practice of medicine; the constitution, powers and by-laws of the College of Physicians and Surgeons of Ontario and the

Ontario Medical Council; the medical faculty of the University of Toronto; osteopathy and the creation of a school of osteopathy in the Province; nursing and the schools for training nurses; the practice in any branch of medicine of Christian Science; opticians and their training in relation to the human eye; dentistry and the training of dentists; the practice of any branch of medicine by the members of any class or sect."

Upon being spoken to afterwards Sir James said that the outline of the scheme had only been drafted, and no move had been taken by the Government to appoint the commission.

Upon the *personnel* of the Commission entirely depends its value to the profession on the one hand, and the general public on the other. It must be without political bias and not composed of any who are in favor of "paths" or queerness of any sort, the more conservative the better. With an audacity born of the necessity of the moment, we would suggest in a general way a commission that would, we think, be capable and acceptable to all concerned—a commission of five men composed of, say, one representative from the Ontario College of Physicians and Surgeons, one from the University of Toronto, one from Queen's University, one from the Western University, and a fifth prominent citizen, outside perhaps of the domain of medicine, but eminently fitted by broadness of mind and education along scientific lines, we refer to the Hon. Mr. Justice Riddell, K.C., LL.D., of Toronto.

If this suggested commission is, as we think it is, honest and honorable in the sight of all men and for the genuine purpose of putting a further safeguard and a wall of suitable dignity around the name and profession of medicine, it cannot be welcomed too eagerly. If, on the other hand, it is a method to force in osteopaths and other professional junk, it will have a sorry purpose and a speedy end.

If, as some have suspected, it is to do away with the Ontario Medical Council, it will be a detriment rather than a help to the medical fraternity. The Medical Council is, or should be, our bulwark of defence and is a body, though a little expensive in former times and severely criticized, on that point only, by this journal, but always upheld for what it stands for. We surely need it more to-day than ever. The larger cities are being overcrowded by cults and so-called healing sects and training schools (so-called) for nurses. The only proper training schools for nurses are our best hospitals, and, if our Government perchance runs out with a flag welcoming indiscriminately Hindoos and other individuals, who knows but a Hindoo osteopath, with a Japanese chauffeur and a Chinese cook, may ask for seating accommodation on festal days with the professoriate of our university! Well! that may be a question after all for the Medical Health Officer to decide in the interests of public health.

But even jest turns often very quickly to earnest when the unguarded door is left rather insecurely locked.

W. A. Y.

THE CANADIAN MEDICAL ASSOCIATION LONDON MEETING

WE have to apologize to our readers that the report of the London meeting of the Canadian Medical Association arranged for cannot appear till next issue. The fault is not ours, but due to unforeseen circumstances. In this issue, however, will be found the presidential address and the address in surgery.

THE DOMINION MEDICAL COUNCIL AND THE ONTARIO MEDICAL COUNCIL

AT a meeting of the Dominion Medical Council, convened at Ottawa, June 16th-19th last, the Dominion Medical Act was completed and by-laws and regulations were adopted for submission to the approval of the Canadian Government. Arrangements were likewise made for the first examination under the Act, which is to take place October 7th next, at Montreal. Successful candidates will, upon registering, be qualified to practise in any part of the Dominion. Physicians in good standing for ten years before November, 1912, may register, without examination, upon the payment of a fee of one hundred dollars. The privileges of Dominion registration are reserved to these two classes of medical practitioners.

The first name on the Dominion Medical Register will be that of Dr. Roddick, President of the Dominion Medical Council and father of the Act, which established that council. Hon. Dr. Roche, Minister of the Interior, who convened the first council meet-

ing, at Ottawa, last October, was elected an honorary member; Dr. R. W. Powell, Ottawa, is the Registrar.

A proviso exists in the Act, which we hope will soon be abrogated. It is to the effect, that those who register under the ten years clause may be required to pass an examination in the final branches, if a Province so decides, not being satisfied with the period of years therein prescribed. Up to the present time, only one Province of the Dominion, viz., British Columbia, has definitely stated that she intends taking advantage of this section.

The leaven of the Dominion Medical Council is already working actively, and a remarkable exhibition of its influence recently attracted the attention of the Canadian profession to the Medical Council of Ontario. Last month, that body decided to open its doors to qualified physicians of ten years standing, of any Province of the Dominion, without examination, and with no demand for a reciprocal concession. All the other Provincial Medical Councils, except that of British Columbia, have already taken similar action. The effect of such reciprocal actions by Provincial Medical Councils will be to secure to practitioners of ten years standing in Canada the benefit already promised by Dominion registration, quite independently of the Dominion Medical Act. By similar mutual arrangement between Provincial Medical Councils, a license obtained by examination in one Province of Canada might be legalized in any other Province, so that the qualifying examination of the Dominion Medical Council would then become of no

particular value. Its looks, therefore, as though the Provincial Medical Councils had become generous to Canadian doctors, at a time when generosity called for no sacrifice on their part. In fact, one might say that the generosity of the Provincial Medical Councils is chiefly exerted in an effort to prolong their own lives and privileges. Imitation is the sincerest flattery, and, in appropriating to themselves the beneficent features of Dr. Roddick's Act, the Provincial Medical Councils clearly indicate the man to whom the gratitude of the profession is due.

J. J. C.

THE ONTARIO GOVERNMENT AND MEDICAL PRACTICE IN ONTARIO

IRREGULAR practitioners of the art of healing in Ontario want the Government to provide machinery, so arranged that they can get fees from their dupes, in a lawful manner. In order to make such a demand, they must have a good deal of influence. The Government, unwilling to offend them and anxious, at the same time, to stand well with the medical faculty and regular practitioners, invokes the aid of a commission. A commission at once suggests to politicians a convenient way for complimentary admirers; for shutting temporarily the mouths of party men; for finding a possible solution of the age-long struggle between quackery and scientific medicine.

We do not think that such a solution will be reached by a commission. A partial solution may be

got through a wide diffusion of knowledge about diseases. Not in medical congresses only, or behind the closed doors of medical societies should the origin, prevention and treatment of important contagious diseases be discussed. Physicians need not a teacher, if they do something more than con other men's books, if they burn up some brain tissue in forming correct notions on the substrata of these diseases. The people, the raw material of physician and quack need instruction in the art of preserving health, in the right of medicine, the wrong of humbug to relieve pain or stop disease. This sort of instruction they should get through the papers, and physicians, who are able to write, should be their teachers. The word doctor is derived from docere, to teach, a doctor of medicine should teach the people how to avoid disease.

People who get their notions of medicine from the advertising pages of papers imbibe quackery without an antidote, and cannot be expected to rise higher, in their knowledge of medicine or hygiene, than the sources from which their inspiration is derived. Give them sound doctrine and some of them will turn towards the light.

In reference to the popular appreciation of doctor or quack, it must be remembered that a doctor's practice is not sound because he was trained in an orthodox school. A school may teach a man scientific medicine, but it cannot so arrange the processes of thought that his appreciation of common clinical data will be correct. What medicine teaches is one

thing; what its practitioners practise may be quite a different thing. A sharp quack, equipped with native good sense, a knowledge of human weaknesses, and possessing an ingratiating manner, with sufficient caution in his make-up to conceal his own ignorance, may distance a gold medallist in securing patients.

There always will be quacks—people who prefer an irregular way of doing things in medicine, who detest the difficult way taught by science, who love humbug and dislike truth. Be it so, but, anyway, let us make these quack doctors do some hard preliminary work before they get the state-given privilege of befooling their admirers. Let the professors or teachers of every irregular school, who claim the right to treat disease as a profession, pay well for the privilege of exercising that right. Let them become educated men and women, even though they should afterwards apostatize and offer incense to idols.

Let them be obliged to matriculate in the Arts course of the University of Toronto; let them pass two years in the practical study of anatomy, physiology, bacteriology and chemistry as applied to medicine; let them pass three years in the study of disease and its therapeutics as taught by regular medicine, Hahnemannism, osteopathy, christian science or what not. A final examination as to competency should be exacted and then the therapeutic tyros should be let go on their way. The State in their regard has done its duty. J. J. C.

Original Contributions

PRESIDENT'S ADDRESS*

BY H. A. M'CALLUM, M.D., M.R.C.P. (LOND.)

IF I had considered the high honor and responsibility awarded me by the Canadian Medical Association at our meeting in Edmonton last year, I should perhaps have declined the flattering tribute, as much from consciousness of my own inability to fulfill the distinguished position in a manner satisfactory to myself, as from a sense of what is eminently due to the scientific and high professional character of this national association. However, inadequate as the discharge of my obligations of office may prove to be, I am emboldened by the support of my local colleagues, and the encouragement of numerous members throughout the Dominion, to rely upon your indulgence for whatever is stale and unimportant, or for whatever may be defective in the manner of my address to-night. It has been the practice of my predecessors in office to sweep the whole horizon of Canadian medicine for objects worthy of the attention of this association. I plead for the liberty to say painful truth when dealing with matters that affect the honor of our profession, and it is not from love of wounding or pleasure of stinging, that I am dealing boldly with professional defects and offences. I would rightly merit the contempt of you all, did I pass these things by on the other side.

The first thing to challenge our attention, is the relative indifference shown to this association and what it represents by too many of the eight thousand doctors in the Dominion. The association has had no mean part in removing narrow, provincial medical prejudices and in bringing about legislation that resulted in the accomplishment of Dominion registration. The splendid service of the British Medical Association to the pro-

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fession of the British Isles, in dealing with the terms of Lloyd George's Insurance Bill, points out what an association can do for each individual member of the profession. The future outlook of Canadian medicine demands a strong association to confront legislation that would make us a despised arm of the Civil Service. It may be there are greater evils in store for us than being brought under the pay and direction of the Canadian Civil Service. If thereby the public were protected against its own "giant credulity" and our profession purged of its abuses, one could gladly welcome the change. So long as a nation can elect a demagogue to its legislative halls, there is sure to arise the attempt. It may be in the very near future. Let us be armed to secure the most favorable terms. If four-fifths of the profession belonged to the association, instead of one-fifth, as at present, no attempt could get under way to bring us into the service without our consent.

Previous to the inauguration of the association journal, there were practically no permanent members of the association, except its officers. The membership lasted only during the meeting, and its character changed from year to year. Since the appearance of the journal, the permanent membership has reached nearly fifteen hundred, and the attendance at the annual meetings has more than doubled. Two factors have created gigantic associations in the United States and Great Britain, viz., the unification of all city or county societies with the national association, and the establishment of a weekly journal. The national association should be the apex of the pyramid, whose base is the provincial societies built upon the city and county societies. At the suggestion of President Mackid, the association last year directed the secretary to induce each provincial society to secure affiliation with itself of all the city, town, and county societies.

The great bond between the national association and the individual in the profession is not the annual meeting, but the weekly journal. It is by way of a weekly journal that we can succeed in forcing this association into greatness. It will require funds to put the association journal out as a weekly, but the difficulty of obtaining these funds is not insurmountable. One way is to canvass the profession for a membership on the

basis of a weekly journal. A membership of one-half of the profession of this country, would assure the continued existence of a weekly issue. Another way is to secure an endowment, the interest on which, when no longer needed for the maintenance of the weekly journal, could be used for lectureships and research work under the association's guidance.

The association is greatly in need of funds for other reasons, one of which is to rescue our profession from being exploited by the commercial enterprise of certain drug houses. Abraham Flexner ("Medical Education in Europe," page 90), speaking of this evil under the head of medical education in Germany, pertinently remarks, "The critical pharmacologist has discredited the old wives' tales that kept up the traditional pharmacopeia. Meanwhile the manufacturer is spinning a new superstition; the chemical industry of Germany is aggressively and intelligently directed. Only a critical pharmacological sense can enable the practising physician to know when to doubt and how far to believe the sanguine and assertive claims made upon him by the manufacturing chemist." The American Medical Association, through a committee on pharmacy, has undertaken to investigate some vaunted claims of certain drug houses with beneficial results to the profession in general. May I ask, are all the medical publishing houses with their endless padded encyclopedias on every conceivable branch of medical science, not likewise guilty of exploiting our profession? Nothing can be done against these exploitations, unless we have paid, skilled and scientific censors. For this purpose, funds obtained through increased membership are urgently needed. Above all, we need the influence of all "the respectable and redeemable members of the medical profession in the remote districts as well as in the great centres of our Commonwealth," that they may have a hand in shaping all legislation affecting the future of our profession, and the public health of our country.

The committee of this association has been promised by the Right Hon. R. L. Borden that there will be created in the near future a portfolio of public health. Inasmuch as these changes take a long time in coming, it behooves us to keep urging the authorities. We cannot get a pure food law or federal control of vaccines, serums, and drugs, such as has been in operation in the

United States during the past ten years, without such cabinet appointment. There they have a fine of five hundred dollars or one year's imprisonment for conviction of adulteration.

Like several of my predecessors in office, I desire to refer to some phases of medical education. The Carnegie Foundation for the advancement of teaching medical education has done great service for medicine on this continent. Out of its criticisms has arisen, almost everywhere, improvement. Not the least valuable part of its contribution is this, that it gave support to that faction of every medical faculty desirous of being abreast of modern education. The Carnegie Foundation authorities have, however, over-emphasized the laboratory side of medical instruction. The German method of medical education is to tie the medical student to a microscope, as opposed to the English method of cultivating knowledge through the unaided eye. In Germany, the aim is to make scientists first and then doctors. Whereas the "primary purpose for which students learn sciences, is to become physicians, not scientists." The literature of the several subjects that form the basis of medicine has become so extensive, that no man can keep abreast of it. Physiology, which is easily the most essential of all primary studies, has become so elaborate that it has suffered subdivision into three or more departments or professorial chairs. There exist similar subdivisions in bacteriology, pathology, and anatomy. As each teacher declares himself incompetent to instruct outside his subdivision, how idle to attempt to make anatomists, physiologists, bacteriologists and pathologists, etc., of medical students. The time is not so very remote when a medical student could master all the primary branches of medicine. To-day it is not possible for him to master a single branch of the sciences that are connected with medicine, during his college course. The instruction given to medical students does not enable one student in a hundred, no matter how high the standing of the school may be, to say whether a throat culture is or is not diphtheria. For years American medical teaching has been dominated by the German plan of instruction. In certain quarters there is setting in a reaction. It is claimed that we have become guilty of a fetish-worship of laboratories in medical instruction and medical practice.

The great physician and surgeon must depend for his diagnosis upon the physical examination and the evidence he ex-

tracts, sifts, and weighs in the patient's history. Laboratory methods are of only occasional use, viz., to support or not support clinical findings. Within the last few years, physiological and pathological chemistry have assumed increasing importance in medical instruction, and would appear to be rapidly pushing, and possibly rightly so, all the other laboratory subjects into the background. It is hopelessly futile to attempt anything more than the most elementary teaching in the primary subjects of medicine to-day. The tried-out subjects of the ages, anatomy, physiology, and chemistry, should have preference as to the length of instruction hours. A student's most precious possessions are his time, his vitality, and a clear mind at the age when the mind is most supple, its curiosity most alert, and its nature most impressionable. It is only by cutting down the time allotted to laboratory subjects that we will be able to find a place to instruct students in all the physical, mental, and nutritional forms of healing. It is high time that there was a readjustment of the programme, and a place, if not a professorship, given to these important subjects. Starling, in his preface to his "Physiology," has rightly said, "Until doctors know more about the physiology of nutrition, quacks will thrive and food faddists abound. Ignorance of physiology tends to make a medical man as credulous as his patients, and as easily beguiled by the specious "puffing of the advertising druggist." Some bold surgery is needed in the medical curriculum. At present it is clogged and strangled with too many subjects, and the malady is yearly increasing. This virtually amounts to a confiscation of the most plastic, receptive, and promising years of the student's life, by making him study subjects almost ulterior to the dominant purpose of his life. It is an academic crime to add more burden to the already overworked medical students, some of whom leave the college doors, now, with wrecked health. As the subjects become more intricate and complex, the teaching should become correspondingly more elementary. Medicine has nursed many of the sciences from infants to giants. Now, each one is able to set up a house of its own over which a full-time professor presides. They have emigrated into the land of pure sciences. In the reconstruction of the timetable, every hour added for a new subject should be cut off from the non-essential.

I am one of these who had the good fortune to serve, while a medical student, an apprenticeship under the guidance of an able practitioner, and I cannot get away from the thought that the time so spent was far more valuable to me than an interneship in a hospital. The enormous increase in hospitals throughout the country makes it unnecessary for a recent graduate to be without an interneship. However, there ought to be a choice between an interneship and a year's apprenticeship with certain designated members of the profession.

A leading insurance company on this continent has found it profitable to pay its examiners a fee for an annual examination of each of its policyholders. The laity insure their barns, buildings, and their valuable stock against accident, and make periodic careful inspection and veterinary testing of these, and yet they will go from year to year without even thinking of subjecting themselves or their families to examination by a reputable physician, that incipiency in ailment may be detected and remedied. Why should we resort to medical inspection of schools and neglect the yearly inspection of the adult citizens of the country. Let us try to hasten the day when no man shall think of exercising the right to withhold himself or his family from a yearly physical examination by a reputable physician, to determine any tendency to disease or the presence of disease itself. I am not blind to the fact that this innovation can lead to abuses, for it is impossible to eliminate at once from our profession the alarmist, the surgical tinker, and the obsessed drug giver.

In common with the profession in the republic to the south of us there are problems here affecting the public no less than the profession. These demand solution. Already there has been inaugurated at Washington, during the past month, a movement to establish a non-teaching college analogous to the Royal College of Surgeons of England, with the aim of giving higher degrees in surgery. The bearer of such a degree will have, from competent authorities, the stamp of approval declaring him capable of doing good surgery. American surgery, recognizing that their evils are likewise our evils, has most kindly invited well-known, reputable Canadian surgeons to become founders with themselves of the projected college. Not only will this college demand of its graduates technical knowledge and operative skill, but, above

all, honesty and unquestionable moral character. A movement of this kind is intended to abolish needless and abusive surgery together with its invariably associated dichotomous fee. To do this effectually, those holding such degree must have public support and sympathy. Is not the time ripe when we should receive higher degrees in Canada, not from Great Britain and the United States, but from a Canadian institution, founded by the parliament of this Dominion preferably at Ottawa? The ambition of ninety-five per cent. of the recent graduates in medicine is to become surgeons, and in many cases life's efforts are directed to this end. Matters have come to such a pass that the recent graduate thinks of disease only in surgical terms, the medical side is "a despised weed." We need competent medical men and competent obstetricians, just as badly as we need competent surgeons, that is, we need men in these departments who have the knowledge of specialists. There is too much tendency to accept mediocre attainment in the two former, and demand thorough attainment in the latter. Given a standard high degree in these subjects, along with publicity of their meaning, we would find plenty in the profession who would put forth continued efforts at self education for their attainment. There is a dearth of competent men in many departments of medicine and an overcrowding of the profession with mediocre ability.

My duty to the profession and to the public would not be done did I not refer to the miserable medical fees common to some districts of this country. Once a fee becomes established in a community it is hard to raise it. In certain districts in England, the twopence and threepence fees still persisting are relics of Henry the Eighth's time. A banker, stating tersely the altered value of money, said that in 1860 $20,000 would yield in interest $2,500 annually. This sum would go as far as $6,000 for living expenses to-day; $120,000 would be the amount of principal required to earn $6,000 to-day. In other words, $20,000 in 1860 yielded a living for which $120,000 would be required to-day, one dollar being equal to six nowadays: "The laborer on the street has been quicker to grasp the altered value of money than your profession," said the banker, "and what is more, he has had, as a rule, the courage to demand his right to substantial increased wage." Through a failure to carry a campaign of

education in favor of better medical fees, there has arisen a disproportion between medical and surgical fees which is largely responsible for fee splitting. One general practitioner gave an illustration in this way. He said he took Jenny B. to a surgeon for appendicular operation between attacks; the father paid the fee of one hundred dollars. Six months thereafter, he protested a bill of twenty dollars for attendance on his other daughter for a severe and prolonged attack of pneumonia. So long as there are miserable medical fees and this disproportion between medical and surgical ones, the fee splitting cannot be stamped out. There must be a good living wage for honest medical service, or members of our profession will fall into dishonest practices, and sink into the mire of dishonor itself. The righteous course for our profession to pursue is, while not distressing the deserving poor, to be careful not to put a premium on mere stinginess.

Medicine has made contribution to every calling in life. It is our high duty to go farther. We must not continue the silence of centuries any longer. We must educate the public in the scientific principles of medicine far enough to give them ground to judge in their true light the sophistries of the quack and the charlatan. The osteopathist, Christian scientist and chiropractor succeed with even the supposedly educated and intelligent, because they teach the public their theories of disease and healing. To tell a patient that his bile has become thickened and that the grooming he is about to receive will make the bile more limpid, is an explanation not above his comprehension. What we must do is to educate the public till such an explanation will not be entertained. The greatest publicity should be given to the achievements of regular medicine since it became worthy of being a science. Should not every school child know that through our profession the average length of human life has been doubled; that in the last twenty-five years, eight years have been added to the average length of life; that it is to our profession that every civilized nation looks to wipe out plagues and hold back and even arrest epidemics? We have given the widest publicity to vaccination against smallpox with happiest results. Why not give publicity to the equally valuable vaccination against typhoid fever? Our battle against tuberculosis has been a publicity campaign in which the laity has not only believed, but has actually

joined with us in great force. The enlightenment of the public in this will render it impossible hereafter for the heartless quacks to thrive upon the ignorance of the consumptive victim. If the battle against cancer, the twin monster of tuberculosis, gains this publicity together with a similar sympathy and active support from the laity, our triumph over this disease is to be within the life of many in this room. Let us never grow tired of impressing the fact that it was the regular profession which discovered anesthetics, abolishing pain and agony off and on the operation table, and that it will not be in the power of the human race in the future to duplicate a boon to humanity like antiseptic surgery. In spite of the fact that serum has cut the fatalities of diphtheria in half, in addition to putting into our possession the most potent agent against the spread of this dread disease of childhood, that the Spanish American Main has been swept clear of the yellow fever scourge, and that we have not only the cure for malaria, but also the power to wipe it off the face of the land, yet there are, both among the ignorant and intellectual, those who declare that medicine has made no advancement in one hundred years, and all this because we have not given the widest publicity to our achievements. In the expressed opinion of Lord Salisbury, medicine is the most exact and advanced of all the true sciences. It has rendered tributary to itself the knowledge of every walk in life.

In conclusion, while I have unflinchingly probed these festering sores on the surface of our professional body, I hasten to declare the heart of it to be sound and flawless, jetting out from its valves a fountain stream of all that is splendid in the history of science and humanity; matchless in progress, matchless in achievement, and matchless in future outlook.

ADDRESS IN SURGERY—FRACTURES AND THEIR TREATMENT*

BY J. ALEX. HUTCHISON, M.D., L.R.C.P. & S. (EDIN.)
Professor of Surgery and Clinical Surgery, McGill University; Surgeon Montreal General Hospital.

It is a great privilege to be permitted to read an address on surgery at the annual meeting of the Canadian Medical Association. When your President, influenced largely, I think, by kindly feelings towards myself, invited me to read the address, in a moment of vanity I consented, and since then I have felt the responsibility more and more as the time of the meeting approached. I wish therefore to express my appreciation.

In the choice of a subject, I have been influenced largely by the fact that during the past few years, more especially since the introduction of radiography, the subject of fractures and their treatment is, perhaps, of more general interest to the members of this association than many other subjects which might have been considered.

Time will not permit me to go into details as to the particular treatment of a particular fracture. My object is rather to consider the subject as a whole, and to make a brief review of the various methods in use, presenting a few of my own observations gathered from twenty-two years' experience as a surgeon and assistant surgeon to the Montreal General Hospital, which institution, from its situation in the centre of the largest city in our country, and within half a mile of the head of ocean navigation, has perhaps, the richest clinic in fractures in Canada.

It has been stated that in the midst of all the wonderful advances in medicine during the past thirty years, and more especially in the advances in the surgical treatment of diseases, our knowledge and treatment of fractures is much as it was in pre-Listerian days.

An exception is admitted in the treatment of compound fractures. The work of Sir William Macewan, in Scotland, Sir Arbuthnot Lane, in England, and J. B. Murphy on this con-

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tinent, during the past ten years, however, has drawn the attention of the profession to this subject, with the result that many radical changes have taken place, not only in our knowledge of bone regeneration and repair, but also in our treatment.

How far the introduction of radiography is responsible for the change it is difficult to say. It has at least added enormously to our knowledge and precision. In a brief review of the subject it is necessary to deal first with:

REPAIR.

It was formerly held that the periosteum was the most important tissue and that largely from it bone repair took place. Our treatment, therefore, consisted largely in attempts to cover divided portions of bone with its periostial envelop. Where disease or injury to bone resulted in destruction of the periosteum and uncovering of the bone, we were taught to expect death of the bone at least in part. It is clearly demonstrated, largely through the experimental work of Macewan, that the periosteum itself cannot reproduce bone, and it acts as a mould, guiding and controlling new growth.

It has been a common clinical experience to find little or no callus thrown out over that portion of a fracture protected with untorn periosteum, or where a splint or other support pressed uniformly against a fracture with torn periosteum, and that in the same fracture with extensive laceration and destruction of periosteum, producing large gaps, extensive, excessive, and irregular callus developed. Thus we learned the well-known rule of the carpenter, "the thinner the layer of glue the stronger the join," and efforts were carried out to limit and control excessive callus formation.

Our present knowledge of repair of bone may be briefly summed up as follows:

Hemorrhage, which is always present to a greater or less extent.

Inflammatory exudate of leucocytes, serum, and fibrin.

Proliferation of bone cells of osteo-genetic power (osteoblasts).

Formation of a matrix of proliferating blood vessels carrying osteoblasts.

Osteoblasts once formed proliferate rapidly, lime salts become deposited and new bone is formed.

During this process large cells, derived also from the bone cells appear, called osteoclasts, which have the power of destroying bone, thus removing unnecessary callus.

These changes vary in individuals in accordance with varying conditions of health, and show greatest activity in the young. Thus we have great regenerative power in the young. Conversely, in older individuals, proliferation is less marked and the osteogenetic cells more rapidly perform their evolution and become complete bone; proliferation ceasing before complete repair of a destroyed portion of bone has taken place. Hence delayed, incomplete, and frequently non-union results.

While bone grows principally from epiphyseal cartilages, after their artificial removal, osteoblasts from the diaphysis in a measure fill the space, and while the process greatly lessens diaphyseal growth it does not entirely cease.

The thanks of the profession are due to the British Medical Association for the report on the treatment of simple fractures recently published. This report has done much to remove many misconceptions, and I am glad to notice among its findings, that the non-operative treatment of fracture in children under fifteen years gives a high percentage of good results. Also that in children, with the exception of fractures of the forearm, open operation does not give better results than the non-operative.

Sufficient time has not yet elapsed since the publication of this report to allow a proper appreciation of all its findings. Much valuable knowledge, however, has been put before the profession. We may look forward with interest to the investigation of the American Surgical Association, the preliminary report of which was recently read at Washington by Dr. J. B. Roberts, chairman of the committee.

We may divide the treatment of fractures into four general groups:

1. Fixation with splints. Rest.
2. Fixation with splints and extension by weights as advocated by Buck many years ago, and also during recent times by Bardenheuer.
3. Ambulatory, mobilization, and massage.
4. Operative or open method.

From these various methods it is difficult to choose, but it is well to keep in mind their usefulness as adapted to the special features of a given fracture. Versatility is the successful instrument, and, for the average practitioner, no one plan should be adopted for routine practice; in fact, routine practice may be said to be the cause of most of our failures. At the same time it should be the aim of each man to adopt a definite scheme of treatment and carry out its details sufficiently in each case to familiarize himself with its advantages and disadvantages.

Those of us who have had much to do with fractures become familiar with a certain line of procedure and gain a certain technique that may bring good results to us, which, when applied by others, may result in disaster. It cannot be too strongly stated that for the man who sees only an occasional fracture the simplest form of splint, and rest combined with extension for certain fractures, will give the best results.

SPLINTS AND REST.

This is the oldest form of treatment of fractures, and it is very accurately described in the earliest Egyptian medical records. The simplest forms are those made of a thin board, moulded plaster of Paris and poroplastic felt. As a rule, moulded splints, sold in sets for special fractures, are objectionable. Experience is required to apply them accurately, and, in the absence of the proper size, one is very apt to use the next available size, which may or may not fit the case. Moulded plaster of Paris, in the form of the Bavarian dressing, requires some experience to apply, but is a very desirable splint when accurately adjusted to the injured part. Poroplastic felt is excellent, although somewhat expensive material, and is very easily moulded.

It is hardly necessary to point out the advantages of the use of such splints, chief of which is, that it enables one readily to expose the parts and replace them without discomfort to the patient, and at a cost of an additional strip of adhesive plaster or a bandage.

This method, combined with extension by weights, is perhaps the safest and more useful form of dressing for fractures of the long bones, more particularly of the femur, and I know of no

better apparatus than Bucks' extension with coaptation splints and a long Liston splint. The dressing, while comfortable to the patient, necessitates almost daily attention, as the rapid atrophy of the thigh muscles requires that the coaptation splints be frequently tightened. As a rule, sufficient weight is not applied. For an ordinary adult about ten pounds should be applied at first, rapidly increasing until spasm of the muscles has been completely overcome. This requires from four to eight days, and the weights can be increased up to thirty pounds. The weights need not be kept on continuously if the patient suffers from pain.

Coaptation splints should also be removed from time to time to allow of massage of the limb, and more particularly gentle movement of the knee joint. After the spasm has been once controlled, the weights can be diminished. Care should be taken, as has been frequently pointed out, that the splints should not be applied so firmly as to interfere seriously with circulation. In fractures of the shaft of the humerus, occasionally weights are required, but as a rule if the patient is allowed up every day, and the supporting sling is kept well down to the wrist and not near the elbow, the weight of the dressings and the limb is sufficient to give the necessary extension.

AMBULATORY.

I have had little experience with the ambulatory method in the treatment of fractures of the lower limbs. Their use requires very considerable experience. While the advantage to the patient of being able to be about and in the open air is undoubted, the control of the patient, and of his apparatus, requires more attention than is usually possible outside of hospital practice. My own practice is to get all patients, excepting those suffering from fracture of the femur, out of bed at the earliest date, while the patient is still in the fixation apparatus.

BARDENHEUER METHOD.

This method, advocated many years ago by the great German surgeon, has many advantages, more particularly for those who have had an extensive experience. The apparatus is only comfortable when properly fitted, and requires constant attention. When one has familiarized himself with the details, the

treatment is an excellent one, and gives good results. However, it should not be used by a beginner. One great advantage of this method is that the damaged limb is more or less exposed and the apparatus permits of lateral as well as rotatory traction, and Bardenheuer lays great stress upon the importance of taking advantage of this.

As a hospital man, I should like to point out a not uncommon practice which has nothing to commend it, that of immediately replacing the displaced fragments of bone in cases of recent fracture, and applying an elaborate fixation apparatus, such as a plaster of Paris dressing in cases which are immediately to be moved to a distant place, and where the patient will come under the care of another practitioner. Such cases seen as an emergency should be put up in the simplest form of dressing, and the patient should be told that the dressing is of a temporary character. It is well to supply a letter addressed to the physician who is expected to take subsequent care of the case, explaining what has been done.

Many instances have come under my notice where an elaborate dressing, such as I have described, has been applied, the patient departing at once and coming under the care of another practitioner. Often the second practitioner has not the moral courage to cut down the plaster of Paris dressing; he therefore assumes all the responsibility of the case, and is certain to come into whatever censure may occur, without really having had anything to do with the actual replacement of the fragments and application of fixation apparatus. The laity should be taught that it is a fallacy to suppose that the so-called setting of a fracture should occur at once after an injury, without regard for the surrounding circumstances. It has been our common experience that many fractures are discharged with good alignment and apparently firm union, which, seen many months later, show marked angular deformity. While it is difficult to control the actions of patients, who have apparently fully recovered, more particularly those cases which are discharged from the public wards of the hospital and pass completely from the observation of the attending surgeon, we have perhaps not taken sufficient steps to protect our own reputations. All such cases should be kept as long as possible under observation, or until good bony union has taken place.

The old-fashioned method of using a bedroom pillow, supplemented with strips of board on either side, is still an excellent dressing, especially in fractures of the leg. Plaster of Paris dressings are difficult to properly adjust, and should never be used until one has acquired considerable skill in their application. In my opinion there are certain parts of the body where plaster of Paris should never be used except by surgical experts, that is, in fractures of the shaft of the humerus and femur, and in obscure injuries about the elbow and knee joints.

MOBILIZATION AND MASSAGE.

We owe very much to the French surgeon, Lucas Championnière, and while very few English-speaking surgeons have been daring enough to carry out his practice in detail, I think we have all appreciated the value of massage and frequent inspection of the injured limb, while at the same time using some definite fixation apparatus. Lucas Championnière has again and again drawn our attention to the fact, which I think had been previously mentioned by Thomas, of Liverpool, that too rigid fixation diminishes reparative bone production, damages the soft parts and stiffens the joints and tendons, so that the patient, when at last freed from his dressings, suffers more in recovering the use of muscles and joints than from any other cause. The originator of this method has pointed out that the massage must be gentle and never carried to a point of producing pain.

Against this method, however, there can be little doubt that the early recovery which has been claimed for it is often at the expense of anatomical deformity. We must, however, always appreciate that to Lucas Championnière, more than any one man, we must acknowledge our thanks for the introduction of the combined methods now so universal on this continent.

The method of extension by the use of nails and traction apparatus, suggested by Steinman, and also the methods of Lambotte, of introducing pegs united to a frame held outside the wound, have very serious objections. The danger of an open wound, through which is introduced a foreign object to the centre of a long bone, leaves a wide-open door for infection.

OPERATIVE OR OPEN METHOD.

No subject in surgery is engaging the attention of the profession at the present time more than the operative treatment of

fractures, and before proceeding to discuss this method I will draw your attention to the following very important sections of the British Medical Association report:

Section 10. "It is necessary to insist that the operative treatment of fractures requires special skill and experience and such facilities and surroundings as will ensure asepsis; it is therefore not a method to be undertaken except by those who have constant practice and experience in such surgical procedures."

Section 11. "A considerable proportion of the failures of operative treatment are due to infection of the wound, a possibility which may occur even with the best technique."

Section 12. "The mortality directly due to the operative treatment of simple fractures of the long bones has been found to be so small that it cannot be urged as a sufficient reason against operative treatment."

Section 13. "For surgeons and practitioners who are unable to avail themselves of the operative method, the non-operative procedures are likely to remain for some time yet the more safe and serviceable."

All operative procedures are becoming easier to an increasingly large proportion of our profession doing surgery, and the probability is that this applies also to the operative treatment of fractures. Mr. Robert Jones, of Liverpool, very tersely states "that the indications for operation will clearly differ from the individual standpoint of the surgeon, and no rules can be laid down. The surgeon with the least mechanical resource will operate most frequently." Those who have seen Lane operate might be led to believe that the proceeding is a simple one, but this is not so; as many of you are aware, Sir Arbuthnot Lane has developed a technique and dexterity which perhaps is unequalled; therefore, it follows that the proceeding is a rational one for him to carry out.

Personally, I have had an open mind, and my practice has been to operate on cases which I was unable to reduce or retain in good position, more particularly in fractures in the upper part of the humerus, upper part of the femur, both bones of the forearm, and in spiral and oblique fractures of the tibia. My experience has been that the open method is a most satisfactory proceeding, and each operation becomes simpler to perform than

the last. No one should operate without having a full supply of the heavy holding forceps, originally suggested by Lane, and of which there are now a number of different types. The practice of Mr. Jones should also be kept in mind: that of keeping up extension by pulleys during the operation. A combination of these two measures makes the operation much easier.

The length of time for repair is undoubtedly longer, and each patient should be especially warned that the early mobility of the limb is due to the introduction of plates and not to bony union, so that such cases should be kept under observation for a longer period, and external supporting apparatus should constantly be used. One case recently under my care has been very instructive, although the point is not new, having been referred to a number of times by others. A plate was applied to a fracture in the lower third of the tibia, and the patient discharged in a long plaster case. He returned once a month, the cast was removed, and at first there was not movement; later, there was a little definite movement. An X-ray showed a rarification of the bone in the neighborhood of the top screw. I cut down and found the plate was almost embedded in new bone; the top screw was loose. I removed the plate and screws and put the patient in a new plaster cast; he returned in a month and had good firm union. This was a case where, apparently, the mobility, as suggested by Lucas Championnière, had finally resulted in union.

In the treatment of compound fractures I have found that the use of a plate, or wrapping the bone in wires, is of great value, but when such proceeding is carried out, the plate is only put in for the first few weeks to control the parts, and must invariably be removed before the wound will, or is allowed to, close. I have made it a practice in all cases of carrying out Lane's suggestion of covering the plate with muscle, fascia, or fat, and in one or two cases where this was not completely done, or where the parts tore away late, I found that I was obliged to remove the plate; in short, the plate should never be allowed to lie exposed immediately below the subcutaneous tissue.

The Committee of the American Surgical Association, in considering the British report, points out that all methods of non-operative treatment have been grouped together in a comparison, and considers that a true estimate of the value of the non-operative method should include a classification to the end that

the best non-operative treatment could be laid before the profession. In this view I am in hearty accord, as I take it that the object of both reports is to place in the hands of the average man the most desirable method of treating non-operative cases.

The American report further points out that, on this continent, the usual treatment is not limited definitely to a fixed plan, but is a combination of several methods. The committee, therefore, in its primary report, believes that prolonged immobility, with continued fixation by means of external splints, or apparatus, should be abandoned, and recommends that the treatment should depend upon three classes of practitioners:

1. The average general practitioner, unskilled in surgery as a specialty.

2. Surgeons with the usual facilities of small or cottage hospitals.

3. Surgical experts with adequate hospital facilities.

For the first, they recommend the mixed method which is practically in use with most of us, laying stress on the importance of a general anesthesia for diagnosis as well as reduction, combined with the use of an X-ray. For the second class the report suggests that the operative treatment be restricted to especially rebellious fractures after the case has been watched for a few days. For the third group, early operation in all cases which cannot be properly reduced and maintained in good position.

Dr. Roberts has associated with him men of wide experience in the care of fractures, and the final report will undoubtedly be a guide of great value.

In doing my first open operation for fracture of the patella many years ago, I was surprised to find the amount of hemorrhage and damage to the neighboring soft parts. Since doing the open method on apparently simple fractures of long bones, I have marvelled at the good results obtained in non-operative treatment, in view of the extensive laceration of the soft parts, and the interposition of muscles and other tissues.

RADIOGRAPHY.

The value of the discovery of the X-rays in the diagnosis of fractures was early recognized, and it is hardly necessary at this date to refer to the great aid that has been given, not only in the

diagnosis of the fracture, but as a guide to satisfactory treatment. It should be remembered, however, that many factors enter into the consideration of a given case. Two plates, one antero-posterior and one lateral, should invariably be used. The diagnosis should not be limited to an examination of the plates, but a careful examination of the injured limb should always be made. A second fracture in the same bone, or a fracture of a neighboring long bone at a higher level may be present, although not shown in the plate.

The possibilities for distortion in a given case depend upon the position of the fracture and the experience of the X-ray operator. The importance of this has not been properly appreciated, more particularly by general practitioners. Distortion of displacement is always present in fractures of the long bones and in fractures of the pelvis.

The public has much to learn in regard to X-ray distortion, and it is difficult to know what our position should be in regard to showing plates to patients and their friends. These persons expect to see the plate, and yet are not sufficiently experienced to appreciate the various conditions which exist in a given case. The impression is therefore left that the fractured bones may not be in good position, when in reality they are.

While it is quite possible to continue the treatment of fractures as in the past without the aid of X-rays, the general practitioner should not undertake the care of obscure fractures, more particularly those involving joints, without at least giving his patient the opportunity of going to some neighboring point where the use of an X-ray plate may be obtained. I, in common with others, have had a number of instances where acute synovitis has masked the presence of an important fracture. Only recently a case came under my observation, where the patient was unable to walk or to straighten out his limb some months after a fall which produced a severe synovitis of the knee joint. X-ray demonstrated the presence of an impacted fracture involving the articular surface of the tibia. I opened the joint and found a knob of callus in the centre of the joint displacing the semi-lunar cartilage; the knob was chiselled off and the cartilage removed.

MEDICO-LEGAL ASPECTS.

It is unfortunate that fractures have always been the source of much medico-legal anxiety to our profession. This has been made greater with the introduction of the use of X-rays. The time has come, I think, when this Association could quite properly investigate our position in regard to the courts and our patients, to the end that some definite legal method, fair to all parties, could be introduced into our court procedures. The situation could hardly be worse than at the present time, where X-ray plates of fractures are passed about the court and interpretations taken therefrom, not only by the court, but by lawyers, jurymen, and others; this without any effort being made to have the meaning of the plate explained by medical men competent to offer such information. As long ago as May, 1900, a report of the American Surgical Association stated that, "Skiagraphs alone without expert surgical interpretation are generally useless and frequently misleading."

Dr. J. B. Murphy recently reported a dislocation of the shoulder joint, where the head of the humerus was behind the glenoid fossae, yet the X-ray showed normal position. In a United States court recently a medical man was held responsible in damages to a large amount, not because the deformity resulting from a fracture was due to lack of skill, but because there was deformity, and the medical man had not recommended the use of an X-ray, although there was no X-ray apparatus in the town.

There is also the question of ethics to be solved. How far a medical man engaged in the practice of radiography is within his rights in selling plates showing fractures which have been under the care of other medical men, without these medical men being consulted.

The development of workmen's compensation acts in our own and other countries, where employers are responsible for the payment of compensation for injuries, makes the whole subject of fractures of greater interest than at any time in our history, and if the time has not yet come for defining our responsibilities it must be close at hand, and I trust this Association will not be behind other organizations in laying before the profession and the public the best means available for the treatment of fractures.

Selected Articles

COMPARISON BETWEEN GERMAN AND AMERICAN CONSTRUCTION

BY DR. JOHN N. E. BROWN,
Superintendent of Detroit General Hospital, and Secretary American Hospital Association.

In Germany a general hospital is properly so called, all sorts of patients are received—acute mental cases, tuberculosis, and the ordinary contagious diseases, in addition to the usual medical, surgical and other cases; provision is also made for epidemics of cholera and plague. This permits medical students, resident medical officers, and nurses to procure an all-around training. We know of no such hospital in this country.

The hospitals of Germany are constructed by the state or municipality. The amount of money needed is asked for and can be counted on. In America we are mainly dependent as yet on the voluntary system of support; though a few of our large cities are undertaking the building of hospitals as a proper part of civic work, making appropriations in their annual budget for this public service, just as they do for their water-works, street cleaning, etc. In America, hospitals start in a small way, and are added to, so that some of our older and larger institutions present a conglomeration of buildings such as are seldom found in Germany. The German hospitals are planned by the municipality or the state architect, an official of much dignity. The office is the goal after a long and rigorous experience of technical training. This official also plans the city hall, the court-house, the schools, and other publicly-owned buildings.

Before beginning to build a German hospital, careful inquiry is made by the authorities as to what number of patients they will provide for; what amount of room will be required for males and females respectively; what space will be given over to medical,

surgical, and other sorts of cases; what space for kitchen, how much for laundry and other services. A study is made of institutions already built, and statistics relating to all services carefully studied. The building must conform to certain governmental regulations, such as the space allowed for day rooms for convalescent patients, the construction of stairways, etc.

Architects and medical men in Germany have not the freedom they have in America to carry out novel ideas. A close observer will find fewer mistakes and fewer oversights than he discovers here. This may be explained by the fact that the Germans follow precedent more, and the architect and director have had advantages both in the matter of training and extensive observation which few American architects and directors seem to have enjoyed. It is more customary in Germany than in America for architects to construct a model of the hospital they propose to

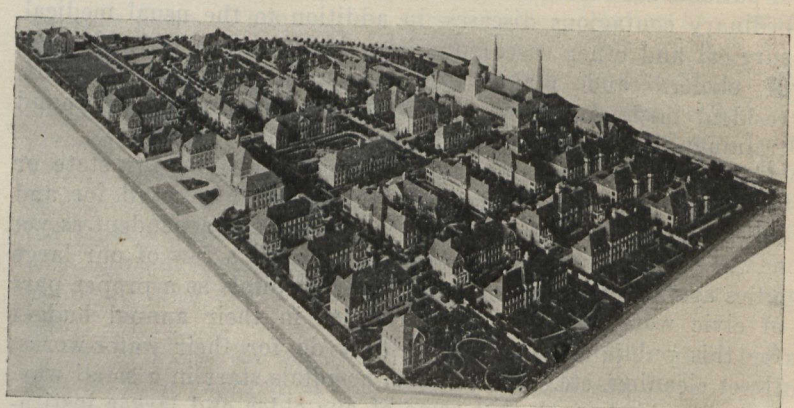

FIG 1.

erect. The advantages of doing this are many; we can strongly commend this custom.

German hospitals are usually built on extensive grounds, those of the pavilion type covering sometimes eighty or ninety acres. These grounds are beautifully parked; trees and gardens surround the pavilions. There is a fine sense of space all about. The air is clean and fresh, and sunshine floods the whole place. The buildings are remote from the dust and din of traffic. Convalescent patients are seen on the lawns, sunning themselves or resting

beneath the shade of the low trees. Throughout the largest hospital sites run driveways or walks which divide the grounds into rectangular blocks. On each of these blocks stand groups which correspond to a general classification of patients. One does not find as many balconies or roof gardens as in America. The patients are taken out on the terraces and lawns.

The ward buildings are not high, chiefly one and two storeys. The architectural effect, both of the groups and of the individual building, in this natural setting, gives a sense of pleasure to the visitor, and must be attractive to the patients.

In many instances the visitor arrives first at a lodge—a picturesque little structure, the residence of the *Pförtner,* or at his office off the main carriage entrance which runs through the administration building. This official receives him, learns his

FIG. 2.

business, and directs him what to do and where to go. Frequently the *Pförtner* is detailed to accompany the visitor throughout the institution.

The newer hospitals are of the most thorough masonry construction. The general finish of the exterior is cement on common brickwork, applied in many simple and charming forms. Much well-designed brickwork is also seen. The roofs of red tile tone pleasantly with the green foliage.

FIG. 3.

Ward floors are generally of tile or terrazzo. There has been some effort to obtain a more comfortable floor through the use of battleship linoleum. As in America, the use of linoleum and of plastic monolithic flooring seems to be still in the experimental stage.

Windows are usually of the casement type, some having transoms at the top. One type has a double transom, which, upon being operated, opens the outer sash at the bottom and the inner one at the top. There is now coming into favor in England and America a type of window with several cross-sashes pivoted at the bottom similar to a transom. Either style of window gives practically quite sufficient natural window ventilation. The

FIG. 4.

latter type has the advantage of directing the air currents upward; the former are more quickly and more easily manipulated. The German windows generally extend close to the ceiling; and the sills are low enough to give the patients a view out of doors. We seldom see casement windows in the hospitals of this country.

The accessory rooms of the ward are grouped separately at opposite ends of the ward. This arrangement, we consider, makes for the convenience of the nurses. In America we seek to give two sides and one end of the ward to the air and sun.

The Germans make fine provision for natural treatment of

patients on the medical side by providing, in their bathhouse baths of all sorts—mud, sand, carbonic acid, steam, electric, hot and cold water, in various forms. The private sanitariums provide special baths, such as sun baths and open-air baths. This

FIG. 5.

bathhouse of the hospital is generally placed near the medical group of pavilions, and is related to this group much as the operation house is to the surgical group.

It is common there to see mechano-therapy rooms—Zander rooms. These are very rarely found in America. The various

apparatus in this department are found most valuable in the treatment of deformities, contractures, and similar afflictions.

The operation house contains all the operation rooms with their annexes. These subsidiary rooms are fewer in number than one sees in some of the newer American hospitals. The surgeons' washup bowls are often found in the operation room proper. There does not seem to be the same accommodation for operating-room nurses as is provided on this side of the water. Nurses there, however, are apparently not so numerous in attendance at operations as they are with us. Provision for sterilization is most complete, and in the room provided for this purpose

FIG. 6.

you will often see apparatus for distilling water and supplying salt solution.

At the St. Georg, Hamburg, the air is filtered through gravel and sand before being forced, on the plenum plan, into the operating-room. Following each operation, the room is disinfected by steam. We have not noted such complete precautions anywhere in the United States.

In this country we are beginning to manufacture for our operating plants copious supplies of sterile water for surgeons' and nurses' washup; for example, the Gary Hospital, Gary, Ind.; St. Luke's, Presbyterian, and the Augustana Hospitals, Chicago;

the German, Philadelphia; the German Deaconess, Buffalo, and the Harper, Detroit.

The Germans seem to agree with our latest conclusions in regard to simplicity in the matter of ventilation and heating. We have not heard of such failures of mechanical ventilation in hospitals over there as we have in some of the leading hospitals in America where the plenum system seems to have proved a failure. The only place in which we saw this system working efficiently was at the Victoria Hospital, Belfast, Ireland; even there in the nurses' residence it was discarded. But on duty, nurses,

FIG. 7.

like patients, submit to it,—an even temperature of about sixty-six degrees with all windows and doors tightly closed.

The Virchow, in Berlin, is ventilated in the following manner:

In the underground floor of each of the pavilions are placed one or more ventilating fans, according to the requirements. These draw in fresh air from vertical little air houses standing amid the shrubbery a few yards from the pavilions. The air passes through a chamber for straining out the dust, a cotton wool filter being used. The air is then driven into a steam-heated chamber, and from here through distributing channels, and hence through wall channels into the different rooms. As the local cli-

mate is sufficiently humid, the air is not moistened, as is done in some places. The foul air is withdrawn from each room by sufficient outlet channels, which extend to the roof story and terminate in a chamber in front of an exhaust fan. It is sucked from here and driven through ridge turrets into the open. In addition to this mechanical system, provision is made for natural ventilation through trap windows. The ventilating apparatus of the lavatories, kitchens, and sink rooms is made particularly effective in order to quickly carry off the vapors and mal-odors which form there.

Germans have their heating and power plant placed in a service building, which building usually contains the kitchen,

FIG. 8.

laundry, and employees' dormitories. The medium of heating is by means of steam or hot water. The pipes may terminate in radiators located along the centre line of the room or along the walls. In the wards of the Virchow there are two four-inch hot water pipes running the whole length of the ward. These can be more easily cleaned than the ordinary radiators, and can be inspected very readily. A sensible type of radiator is the one now being put in the new measles building of the Willard Parker Hospital, New York City, there being room between the sections to allow for easy cleaning.

German laundries and kitchens are spacious. One seldom finds hoods over ranges and mangles. The black, dirty-looking stockpots of the American hospital kitchen are nowhere in evidence in Germany. Stockpots are covered with nickel, enamel, or white metal, and set on a neat, round, central foot. Some of the pots are provided with a water jacket as well as with a steam jacket, which permits their being used for a variety of purposes. Both kitchens and laundries are divided into separate rooms for the separate duties; sometimes these subsidiary rooms are merely alcoved off. In America we more often find nearly everything done, both in laundry and kitchen, in one large room.

FIG. 9.

The Germans provide in their hospitals more laboratory accommodation than we do. This is especially true of their teaching hospitals. In one of the medical or surgical units of the Charity Hospital, Berlin, for instance, you will find commodious laboratories adjoining the ward unit—for bacteriology, for chemical pathology, for surgical pathology, for X-ray work, etc., and other special rooms for original research. Our laboratories are remote from our wards, which probably corresponds to the scientific status of our medical organization. Our clinicians are not pathologists; many of them have arrived at the kingdom of clinical medicine after a prolonged period in the realm of path-

ology, hence can combine the work of the two in one in a great measure.

Disinfection receives much more attention in Germany than in America. Disinfection houses are seen in connection with all large German institutions. In America the writer has not seen any. In a typical German disinfection house, belonging to a large hospital, you will see provision made for disinfecting various types of material in various sized sterilizers. These sterilizers are set through a wall—the soiled or infected material being brought to the room on the "unclean side," placed in the

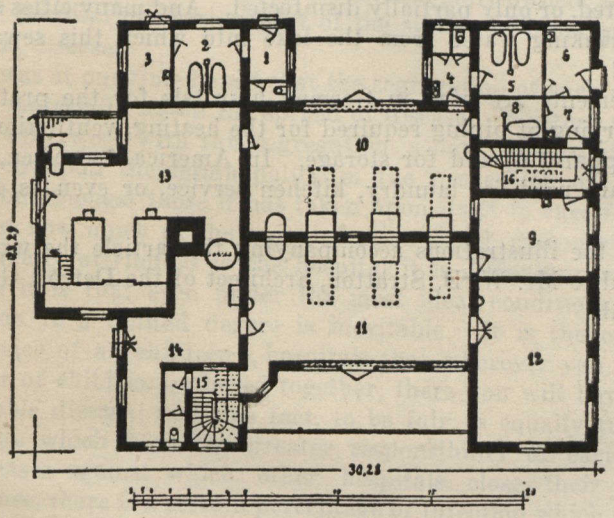

FIG. 10.

sterilizers, and withdrawn in a room on the clean side. Off this clean room may be found the store room for the disinfected clothing. Provision is also made for the disinfection of doctors, nurses, patients and employees. There is a room for the removal of infected clothing; adjoining this is the bath room, and beyond a clean room in which fresh clothing is put on.

Besides the complete disinfection plant in the disinfection building, in many hospitals provision is made in the ward unit for the disinfection of ward linen. A vessel is placed in a

wall between two rooms, one-half of it projects into the room for the reception of the soiled linen, the other into a small room on the other side of the wall—the clean side. After the linen is first thoroughly soaked and the blood and pus stains removed, it is carefully disinfected by means of heat carefully applied, plus, in some instances, the use of an antiseptic solution.

Sewage from wards is piped to a cement cavehouse—the sielgrubenhaus—and here disinfected before being allowed to run off into the general sewage system of the city. This feature is absent in America, but should be introduced. Many hospitals here allow their typhoid stools to pass into the general sewage system, not disinfected, or only partially disinfected. And many cities secure their drinking water from the lake into which this sewage is poured!

Basements are used in German hospitals for the protection and carrying of piping required for the heating, ventilation, and other apparatus, and for storage. In America, too often, basements are used for laundry, kitchen service, or even as dormitories.

For the illustrations accompanying this article the writer is indebted to Mr. W. B. Stratton, architect of the Detroit General Hospital.

HOW CAN CROSS-INFECTION BE PREVENTED IN A HOSPITAL FOR COMMUNICABLE DISEASE?

BY M. B. WHYTE, B.A., M.B., TORONTO.

MR. CHAIRMAN AND GENTLEMEN,—

The subject for discussion at this time is one which has received attention from the responsible heads of hospitals for communicable diseases ever since the municipally-owned and controlled hospital has been a part of the system of isolation of infectious diseases.

It was at one time hoped that the segregation of such diseases would materially lessen the spread of disease. Whether successful or otherwise, with this segregation, a new responsibility has devolved upon the municipality in the prevention of further infection amongst those it has taken upon itself to care for.

Just how much of the cross-infection which does occur may be correctly attributed to the hospital it is difficult to say, but certain it is that even under the most ideal conditions, cross-infection to a limited degree is inevitable. It is the common experience of all children's hospitals that wherever you have a number of children gathered together, there you will have communicable disease; and this fact, to be fair, is equally true for hospitals which have the greater responsibility of caring for those cases against which other hospitals close their doors. Therefore, there is a certain percentage of infection which is common to all hospitals where children are congregated. Deduct this common percentage from the statistics of a well-planned and carefully managed hospital for communicable disease, and I venture to say that if the facts were known, the balance, if any, to the credit of the municipal hospital would be very, very small.

The causes of cross-infection are many and varied. From what little experience I have had in Toronto, I should say that the great causes are overcrowding, lack of accommodation for observation of doubtful and of suspected mixed cases, and the

* Read before the Ontario Health Officers' Association, Toronto, June, 1913.

lack of proper and convenient facilities for the frequent cleansing of the hands by attendants. This, of course, is secondary to or dependent upon the fact that mixed cases and carriers of disease are quite common: It is common knowledge that two and even three different diseases may co-exist in one patient. One disease may be perfectly obvious; the other may be in the incubation stage, or may be so far advanced that it is now unrecognizable. For instance, of all cases of scarlet fever admitted to the Toronto Isolation Hospital during 1912, 14 per cent.—a rather unusually large percentage—were carriers of diphtheria bacilli on admission. Since only from 1 to 2 per cent. of well persons harbor diphtheria bacilli, this indicates, I think, the great susceptibility of the scarlet fever patient for diphtheria, and furnishes a very reasonable explanation of the frequency of the occurrence of post-scarlatinal diphtheria. The converse is not proven bacteriologically, but very possible, namely, that a certain percentage of diphtheria patients are also carriers of scarlet fever in the form of mild or unrecognizable cases. One can appreciate the possibilities of cross-infection if the 14 per cent. of scarlet fever patients, all harboring diphtheria bacilli, were allowed to mingle freely with the other patients not so infected. A difficulty quite parallel, and for which we have not as simple a remedy, still obtains in the possibility of a percentage of diphtheria patients being also carriers of scarlet fever, and therefore dangerous to other diphtheria patients.

The carrying of infection on the person, especially the hands of an attendant, is a cause which cannot be overlooked, and as infection by contact, direct or indirect, is now recognized as the main or only medium of infection, carelessness in this regard may become a very real danger.

I have often wondered if our innocent-looking little clinical thermometer may not have been in many cases the vehicle of transmission of disease from one patient to another, more especially where communicable diseases are concerned. It is impossible to thoroughly sterilize a thermometer; in fact it is the only article coming in contact with the patient's mouth which may not be boiled. I have felt that it would be a step in advance were each patient provided with his or her own thermometer while in the hospital.

Having in mind the main causes of cross-infection, the preventive measures should be such as will reasonably meet these causes. In the first place, to tax the capacity of a hospital to the utmost is to invite cross-infection. This is a real danger which should be emphasized. There is always a percentage of cases which, on admission, give a history of exposure to another disease, or which are at the time suspicious of another disease, or which are definitely mixed cases. With a number of empty beds at our disposal for observation purposes and a sufficient nursing staff that is not overworked, these cases can be safely isolated until the diagnosis is cleared up, or kept in isolation during their entire stay in the hospital. A careful history-taking on admission, and a careful physical examination with special reference to the condition of the throat and tongue, the presence of Kopliks spots and presence of skin rashes and desquamation, with ample room for isolation, is the most potent factor in the prevention of the spread of an infection which cannot be diagnosed bacteriologically but clinically.

To isolate every case of diphtheria for one week as a suspect scarlet fever patient is no doubt the ideal procedure. It entails, however, a great amount of apparently unnecessary labor and expense. It has been my experience that isolation of all cases pronounced suspicious, after careful examination in the admitting room, is, for practical purposes, quite sufficient. The typical appearance of a fourth or fifth day scarlatinal tongue and the punctate rash or "enanthem" on the palate of an early case have proved invaluable clinical aids. In Toronto, during 1912, one-half of all cases of scarlet fever occurring amongst diphtheria patients developed during the first week in the hospital, and were no doubt incubating the disease on admission. Most of the remaining cases could be traced to these as a source. This would seem to argue in favor of the rigid isolation of all cases of diphtheria for one week as suspects. But there has been a great reduction in this type of cross-infection dating from the opening of the new wing, providing an additional 120 beds, two separate nurses' homes and better and more convenient facilities for gowning and cleansing the hands. During the past eleven months, in which we have had the advantage of these needed improvements, the occurrence of scarlet fever amongst diphtheria patients has become a rare thing indeed, and this without the

rigid isolation of every case of diphtheria, but only those which were in any way suspicious. Only three cases have occurred in 568 diphtheria patients admitted, about one-seventh of the number occurring during the previous year. It is doubtful if much better results than this would be obtained by the use of cubicles.

The two separate nurses' homes for diphtheria and scarlet fever nurses, and separate quarters for maids, are no doubt most important factors, where they are possible. Where not possible, the only safe procedure is to provide facilities for nurses to change their uniforms and to thoroughly cleanse their hands before going on or off duty.

The routine swabbing of throats of all scarlet fever patients on admission, the isolation of those found with diphtheria bacilli, and the administration of an immunizing dose of antitoxin—say 2,000 units—to all patients practically rules out the possibility of post-scarlatinal diphtheria. In Toronto, during the past two and one-half years, this procedure has been adopted. With an admission of 1,425 cases of scarlet fever, only 6 patients contracted a very mild, almost membraneless, type of diphtheria after admission. For one year, 1912, there were no cases at all. Three developed at one time, and were traced to a "carrier," who was considered free of the germs after two successive negative cultures had been obtained, but on a third culture being taken, showed the presence of the Klebs-Loeffler bacillus.

Where measles and chickenpox—two diseases with fairly definite incubation periods—have been known to break out in a ward, a most ingenious "ruse" is adopted by the authorities in the South Department of the Boston City Hospital. The infecting case, of course, is immediately removed, and toward the end of the incubation period, those cases remaining are divided into units of two or three patients and isolated in separate small wards. Should a second case then develop, it will have exposed only those two patients with whom it was isolated, and in this way the spread of the disease is effectually curtailed.

The fundamental principle underlying the prevention of cross-infection is medical asepsis, first and last. It had its beginning when Dr. Grancher, of Paris, discarded the theory of airborne infection, and has since developed and been put to the test in hospitals in France, England and the United States. It

has resulted in more perfect isolation by relieving our minds of the fear of infection through sources which do not exist, and allowing us to concentrate our thought and efforts upon the real cause, direct or indirect contact.

Great credit is due to those who had the courage to disregard the time-honored theory of aereal infection, and to prove the value of aseptic nursing by actual experiment. The isolation of various types of infectious disease in one ward is not an advisable procedure from a practical standpoint, tending to throw unnecessary responsibility upon the nurse, but it has served to illustrate that contact is the true vehicle of transmission of infection, and that perfect medical asepsis is the only certain barrier.

THE AMERICAN MEDICO-PSYCHOLOGICAL ASSOCIATION

THE sixty-ninth annual meeting of the American Medico-Psychological Association was held at the Clifton Hotel, Niagara Falls, Ont., June 10th, 1913, under the Presidency of Dr. James T. Searcy, of Tuscaloosa, Alabama, and proved to be one of the best attended and most interesting and instructive in recent years.

Mayor Chas. C. Cole, of Niagara Falls, bid the members a hearty welcome to the "Power City," the greatest electrical developmental city in the world, and invited them to be the guests of Council on Thursday afternoon, when some of the large power plants would be inspected. The inspection proved most interesting, and in addition a delightful trolley ride to Chippewa and Lundy's Lane was enjoyed. At the latter romantic and historic spot Rev. Rural Dean Benan, standing upon the steps of the Canadian Monument erected to the memory of the soldiers who fell on that occasion, gave a delightful reminiscent talk.

On Tuesday evening, F. H. Severance, Esq., Secretary of the Buffalo Historical Society, gave an entertaining and cleverly handled address on the Niagara District and the Peace Centenary, reviewing the settlement from the earliest days and the many more or less eventful battles, and spoke of the several monuments erected in memory of the valiant warriors who so bravely fought for King (or President) and country.

Besides the strictly sectional papers bearing on the varying modern ideas of caring for and treating the insane, and the diagnosis and pathological changes in the several forms of mental disease, probably the most interesting and startling was the report of the Committee on Applied Eugenics, presented by the Chairman, Dr. Hubert Work, of Pueblo, Colorado, who has devoted a great deal of thought and time to the consideration of this all-important subject.

The pith of the report was that in treating the feeble-minded, degenerates and persistent criminals, sterilization, segregation and colonization should be the watchwords and in no other way

could their great and increasing clan be properly cared for and safeguarded against themselves, as it is a well-known fact that the feeble-minded and degenerates procreate much more prolifically than the better classes possessing higher mental calibre. Some ten or more of the States have passed laws enacting such rules for confirmed criminals, epileptics and the hopelessly insane, as also degenerates and the feeble-minded, and many more other States and Provinces are moving along similar lines.

Dr. J. V. May, of Albany, New York, in the most interesting review of the statistical records of New York State, presented a few startling facts: "Four per cent. of the population of insane hospitals are criminal. From 1900 to 1912 there has been an increase of 40% in the insane population and only 24% in the general population in this State."

Dr. E. Stanley Abbott, of Waverly, Mass., in a paper entitled "Psychology and the Medical School," drew attention to the urgent need of fuller practical instruction to the student in psychology by fully qualified instructors (many schools at present do not give any instruction in that subject).

In the display of work done under Industrial Occupations and Manual Handicraft, nine institutions showed most interesting and useful articles, made by imbeciles and dements of long standing under careful instruction, who showed decided mental and physical improvement after a short application patiently persisted in. That from Homewood Sanitarium, Guelph, Ont., was the largest and most pretentious and received many words of approbation.

The exhibit of the National Committee for Mental Hygiene, under the care of Dr. Salmon, New York, showed many elaborate and instructive plans of modern hospitals, psychiatric clinics and startling statistical records regarding the propagation of degenerates and the transmission of their many bad traits.

In all, this exhibit covered over 2,000 feet of floor space, and is one that should have a very decided and beneficial result if carefully reviewed and studied by the general public, as well as by the profession.

We understand that at the annual Hygienic and Prison Reform meetings throughout the Eastern and Central States this

excellent collection is to be extensively shown, as it has already been in several centres.

The following officers were elected for the ensuing year:

Dr. Carlos F. MacDonald, of New York, President.

Dr. S. E. Smith, of Richmond, Indiana, Vice-President.

Dr. C. W. Wagner, of Binghamton, N.Y., Secretary-Treasurer.

The meeting place selected for 1914 was Baltimore, Md.

THE ONTARIO MEDICAL COUNCIL

AFTER twenty years' hesitation, the Ontario Medical Council, in annual meeting in Toronto last month, decided by unanimous vote that they would accept any qualified practitioner holding a Dominion license to register without examination and pursue his profession in the Province. For nearly a quarter of a century the different Provinces of Canada have required that a physician or surgeon wishing to move in from another Province pass a rigid examination before being granted a license. While this has tended to keep out inferior men from some of the Provinces, it has been regarded by a large part of the profession as an undue hardship. Many controversies have been waged on the subject, and only a few weeks ago was the reform effected by the Medical Council for Ontario.

The resolution, moved by Dr. Wm. Spankie, of Kingston, and seconded by Dr. R. J. Gibson, of Sault Ste. Marie, two men who have led the fight for the past several years, which passed unanimously, was as follows: "Whereas it is provided by the constitution and rules of the Medical Council of Canada that practitioners of ten or more years' experience in any Province of Canada may register with the Dominion Medical Council, and whereas such registration does not necessarily carry with it the right to register in any Province unless the Council of such Province is satisfied;

"Be it therefore resolved that this Council hereby instruct our Registrar to accept Dominion registration as full qualifica-

tion for license in Ontario, subject only to the production of the necessary credentials and the payment of the usual fee."

The resolution did not pass without a good deal of discussion. The ground was taken by Sir James Grant, the veteran Ottawa physician, that according to the British North America Act such action would be illegal, and a number of others feared it might not work out smoothly. All, however, were united in their desire to reach an agreement by which the reform might be carried out, and Dr. Spankie finally revised the wording of his resolution to read as above, and the vote was taken amid applause.

When the President, Dr. Klotz, of Ottawa, declared the long-wished-for change had been made on a unanimous vote, Sir James Grant called for three cheers for Dr. T. G. Roddick, of Montreal, father of the Act incorporating the Dominion Medical Council, and the Council stood as they complied.

A motion was passed fixing the registration fee for students at $25, and that for licentiates at $5.

The names of two practitioners in the Province, Dr. Benjamin E. Hawke, of Toronto, and Dr. A. W. Stinson, of Brighton, were erased from the registration book of the Council, the Committee on Conduct having found them guilty of "infamous and disgraceful conduct in a professional respect." The motion to annul their licenses passed unanimously. Dr. Hawke has been a fugitive from Canada for a year on account of a warrant issued by the Toronto authorities.

The Board of Examiners reported 29 successful and 15 unsuccessful candidates for the fall examinations of 1912, and 65 successful and 37 unsuccessful candidates for those held this spring. Several members of the Council complained that the number "plucked" was out of proportion to the number trying, and declared that something was wrong somewhere. Dr. MacCallum objected that the examiners had not placed the maximum marks opposite the questions on the different papers and that this did not give the candidates a full idea of the value of what they attempted to answer. Dr. Bray, the Registrar, explained that this year the examiners had neglected their duty in that respect and promised to see that it was made compulsory next year.

Dr. Spankie, of Kingston, declared it was not fair to un-

successful candidates for the Council awards that they had to wait a full year before being given another chance to make good. Supplemental examinations were conducted in all the other departments of the University, and he moved that the Council hold supplementals this fall. The motion passed, and as a result all those who failed this spring will have the privilege of trying again in November.

The Council approved the appointment of Mr. John Fyfe as its prosecutor for the year, the salary to be $1,200, with a $1,000 bond.

Dr. J. S. Hart, of Toronto, was not successful in his attempt to have the indemnity of members of the Council raised. It is now $100 and a five-cent mileage rate.

The next spring examinations to be conducted by the Council will begin on May 26, 1914, and the Council will convene next year in the first week in July.

The Council, on invitation from Dr. C. J. Clarke, Superintendent, visited the new General Hospital in a body.

MEDICAL COUNCIL OF CANADA—ANNOUNCEMENT

GENERAL NOTICES.

The following announcements are made under the provisions of the Canada Medical Act (1-2 George V. Chap. 16), endorsed and supplemented by the Acts passed by the various Provincial Legislatures of Canada.

(a) Any person who secures registration on the Medical Register of Canada by examination is entitled to register without further examination, in any Province of Canada, on complying with the necessary regulations pertaining thereto, including the payment of the Provincial registration fee.

(b) Any person who was duly registered in any Province of Canada prior to the seventh day of November, 1912 (the date under which the Medical Council of Canada was first legally constituted under the Canada Medical Act), but who was not so registered ten years prior to the seventh day of November, 1912, may be registered on the Medical Register of Canada, either by examination, or without examination, on the completion of ten years after the date of his Provincial registration.

(c) Any person whose first Provincial Registration is subsequent to the seventh day of November, 1912, can become registered under the Canada Medical Act only by passing the examinations of the Medical Council of Canada.

(d) Any person who secured registration on the Medical Register of Canada by Provincial Registration of ten years standing (Sec. 18, Clause 2, Can. Med. Act), is entitled to register without further examination in any Province of Canada on payment of the necessary fee, and subject to the following proviso of Sec. 18, Clause 2 of the Canada Medical Act.

"Provided that if the Medical Council of any Province is not satisfied with the period of years prescribed by the subsection, such Medical Council may, as a condition to Provincial Registration, exact an examination in final subjects from practitioners registered under this sub-section, and the said examination shall be held according to the provisions of the by-laws or rules of the respective Provincial Councils."

REGISTRATION.

Those entitled to Register without examination.

Any person who on or before the 7th of November, 1912, was the holder of a license or certificate in any Province of Canada and who has been in active practice in Canada shall, ten years after such Provincial registration, be entitled to register without examination.

Certificates in blank will be provided by the Registrar of the Medical Council of Canada upon application.

Form of Certificate:

I hereby apply to be registered on the Register of the Medical Council of Canada under Section 18, Clause 2, of the Canada Medical Act.

I received a certificate of Registration in the Province of ..... on ..... proof of which I herewith present, and have since been engaged in the active practice of medicine at.....

.....

.....

Applicant.

I hereby certify that I know the above-named applicant and attest the correctness of the above declaration.

.....

Registrar,
Coll. of Phys. & Surgs. of

.....

Dated .....

A form of affidavit, and a photograph of the applicant for purposes of identification shall be attached to certificates from candidates for registration or examination.

EXAMINATION.

1. The Council shall at its annual meeting determine the place or places and dates for the next examinations of the Council, and shall appoint the examiners necessary for the proper conduct thereof.

2. Candidates for the examinations of the Council must present either (a) license of a Provincial Medical Council or Board of Examiners, or (b) a certificate from the Registrar of a Provincial Medical Council, or Board, that the requirements of that Council or Board in regard to preliminary education, matriculation, medical curriculum and graduation have been complied with.

Certificates in blank will be provided by the Registrar of the Medical Council of Canada upon application.

Form of Certificate:

This certifies that .....of..... is a graduate in medicine of .....University or Medical School, and has complied with all the requirements of the Medical Council, or Board, of the Province of..... relating to preliminary education, matriculation, medical curriculum and graduation, and is eligible as a candidate for the examination for license to practise medicine in the Province of .....

.....

Registrar,
Coll. of Phys. & Surgs. of

.....

3. Applications for examinations, together with the necessary certificates and fee must be deposited with the Registrar at least four weeks before the date set for the commencement of the examinations.

4. Candidates who hold diplomas obtained outside of Canada must present certificates from the Registrar of a Provincial Medical Council the same as is required of graduates of the Canadian universities.

5. No member of the Medical Council of Canada shall act as an examiner or as a Deputy Registrar for the Council.

6. The Council shall determine from time to time the subjects for examination and shall adopt rules and regulations for the guidance of the Registrar, Deputy-Registrar, Board of Examiners, and for candidates when in the examination hall.

7. The qualification granted by the Medical Council of Canada shall be known as the "License of the Medical Council of Canada." (L.M.C.C.)

8. Candidates who intend to be examined by the examiners in homeopathics shall signify their intention to the Registrar at least four weeks before the commencement of the examinations. These candidates shall be examined in therapeutics, and in all examinations where therapeutics are involved, by examiners approved by the majority of the homeopathic representatives in the Council.

SUBJECTS OF EXAMINATIONS.

9. (a) Physiology.
(b) Anatomy.
(c) Hygiene and Public Health.
(d) Pathology and Bacteriology.
(e) Midwifery and Gynecology.
(f) Surgery.
(g) Medicine, including Therapeutics.

10. The examination shall consist of two examinations in each subject:

1. Written.
2. (a) Clinical in the subjects of Medicine and Surgery.
(b) Oral in the subjects of:
Physiology.
Anatomy.
Hygiene and Public Health.
Pathology and Bacteriology.
Midwifery and Gynecology.

11. Sixty per cent. of the marks in each of the examination in each subject shall be required to pass.

12. A candidate who fails in not more than two of the subjects of examination, may present himself at a subsequent examination for those subjects in which he has failed. Failure in more than two subjects will necessitate re-examination in all subjects.

13. The values awarded by the examiners to the answers of the candidates are not to be subject to revision.

RULES FOR CANDIDATES WHEN IN THE EXAMINATION HALL.

14. Each candidate must produce evidence of his identification satisfactory to the Registrar, or to the Deputy Registrar.

15. Each candidate shall receive from the Registrar a programme containing a list of subjects upon which the candidate is to be examined, and it will admit the candidate to the examination hall during the progress of the examinations upon such subjects, but at no other time.

16. Candidates must write the answers to the questions given by the examiners legibly and neatly, on one side only of the page of the paper, which will be furnished in book form to each candidate, and the number given with each question is to be put at the head of the answer to it. When a candidate has finished writing he shall write his name in ink on the slip of paper which shall have been temporarily attached to the first page of the book for that purpose, and shall then hand the book to the Registrar. Neither signature, number nor sign by which the writer could be recognized by the examiner, is to be written, or marked on any portion of the book.

17. No candidate will be allowed to leave the hall for half an hour after the questions have been given out except by special permission of the examiner, and then only when accompanied by someone, and no candidate shall be admitted after that time.

18. No person shall be allowed in the hall during the hours of examination, except those who are actually undergoing examination, or members of the Council, or officials connected therewith.

19. Any candidate who may have brought any book or paper into the hall must deposit it with the Registrar before the examination begins.

20. Candidates must not communicate with each other while examinations are going on in any manner whatever.

21. Candidates must bear themselves towards the Registrar, or Deputy Registrar, and Examiners, with deference and respect, and must conduct themselves with decorum while an examination is going on. They will be held strictly responsible for any impropriety of conduct during the whole progress of the written and oral examinations.

22. Any infraction of the above rules will lead to the exclusion of the candidate who is guilty of it, from the remainder of the examination, and he will not receive credit for an examination paper which may have been handed in to the Registrar

previous to his being detected in misconduct; and he may be debarred from further privileges at the discretion of the Council.

FEES.

23. The fee for the examination, including subsequent registration, shall be One hundred dollars ($100). In cases of failure requiring re-examination, half of the original fee, that is, Fifty dollars ($50), will be payable.

24. No candidate shall be admitted to any examination until the fee for such examination has been paid in full.

25. All fees must be paid in lawful money of Canada to the Registrar of the Council.

26. Any person who has received a license or certificate of registration in any Province previous to November 7th, 1912, and who has been engaged in the active practice of medicine in any one or more Provinces of Canada, shall, after ten years from the date of such license or certificate, be entitled to be registered without examination, upon payment of the sum of One hundred dollars ($100).

R. W. POWELL, M.D., Registrar.

180 Cooper Street, Ottawa, Ont., Canada.

School Hygiene

THE TONSIL SITUATION

In view of the scores of compliments we received recently in connection with our criticisms regarding "The Tonsil Situation" in our Public schools in Toronto, the following communication will be interesting. As will be seen, it comprises a letter sent by The Section on Laryngology and Rhinology of the New York Academy of Medicine to The Associated Out-Patient Clinics of the City of New York. The communication is as follows:

Dear Sirs,—Desiring to comply with your request for an expression of opinion from the members of the Laryngological Section upon certain phases of the 'Tonsil Situation' in this city, the matter was brought before the Section at the regular meeting on March 26th. On motion, the Secretary was instructed to send to each member a circular letter embodying the questions contained in your communication. Some seventy responses were received, and the following report embraces the opinion of the majority of those who answered this letter.

First question.—Should the present widespread practice of tonsillectomy in children be continued and the school inspectors encouraged in urging parents to have their children's tonsils removed?

Answer: (a) Tonsillectomy in children should be advised only by those especially trained to recognize the conditions demanding this operation.

(b) The average school inspector and visiting nurse is incompetent to decide this question.

(c) Parents should not be advised to take their children to certain institutions, as this encourages many to seek charity who otherwise would not do so, thus tending to pauperize the community. The majority favor tonsillectomy in every instance, but some few believe that tonsillotomy still has its place.

Second question.—Should either tonsillectomy or tonsillotomy, or both, be performed in out-patient clinics?

Answer: (a) The majority believe that both operations are operations requiring the facilities of a hospital.

(b) A small minority believe that both operations can be safely done in an out-patient clinic, while some few believe that tonsillotomy but not tonsillectomy may be done without hospital facilities.

Third question.—If the previous question is answered in the affirmative, what facilities should be provided for the surgical treatment and aftercare of these patients? Should operations be performed in dispensaries (a) which have no special operating room, (b) which have no recovery room where patients may be kept after operation?

Answer: The few who think that this operation can be safely performed in a dispensary believe that a recovery room should be provided, where patients may be kept for several hours under observation.

Yours very truly,

(Signed) WILLIAM WESLEY CARTER, M.D., *Chairman.*

(Signed) C. D. VAN WAGENEN, M.D., *Secretary.*

Obituary

DEATH OF DR. JERROLD BALL

DR. JERROLD BALL, of Sherbourne St., Toronto, died at the Wellesley Hospital on Sunday, July 6th, as the result of complications following appendicitis. Dr. Jerrold Ball was one of the best known doctors in Toronto, where he practised for nearly forty years. Born near the town of Meaford, in Grey County, he graduated from Toronto University, and also from the old Victoria Medical School in 1874. In that year he commenced active practice in this city, where he had remained practically ever since. He remained in active practice until his death.

He is survived by his widow and one son, Dr. Harold D. Ball, of 178 Sherbourne St. Dr. Ball was a physician and a gentleman of the old school, at once the capable doctor and the friend of his patients, poor and rich alike. Those who knew him best, one and all have expressed the sincere tribute to his memory that the world is a little better because of the unwearying days' work done by Jerrold Ball.

News of the Month

BATTLE CREEK SANITARIUM

"THE AMERICAN FLORIST" calls attention to the efficacy of flowers in cheering up the sick and thus aiding in their recovery. It cites the Battle Creek Sanitarium, at Battle Creek, Mich., as carrying out this idea most specifically. Here, physicians actually prescribe flowers for patients, just as they would order massage or an application of electricity. After an operation, or if a sick person feels particularly depressed in spirits, a blooming plant or a vase of flowers is sent to his or her room, and the effect is often pronounced. Of course, women are more susceptible to this influence than men, but some of the male invalids take a surprising lot of comfort from this "medicine." No charge whatever is made for these gifts.

Several large greenhouses supply the blooms in winter, while, in summer, flowers are raised on a large scale. Perhaps 10,000 dozen asters are given away each season, not to mention bushel-baskets of sweet peas and blossoms from scores of other kinds of flowers. A big palm garden forms a pleasant lounging place in the cold days.

The Sanitarium this year has laid out a Burbank garden, devoted especially to the wonderful floral productions of the noted Californian. Some of the gladiolus bulbs cost $50 a dozen —which is just one hundred times as much as the price of ordinary specimens.

HISTORICAL MEDICAL MUSEUM FOR LONDON

THE ceremony of opening the Historical Medical Museum organized by Mr. Henry S. Wellcome was performed on June 24th by Dr. Norman Moore, President of the Section History of Medicine of the forthcoming International Medical Congress, and the new institution received the benediction of Sir Thomas Barlow,

President of the London Royal College of Physicans and of the International Medical Congress; Sir Frederick Treves; Sir Rickman Godlee, President of the London Royal College of Surgeons, and Sir Francis Champneys, President of the Royal Society of Medicine.

The idea of forming a museum illustrating the history of the healing art was first conceived and organized by Mr. Wellcome several years ago, and a remarkable collection of rare and curious objects of historical interest connected with medicine, surgery and the allied sciences has now been brought together from all parts of the world.

Dr. Norman Moore, in the course of his opening address, said the museum would be a most important addition to the studies of the International Medical Congress and would deeply interest a great many of the 7,000 medical men who were expected to attend. He reviewed the formation of earlier museums, all of which are relatively recent creations and usually developments from libraries. The museum he that day formally declared open was the first established in England to illustrate the history of medicine, and it might justly be regarded as a further step in the establishment of the subject as a regular study.

In responding to a vote of thanks, Mr. Wellcome expressed his indebtedness for kind services and assistance given by Sir William Osler and many other eminent men and also institutions whose names he mentioned. He regarded the museum as at its very beginning, and intended the present collection to form the nucleus of a permanent Historical Medical Museum in London.

It was his intention to found in London a Bureau of Scientific Research and to appoint as director-in-chief, Dr. Andrew Balfour, who for nearly twelve years had rendered such fruitful services as director of the Wellcome Tropical Research Laboratories at Khartoum, Sudan.